OECD Economic Surveys: Netherlands 2010

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Table of contents

Boxes

Tables

Figures

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of the Netherlands were reviewed by the Committee on 22 April 2010. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 6 May 2010.

The Secretariat's draft report was prepared for the Committee by Jens Høj and Tomasz Kozluk under the supervision of Pierre Beynet. Statistical research was provided by Sylvie Foucher-Hantala. The survey also benefited from external consultancy work.

The previous Survey of the Netherlands was issued in January 2008.

BASIC STATISTICS OF THE NETHERLANDS, 2009

THE LAND

Area (1 000 km^2)		Major cities (thousand inhabitants)	
Total	41.5	Amsterdam	747
Agricultural area (1 000 km^2)	19.1	Rotterdam	583
Woodland	3.7	The Hague	475

THE PEOPLE

Population (thousands)	16 485	Total employment (thousands)	8 638.5
Natural increase (thousands)	50.7	Employment (% of total, 2008)	
Number of inhabitants per km^2	489	Agriculture	2.6
		Industry	18.0
		Other	79

PRODUCTION (2008)

Gross domestic product (in billion EUR)	595.9	Gross fixed capital investment	
Gross domestic product per head (thousands EUR)	36.2	In % of GDP	20.4
		Per head (EUR)	7 401.3

THE GOVERNMENT

Public consumption (% of GDP)	28.2	Composition of Parliament (seats)	150
General government (% of GDP)		Christian Democratic Appeal	41
Current disbursements	48.9	Dutch Labour Party	33
Current receipts	46	Socialist Party	25
		People's Party for Freedom and Democracy	21
		Party for Freedom	9
		Others	30
		Last election: November 2006	
		Next election: June 2010	

FOREIGN TRADE

Exports of goods and services (% of GDP)	69.3	Imports of goods and services (% of GDP)	62

THE CURRENCY

Monetary unit: Euro		Currency unit per USD, average of daily figures:	
		Year 2009	0.72
		April 2010	0.75

Executive summary

The global crisis led the Netherlands into deep recession, despite a decisive government intervention to support the financial sector and a timely fiscal stimulus. The increase in unemployment was surprisingly limited, reflecting, among other factors, a severe pre-crisis overheating of the labour market. Growth recommenced in mid-2009. Looking ahead, the recovery is expected to gather pace relatively slowly. In this context, the main challenges for the government coming in after the June 2010 general election are to exit from stimulus policies and to boost potential growth in an ageing society.

- **The planned fiscal consolidation is a step in the right direction to secure fiscal sustainability.** *Fiscal policy is appropriately supporting weak 2010 economic activity. In the following years, the recovery should be sufficiently strong to allow consolidation that is at least as sizeable as laid out in the Stability Programme. Fiscal consolidation should be combined with structural reforms to boost employment and participation rates.*
- **The financial crisis and increased longevity are threatening the solvency of the second-pillar pension system.** *The fall in the funding ratios of the pension funds for the second time in this decade required the widespread implementation of recovery plans, mostly relying on suspending indexation of pensions and accrued pension rights. In the longer term, only longer working lives in combination with a mix of higher contribution rates and lower real pensions and pension rights can secure promised pension replacement rates. To avoid abrupt recovery measures in the future, regulation should be less sensitive to short-term developments, for example by using more stable discount rates. In addition, there is a need to improve corporate governance and make investment strategies more transparent.*
- **For several decades road traffic has increased faster than the expansion of the road network, leading to widespread congestion.** *As a result, the Dutch spend a large amount of time commuting by international comparison and the share of road transport in CO_2 emissions has increased markedly. The proposed nation-wide road pricing scheme is an innovative and forward-looking measure to enhance the efficiency of road transport. An important element in any road pricing scheme is the inclusion of congestion charges, which would further harvest its benefits. To provide alternatives to travellers, the adopted scheme should be accompanied by more efficient provision and use of public transport services and the promotion of different working patterns.*
- **The housing market is characterised by numerous rigidities, which may hamper geographical labour mobility.** *The rental segment is characterised by rigid rent control and an internationally large social housing sector. The below-market rents combined with eligibility checks only at entry have led to low tenant turnover and only 40% of the social dwellings being occupied by households with low incomes. In the owner-occupied segment, mobility is reduced by a high transaction tax and prices are pushed up by a generous tax treatment of mortgages and a rigid supply which is related to strict land use policies. These issues point to the need for a fundamental change of housing policies combined with rethinking land use regulation.*

Assessment and recommendations

The economy is slowly exiting from the global crisis

Growth came to an abrupt halt in mid-2008 as the economy was hit by the global crisis, although the increase in the unemployment rate was smaller than anticipated. The economy exited recession in mid-2009, as the effects of the fiscal stimulus, easier monetary policy, improved financial conditions and an emerging recovery in world trade began to revive activity. Given the expected slowdown in household incomes, the fall in real and financial wealth of households and the need for rebuilding profits, it is likely that the domestic economy will remain sluggish in the short-term.

A substantial part of the explanation for the lower-than-expected increase in unemployment relates to firms' desire to keep qualified workers after experiencing widespread labour shortages before the crisis. The government also supported labour hoarding by introducing a reduced work time programme which subsidises firms with falling activity levels to maintain their employment. The programme appears to be well designed with a large number of checks and balances to enhance its efficiency, including rules to ensure that only companies with large falls in activity can apply. Moreover, if the workers are fired after enrolment in the programme, the employer has to repay the financial support. More traditional factors, such as strict employment protection legislation for permanent workers, also explain the degree of labour hoarding.

The government reacted swiftly to save the financial sector and stimulate the economy

The Dutch financial sector was strongly affected by the global crisis. The government responded with decisive action to save the financial sector by intervening with liquidity measures as well as nationalising a large part of the sector. In total, the cost of government interventions came to about 14% of GDP, although almost half of the total amount of financial interventions has subsequently been repaid. In addition, guarantees worth 2½ times that amount have been made available. Furthermore, banks are encouraged to provide credits to business through expansion of guarantee facilities. The government does not intend to have a long-term involvement in the financial sector. Thus, the next step for the government coming in after the June 2010 general election is to formulate and implement exit strategies. The government also supported economic growth through a substantial fiscal stimulus package. Total discretionary measures amounted to about 1½ per cent of GDP. The stimulus package aimed at reducing taxes (*e.g.* tax relief for companies), increasing public investment and sustaining employment. In

addition, the unemployment insurance premiums were lowered, amounting to a stimulus of almost 1 per cent of GDP over the two years. The fiscal deficit exceeded 5% of GDP in 2009 and is expected to widen to above 6% of GDP in 2010.

The fiscal stimulus should be removed as soon as the recovery gains strength

An appropriate growth-dependent fiscal consolidation plan has been adopted to remove the structural deficit of around 4% of GDP. According to the plan, fiscal policy will appropriately support the economy in 2010 and start consolidating by at least 0.5% of GDP per year in 2011 (if projected growth is higher than 0.5%). The consolidation will start by withdrawing the stimulus and reducing public administration costs. Raising the retirement age in the state pension system, cuts in health care and higher property taxes have also been proposed, but will only yield effect in the longer term. Moreover, 20 committees proposed on 1 April 2010 substantial spending cuts and another committee has suggested measures to make the tax system more efficient. It is welcome that the government has already prepared the ground work for substantial consolidation. *The government should pursue its consolidation plans by using the committees' proposals to specify more concrete measures. Moreover, if economic growth surprises on the upside, the government should be ready to implement more consolidation.*

In the longer term fiscal sustainability should be secured

Public finance sustainability has deteriorated following the crisis. Consolidation should primarily aim at curbing growth in public spending. A particular challenge in this respect is to restrict growth in ageing-related spending, such as health and pensions. With respect to the latter, the government should pursue the plans to increase the official retirement age by two years to 67 years – an important measure to (partially) address the fiscal sustainability. However, more front-loading of this measure would have stronger effects on fiscal sustainability and reduce early retirement incentives in the transition phase. Moreover, life expectancy is likely to increase further, so the retirement age will also need to be adjusted in the future. A structurally more solid solution would thus be to *link the official retirement age to developments in life expectancy*.

Labour utilisation remains low

Labour utilisation remains relatively low in the Netherlands, reflecting relatively high participation combined with low hours worked, despite a strengthening of activation policies over the past couple of years. Recently adopted measures aim at lengthening working careers by offering wage subsidies for hiring older workers. In addition, older workers are encouraged to continue to work through tax incentives. Younger people (less than 27 years) are no longer eligible for passive income support, but are encouraged to work or study. A similar measure has been put in place for the young partially disabled to stem the high inflow into the special disability programme for young people. *To reduce the stock of the young disabled, they should be subject to the same controls and activation measures as new applicants*. In addition, there has been an emphasis on providing more and better

targeted services to job-seekers. These efforts follow the OECD recommendation on creating effective activation policies. Their efficiency could be further improved by *making activation policies more counter-cyclical*, by making the resources devoted to activation policies proportional to the number of unemployed. Moreover, as highlighted in the previous Survey, there is a need to increase the hours worked by females.

There are two areas of labour market policy where progress should be made in order to boost the employment content of the economic recovery. The efforts to reform the strict employment protection of workers with permanent contracts have come to nought. *The government should renew its efforts to make the judicial part of the system more predictable and generally lower the cost of firing to enhance the job creation capacity of the projected upswing*. Moreover, unemployment benefits continue to be generous and have long maximum duration (38 months). *Reform of the system should include three dimensions: the long duration should be reduced; the initial generosity should be maintained, but should decline over time to create dynamic search incentives; and the high upper ceiling for benefits should be reduced to sharpen search incentives for high wage workers*. A particular issue in this respect is that older workers can use a combination of severance pay and unemployment benefits as a pathway into early retirement. This often leaves older unemployed, who have accumulated substantial severance pay rights, financially better off than if they continued to work. *Thus, benefit periods and severance payments should be truncated for older workers, preferably as a function of the work life remaining before becoming eligible for state pension*.

The pension system has been hard hit by the financial crisis and increasing longevity

The financial crisis threatened the solvency of many pension funds, which have the largest asset accumulation (relative to GDP) in the OECD. A more structural problem is increasing longevity. Thus, if unresolved the solvency crisis could potentially threaten pension promises and fiscal sustainability in case of bail-outs. As equity collapsed, the value of pension assets fell from a level well above that of GDP to below it in 2009, putting many funds' solvency under pressure. In addition, the turbulence on the interbank market meant that the swap yield curve began to gyrate along a declining trend. As the interbank swap yields are used as the discount rates, this fall in interest rates boosted the present value of liabilities. Combined with the fall in assets, this led in many cases the pension funds' nominal funding ratios (the share of assets over the discounted value of future liabilities) to fall below the legal minimum of 105% from a pre-crisis level of more than 140% on average. In response, the funds had to implement recovery plans, which were mostly based on suspending indexation of pensions and accrued pension rights. In addition, the period within which the funds had to restore their funding rates was extended from three to five years as it was recognised that not all of the turbulence could be attributed to a fundamental shift in the pricing of financial market products.

Current recovery plans will only restore funding ratios to their minimum legal levels

As equity markets recovered during 2009, a number of funds have seen a return of their nominal funding ratios to above the legal minimum. However, in most cases the ratios remain well below the level (125%) where indexation can be reinstated, or the level (145%)

that allow funds to make up for past suspension of indexation. OECD simulations (carried out for this survey) show that with current measures in place (based on a set of conservative assumptions concerning future rates of returns) funding ratios will continue to increase within the 5 year recovery period, so that by the end of the period most funds will reach the legal minimum funding ratio. However, there will be little subsequent improvements, implying that in the absence of a strong rally in equity markets, most funds will not be able to honour their internationally generous pension promises. This highlights the conflict between providing a high level of benefits and a high degree of certainty.

Based on OECD calculations, restoring funding rates so pension funds can honour their pension promises would require that the working life of their members are extended by four years or that the contribution rates are raised by some 4½ percentage points. Alternatively, future indexation can be secured by reducing the real value of accrued pension rights by one-third. These options have different impacts on the macroeconomic development and on intergenerational equity. *Thus, to balance intergenerational considerations while minimising potential macroeconomic costs, the recovery plans should include requiring members to work an additional two years and introducing a mix of lower indexation and higher contribution rates*. The additional two years would realign the retirement age with the proposed changes in the state pension system – *a feature that should be preserved in the future*.

Regulation could be less focussed on short-term developments

The assessment of the long-term health of pension funds is tied to short-term financial market developments. For example, the choice of using the interbank swap yields (to abide by the "fair-value" accounting standards) as the discount rates implies that the net present value of the funds' long-term liabilities has to be adjusted almost on a daily basis. One option would be to allow funds to use less volatile rates, as in other countries. This could be a fixed discount rate (as previously used in the Netherlands and still in used in the United Kingdom and the United States) or a moving average of historical interest rates. *A more structurally solid measure, however, is to use the rate on a long-term high grade investment bond such as corporate AA- bonds. However, if the markets for corporate bonds are considered too volatile, the long-term government bond rate should be used as the discount rate*. To reflect the higher market rates, a historical average of the spread between corporate and government bonds could be added. Such a discount rate would perhaps not fully reflect pension funds' expected returns – a critique also applicable to the current discount rate – but would capture changes in market sentiments without exhibiting excessive volatility. *The standard recovery period of three years comes across as rather short, and at least the exceptional extension should become permanent to allow funds greater flexibility in restoring their funding rates*. Finally, the repetition of large losses within a decade could indicate that stronger risk control could also be helpful.

Pension transfer decisions should be made easier

All members of pension funds have a legal right to transfer their accrued pension rights (but not indexation promises) to another fund when changing jobs However, because pension promises are contingent on indexation, it is difficult to make a rational decision on the benefit of transferring. The main issue is that members have to compare the type and

quality of indexation (which is often linked to the offered accrual rate of pension rights). A further complication is that indexation is conditional on the financial health of the pension funds, implying that members also have to compare investment strategies, etc. Only the most financially literate members are able to make such complicated comparison. The lack of transparency may even make risk-averse workers hesitant to change jobs. Moreover, older workers may refrain from becoming self-employed as there is no pension fund for self-employed and most of the accrued pension rights are accumulated relatively late in peoples' careers due to the important seniority based element in wages. *This problem can be solved by allowing self-employed to stay (longer) with their previous pension funds and pay the full (employer and employee) contributions*. In addition, corporate governance issues should be addressed to ensure that the risk profile of the investment portfolio reflects the desired risk strategy and the members' age structure. In this respect it should be considered to *allow members of persistently under-funded or -performing funds to change funds*, although this would require that the associated transfer of pension rights reflects the financial situation of the fund concerned.

Road congestion has become a major problem

The average commuting time in the Netherlands is longer than in other European countries and commuters also spend more time in congestion. This can partly be explained by the fact that the Netherlands is a densely populated country, where much of the population is concentrated in the so-called Randstad area. The rigid housing market plays some role in explaining the large amount of commuting, indicating that more than just transport policies are required to solve these problems. Road infrastructure also contributes to the problems, as the Dutch highway system is more constrained in terms of capacity than in other OECD countries. Moreover, the secondary road network tends to be less developed than in other countries. The problem is expected to grow further with long-term projections indicating a 50% increase in traffic over the period 2000-20. On current trends, this expansion is likely to materialise soon after 2020.

Congestion can be addressed through more infrastructure and managing demand through improved incentives

In the long-term, infrastructure expansion could ease congestion problems. However, strict zoning and planning regulation make it difficult to find land and lengthy to obtain planning permission. *Thus, to facilitate the expansion of the infrastructure, strict zoning and planning regulation should be eased*. In the short-to-medium term, a more promising reform avenue is to improve the efficiency of infrastructure. Recognising this, a pioneering road pricing scheme covering (nearly) all vehicles and roads in the country has been presented to parliament. Under the scheme, users will pay for each kilometre driven plus potentially a surcharge in bottleneck areas. *The government should pursue the implementation of the innovative and forward-looking road pricing system as it is a powerful instrument to reduce congestion and to pursue environmental objectives.*

Road pricing should address negative externalities

The scheme, as envisaged, sets prices so that revenues from the scheme are no higher than the revenues lost by the planned elimination of the current vehicle taxes. So, for example, trucks will be charged less per kilometre than car while motorcycles are excluded. Thus, the relative road prices will not reflect the external costs of different vehicles. A number of adjustments should be considered to capture all negative external effects. *The possibility in the scheme for implementing congestion charges should be employed rapidly to reduce congestion – a key problem the plan is meant to address. To ease congestion from freight transport, road prices for trucks should set to discourage road haulage during rush hours. Further refinements could include more price differentiation according to vehicle class to better reflect road maintenance and social costs, such as noise and road safety, including extending charges to motorcycles. Such changes may violate the revenue neutrality of the initial implementation. If revenue neutrality is to be preserved, it should be done through the adjustment of other taxes, for example on income or consumption.*

If implementation of a road price system is delayed, the government should rely on alternative price measures

Other options could also be considered if the implementation of a fully-fledged road pricing scheme takes longer than expected. To address the congestion in and around the main cities, *a relatively fast low-cost solution could be to implement a congestion charge system* in these areas. Such a solution would address a considerable part of the congestion problems, though it would not have the same environmental benefits as a fully fledged road pricing scheme. *The negative environmental effects of road transport could be addressed through a higher reliance on taxation of transport fuels*. In this context the tax on diesel fuels is lower than that on gasoline despite its higher carbon content and other polluting emissions. Thus, *taxation of diesel should be increased*.

Commuters should have more alternatives

In order to secure the maximum benefits from the road pricing scheme, it is important that commuters can adjust their travel. This can be achieved through the promotion of alternative working patterns and a more efficient provision and use of public transport. Currently, public transport is considered to be working at full capacity during rush hours. Hence, the supply of such services should be better aligned with changes in demand. *This can be achieved by opening up more for competition and giving private providers of public transport greater possibilities to open new (bus) routes*. To ensure that commuters take informed decisions, *prices in public transportation should reflect the cost of provision and subsidies should be transparent and clearly defined, notably to reflect the positive externalities of having public transportation (e.g. reduction in congestion, improvements in accessibility, and increased mobility)*.

Housing is characterised by a large and rigid social housing sector

Renting is composed of a social housing sector which is large by international comparison (about 35% of the total housing stock) and a small declining private rental segment. The rigidity of the rental sector arises from strict rent regulation and only 10% of all rentals are unregulated. Moreover, entry into the social housing sector is subject to means testing, which is not repeated afterwards. As a result, only 40% of the social dwellings are occupied by households with low incomes, *i.e.* eligible for housing allowance. Turnover is low because moving apartments, even within the housing association, is considered as a new entry and thus potentially leads to large rent increases. In addition, rental contracts are open-ended. As a result, tenants tend not to adjust their consumption of housing to changes in family and income situations.

Creating a more flexible rental sector is necessary and requires for political economy reasons a well-designed transition path, including a gradual reduction in the extent of rent regulation. *A first and easily implementable measure is to introduce free rent setting in all new rental construction*. Such a measure would also attract institutional investors, such as pension funds, boosting the supply of rentals. Next, *rental contract should have time limits to ensure that rents are periodically adjusted to reflect market conditions*. Such measures increase the flexibility of the rental market only over long time periods. A more rapid measure would be *to restrict the role of social housing associations to focus on their core activity of providing social housing to those eligible* and move other parts of the social housing sector into the private rental sector with free rent setting. *This would require the extension of means testing to tenants in social housing and faster rent adjustments in the part of the rental sector that is destined to be liberalised*. Moreover, the scope for a private rental market should be enhanced by gradually lowering the maximum allowed rent in social housing. Rent liberalisation may lead to large windfall capital gains for some social housing associations. Given that the capital of the social housing associations has been build up over time through large direct and indirect subsidies from the government, then *excessive capital gains arising from free rent setting or sale of dwellings should be transferred to the government*. A corollary of introducing free rent setting in a larger part of the rental sector is that *the government should increasingly rely on housing allowances to pursue its social objectives* – a measure that, contrary to rent control, does not hinder mobility.

Housing taxation should be based on ownership rather than purchase

The inflexibility in the owner-occupied segment arises from high transaction costs and rigid zoning and planning regulations which impede the housing supply from adjusting to price signals. This results in welfare loss and reduced labour mobility. *To bolster the flexibility of owner-occupied housing, the transaction tax should be abolished while taxation of ownership should be increased. The latter would ideally take the form of higher taxes on imputed rents. However, many countries have had difficulties in effectively implementing such a tax, so instead reducing the value of mortgage interest deductibility and increasing property taxes could be considered*. In all cases, a key element to effective reform is to ensure that the tax base is calculated using current market prices.

Land management should be reconsidered

Lowering housing subsidies will reduce the tensions in the housing market. In addition, land management policies should be rethought to achieve a more flexible housing supply. The supply restrictions on housing are, to a large extent, an issue of preserving the "green heart" of the Netherlands in the middle of the densely populated Randstad quadrangle, where two-thirds of the area is devoted to (mostly) agriculture and (to a smaller extent) water management, providing a "lung" for this metropolitan area. There is scope to develop more housing in the green heart, but permission is seldom given. Earlier Surveys have recommended *easing zoning laws for new developments*. Nevertheless, in densely populated areas it is important to preserve recreational areas, a function not necessarily provided by agriculture. *Thus, a balanced development of the green heart would include both more housing and new forests and nature parks*. Planning, however, cannot be a standalone measure, and *municipalities should benefit more from new developments, for example in terms of greater tax revenues*.

Chapter 1

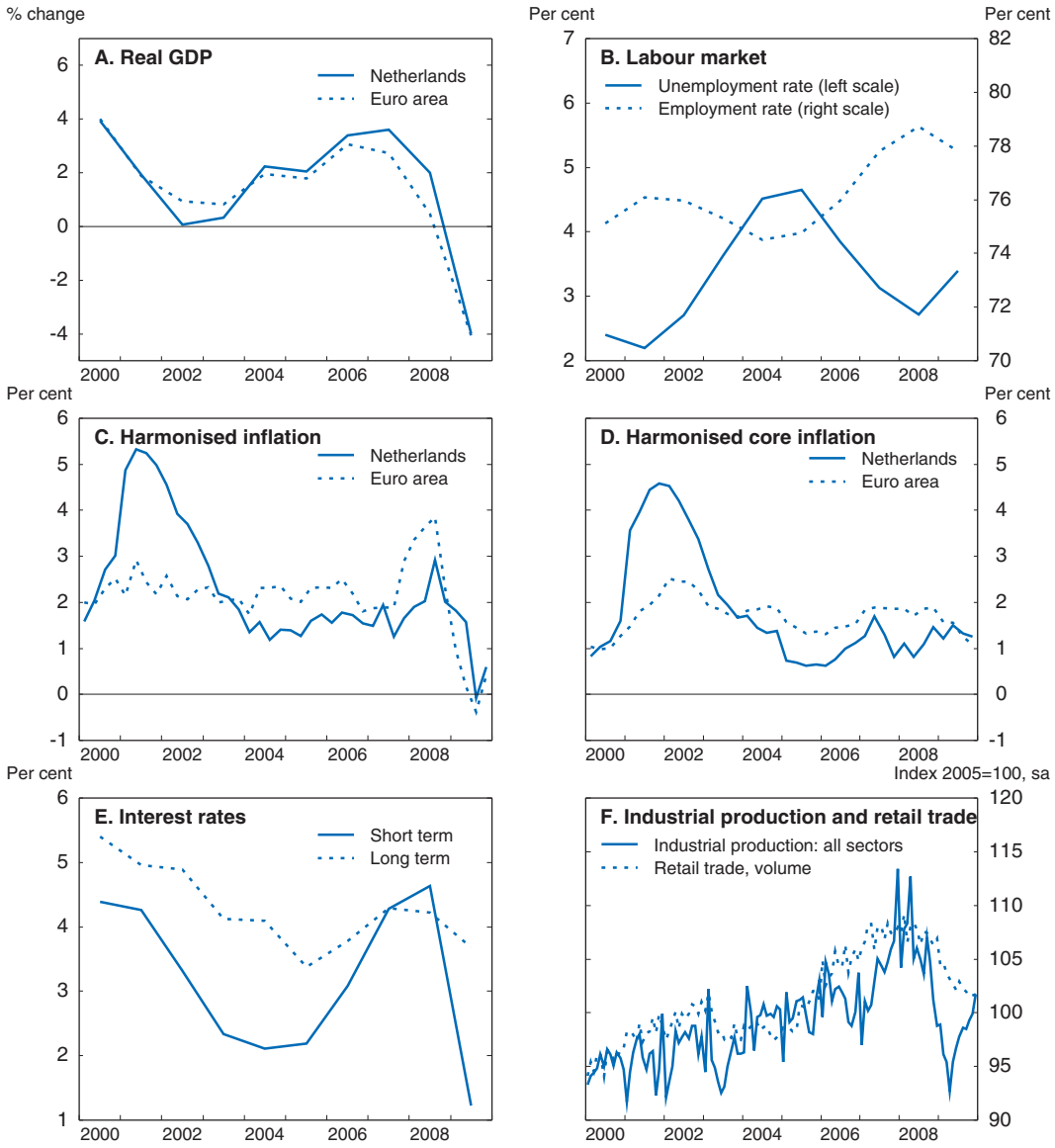
Securing fiscal sustainability and boosting potential growth after the crisis

The economy contracted sharply during the crisis but began to recover slowly from mid-2009. Unemployment rose by less than might have been expected, partly as the labour market was more overheated prior to the crisis than realised at the time. Strict employment protection legislation and the government's continued focus on active labour market policies also played a role. In this context, the most pressing challenge for the near future is to prevent the cyclical increase in unemployment from becoming structural. As in other OECD countries, the upturn is still supported by exceptional fiscal and monetary stimulus. The fiscal policy response was generally well designed, but as a result the deficit widened significantly and fiscal sustainability deteriorated. As economic growth strengthens, the government coming in after the June 2010 elections will be confronted with the task of consolidating public finances without putting the recovery at risk. The most crucial longer-term challenges are to secure fiscal sustainability and raise potential growth.

Despite a deep recession, labour hoarding has surprised on the upside

After four years of strong expansion, the Dutch economy plunged into a deep recession in 2008. In five consecutive quarters of contraction the economy shrunk by over 5% (Figure 1.1). The government responded with an exceptional fiscal expansion and

Figure 1.1. **Short-term economic indicators**

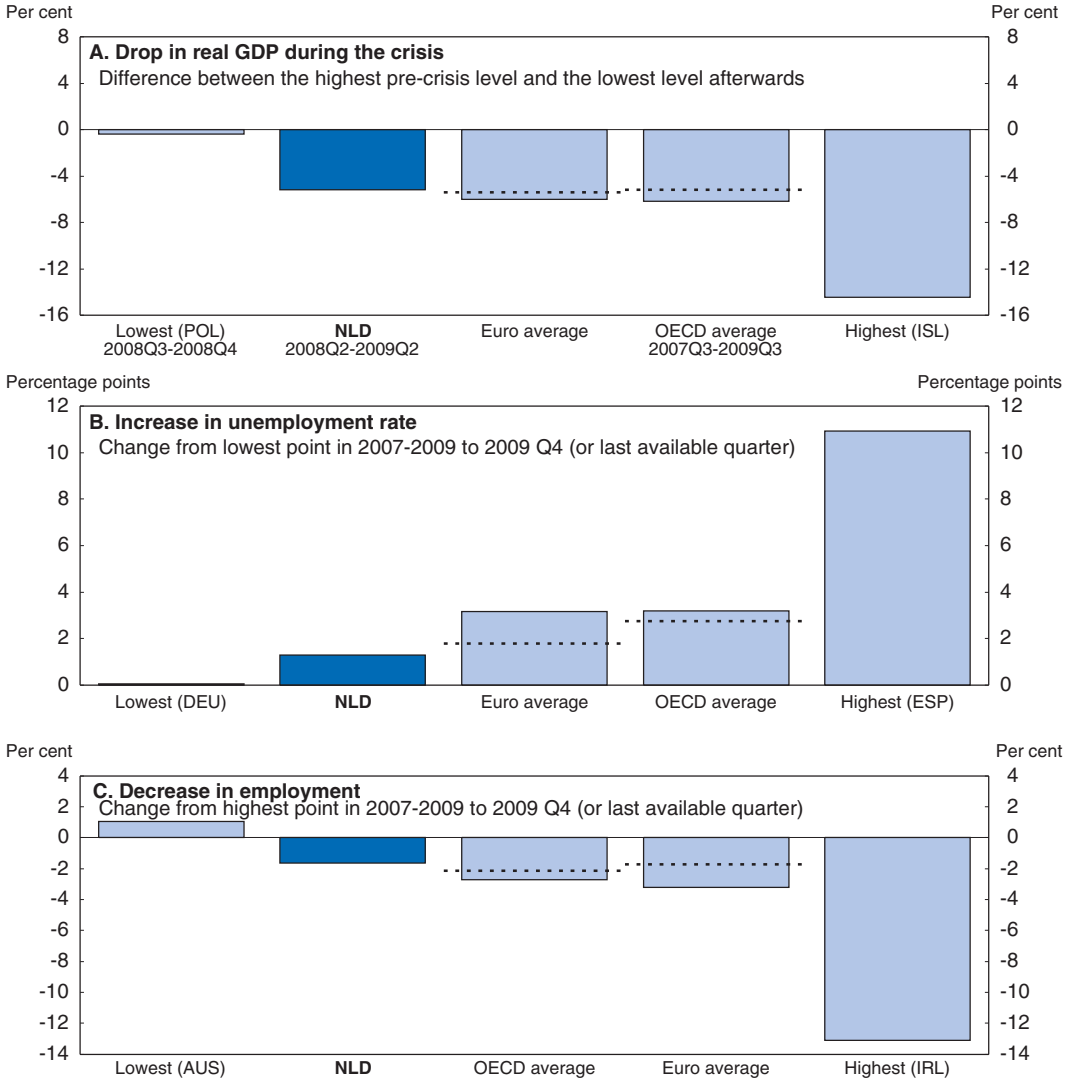


Source: OECD (2010), *OECD Economic Outlook* and *Main Economic Indicators Databases*.

StatLink http://dx.doi.org/10.1787/888932291529

measures to save the financial sector while Euro-area monetary policy became exceptionally supportive. The overall drop in output was in line with other small EU15 countries (Figure 1.2, Panel A). A slow recovery began in mid–2009, as the effects of the fiscal stimulus, easier monetary policy, improved financial conditions and an emerging recovery in world trade (the importance of which is reflected in the current account balance, Box 1.1) began to revive activity. Real income growth will decelerate on the back of higher unemployment, which combined with lower real and financial wealth of households and the need for rebuilding profits will make it likely that the domestic economy will remain sluggish in the short-term and that the large output gap will only narrow significantly in mid-2011 (Table 1.1).

Figure 1.2. **Effects of the crisis on output and the labour market: an OECD perspective**[1]



1. Dotted lines represent Euro area and OECD medians.

Source: OECD (2010), *Analytical Database*.

StatLink http://dx.doi.org/10.1787/888932291548

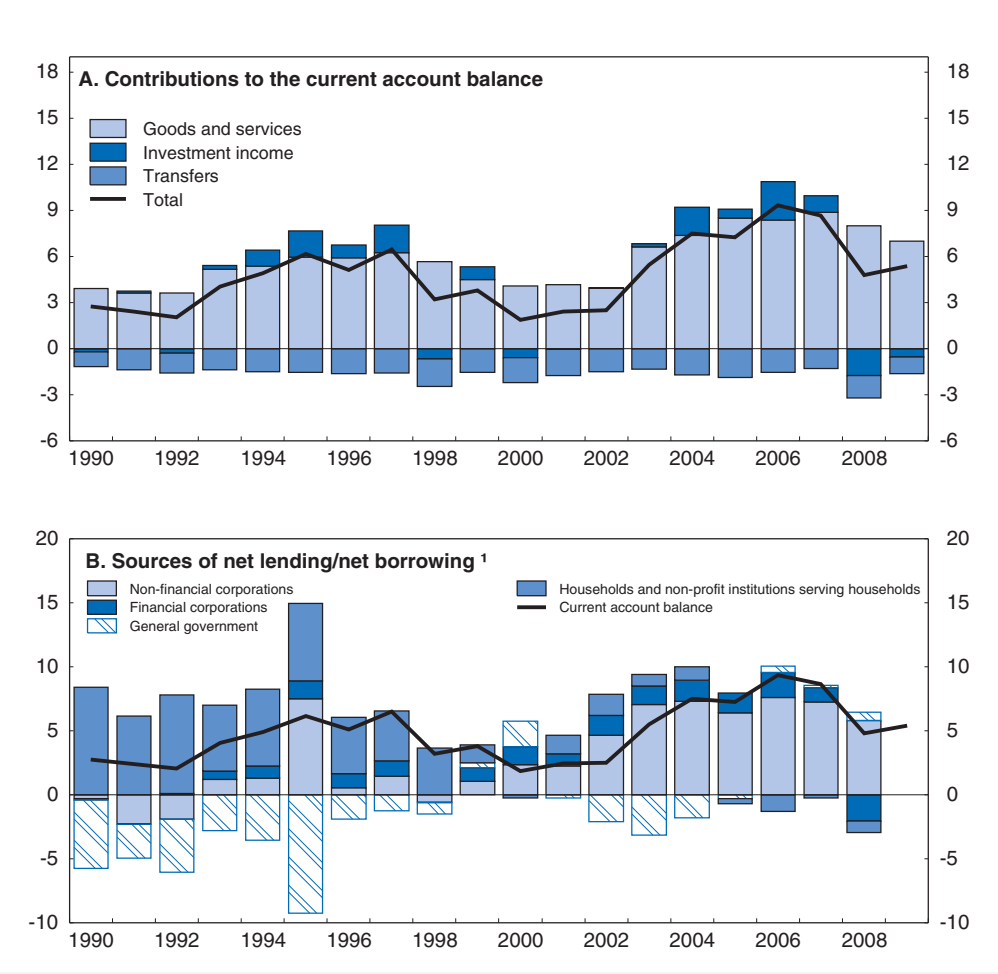
Box 1.1. **Current account developments**

The current account has been in surplus since the early 1980s, exceeding 9% of GDP in 2006, before falling to just above 5% (Figure 1.3, Panel A). The main contribution comes from the large goods trade surplus, mainly with the European Union (exceeding 16% of Dutch GDP in late-2000s), in particularly Germany (3.5-4% of GDP). On the contrary, the Netherlands has had a large and widening deficits *vis-à-vis* Asia (6-7% of GDP), the majority of which is with China. This pattern is largely a result of the internationally large share of re-exports in exports (about half), which are often goods imported from Asia by Dutch companies and subsequently shipped across Europe (CBS, 2009). The role of re-exports and natural gas exports has increased significantly over the 2000s.

Looking at capital flows (Figure 1.3, Panel B), the current account surplus is largely related to foreign direct investment of Dutch non-financial firms – particularly since 2000 – reflecting companies outsourcing production, market expansion and other exploitation of new market opportunities. The contribution from financial companies (which include pension funds) reflects increasing investment opportunities abroad, but turned negative in 2008. Household savings and government deficits, which played a major (mutually offsetting) role in the 1990s, have had little net effect in 2008.

Figure 1.3. **Current account balance**

As a percentage of GDP



1. The decomposition is not yet available for 2009.

Source: OECD, *Analytical Database*, *Annual National Accounts* and *Financial Accounts Databases*.

StatLink http://dx.doi.org/10.1787/888932291567

Table 1.1. **Main indicators for the Netherlands**

Percentage changes from previous period, at constant prices, unless indicated

	Current prices Euro billion 2006	2007	2008	2009	2010	2011
Gross domestic product	540.2	3.6	2.0	–4.0	1.2	2.0
Consumption						
Private	254.9	1.7	1.3	–2.5	0.5	1.3
Government	135.4	3.7	2.0	3.2	1.1	0.5
Gross fixed capital formation	106.4	4.8	4.9	–13.0	–7.5	4.0
Public sector	17.8	4.5	6.2	9.7	1.3	0.9
Residential	34.2	4.2	0.9	–13.8	–7.5	3.8
Business	54.3	5.3	7.0	–19.9	–11.5	5.6
Stockbuilding[1]	1.7	–0.6	0.3	–0.7	1.1	–0.0
Total domestic demand	498.4	2.3	2.7	–4.0	0.3	1.5
Exports of goods and services	393.5	6.7	2.7	–8.2	9.6	7.0
Imports of goods and services	351.7	5.1	3.7	–8.7	9.0	6.9
Foreign balance[1]	41.8	1.5	–0.4	–0.4	1.1	0.6
Output gap[2]		1.5	1.5	–4.1	–3.8	–2.8
Consumer price index		1.6	2.5	1.2	1.0	1.4
Harmonised underlying inflation		1.3	1.1	1.3	1.3	1.3
Unemployment rate[3]		3.1	2.7	3.4	4.6	4.8
Households saving ratio[4]		10.4	8.8	12.9	12.1	11.4
Government financial balance[5]		0.2	0.7	–5.3	–6.4	–5.4
Government debt[5]		45.5	58.2	60.9	67.2	71.5

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP.

1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. As a percentage of potential GDP.
3. As a percentage of labour force.
4. As a percentage of disposable income.
5. As a percentage of GDP.

Source: OECD Economic Outlook 87 Database.

The crisis had a relatively modest effect on the labour market

A particular feature of the crisis concerns labour market developments. Unemployment picked up in late 2008, but remained low throughout the following year. The unemployment rate increased to 4.2% by early 2010, leaving the overall rise among the lowest in the OECD (Figure 1.2 Panel B). The contraction in employment was also smaller than the EU and OECD average, pointing to significant labour hoarding. This has been a prevalent feature of the Dutch labour market, due to high firing costs related to the strict employment protection legislation for workers with permanent contracts (OECD, 2008a). As an implication, initial adjustments mostly affected the flexible layer of workers with time-limited (and often part-time) contracts. Still, the observed increases in unemployment were far below what was initially expected by both national and international forecasters (Dutchnews, 2009) and labour hoarding has been more pronounced than in the economic downswing earlier in the decade.

The limited reaction of the labour market seems to be a result of the interplay of a number of forces. Firstly, the overheating of the labour market prior to the crisis appears to have been more severe than realised at the time. Unfilled vacancies have halved since the all-time peak in 2007, but remain among the highest in Europe. Moreover, the scarcity of skilled workers in the run-up to the crisis and the expectations that population ageing will

restrict labour supply probably made firms reluctant to fire. The cyclical change in working time is more important than in many other OECD countries, reflecting the high share of part-time workers, but also a reduction in paid overtime work in 2009 (OECD, 2009 and CPB, 2010b). A smaller part of the adjustment can be ascribed to a reduction of working hours by the relatively numerous self-employed. A more traditional discouraged worker effect has also been at work (for example the number of students enrolled in further education has increased much more than expected by the government).

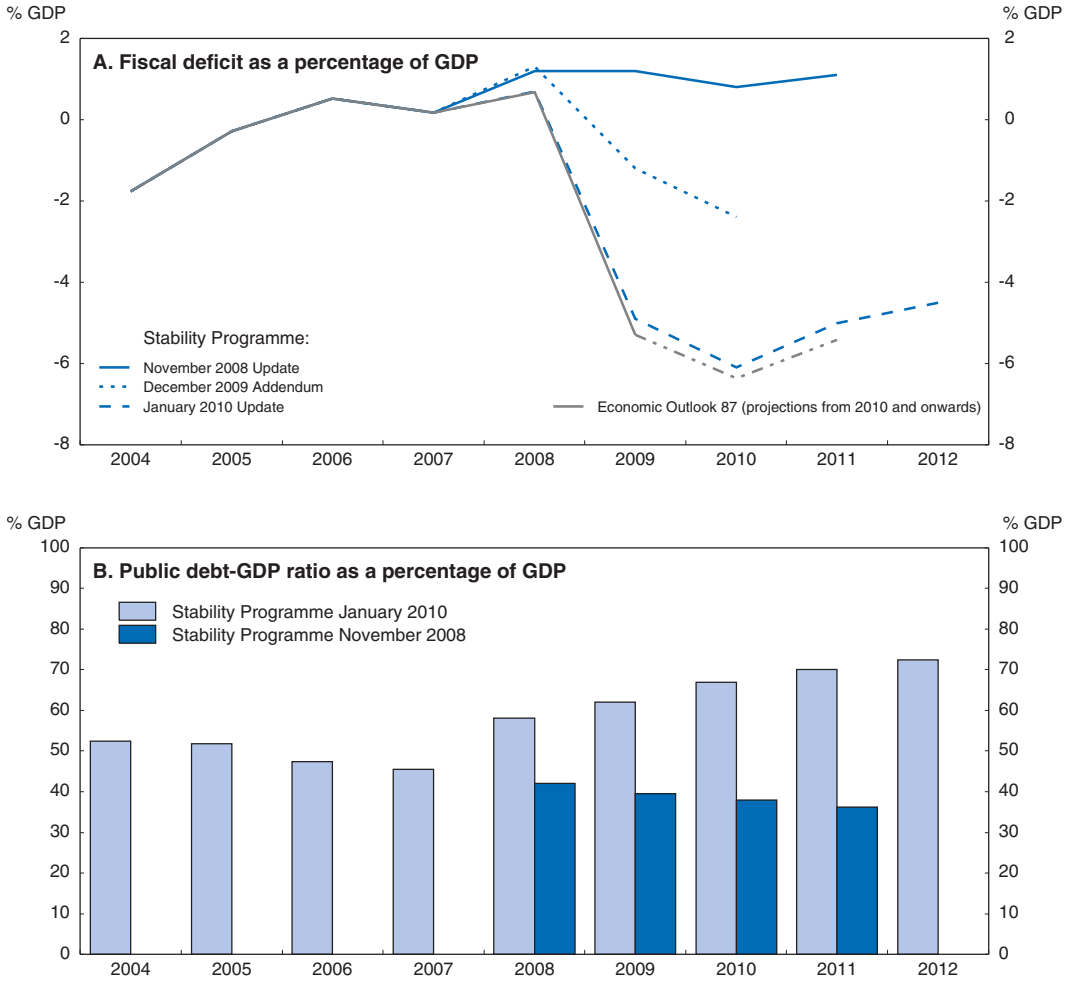
The government also contributed to curbing the unemployment increase. The government-sponsored reduced working hour programme has lowered the cost of labour hoarding by allowing companies with significant and temporary declines in activity to put partly redundant workers on unemployment benefits for the hours they do not work.[1] The scale of the Dutch programme is limited compared with similar programmes elsewhere in the OECD (*e.g.* in Belgium and Germany), involving only some 40 000 workers in autumn 2009. A number of checks and balances enhance the efficiency and reduce the deadweight loss of the programme. Entry requirements are relatively strict, as companies applying have to demonstrate a substantial reduction in turnover. Moreover, companies can only apply for time limited periods, which depends on participation. Companies that fire their workers during or shortly after using the scheme have to return to the state all or half of the benefits paid out. To further ensure that employers cannot "park" their employees in the programme, the latter are automatically made available for employment by other companies and have an obligation to participate in training programmes. This helps secure a continuous reallocation of workers, improving labour market matching and promoting long-term growth (OECD, 2009). The scheme is budget-dependent and hence by design limited in time – it is to cease by July 2011.

The main challenge ahead is the exit strategy from stimulus policies

As in many OECD countries, the recovery is supported by a strong fiscal stimulus. The government allowed built-in automatic stabilisers to work fully during the crisis and suspended the fiscal warning rule, which otherwise would have required government spending cuts when the deficit exceeded 2% of GDP. Furthermore, in order not to induce pro-cyclical policies, unemployment benefits were (temporarily) excluded from the expenditure rule. This was topped up by discretionary fiscal measures of above 2% of GDP over 2009-2010 (including the crisis-related March 2009 fiscal stimulus package of about half of the total) which, according to OECD calculations could help sustain economic activity by a cumulated ¾ to 1% of GDP over the two years (Box 1.2).

The government's reaction was timely and generally well-targeted at cushioning the shocks to the labour market, providing companies with liquidity and sustaining demand. Most measures will expire automatically by the end of 2010 and require an explicit decision to be prolonged. Nevertheless, as a result the 2008 budget surplus of 0.7% turned into a deficit of over 5% of GDP in 2009, and is expected to widen further in 2010 (Figure 1.4, Panel A). About two thirds of the deterioration is due to automatic stabilisers, the rest coming from discretionary measures and lower natural gas revenues. Together with a contraction in nominal GDP and interventions in the financial markets, this has increased the public debt to GDP ratio by some 15 percentage points with respect to pre-crisis levels to 61% of GDP at the end of 2009. This means the public-debt-to-GDP ratio was some 22 percentage points higher than expected before the crisis (Figure 1.4, Panel B).

Figure 1.4. **Public finances have deteriorated**



Source: OECD, *OECD Economic Outlook 87 Database*, and Stability Programmes of the Netherlands.

StatLink http://dx.doi.org/10.1787/888932291586

Box 1.2. **The discretionary fiscal expansion in 2009-2010**

The cumulated discretionary fiscal stimulus provided by the government over 2009-2010 amounts to above 2% of GDP. The stimulus broadly consisted of two sets of measures:

- Measures in the 2009 budget, mostly on the revenue side, were taken in light of the economic slowdown in 2008. They were preceded by an announcement that the planned 1 percentage point increase in the VAT rate will be foregone. The unemployment insurance premiums were lowered (scrapped for employees) and a number of tax measures were introduced (for households: income tax credit for working couples, earned income tax credit; and for companies: temporary easing of depreciation rules). The cumulative stimulus over 2009-2010 is about 1 ¼ per cent of GDP.
- In March 2009 the government presented a crisis-related fiscal stimulus package totalling another 1¼ per cent of GDP (over 2009-2010). The measures, a fifth of which

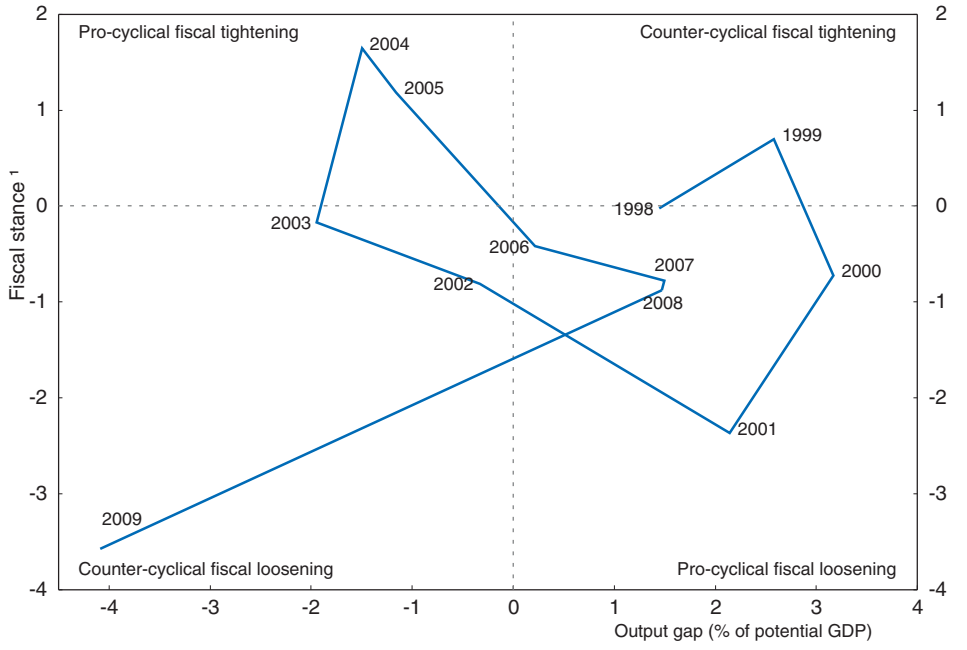
Box 1.2. **The discretionary fiscal expansion in 2009-2010** *(cont.)*

came from lower levels of government, were largely on the spending side and focused on four main pillars, similar in terms of magnitude:

- maintaining employment (*e.g.* a reduced working time scheme, activation measures, retraining and job-search assistance, a debt assistance programme for newly unemployed);
- shifting forward a number of planned public investment projects (monument restoration, costal works, waterway, road and bridge maintenance and construction works, health care centres, maintenance and construction of youth centres, schools, etc.);
- providing liquidity to companies (relaxation of rules on carrying over losses from 2008, broader R&D tax rebate, abolishing the air flight tax, energy investment tax credit, various tax cuts for SME's, etc.);
- "economic sustainability" – various environmentally-motivated measures, including investments in energy efficiency and a car scrapping scheme.

As a result, the Dutch public finances saw the largest fiscal expansion on record in 2009 (Figure 1.5). The budget for the following year contains few new stimulus measures and can be seen as supporting economic activity, while laying grounds for a transition to a more restrictive stance necessary to restore fiscal sustainability. Moreover, most measures are temporary and only about 10% of the stimulus (0.1% of GDP) will automatically continue beyond 2010.

Figure 1.5. **The fiscal stance has been expansionary**



1. Fiscal stance is measured by the changes in cyclically-adjusted primary balance, excluding natural gas revenues. The potential output and thus the output gap have been revised since the previous survey.

Source: OECD, *OECD Economic Outlook 87 Database*.

StatLink http://dx.doi.org/10.1787/888932291605

The reaction of fiscal policy to the crisis should be viewed in the context of the strong Dutch fiscal policy framework, which has been discussed in more detail in the previous *Survey*. The framework is viewed favourably in an international context because of the reliance on strict multi-year expenditure rules, the important role of independent bodies (namely the CPB) and the fact that it has been consistently endorsed by successive governments (Bos, 2008). Nevertheless, there may still be room for further refinement. Part of the fiscal expansion came from the fact that the 2007 expenditure rules were based on real growth expectations which have failed to materialise. However, a mechanical cutback in spending, which would be the outcome if the rules were adjusted in line with GDP, would have been pro-cyclical. Rather, excluding highly cyclical components from the expenditure rules could help reduce the tendency for pro-cyclicality of other government spending. In this respect, in March 2009 the government temporarily excluded unemployment benefits from the expenditure rule.[2] In line with OECD recommendations this measure should become permanent. The previous *Survey* recommended excluding non-tax revenue items, such as dividends from the ceilings and treating them as windfall profits to reduce public debt. This has been implemented for any dividends (and other revenues) arising from the interventions in the financial markets. A more radical measure would be to use the full revenues from natural gas (in the order of 1.5% of GDP per year in the recent years), and other windfall gains explicitly for debt reduction. Currently, a significant part of gas revenues is attributed to the FES (*Fonds Economische Structuurversterking*) fund which is used for investment in broadly defined infrastructure. In 2008 the FES income from gas revenues was changed from a percentage share to a fixed amount due to mounting expenditure pressures. Although gas revenues are not used for the calculations of expenditure ceilings, in the past there have been some indications that including them in the general budget may lead to financing fiscal expansions (Wierts and Schotten, 2008).

The deterioration of fiscal sustainability requires an exit strategy

Fiscal sustainability has come under severe pressure. Prior to the crisis the sustainability gap of public finances was 1.3% of GDP as compared with an EU average of 3.4%, reflecting a favourable fiscal position but a large expected budgetary impact of ageing (EC, 2006).[3] Under the impact of the crisis the gap grew to 6.9% of GDP in 2009 – slightly above the EU average (EC, 2009). The increase reflects the deterioration in the budgetary position (5.0 percentage points) and a small increase in the expected long-term cost of ageing (0.6 percentage points). Developments that followed the release of the Commission's estimate (larger than expected fiscal deficit and upwards revised estimates of life expectancy, Dutchnews, 2009) increased the sustainability gap estimate to 8.5%. Recent work from the CPB, confirm that the sustainability gap is substantial, though the estimates are smaller (4.5% of GDP in 2015) as they take into account expected structural improvements arising from a range of already adopted measures and lower assumed increases in ageing related spending (CPB, 2010a).[4]

There is a need for balancing fiscal stimulus against fiscal sustainability. As the economy recovers, the cyclical part of the deficits should eventually disappear. However, OECD estimates place the cyclically-adjusted deficit for 2010 at about 4% of GDP (½ percentage point higher than the year before), pointing to the longer term need for coupling significant consolidation effort with efforts to contain the increases in the ageing-related costs. The main short-term focus should be to withdraw the fiscal stimulus without undermining the economic recovery, which is likely to be fragile throughout 2010. The

government is planning medium-term fiscal consolidation to start in 2011, if economic growth is sufficiently strong (Box 1.3). The plan stipulates a minimum of 0.5% of GDP structural improvement per year, until a structural balance is reached. Initially, the consolidation will be based largely on the withdrawal of existing stimulus (0.5% of GDP), with some savings on public administration (0.3% of GDP). As according to OECD projections, growth is likely to strengthen significantly in 2011, the government should be prepared to implement stronger consolidation.

Box 1.3. **The medium-term fiscal consolidation proposal**

Alongside with the 2010 budget the government has proposed a consolidation path to achieve a structural balance. The 2010 budget remains expansionary in order to support the fragile recovery, and only few savings measures have been included (minor cuts in aid budgets and workforce reintegration, frozen child benefits and student grants). The proposal stipulated:

- The measures for 2011 to be linked directly to growth forecasts:
  - if growth is above 0.5% in 2011 – most of the stimulus package will not be extended to 2011, yielding about 0.5% of GDP of savings;
  - if growth is between –0.5% and 0.5% then part of the stimulus will remain in place;
  - if growth is below –0.5% then the stimulus of about 0.5% of GDP will be prolonged.
- In the following years, an annual structural improvement of at least 0.5% of GDP in the balance, higher if growth permits.
- Savings in public administration and dedicated funds would yield some 0.3% of GDP.
- Deficits of lower levels of government were to be voluntarily limited to a total of 0.5% of GDP.

The medium-term consolidation plan is a welcome first step, but will not suffice to close the sustainability gap. According to OECD calculations to close the gap in line with the minimum consolidation effort planned by the government (0.5% of GDP per year), the medium-term plan would have to be prolonged by a decade or so. Thus as an important next step, concrete proposals should be presented on how to achieve the necessary long-term savings. In this respect, the government has identified three general areas for action (pension age increase, healthcare savings and higher property taxation). These measures are expected to improve the structural balance by 1.3% of GDP but will only materialise over the longer term. Moreover, some of the expected savings in the health sector have been judged as overoptimistic by the CPB (2009a) on the grounds that the policy to introduce more market forces in this sector may actually lead to higher demand. An important further step in the government's strategy was to setup 20 study groups in key policy areas to search for potential structural savings of 5 to 7% of GDP (Box 1.4).

Structural reforms are necessary to contain the cost of ageing and boost tax bases. The total costs of ageing for the budget, relative to GDP, are set to increase by over 9 percentage points between 2010 and 2060, the fifth highest in the EU and double the EU average (EC, 2009 and 2010). The costs of long-term care, already the highest in the EU, are expected to rise by 4.6 percentage points – four times the EU average. The expected 4 percentage point increase in pension spending is also above the EU average. These estimates are likely to

Box 1.4. **Fundamental Budget Review – government study groups on budgetary savings**

In October 2009 the government established 20 study groups in key policy areas (Table 1.2) to review spending and fiscal expenditures in its each of the areas. Each of the groups is to come up with proposals how to find structural savings for a total of 20% within its area. Together, the expected potential saving proposals are to amount to EUR 30-40 billion. According to the guidelines provided, the search for savings is to focus on: harmonising and simplifying regulations; strengthening the interaction between different instruments and institutions; evaluating the costs and benefits of existing policies; reducing implementation costs and promoting effectiveness; examining alternative funding and financing systems (including private financing); encouraging individual responsibility and increased use of polluter-pays principles; a new division of responsibilities for municipalities and provinces; and setting less ambitious national objectives and policy aims. An additional study group on the tax system was formed to consider the revision of taxation in light of the economic efficiency of the system, the stability of tax revenues, the sustainability of tax bases and the room for simplification.

Table 1.2. **Policy areas of the study groups on budgetary savings**

	Policy themes		Policy themes
1	*Energy and climate*	11	*Curative care*
2	*Living environment and nature*	12	*Long-term care*
3	*Mobility and water*	13	*International collaboration*
4	*Housing*	14	*Asylum, immigration and integration*
5	*Child care and other schemes for children*	15	*Public safety and terrorism*
6	*Productivity in education*	16	*Tax administration*
7	*Higher education*	17	*Supplementary benefits*
8	*Innovation and applied research*	18	*Public administration*
9	*Distance to the labour market*	19	*Business administration (including of independent administrative bodies)*
10	*Unemployment*	20	*International security*

Source: Dutch Government.

The groups presented their results on April 1st 2010. Some of the elements of the proposals most relevant for this *Survey* are:

- *Labour market:* limiting the duration of unemployment benefits to one year (potentially with an additional 6 month benefit based on the social minimum level); combining unemployment insurance with individual savings accounts; reforms of the dismissal system, including caps on severance pay, linked to employment history; obligations for employers to pay first six (or nine) months of unemployment benefits.
- *Mobility:* introducing a congestion charge and a road-pricing system for freight (similar to that in Germany) in combination with reducing infrastructure investment.
- *Housing market:* focusing implicit rent-regulation subsidies on lower incomes, reform of the fiscal treatment of home ownership; changing the transaction tax on house sale into a property tax; reforming zoning procedures.

increase in response to the upward revision in life expectancy. At the same time, the increase in the old-age dependency ratio is relatively low. Thus, the main concern is the generosity of the Dutch system and increases in ageing-related spending need to be curbed to secure fiscal sustainability.

The proposed increase in the official retirement age from 65 to 67 years (in two steps in 2020 and 2025) would reduce pension spending and expand the tax base; when fully implemented the structural budget should improve by 0.7% of GDP. This is a welcome measure, and should be pursued. Some additional savings (of as much as a cumulated 2½ per cent of GDP) could be reaped if the increase in pension age was more front-loaded (for example by one and a half months per year starting 2011). This would also limit the incentives for early retirement relative to the planned one year increases. As life expectancy is likely to continue increasing, the official retirement age should become structurally linked to life expectancy as recommended in previous *Surveys*.

Eventually, the government should exit from its participation in the financial sector

The international financial crisis brought the large and concentrated financial sector to the brink of collapse in late 2008. ABN AMRO, which had been freshly taken over by an international banking consortium in the largest banking deal in history, and one of the consortium partners, Belgian-Dutch Fortis, saw liquidity dry up following the highly leveraged transaction. The financial crisis also spread to other major Dutch financial conglomerates, including ING which was highly exposed to the US mortgage market. The government intervened with an array of measures, including nationalisation of Fortis Netherlands/ABN AMRO, recapitalising other major groups, providing direct loans, guaranteeing short-term interbank loans, taking over some risky assets and increasing depositor protection (Box 1.5). Guarantee facilities for banks lending to companies were widened. Overall, the government reserved funds worth half of annual GDP for interventions in the financial markets, though at the peak of the crisis direct interventions and guarantees issued summed up to about a quarter of GDP. Apart from the non-utilised guarantees, the measures were financed by public debt, which as a result increased by about 14% of GDP in 2008 (Table 1.3). In return, the state became the owner of a large commercial bank (Fortis Netherlands), a consortium partner in another (ABN AMRO) and holds participations in another three key players. The impact on net debt will be clear only once the state exits from the sector. The stress tests for the financial sector indicate that the sector is well capitalised and although the growth of bank lending, both to households and companies, has slowed significantly on the back of tighter lending conditions and lower demand, there are few clear signs of a credit crunch.[5]

The "fix it and exit" strategy should be pursued to reduce public debt and avoid distortions to competition. This should be done in light of two key objectives: assuring that the fragile stability is not put at risk and improving the financial framework in order to minimise the likelihood of similar developments in the future. The government has made it clear that it does not wish to remain in the financial sector and a number of the measures are designed to expire automatically (*e.g.* the interbank lending guarantees, the direct loans). As for the recapitalisation, the government-provided capital is significantly more expensive than ordinary shares for the companies (in terms of dividend). The relative cost of government capital will further increase in the next years, intensifying the incentive for the concerned companies to buy the shares from the state. Hence, the main unresolved issues concern the illiquid asset backup facility provided for ING and the ownership of Fortis Netherlands/ABN AMRO. No concrete strategies in this respect have been formulated so far.[6] When designing exit paths, timetables and identifying measures which will trigger the government's pull-out of the sector, the key focus should be on the credibility of the

Box 1.5. **Government intervention in the financial sector**

Nationalisation (and related measures)

ABN AMRO and Fortis Netherlands – among the world's largest financial groups before the crisis – were taken over in October 2008. The intervention entailed nationalisation of (mainly) the Dutch activities of the group, direct loans and a government guarantee against a portfolio of Dutch mortgages. Although by early 2010 the government involvement was smaller, at the peak over 12% of GDP worth of state funds were directly engaged.

Recapitalisation

Capital provision scheme. In October 2008 the government committed EUR 20 billion (over 3% of GDP) for the recapitalisation of financial institutions. In return for capital, the government is to receive non-voting shares, which pay a significantly higher dividend than regular shares (if dividends are paid at all). The cost of state-provided capital increases in time and the shares can be converted to regular (voting) shares after 3 years, in which case the government can opt for a payback plus accrued interest. In late 2008, three large companies used the scheme (ING, Aegon Insurances and SNS Reaal Bank) for a total of 2½ per cent of GDP. Nearly half of this has been paid back by early 2010.

Guarantees

Depositor protection scheme. In early October 2008, the scheme was extended to the ceiling of EUR 100 000 per depositor per bank (from EUR 38 000).

Bank debt guarantees. In mid-October 2008 the government committed EUR 200 billion (one third of GDP) to guarantee short- to medium-term debt instruments issued by banks. Banks who want to benefit need to be solvent and the fee is inversely related to their creditworthiness. The scheme was subsequently extended for loans of up to 5 years and has been extended until mid-2010. By early 2010 the guarantees actually issued amounted to about a quarter of available funds, with several large companies benefiting (Leaseplan, NIBC Bank, SNS Reaal Bank, ING and Fortis Netherlands).

A *Credit Guarantee Scheme* for financial institutions servicing credits to SME's was established in October 2008. The budget is capped at 0.2% of GDP and the scheme will expire in 2012. An additional *Export Credit Guarantee Scheme* was introduced to address liquidity problems of export insurance providers. The maximum state exposure is about 0.3% of GDP and the scheme expires by the end of 2010.

Illiquid asset back-up facility. In January 2009 (effective April) the government took over 80% of the risk of a EUR 27.7 billion (5% of GDP) portfolio of US mortgages from ING for a discounted price and in return for a guarantee fee.

Other measures

The Icelandic Depositor Insurance Scheme received a loan of EUR 1.3 billion (0.2% of Dutch GDP) to assure swift payout to Dutch depositors with accounts in Icesave (a branch of an Icelandic bank). The loan is to be repaid by 2024 and the government topped up the Icelandic scheme with another EUR 100 million in line with the conditions of the Dutch equivalent (from about EUR 20 000 to 100 000).

A *short selling ban* for financial companies was introduced in October 2008. It was annulled in mid-2009 and replaced by a requirement that short positions above a certain threshold have to be reported to the regulator.

Source: Stability Programme of the Netherlands, January 2010 Update, Dutch Government.

Table 1.3. **Financial market interventions**[1]

Billions of EUR	2008	2009
Nationalisation and related (loans and recapitalisation)		
Fortis Netherlands/ABN AMRO	16.8	1.4
RFS/ABN AMRO	6.5	
Bridging loan	44.3	–36.5
Spin-off of corporate insurance branch		–0.4
Further recapitalisation (partly through a loan)		2.6
Interest paid to government	–0.5	–0.7
Recapitalisation		
ING, Aegon, SNS Reaal	13.8	
Repayments received by government		–6.2
Interest and dividends paid to government		–1.3
Illiquid asset backup facility		
Obligation to ING (no cash flow)		15.9
Fees paid to ING		3.9
Fees received by government		–3.9
Other loans		
Iceland (Deposit Insurance)	1.2	0.2
Net cost (% of GDP)	**13.8**	**–4.2**
State guarantee facility on interbank loans		
Guarantees issued	2.7	47.5
Guaranteed loans already expired		–3.1
Fees received by government		–0.1
ABN AMRO Capital Relief instrument		32.8
Exposure relative to GDP (%)	**0.5**	**13.1**

1. Rounding errors possible, includes both on and off budget items.
Source: Stability Programme of the Netherlands, January 2010 Update.

strategy, its communication and transparency, while the possibility of the state incurring capital losses should not prevent the withdrawal.

As called for by international organisations (for example the G20), the chances of a similar financial sector collapse in the future should be reduced by improving macro-prudential regulation and supervision in cooperation with European and other international institutions, such as the Financial Stability Board. Dutch-specific problems will also need to be addressed, such as the high concentration of financial services – an issue raised in the 2006 *Survey* (OECD, 2006). Furthermore, OECD research (Ahrend *et al.*, 2009) indicates that the regulation, although in conformity with international requirements, appears relatively lax compared to the OECD average in three areas: *i)* rules on capital requirements, *ii)* accounting and provisioning rules and *iii)* exit rules and disciplining (rules relating to the forced exit of banks, bankruptcy procedures, and the powers of supervisors to act if the solvency of a bank is under threat). A number of sources attribute the vulnerability of the Dutch financial system to high leveraging, a likely result of the current tax system which favours debt over equity financing (Bijlsma and Suyker, 2009 and the *Government Tax Study Committee*). Finally, a regulatory aspect became evident when the branch of an Icelandic bank (Icesave) collapsed and government funds were effectively used to bail out the depositors, who included local municipalities (Box 1.5). In the future, the regulator should be clear about the risks associated with deposits in banks not covered by the Dutch deposit protection scheme.

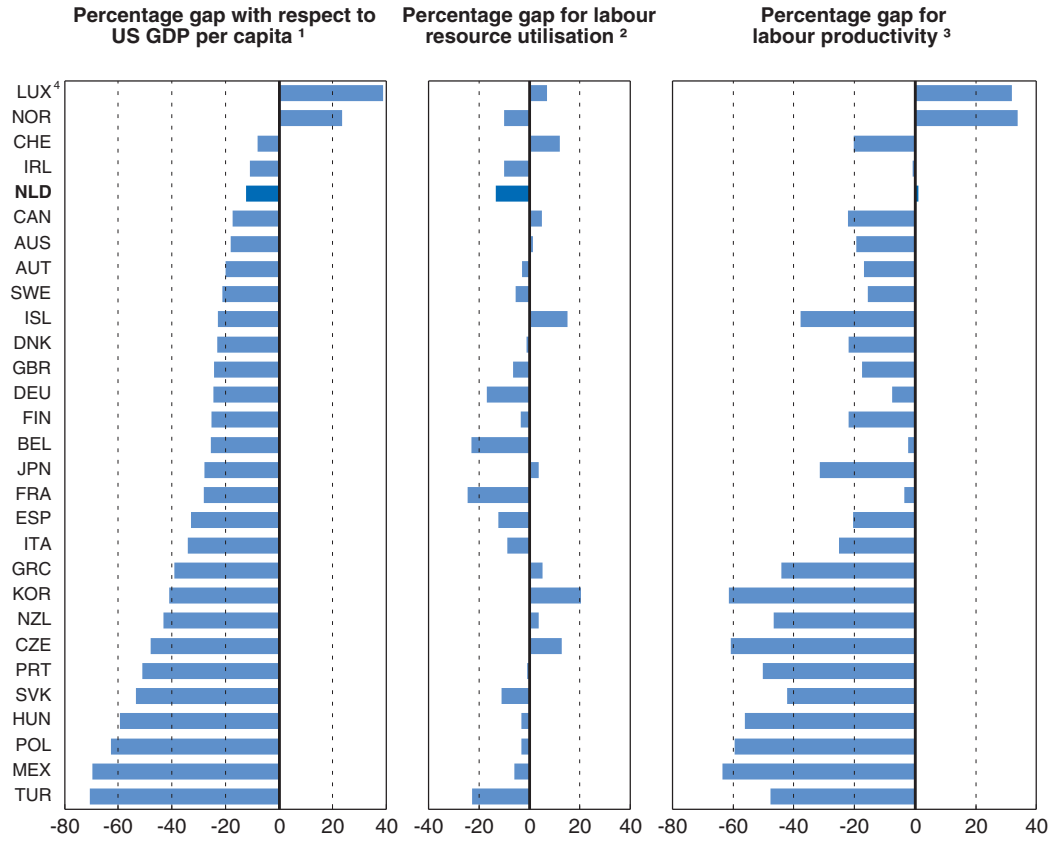
Boosting potential growth requires continued efforts to enhance activation policies

The fiscal efforts should be accompanied by structural policies to improve the growth prospects. The upcoming effects of ageing have, already before the crisis, led to expectations of lower potential output growth in the future. The crisis itself is likely to have an additional negative effect on potential output through a number of channels: capital scrapping and higher real capital costs; hysteresis effects in the labour market; and potentially through subdued productivity growth (OECD, 2010). The longer-term implications are uncertain, but it seems likely that the fall in potential output growth will be temporary but even as potential growth recovers to its pre-crisis path there will be a permanent loss in the level of potential output, strengthening the case for structural efforts (Furceri and Mourougane, 2009).

Reforms should aim particularly at improving relatively low labour utilisation (Figure 1.6) which, as discussed in the previous *Survey*, results largely from the low average

Figure 1.6. **The source of real income differences**

2008



1. GDP in US dollar at current prices and purchasing power parities.
2. Measured as total number of hours worked per capita.
3. Labour productivity is measured as GDP per hour worked.
4. In the case of Luxembourg, the population is augmented by the number of cross-border workers in order to take into account their contribution to GDP.

Source: OECD (2010), *Productivity Database*, March.

StatLink http://dx.doi.org/10.1787/888932291624

amount of hours worked per worker. To increase participation and hours worked (in particular of older and younger persons, females and immigrants), efforts should focus on extending working life, improving activation and stimulating job-search. Detailed recommendations regarding increasing hours worked, in particular of females, were discussed in the previous *Survey* and focused largely on lowering the marginal effective tax rates and improving the provision of childcare services. While a number of measures were implemented (Box 1.6), areas with little progress remain (Annex 1.A1). A particular challenge will come from the fact that spending on active labour market policy measures is to a large degree pro-cyclical, reducing available resources per unemployed as the labour market deteriorates. This issue is not as pressing in the Netherlands as in some other

Box 1.6. **Additional activation policy measures introduced in 2009**

Increasing participation of older people

- Employers hiring benefit recipients older than 50 years will receive a EUR 6 500 discount on social security contributions (for three years).
- Employers who keep employees older than 62 years will receive an annual EUR 2 750 reduction in social security contributions (for three years). This reduction will be EUR 6 500 from 2013 onwards.
- Workers continuing to work after their 62nd birthday will receive a so-called work continuation bonus of up to EUR 4 591. After their 65th birthday they can opt for receiving part of their state pension or to suspend their state pension for up to 5 years and in return receive a higher pension afterwards.

Increasing hours worked and activation of women

- An income-dependent combination tax credit (IACK) was introduced to encourage the lower-earning partner to extend hours worked.
- Non-working and non-benefit receiving people are encouraged to take up work through a new income-dependent tax credit (IAK).
- From 2009 workers with non-working spouses are gradually losing the current tax credit pursuant to which the so-called general tax credit can be transferred.
- Single parents on benefits with children below 5 years are no longer obliged to apply for employment, but are required to attend schooling as an alternative and self-employed women will become entitled to publicly paid pregnancy and parental leave (max minimum wage).
- Low income families will receive more non-monetary support (computers for children and sport club memberships) from municipalities. Municipalities will also have more scope for providing additional financial support to families that have been on low income for a very long time.

Activating and stimulating younger people

From 1 October 2009 onwards, under the Investment in Youth Act young people no longer receive social security benefits, but municipalities must either offer them work, training or both (for which they may receive financial support). In addition, municipalities will receive a lump sum of EUR 2 billion for stimulating people to participate in integration, work or school. This is basically the bundling of the three existing budgets in these areas intended to allow a more effective use of resources.

Box 1.6. **Additional activation policy measures introduced in 2009** *(cont.)*

Promoting re-integration

Employers may receive a one-year wage cost subsidy of up to half of the minimum wage if they hire long-term unemployed less than 50 years old (on benefits for at least one year) or partially disabled. The new employees have to be hired on full-time contracts and for at least one year. The subsidies can also be used to provide bridging jobs (for up to a year) for partially disabled and can be combined with education and an (employment) bonus.

Additional work incentive measures

- Unemployment benefit contributions paid by employees were abolished in 2009.
- The definition of suitable work was broadened. Unemployed on benefits since one year must accept job offers with wages below their benefits. A temporary benefit supplement will be provided to ensure that work pays.
- Social assistance recipients, long-term unemployed and the partially disabled can be offered placements for two years to gain work experience. They retain their benefit plus a bonus ensuring they are better off financially.
- The employment placement service (CWI) and the benefit providers (UVW) are merged and a network of 100 Service Desks for Work and Income is being created to ensure that employers and job seekers deal with a single organisation.

OECD countries (OECD, 2009) but increasing the counter-cyclicality of activation policies should be considered.

From a political economy point of view, measures to increase participation are easier to implement when the economy is recovering because of the increasing employment possibilities. The activation policies in place were fully described in the previous *Survey*, and since then the government has implemented new measures focussing on strengthening participation incentives for older workers and female workers, search incentives for younger people and on providing better placement services to job seekers (Box 1.6). A number of measures were crisis-related, mostly centring on providing better job-placement service through improved dissemination of labour market information, more targeted services through the establishment of mobility centres and greater local-level cooperation. The room for private initiative in job counselling was expanded and more emphasis was put on training of low-skilled employees and unemployed, including retraining grants for employees with a high unemployment risk. An agreement with social partners stipulated that school-leavers that have been unemployed for three months should be offered a work traineeship place. In addition, younger people are now allowed to have four consecutive time-limited contracts, against three prior to the crisis, to improve their labour market prospects.

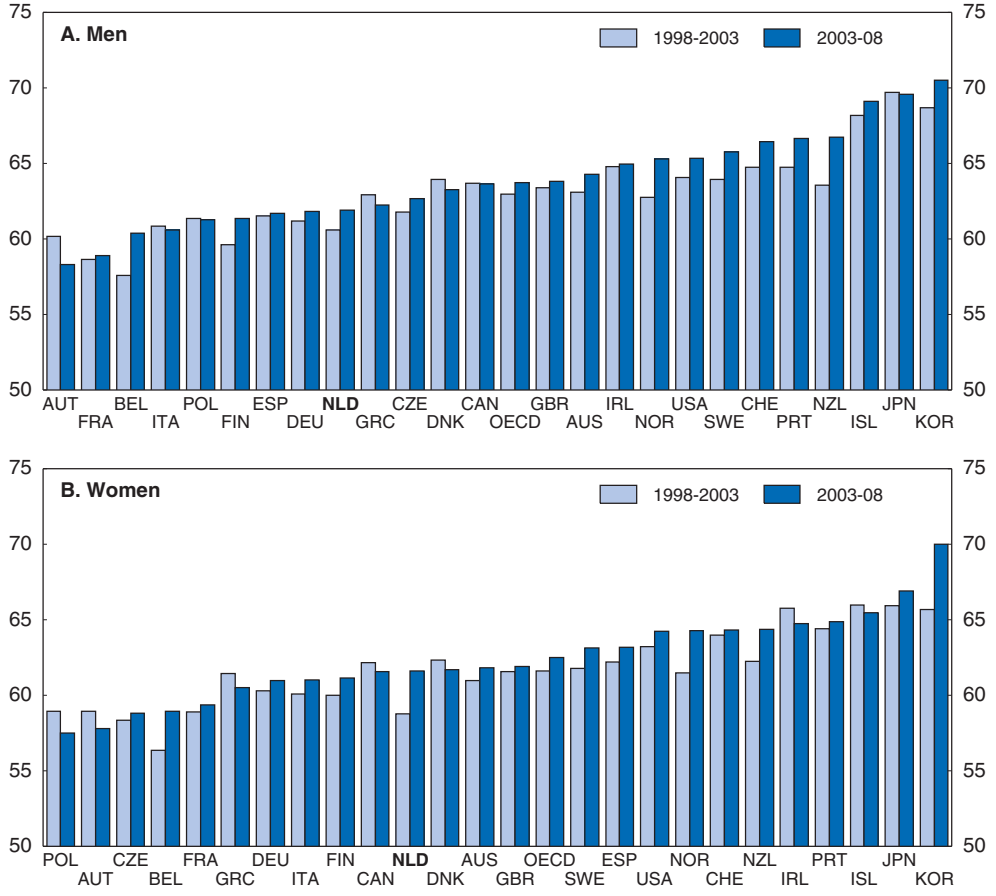
Despite the activation measures, outflows from benefit programmes are low and it is difficult to find empirical evidence of a substantial positive effect of the various active labour market programmes (Gautier and van der Klaauw, 2009). Thus, it appears that the activation framework needs to be supplemented by stronger search incentives in the unemployment benefit system, in particular in the early stages of unemployment, when the odds of finding a job are likely to be the highest. The system is characterised by a long maximum duration of up to 38 months (lowered in 2005 from 60 months) and a high replacement rate. Search incentives should be strengthened by further reducing the

duration of benefits. To yield the desired effects, such a measure should be preferably implemented soon so that the effects materialise once the economy gains pace and hiring picks up. In addition, the replacement rate is 75% for the first two months, thereafter declining to 70%. It is capped at EUR 185.46 per day, equalling about EUR 50 000 per year. This incentive structure can be strengthened by letting the benefit level decline more steeply over time, so that it is eventually aligned with social assistance benefits. Lastly, the high ceiling for benefits should be reduced to sharpen search incentives for high-wage workers, who are not typically targeted by activation policies.

Labour market participation among older workers could be increased further

Over the past decade, the government's drive to increase the participation rate of older workers has been successful in raising the effective retirement age for males and females by 1 and 3 years to 61.9 and 61.6 years, respectively (Figure 1.7). This is partly a result of the measures implemented in the 2000s to close pathways into early retirement, although also

Figure 1.7. **Average effective retirement age**[1]



1. Defined as the average age of exit from the labour force during a 5-year period. Labour force (net) exits are estimated by taking the difference in the participation rate for each 5-year age group (40 and over) at the beginning of the period and the rate for the corresponding age group aged 5-years older at the end of the period. Data are estimates derived from the European and national labour force surveys. The data for employment include all workers irrespective of hours worked.

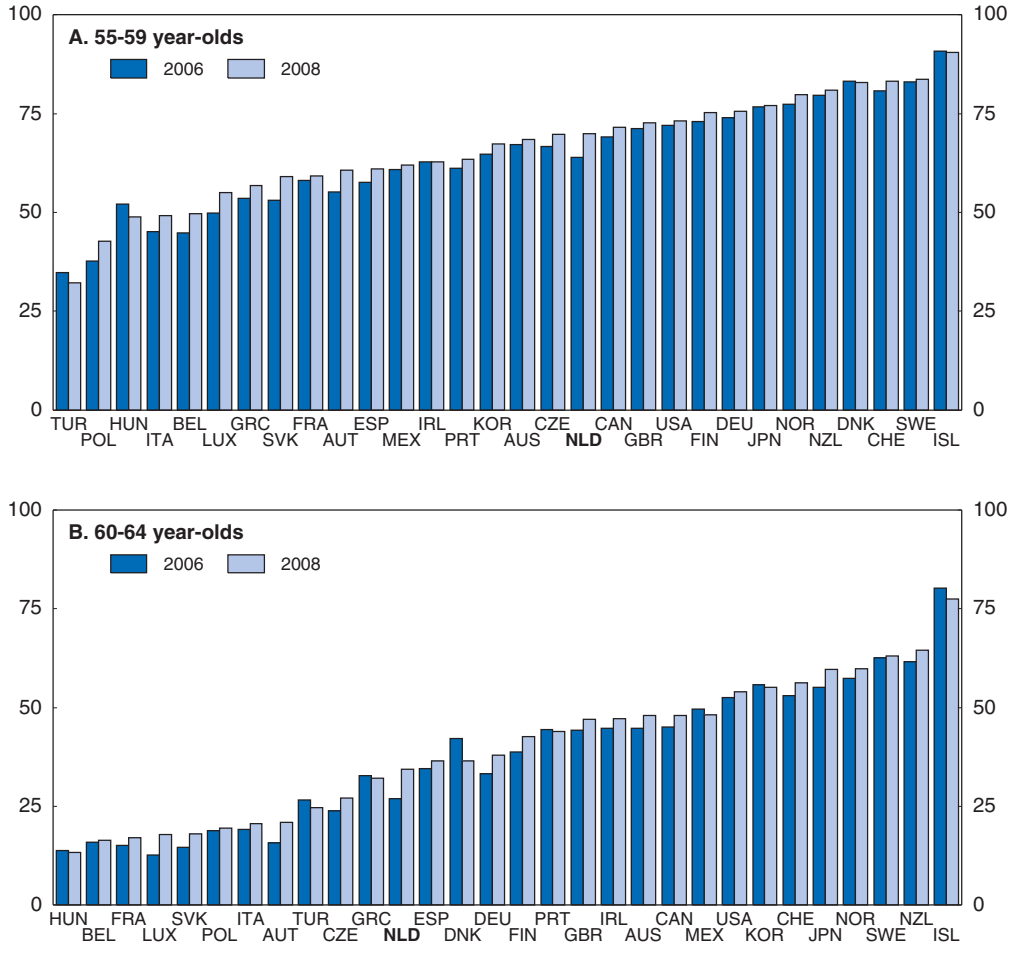
Source: OECD (2010), Directorate for Employment, Labour and Social Affairs, February.

StatLink http://dx.doi.org/10.1787/888932291643

of other developments, such as changes in the educational level of workers and increased female participation (Deelen and van Vuuren, 2009). The tax incentives for early retirement were removed and the unemployment benefit duration for older workers shortened and aligned with that of the general regime.[7] As a result, the spike in the inflow of older workers (particularly high-wage workers) into unemployment just after the age of 57½ disappeared, indicating that older workers have some influence on when they are fired (van Ours and Tuit, 2010). Despite increases, the participation rate for older workers remains low compared with the Nordic and Anglo-Saxon countries, and the effective retirement age remains below the OECD average (Figures 1.7 and 1.8). Moreover, more than half of all male and female workers have retired from the labour market by the age of 58½.

The government is aiming at further increasing the effective retirement age and, as mentioned, is planning to increase the legal retirement age. While the implementation period is comparable to or even shorter than in some other OECD countries that introduced similar reforms (*e.g.* Germany) the Council of State – the government's advisory body on

Figure 1.8. **Labour participation rates for older workers**
As a percentage of working age population



Source: OECD (2010), *OECD Labour Force Statistics Database*, March.

StatLink http://dx.doi.org/10.1787/888932291662

new legislation – has argued that for intergenerational equity reasons the retirement age should be raised more quickly. Either way, to fully benefit from the increase in the official retirement age and hence improving growth prospects and fiscal sustainability it is important that the effective retirement age is increased, preferably by at least a similar amount.

The recently-introduced incentives for older workers to stay in the job market (Box 1.6) could be further increased by reducing the state pension, as recommended in the previous *Survey*. Similarly, increases in the second-pillar retirement age should follow (Chapter 2). On the other hand, the 2004 extension of the employer-paid sickness period to two years may discourage firms from hiring older workers who have higher health risks, pointing to the need for reducing the period for workers close to retirement.

Strict employment protection legislation reduces labour market dynamics

The success of activation measures depends on the flexibility of the labour market, which is hampered by the internationally strict employment protection legislation for workers with permanent contracts (EPL). The latter may result in initially delaying increases in unemployment during a downturn, but ultimately increases the risks associated with hiring. Thus, it is likely to lead to more long-term unemployment and may cause firms to be wary of hiring in the early phase of the upswing. Moreover, as workers with long job tenure who lose their job can expect that courts award them a multiple of their annual salary in severance pay,[8] the strict EPL effectively increases the attractiveness of using the (lengthy and generous) unemployment benefits as a pathway into early retirement, particularly for workers who are close to their 62nd birthday. In effect using this pathway may often generate a higher disposable income than remaining employed until retirement.[9]

For older employees as well as for their employers, the attractiveness of using the combination of generous unemployment benefits and high severance payments as a pathway into early retirement is likely to be increasing in the crisis. Employers who have to reduce their workforce often prefer to find solutions that avoid social unrest while the substantial seniority element in the Dutch wage scales makes firing older workers a more cost-efficient way to reduce labour costs, if the higher wage does not reflect their productivity. On several occasions, the government has unsuccessfully attempted to reform the dismissal law to make the system more predictable and less costly, but even the latest proposal to cap severance pay at EUR 75 000 has failed, reflecting the difficult political economy of such reform. Nevertheless, the next government should aim at making the dismissal system simpler, more predictable and less time-consuming. Court appeals should only become possible *ex post* as recommended in the previous *Survey*. In addition, capping severance pay and letting the cap decline as workers approach retirement age should be considered.

Reducing maximum unemployment benefit duration would also limit pathways into early retirement. Moreover, the truncation of duration that is effectively already in place (as unemployment benefits stop at retirement) could be further brought forward *e.g.* by six months, through terminating the access to unemployment benefit at the age of 64½ (a truncation that would have to be adjusted as the retirement age is increased) whereby a greater element of self-financing of early retirement is introduced. Alternatively, the truncation could be linked to severance pay, where workers with substantial severance pay rights would see their access to benefits truncated at an earlier point and those with

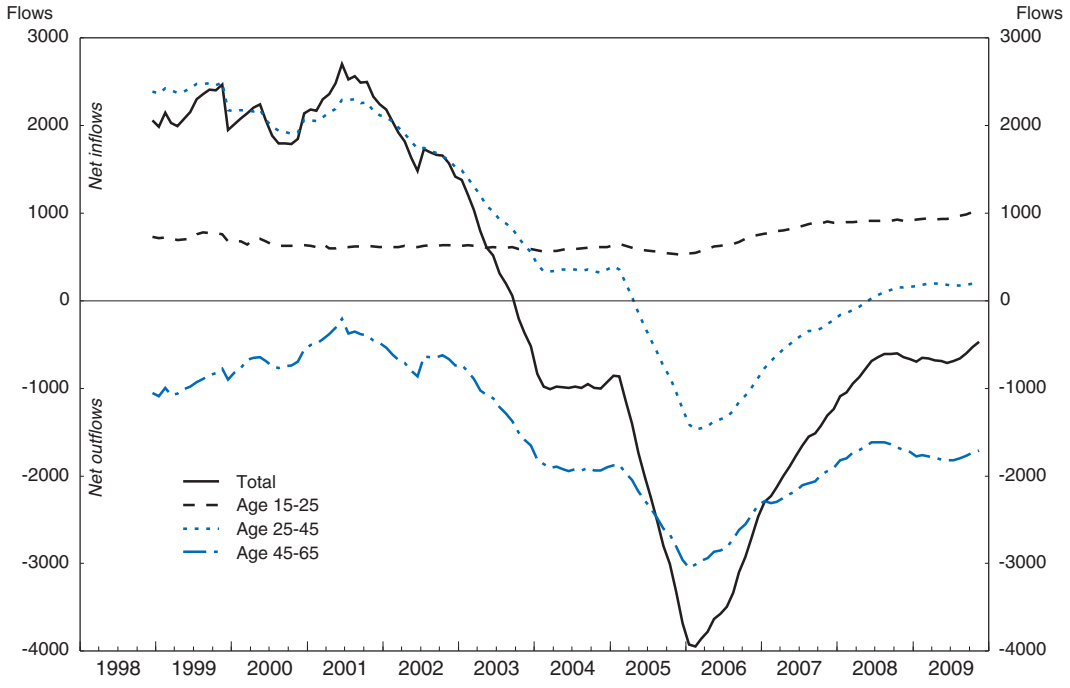
limited rights closer to retirement. Such a solution would also alleviate concerns whether the older unemployed have sufficient income levels.

The inflow into disability benefit schemes has been lowered

Since 2002, a number of measures have been implemented to curb the extensive use of the disability scheme, including tighter eligibility and testing criteria, the extension of the employer-paid sickness period from one to two years, and the introduction of a "no-risk" policy where the government covers sickness payments for recently-hired partially-disabled workers and of work-capacity related disability benefits to strengthen work incentives (OECD, 2008a). Lower inflows into the disability scheme were initially a mechanical result of the extension of the sickness period but were sustained in recent years (Figure 1.9). As a result, the number of disability benefit recipients has decreased by about 15% from the 2003 peak, although the level remains high at around 8% of the working-age population. The fall mostly reflects outflows from the system, but mostly towards other benefit systems (such as to the state pension system). Efforts to induce partially-handicapped to participate in the labour market have been less successful, having only increased by 3 000 persons over the period 2007-09. Moving disabled into employment is a huge and complicated task, calling for a broad range of policies, in areas like gatekeeper control, reassessment of disabilities, cooperation with employers, hiring incentives, etc., which were recently discussed in a special OECD publication covering the Netherlands and three other countries (OECD, 2008b).

Figure 1.9. **Net inflows to the disability benefit scheme**

12-month moving average



Source: Statistics Netherlands.

StatLink http://dx.doi.org/10.1787/888932291681

Internationally, there is a tendency for increased inflows into disability schemes during economic downswings, reflecting that deteriorating employment prospects induce individuals to claim disability benefits and that employment centres have incentives to reduce unemployment through the use of such schemes (Benitez-Silva *et al.*, 2009). As unemployment is expected to remain relatively high over the coming years, this indicates that an emerging challenge for the government will be to preserve the recent gains in reducing the use of the disability benefit scheme and to avoid that it is being used as a pathway into unemployment (Koning and Van Vuuren, 2006a and 2006b). As the system relies to an increasing extent on private providers of job-placement and other social services, a particular issue is to avoid cream-skimming, *i.e.* a tendency to focus efforts on relatively easy-to-employ clients, leading to "programme parking" of more difficult cases (Koning and Heinrich, 2009).

The Wajong, a special system for younger disabled people, has seen a doubling in its inflow over the past five years, mostly the result of an increase in the number of recipients for mental reasons – which does not appear to reflect an increase in the number of individuals with serious mental disorder as there was no corresponding increase in hospitalisation. A factor behind this development is that the decentralisation of activation responsibilities for social assistance recipients was transferred to the municipalities. This gave the latter incentives to offload recipients to other central government-financed programmes – as the municipalities are allowed to keep social security budget surpluses for other purposes (Gomez *et al.*, 2009; UWV, 2008).[10]

The government reacted in the beginning of 2010 by reorienting the focus of the Wajong programme (for new participants) from providing passive income support to providing educational, training and job-finding support (the support is individually tailored and includes aspects such as supplementary income support, training, coaching, commuting, etc.). Moreover, participants in the programme will be assessed upon entry (usually around the age of 18) and again at the age of 27. Only at the second assessment can participants (who have not worked since the first assessment) transfer to permanent income support (75% of the minimum wage). The change is expected to reduce the inflow into the Wajong, nevertheless the stock is still expected to double by 2040, reaching 400 000. Moreover, the already high stock of Wajong recipients (at 190 thousand in late 2009), implies that a relatively high number of young partially-disabled are not benefitting from the same activation measures as new entrants. Thus, the panoply of support measures should be offered to existing recipients of Wajong disability benefits on the same conditions as for new entrants.

Box 1.7. **Policy recommendations**

Fiscal policy

- The proposed medium-term fiscal consolidation strategy is appropriate, sustaining the recovery in 2010 and consolidating from 2011 onwards. The next government should pursue this path and prepare measures to increase the consolidation effort in case growth is strong enough.
- Devise a comprehensive fiscal consolidation plan to achieve fiscal sustainability. Continue the focus on budgetary savings, in particular on curbing long-term ageing-related spending increases. The government should use the proposals from the committees set up under the Fundamental Budget Review to specify more concrete measures.

Box 1.7. **Policy recommendations** *(cont.)*

- Fine-tune the strong fiscal policy framework by making the decision to exclude unemployment benefits from the expenditure rules permanent.
- Use natural gas revenues (and other windfall gains) directly to reduce public debt.
- Implement the plan to increase in the legal pension age to 67. Supplement the proposal by linking retirement age to life expectancy thereafter. A more front-loaded introduction of the increase (*e.g.* by 1½ month a year) could yield additional savings and limit incentives for early retirement.

Financial markets

- Design and implement exit strategies to assure devolution of government's stakes in the financial markets. The strategies must not put the recovery at risk and should be credible and transparent. The possibility of incurring capital losses should not prevent withdrawal of state involvement.
- Improve macro-prudential regulation and supervision of financial markets in cooperation with international institutions.
- Improve the awareness, in particular among local governments, of the risks associated with deposits in banks not covered by the Dutch depositor protection scheme.

Labour market

- Continue the focus on measures to increase activation and hours worked. Consider making active labour market policy spending more counter-cyclical (*e.g.* by adjusting spending proportionally to unemployment level). Reduce the risks of hiring and sustain the recovery by relaxing employment protection legislation and making it simpler and more predictable. Court appeals should only become possible *ex post* and severance pay should be capped.
- Strengthen job-search incentives of the unemployed by decreasing unemployment benefits more dynamically throughout their duration. Supplement this measure by shortening the long duration of unemployment benefits. The high ceiling of benefits should be reduced to stimulate search incentives for the high-skilled unemployed.
- To reduce the stock of young disabled, they should be subject to the same controls and activation measures as new applicants.
- To further increase work incentives for older workers, the level of state pension should be lowered. The ability to use the unemployment system as a pathway into early retirement should be reduced by truncating unemployment benefits before the legal retirement age or link their generosity (inversely) to severance payments. The latter should be capped for older workers and reduced as they approach retirement.
- Due to higher health risks of older workers, the obligation for employers to pay up to two-years sick leave should be reconsidered for older workers to enhance their the labour market chances.

Notes

1. The technical details of the reduced working time scheme have undergone refinements, in particular regarding the entry criteria, which have been tightened in April 2009. The programme still allows maintaining workers as fully employed in the company, while their working time is reduced and the employer only pays for the time worked. For the remaining time, the employee receives an unemployment benefit.

2. The expenditure framework was also corrected for the so-called wage-price differential. Failure to do so would mean that lower-than-expected price and wage developments resulting from the crisis could yield cost savings which could be used to finance the expansion of other spending under the expenditure rules.
3. The sustainability gap defined as the required immediate increase in the structural primary balance to make public finances consistent with the governments inter-temporal budget constraint (thus allowing a financing of ageing costs with no abrupt policy changes) is labelled as the S2 indicator under European Commission nomenclature.
4. The 4.5% of GDP sustainability gap is measured in 2015, under the assumption that already adopted measures will decrease the gap by 2% of GDP between 2010 and 2015. These measures include improvements in the structural balance and the compensation of (part of) the increases in health-care costs through higher insurance premium. Other factors reducing the gap in the CPB scenario are lower growth of ageing costs and increases in consumption tax revenues resulting from rising pension benefits and pensioners' high propensities to consume.
5. In late 2009 a small retail bank (DSB Bank) collapsed. Its problems were caused by a bank run following a public discussion on its risky business strategy. Though, at least in part, the causes were not directly related to the crisis the fragile market situation contributed to the rapid developments. The collapse has not directly influenced the position of other financial institutions, but will cost the Dutch banks (via the depositor guarantee scheme) EUR 3 billion (0.5% of GDP).
6. The initial government plans involved merging the two nationalised banks (Fortis Netherlands and ABN AMRO) and spinning off a number of non-core activities. The European Commission has required a more substantial trim-down of activities on the grounds of competition in the Dutch market. At the same time, there remains significant uncertainty about the quality of some assets of the banks. Similarly, the Commission retrospectively introduced a number of clauses on the ING illiquid asset back-up facility, including a higher fee to be paid to the government and an obligation to sell some of ING's activities.
7. Before 2003, the duration of unemployment benefits for persons over 57½ years old was 50% longer than for others.
8. The general rule for severance pay is one month salary for each year worked, increasing to two months' salary for workers above 50. Alternatively, employers can ask for firing permission from the local public employment service, involving long notice periods, bureaucratic and time-consuming dismissal procedures – see previous *Survey*.
9. There is a negative correlation between the strictness of employment protection legislation and the length of unemployment duration for older workers as it becomes easier for them to be hired when the strictness of EPL is reduced. Another issue is that the accumulated severance pay rights are lost when changing jobs, which means that older workers with substantial accumulated rights are very reluctant to change jobs (Euwals, de Mooij and van Vuuren, 2009).
10. A number of municipalities have relied on private job placement services with performance-related contracts. However, there seems to be little evidence that such a choice improved placement rates although it may have been less costly (Koning, 2009).

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ANNEX 1.A1

Progress in structural reform

This annex reviews actions taken to follow policy recommendations made in the *2008 OECD Economic Survey of the Netherlands*. Recommendations that are new in this Survey are shown in the boxes at the end of each relevant chapter.

Recommendations in previous Survey	Actions taken and current assessment
A. Public finances	
Fiscal consolidation should be implemented as planned without hampering the full function of the automatic stabilisers.	Fiscal consolidation has been postponed given the historical magnitude of the crisis. The government already proposed a consolidation path, starting 2011, to reach a structural balance.
The fiscal framework could be further improved	
Exclude items which behave pro-cyclically (notably spending on unemployment benefits) from the expenditure ceilings. Moreover, consider excluding certain revenue items in the expenditure ceiling (such as dividends and central bank income).	Unemployment benefits have been excluded from the expenditure ceilings to allow a full response of automatic stabilisers in the recession. The next government will make the decision whether this measure remains permanent.
Improve reporting on tax expenditure (notably on the income-tax allowance for mortgage interest payments and pension premiums) in the annual budget, and consider a periodic review of these expenditures by an independent body to improve fiscal spending efficiency.	All tax expenditures, and important tax-deductible items in the income tax (*e.g.* the fiscal treatment of mortgage interest and pension premiums, are now reported yearly in Annex 5 of the Budget Memorandum).
Measures to secure fiscal sustainability should include reforming the state pension	
Focus on enacting further reforms aimed at increasing labour participation and reform age-related institutions. Raise the official retirement age in several steps to 67 years and thereafter link it to developments in life expectancy.	The government proposed raising the official retirement age (the public pension, AOW) to 67 years in two one-year steps (in 2020 and 2025). It would be useful to consider phasing in the changes more rapidly. Linking the pension age to life expectancy should follow.
B. Labour market	
Continue activating social assistance beneficiaries	
Job search requirements for current social assistance benefit recipients should be strictly enforced. The authorities should not introduce exemptions for lone parents as is currently planned.	The only general exemption in job search requirements for social assistance benefit recipients is applicable to lone parents with children below the age 5, with an maximum exemption duration of 6 years.
Encourage participation of women with weak labour market attachment	
Phase-out the transferability of the tax credit for second earners more rapidly than the currently announced 15 years.	No action taken.
Shift more of the family-income based child tax credit to the individual or second-earner children tax credit.	No action taken.
Consolidate the successful reforms of disability benefit	
Closely monitor the outflow of former disability benefit recipients in order to assess the success of the disability benefit reform in reintegrating them into the labour market.	A decline in the number of disability recipients was observed during the last years.

Recommendations in previous Survey	Actions taken and current assessment
Medical criteria for the young disabled under the Wajong scheme should be tightened. Preferably, the young disabled should first receive social assistance and be granted Wajong only as a top-up after a waiting period.	Since 2010, the new participants in Wajong are entitled to job support rather than passive income support. Moreover, participants in the programme will be assessed upon entry and again at the age of 27. Only at the second assessment can participants be transferred to permanent income support.
Continue retesting the existing stock of disabled under the new, stricter medical testing criteria, disregarding the age of the benefit recipient. Moreover, in order to allow fully and permanently disabled people to benefit from new employment opportunities, permanent disability should be re-examined on a regular basis.	The age of disability benefit recipients subject to retesting has been lowered from 50 to 45. Permanently disabled have the opportunity to resume work again, via loan subsidies.
New entrants into the partial disability benefit scheme should be activated early, possibly already during their sickness period. Work incentives for partially disabled should be further strengthened by shortening the initial period of the first-stage replacement benefit (the *loongerelateerde uitkering*).	Under the Law Stimulating Labour Participation' (STAP) employers receive a subsidy (maximum 50% of the minimum wage) when employing long-term unemployed. Moreover, people with a disability who have problems finding a job are able to get work experience through internships.
Further increase participation of older workers	
The use of tax-favoured savings schemes such as the recently introduced life-course savings scheme should be monitored closely. The authorities should consider phasing-out the tax exemptions for these schemes entirely.	The life-course saving scheme is currently being evaluated. Starting in 2010 income from the life-course saving scheme will no longer qualify for fiscal measures aimed at increasing the income of workers.
Strengthen the job search requirements for older workers and aligned them with those for other unemployed.	All workers who are unemployed for a year or more are now obliged to accept any job offer.
Consider indexing the official retirement age to the increase in life expectancy. In order to allow older workers to be employed after the age of 65, permanent contracts should be made transformable into temporary ones more easily.	The government has proposed increasing the retirement age in the state pension scheme from 65 to 67.
The obligation to pay full wages during long periods of sickness for +65 years should be reconsidered.	Over-65 workers who get sick will now receive only six weeks full wages. Moreover, social security premiums have been reduced for employers for keeping older workers (62 years and older) and for hiring workers of 50 years and older.
The state pension system (AOW) should be reformed and possibly merged with the current Social Assistance benefit scheme.	The government proposed raising the official retirement age (the public pension, AOW) to 67 years in two one-year steps (in 2020 and 2025).
Further enhance activation of the long-term unemployed	
Unemployment benefits should be made more activating by further reducing benefit duration and allowing for a gradual decrease of the replacement rates with the length of the unemployment spell. This could imply an initially higher replacement rate for short unemployment durations.	No action taken.
To reduce long-term unemployment, employment protection should be lowered by *e.g.* making the current dual system of dismissal simpler and more predictable.	Attempts to reduce employment protection legislation failed due to opposition of the social partners.
The unemployed should be profiled directly into different programmes instead of different activation categories.	No action taken.
Increase working hours	
Facilitate female full-time participation by further developing the market for childcare services	
Support the development of the new market for childcare services by setting provisions for a minimum number of opening hours.	The Childcare Act assigns municipalities the task of supervising and enforcing childcare. Schools have to offer childcare services from 7 a.m. to 7 p.m. (BSO).
Lower the marginal effective tax rates over the income spectrum, for instance by introducing a flat tax system. In order to finance such a decrease in the marginal tax burden, existing tax exemptions on state pensions and second-earner tax credits should be removed. Increase participation by reducing the marginal effective tax burden.	No action taken.

Recommendations in previous Survey	Actions taken and current assessment
Introduce – as planned – an individualised work-related tax credit for second earners, to replace the current general tax credit. Further reduce the tapering off rate for housing and child benefits and condition certain work-related entitlements and tax credits on the number of hours worked. Lower the marginal effective tax rates over the income spectrum, for instance by introducing a flat tax system. In order to finance such a decrease in the marginal tax burden, existing tax exemptions on state pensions and second-earner tax credits should be removed.	Several new measures were taken to lower the marginal effective tax burden for some income groups: 1. Income-based combination tax credit (IACK) 2. Income dependent tax credit (EITC) Special tax credit for workers with non-working partners is being phased out.
To avoid the increase in marginal effective tax rates due to the recent childcare benefit reform, consider introducing flat childcare benefits, irrespective of the family income. Alternatively, consider conditioning the reimbursement rate for childcare services on the number of hours worked. Introduce, as planned, an individualised work-related tax credit for second earners, to replace the current general tax credit. Further reduce the tapering off rate for housing and child benefits and condition certain work-related entitlements and tax credits on the number of hours worked.	The tax deductions are replaced by direct (income-related) subsidies. These subsidies decrease with parental income.
Reducing the rate at which certain benefits phase out, such as the housing or the children benefit. Alternatively, broaden the existing work-related tax credit.	No action taken.
Strengthen incentives to negotiate a longer work week	
In order to address pending problems in the public sector to find qualified employees in sufficient numbers, the authorities should consider negotiating longer standard working weeks for public sector employees, at least for new hires.	No action taken.
Further ease rules on overtime work further. In particular, consider defining the maximum hours worked over a longer horizon (preferably over a year).	No action taken.
Recommendations on migration and integration policy	
Improving immigration policy to meet labour market needs	
Workers with desired characteristics would be granted a work permit without the *ex ante* requirement of holding a job contract. Moreover, the tax incentive scheme for highly skilled foreign workers should be made more transparent and more targeted.	From 2009 a two-year pilot programme has started with a supply-steered work permits based on a point system. Graduates from the world's top 150 colleges can search for a suitable job for up to one year (subject to a minimum annual salary of EUR 25 800).
Improve labour market integration of immigrants	
Reduce employment protection for regular contracts to share economic risks more evenly across the population.	The reduction in administrative and regulatory burden for entrepreneurs who wish to employ labour migrants has been proposed.
Grant asylum-seekers full access to the labour market if the asylum procedure takes longer than six months. Possibilities for (voluntary) work and schooling during the first six months should be improved.	No action taken.
Consider more actively guiding women entering for family formation into employment at an early stage, for example, by increasing financial incentives for municipalities to activate this group.	No action taken.
Postpone the age at which children are placed in different streams, stimulating more mixed-level education during the first phase of secondary education and creating greater second–chance options for changing streams in later stages.	No action taken.
Reduce barriers to mobility in the housing market, most notably, rental regulation and transfer taxation.	No action taken.

Chapter 2

Making the pension system less vulnerable to financial crises

The Dutch occupational pension system has been successful in securing high asset accumulation to fund generous pension promises. However, for the second time in this decade the pension system has been affected by a financial crisis and many pension funds' assets fell below levels needed to meet regulatory requirements. Insufficient funding raises solvency issues, which could eventually lead to large fiscal costs in case of bail-outs. In response to the crisis, most funds were required by the regulator to draw up recovery plans to restore their funding over five years. This has raised concerns that the adjustment required by the regulator is unnecessarily sharp, with possibly adverse macroeconomic implications. On the other hand, OECD simulations indicate that under current policies, it is unlikely that funding rates will be secured that enable the funds over the long term to fulfil their promises of a replacement rate of up to 80% of average wages. This raises the challenge of implementing parametric changes that secure pension benefits without large detrimental effects on intergenerational equity and growth. Occupational pensions are transferable, which enhances labour market mobility. But it is often very difficult for workers to assess how one pension scheme compares to another, posing practical barriers to mobility that should be eased.

The solvency of the Dutch pension system was put under pressure by financial market developments

The main distinctive feature of the Dutch pension compared to most other OECD economies is its extensive occupational (second) pension pillar. This results from quasi mandatory participation in industry (or company based) pension plans (Table 2.1), resulting in 94% of employees being covered (see Annex 2.A1 for an overview of the Dutch pension system).[1] Dutch occupational pension funds have the largest accumulated assets relative to GDP in the OECD (Figure 2.1). This makes the Dutch pension system particularly

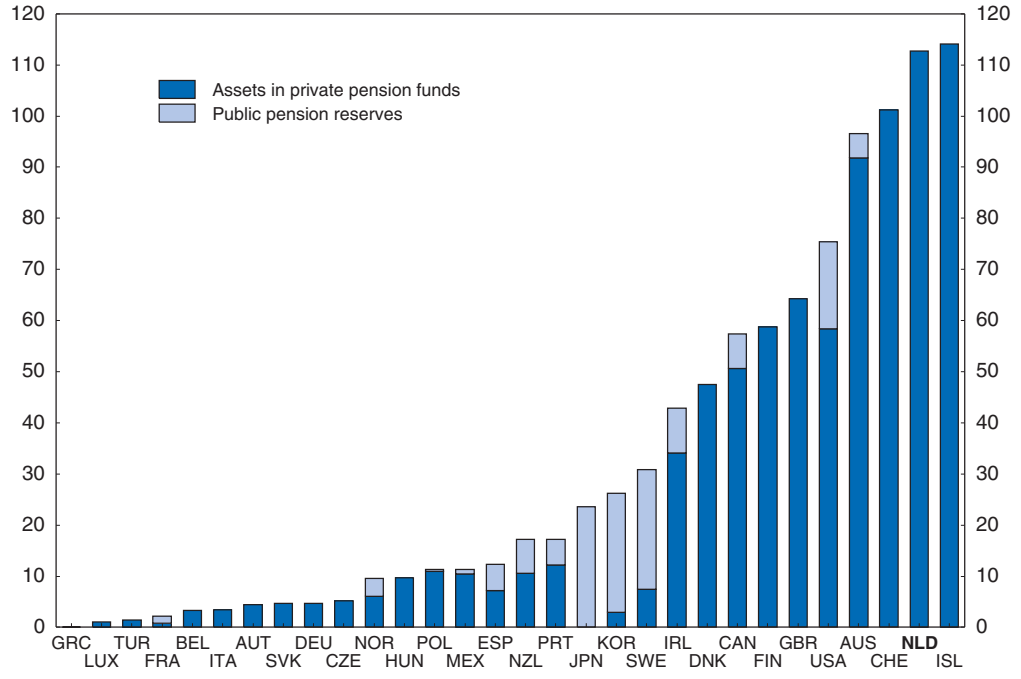
Table 2.1. **Pension funds in the Netherlands, ultimo 2007**

	Number of funds	Assets	Share of active members	Share with defined benefits	Share with defined contributions
Corporate pensions funds	85%	27%	12%	90%	10%
Industry-wide funds	13%	71%	87%	96%	4%
Professional group pension funds	2%	3%	1%	83%	17%
Total	713	EUR 684 billion			

Source: Bikker *et al.*, 2009.

Figure 2.1. **Pension assets relative to GDP in the OECD countries**

As a percentage of GDP, 2008



Source: OECD (2010), *Pensions Database* and *Pension Markets in Focus*, No. 6: Statistical Table No. 1.

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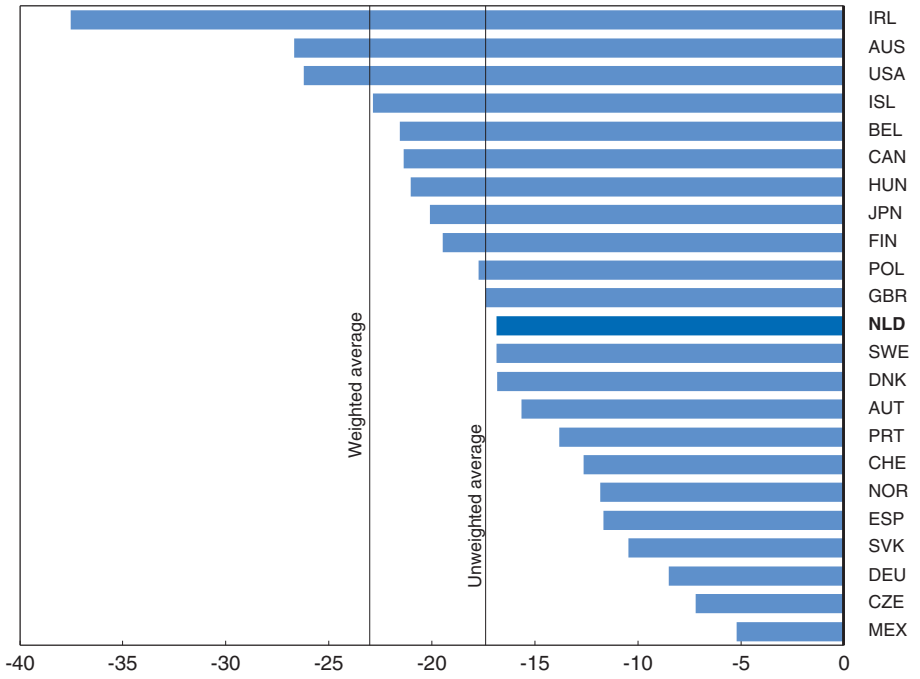
sensitive to financial market crises despite its success in securing net replacement rates that are among the highest in the OECD (Annex 2.A1). Weakened solvency of pension funds may threaten pension promises and potentially lead to large fiscal costs in case of public bail-outs. Alternatively, pension funds recovery measures may deepen the crisis if they are too pro-cyclical.

The global crisis has strongly affected the real return of the pension funds in the short term, with a loss of more than 15% in 2008, given Dutch pension funds' weight of equity in their portfolio (40%). While this fall is in line with the average investment performance of pension funds in other OECD countries in 2008 (Figure 2.2), it nevertheless threatens the solvency of Dutch funds. If unresolved, the solvency issue may have a negative impact on the net replacement rate, which is currently one of the highest in the OECD, as more than half of the retirement income package – a very high share on international comparison – is provided by these funds (OECD, 2009).

Figure 2.2. **Pension funds' real investment returns in 2008**[1]

As a percentage



1. Returns are shown only for countries where pension-fund assets exceeded 4% of gross domestic product (GDP) in 2007.

Source: OECD (2009), *Pensions at a Glance*.

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An important measure, in the Dutch context, of the impact of the global crisis on pension funds is the so-called funding ratio: the value of assets divided by the net present value of nominal liabilities. The Dutch regulatory authorities have defined key nominal funding ratios that need to be met to ensure that pension funds are able to finance their nominal (future) pension commitments. If the ratios are not met, a recovery plan has to be implemented (Box 2.1).

Box 2.1. **Funding rates for pension funds**

For the individual pension funds, there are three thresholds for their funding ratio:

- A legal minimum level of around 105% – where the exact threshold for each fund follows the EU's directives concerning occupational pensions and life insurances, stipulating a number of technical and other provisions (EU, 2002; 2003). Below this limit funds are not considered to be able to honour their nominal pension promises. If funds fall below that threshold it is mandatory for them to submit a recovery plan with a three year time horizon (presently temporarily extended to five years) to the regulator (De Nederlandsche Bank).
- A higher individual fund threshold of typically 125% (with a portfolio equally divided into equities and bonds and with a standard quality of assets) when the funds are considered to have sufficient capital to fully cover their unconditional nominal commitments within a year with a certainty of 97.5% and which incorporates the riskiness of the individual funds' investment strategy. Funds falling below this threshold have to issue recovery plans with a time horizon of maximum 15 years.
- A threshold of typically 145% for which the pension funds have to be above before they are allowed to make up for past recovery measures, such as lower contribution rates or make up for past suspension of indexation.

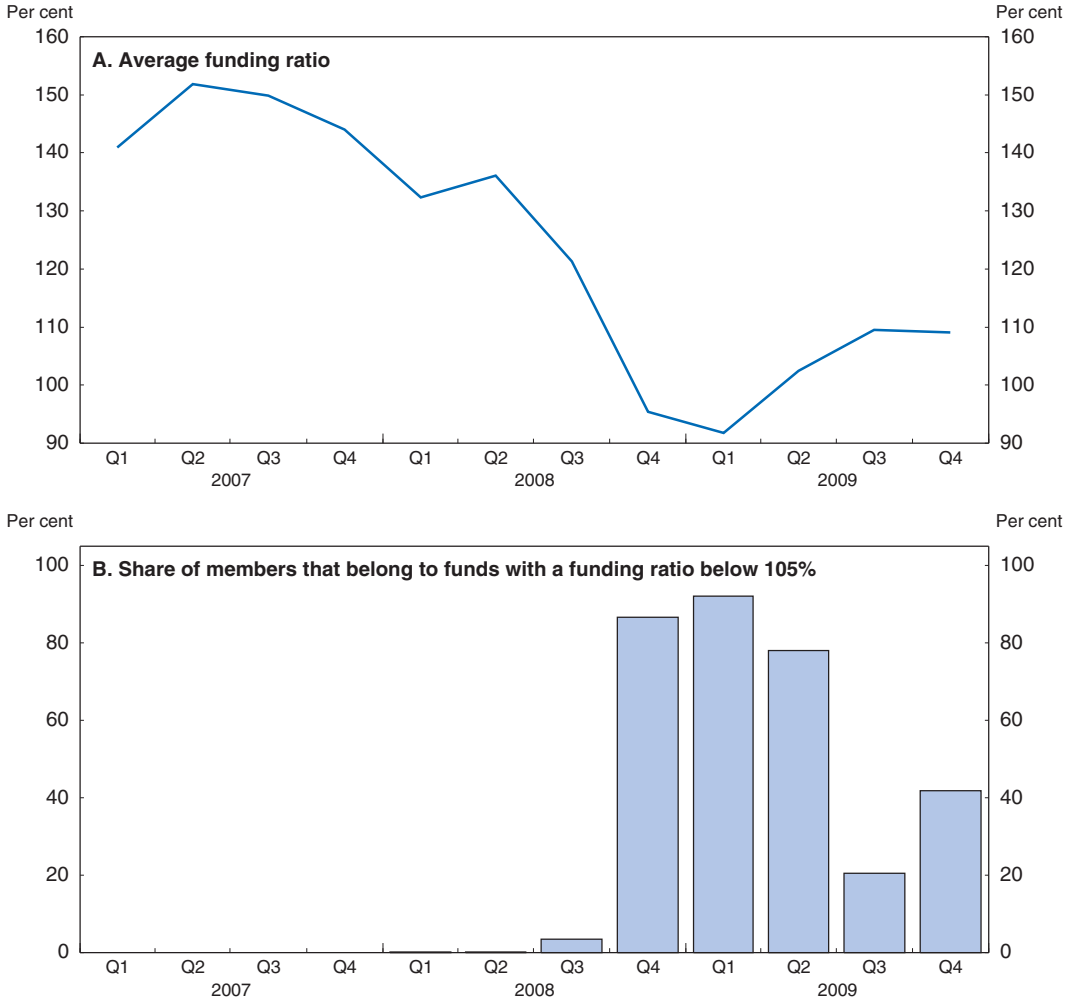
Moreover, each pension fund must make a continuity analysis (including a distribution of possible outcomes) at least once every three years with respect to their financial soundness over the next 15 years (DNB, 2007b) – a measure that forces pension funds to have a relatively long-term perspective with respect to setting contributions, indexation and investment policy as well as contributing to the formulation of well-founded long-term recovery plans. In particular, this measure provides information to members about possible indexation promises.

Following the financial crisis, the average funding ratio fell from 144% in end-2007 to around 92% in early 2009, before recovering to 109% in latter part of 2009 (Figure 2.3). It should be noted that these figures do not take into account the new life expectancy estimates that are 1.6 years longer in 2050 and which could reduce funding ratios by about 7 percentage points, assuming that life expectancy at the age of 65 increases as much as life expectancy at birth. This is the second time in this decade that the funding ratios for a large number of funds fell below the legal minimum level of 105%.

A contributing factor was a declining discount rate

The two main external determinants of the funding ratio in the short term are the equity and bonds markets, which give the value of assets, and the discount rate for calculating the present value of future liabilities. Reflecting a market based approach to regulation, the latter is the interbank swap yield curve. In the initial phase of the crisis (until mid-2008), the fall in the ratio was mainly driven by weaker equity markets. Thereafter, about 40% of the decline can be attributed to lower interbank swap rates that boosted the discounted value of future liabilities. For example, in the second half of 2008 the 15-year rate declined by about 0.4 percentage point, which increased pension liabilities by some EUR 15 billion (2.6% of GDP) (DNB, 2008). For the full year, the increase in the present value of liabilities was about 25%.

Figure 2.3. **The average funding ratio and share of funds with a funding ratio below the legal minimum**



Source: Dutch National Bank.

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The somewhat unusual choice of discount rate(s) reflects a change in the legislation in the mid-2000s, when the adoption of the fair-value accounting principles led to the replacement of the fixed rate of 4% (in place since 1969) with a market based approach (Ponds and van Riel, 2007; van Rooij *et al.*, 2004) (Box 2.2). Before that, markets rates were usually higher than the fixed discount rate, which meant that the discounted value of future liabilities was higher than what would have been the case using market rates. In effect, this overestimation implied a hidden reserve for pension funds. Conversely, if the system had remained in place, the current low interest rates would have implied a hidden liability. The new market-based discount rate is the zero coupon interbank swap yield curve, which has the advantage of being a forward looking rate and thus containing, in principle at least, all available market information, according to efficient-market theory, although the recent crisis has called this theory into question.

Box 2.2. **Regulatory changes**

A major change in the regulatory approach to pension funds came in 2002, when the regulator – in response to the crisis at the time – issued a letter to the pension funds clarifying the financial supervisory framework and outlining the necessary adjustments for restoring the pension funds' funding ratios. These elements were subsequently adopted and elaborated in the new Financial Assessment Framework (FAF) in place since early 2007, which defines solvency requirements in a stochastic fair-value framework, compelling pension funds to improve their risk management tools to better control their short-term solvency position and to ensure that the (long-term) benefit promises can be met with adequate certainty (Ponds and van Riel, 2007).

The main elements in the letter were:

- Pension funds with funding ratios below 105% were to be back to that level within a year. The 2007 pension law extended the recovery period to three years. The year after, the period was temporarily increased to five years, while the deadline for outlines of recovery plans (1 April 2009) was (earlier) also extended.
- Pension funds with funding ratios below 125% were asked to present a recovery plan to restore their funding ratio to at least 130% within a maximum of 8 years. The new Principles on the Regulation of Financial Regulation of Pension funds that were approved by Parliament in early 2004 extended the recovery period to 15 years.
- Pension funds had to raise contribution rates to cost-covering levels.

The main risk management tool for pension funds is the Asset Liability Management (ALM) analysis to evaluate pension promises, funding and risks, which provides insights into the sustainability of pension policies at different horizons. Typically, an ALM analysis uses an economic model to produce stochastic simulation of returns on asset classes and other relevant economic data, such as inflation, wages, etc. A subsequent scenario analysis produces probability distributions for the key variables. Usually, sensitivity analyses are preformed to explore policy variants in the asset mix, contribution policy and indexation rules. Policy variants are evaluated in terms of expected values and relevant risk measures for the key variables: the funding ration, the contribution rate, the indexation rate, etc.

In the second half of 2009, the average funding rate recovered, mostly on the back of stronger equity markets. The recovery could have been larger, though, if the funds had not scrambled to exit their equity holdings as stock markets collapsed (to lower their risk exposure) with a one percentage point fall in the funding rate typically leading to a ¼ percentage point decline in the equity allocation (Bikker *et al.*, 2009). Developments in individual funds depended mainly on their share of equity in their portfolios and the degree of hedging of interest-rate risks leading to a rather heterogeneous effect on individual funding ratios; the average fall was about 33%, but 27% of funds had larger declines and 42% smaller ones (Annex 2.A2).

Most pension funds had to implement recovery plans

During this crisis, funding ratios fell below 105% for about 80% of all funds, which had to submit recovery plans to the regulator, specifying how their underfunding would be eliminated by 2013. Another 10% of the funds, who's funding ratio fell between 105% and 125%, had to submit recovery plans specifying how to eliminate their reserve deficits

by 2023. The affected funds have few characteristics in common, reflecting the fact that the shock was external to the pension system. Recognising this, as well as the high degree of uncertainty, it was decided to extend the recovery period to five years. However, the extension is conditional as funds opting for the full five years have to implement supplementary measures if the funding ratio falls below the path agreed on in the recovery plan.

The recovery plans have in almost all cases included suspending indexation of acquired pension rights, directly reducing real benefits to retired members of the fund. Active members and non-contributing members (so-called "sleepers") are affected once they begin to draw pensions. This suspension of indexation is a repeat of similar measures in 2003-06, where accumulated delayed indexation fell 3% behind wage growth and 2% behind price inflation (DNB, 2007a). In addition, in about 90 company-based schemes the sponsoring companies have made one-off contributions to restore the funding ratio (for example, Royal Dutch Shell contributed about EUR 2 billion and ING EUR 1 billion to their company pension funds). Unlike earlier in the decade, only in relatively few cases were the members' contribution rates increased, such as the temporary (and partly suspended) 3 percentage points increase in the ABP fund (for state and educational workers). Lastly, some 20 recovery plans (mostly from small pension funds) include reductions of nominal pensions, although these will be applied only from 2012 onwards and only in case there has been insufficient recovery in the funding ratios.

Recovery plans are better designed than during the last financial crisis

The last financial crisis, when the information-technology bubble burst in the early 2000s, also had a strong impact. Funding ratios in many pension funds fell below the legal minimum of 105%. In response, many funds hiked contribution rates, which on average almost doubled to 12.7% of wages by the mid-2000s, before coming down somewhat before the current financial crisis (Annex 2.A2). Recovery plans had at that time a pro-cyclical impact as the increase in the contribution rate depressed activity, as described in the previous *OECD Economic Survey of the Netherlands* (OECD, 2009).

This time, however, the Dutch Central Bank estimates that the macroeconomic consequences of the fall in the funding ratio will be limited as the recovery plans are estimated to reduce annual growth by 0.15 percentage points per year on average in the period 2009-13. The muted impact reflects the fact that only pensioners lose disposable income from the suspension of indexation rights, and the assumption that households do not boost other savings to compensate for the reduction in the real value of their accrued pension rights. The latter may be related to the fact that most people only have a vague understanding of the pension system and find it difficult to assemble and process the relevant financial information (Social Economic Council, 2008). Indeed, members' expectations of retirement replacement rates are substantially higher than what available pension records would indicate – a spread that appears to be related to ignorance of pension institutions but which decreases with age (van Duijn *et al.*, 2009). The government, the pension funds, and the social partners have instigated a number of measures to enhance information about pensions (Box 2.3). Nevertheless, only a bit more than a tenth of pension fund members report that they feel adequately informed about their old-age pension (see below for a more general discussion on how to improve transparency on pension rights).

Box 2.3. **Pension information**

Pension funds are obliged to inform their members in an annual statement (the Uniform Pension Survey) about the value of their accrued rights. This statement may or may not contain information on the amount of suspended indexation. From 1 January 2009, the annual statement also has to include the so-called indexation label, which is intended to provide the members with information about the quality of the indexation promises of the pension fund. However, the information provided is highly complex as it contains indexation projections based on a number of economic scenarios, which, given the members' limited understanding of pension issues, make it unlikely that members fully appreciate the provided information. The indexation label is based on the continuity analyses that the funds have to deliver to the regulator at least once every three years.

Changes in the pension system have improved inter-generational equity

Raising contribution rates, as in the dot-com crisis, both deepened the crisis and put the main burden of the adjustment on younger generations (Ponds and van Riel, 2007). Subsequently, and to foster pension funds solvency in case of financial market disturbances, most funds switched from final pay to average wage plans, where pension benefits are based on members' average wage over their working life. It should be noted that for people having contributed 40 years, the average wage plans give a replacement rate similar to that in the previous final pay plans.[2]

The move to average wage plans gave the funds an additional recovery measure as indexation became contingent on the funds' financial health. Suspending indexation may prove less pro-cyclical than raising contributions, but also allows funds to spread the adjustment more evenly across generations. More concretely, the suspension of indexation puts most of the adjustment burden on the generation born in 1940-70, assuming that indexation is fully restored after the end of the recovery period (Bonenkamp *et al.*, 2009).

The changes in the Netherlands contrast with developments in a number of other countries (particularly the United Kingdom, the United States and some other Anglo-Saxon countries) where similar solvency problems have accelerated the switch from defined benefit (DB) plans to defined contribution (DC) schemes – a move that places solvency risks on the employee and limits risk sharing between generations (OECD, 2009). Still, a small move in the direction of DC plans has taken place because contingent indexation of pension rights means that to some extent pension payments will depend on the performance of the funds (Ponds and van Riel, 2007).

The recovery plans are unlikely to secure a return to full indexation

During 2009, the average nominal funding ratio returned to a level above 105%, indicating that the financial health is returning to the pension funds. However, the legal minimum level (105%) for the funding ratio only secures the nominal value of accrued pension rights. To see whether accrued pension rights can be expected to keep their real value, a real funding ratio that takes into account likely price developments can be calculated. This shows that, even when the average nominal funding ratio was a seemingly comfortable 144% before the crisis, the real funding ratio was barely high enough (*i.e.* around 100%) to secure accrued pension rights in real terms (see Annex 2.A2 for more details). Moreover, funding ratios exhibit a large variation across funds, and about a third of the funds

had ratios that were close to the 125% level that the supervisor considers the lower bound for a sound funding ratio for guaranteeing the nominal pension promises, and which therefore fall short of funding real pension values. Following the crisis and despite the recovery in the nominal funding ratio in 2009, the OECD estimated that the real funding ratio remained around 70%, although the DNB (2009) has a somewhat higher estimate (81%). Either way, both estimates indicate a substantial deterioration of the real value of accrued pension rights.

The current recovery plans are not enough to secure full funding of all indexation promises and additional measures are required. The OECD Secretariat has for this survey created a number of scenarios to evaluate different policy options (see Annex 2.A2) in an environment with relatively conservative financial market assumptions (Box 2.4). The baseline scenario is that contribution rates and retirement age remain at their pre-crisis level and full indexation is applied, *i.e.* no recovery measures are implemented. Although the baseline scenario does not take into account recovery measures that are currently being implemented by the pension funds, it is realistic in the sense that most funds have not abandoned their long-term ambition of a pension replacement rate of 80% of average wages (about two-thirds of the funds have the ambitions that losses in accrued pension rights arising from suspension of indexation will ultimately be recovered) and thus the scenario can be interpreted as assuming that pension right losses incurred because of the indexation suspension are eventually recovered.[3]

Box 2.4. **Key assumptions behind the baseline scenario**

The calculations assume price inflation of 1.4% in 2010 and 2011, rising to 2.0% thereafter. Nominal wage growth is set to 2.4% in the first two years and 3.7% in 2012 and thereafter. The nominal risk-free interest rate equals 2.9% in the period 2010-2011 and 3.5% in the year 2012 and thereafter. An equity premium of 3%-points over the whole period is assumed; hence, the calculations adopt a 6.5% nominal equity rate of return. The portfolios of pension funds have equal shares of equity and bonds. The largest pension fund in the Netherlands, ABP, has a financial investment portfolio of 45% equity (including hedge funds, private equity and real estate) and 38% bonds and the corresponding figures for the second largest fund (PfZW) are 45% and 39%. Pensions and pension rights are indexed to a basket of wage and price inflation, with weights equal to 70 and 30% respectively.

A long-term real risk-free interest rate of 1.5% a year is below the historical average of 2.1% and is motivated by the prospect of population ageing which is generally expected to decrease interest rates (Campbell and Viceira, 2002). An equity premium of 3.0% is in line with the literature, although it is lower than the world historical average of 3.4%, reflecting the idea that the future equity premium will be below its historical counterpart, because the historical average has been positively affected by a number of non-recurrent events, such as financial liberalisation (Dimson *et al.*, 2009).

The baseline scenario shows that the average nominal funding rate will not recover by 2024 to the nominal funding ratio of 145% that corresponds to a 100% real funding ratio, where the pension promises of a replacement rate of up to 80 % of average wages can be honoured. The baseline scenario allows funds to regain a funding ratio close on average to the legal minimum of 105% by end-2013, but about half of the funds will still not reach that threshold (Table 2.2). Extending the scenario to 2024 does not improve the funding ratios

Table 2.2. **Funding ratios in the baseline scenario**

End of year	Number of pension funds	Pension liabilities (billions of EUR)	2009	2010	2011	2013	2015	2020	2024
Group 1 (< 100)	41	46.4	95	97	98	100	101	101	101
Group 2 (100-110)	150	357.5	105	107	109	111	112	112	113
Group 3 (110-120)	115	118.4	115	117	119	122	122	124	125
Group 4 (120-130)	35	37.2	125	127	129	132	133	135	138
Group 5 (> 130)	39	31.5	135	138	140	143	144	147	150
Average	380	591.0	109	111	113	115	116	117	118

Notes: Pension funds are divided into a number of groups, depending on their 2009 funding ratio. Group 1 has funding ratios below 100, group 2 between 100 and 110, group 3 between 110-120, group 4 between 120-130, and group 5 above 130%.
Source: Dutch National Bank and OECD calculations.

much. Hence, unless the rate of return on equity is much higher than assumed in the baseline scenario, there is a need for further policy measures to restore the pension fund solvency.[4]

Restoring pension funds solvency can be achieved through three main options: lowering pension rights, raising contribution rates, or increasing contribution periods. The OECD has simulated different scenarios (see Box 2.5 and Annex 2.A2 for more details on the results of the simulations). Results show that using each instrument separately will require a substantial adjustment to reach a funding ratio of 145% by 2024. For example, reducing pension rights would imply a one-off cut in the value of accrued pension rights by 17½ per cent.[5] Alternatively, lowering pension indexation by half (compared to the baseline

Box 2.5. **Different recovery scenarios, 2009-2024**

All scenarios are calibrated to ensure that solvency in real terms is restored, *i.e.* a nominal ratio of 145%, by 2024 (see Table 2.3).

Scenarios based on lowering pension rights

A first scenario that shows that a one-off reduction of accrued-pension rights by 17½ per cent is required.

A second scenario that shows indexation must be reduced by half compared to the baseline scenario.

Scenarios based on raising contribution rates

A third scenario that shows that employees' contribution rates must be increased by a third.

A third "bis" scenario that shows the effects of increasing employers' contribution by a third.

Scenarios based on increasing contribution periods

A fourth scenario that shows that retirement age must be increased by 4 years (implying a lowering of the accrual rate because the funds are subject to an actuarial neutrality conditions).

Mixed scenario

A fifth scenario assumes a 2 year longer contribution period and shows that this must be combined with an immediate pension write off 8.2%.

Box 2.5. **Different recovery scenarios, 2009-2024** *(cont.)*

Table 2.3. **Different recovery scenarios,[1] 2009-2024**

	2009	2010	2013	2024
Immediate pension write off scenario				
Indexation cuts (% pension rights)	–	17.5	0	0
Funding ratio (end of year)	109	135	140	145
Reduced indexation scenario				
Indexation cuts (% pension rights)	–	–0.2	0.9	1.7
Funding ratio (end of year)	109	111	117	145
High employee/employer contributions scenario				
Increase contribution (% wages)	–	4.6	4.6	4.6
Funding ratio (end of year)	109	113	122	145
Increase retirement by 4 years age scenario				
Funding ratio (end of year)	109	112	121	144
Hybrid scenario: increase retirement age by 2 years combined with pension write off				
Indexation cuts (% pension rights)	–	8.2	0	0
Funding ratio (end of year)	109	122	129	145

1. The changes in the policy instruments are relative to the baseline scenario.
Source: OECD calculations.

scenario) would achieve the same result. Relying exclusively on higher contribution implies increasing contribution rates by one third, which means an additional 4.6 % of wages.[6] Finally, a four year extension of the contribution period could also restore the solvency, implying a retirement age of 69 years.

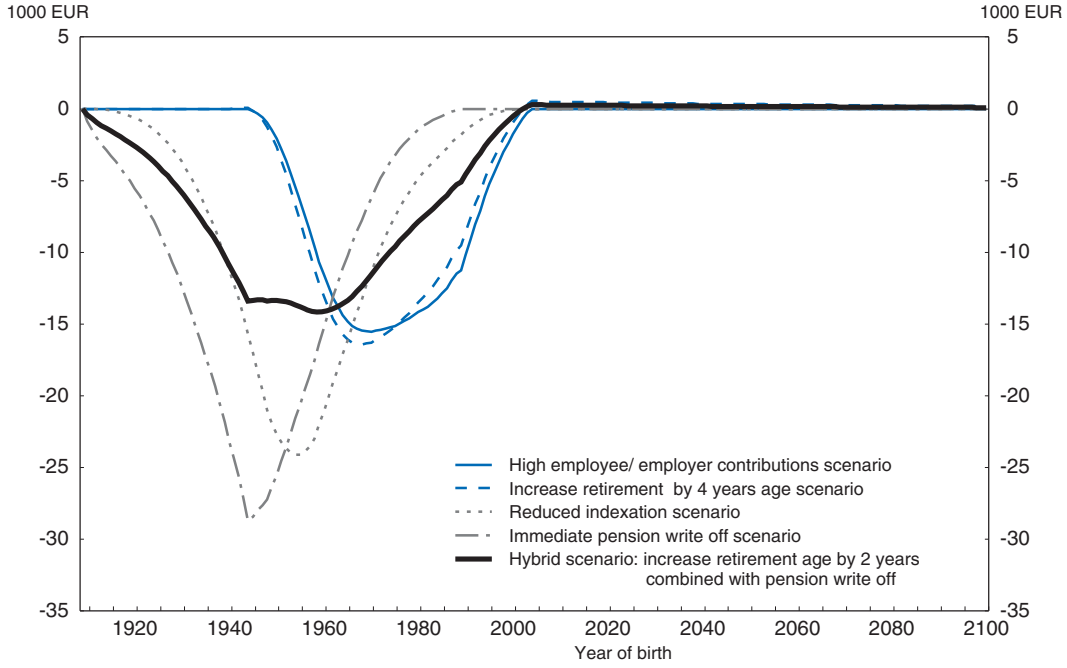
Additional recovery measures will need to take into account impact on equity and growth

When deciding which instruments to use to restore real funding ratios to 100% (*i.e.* about 145% in nominal terms), there are at least two objectives to take into consideration. First, there are intergenerational concerns as the instruments have different impacts on younger and older generation. As illustrate in Figure 2.4 below, each single instrument has a very distinct impact on generations. Instruments could be group into two categories in this respect. The first group consists of raising contribution rates or increasing retirement age. These two options put the burden of the adjustment exclusively on working generations. The second group consists of the options of suspending indexation or a one-off cut of pension rights ("write-off" scenario). These two scenarios put a bigger part of the adjustment burden on older generations than the two previous ones (Figure 2.4). Interestingly, the hybrid scenario, combining reduced pension rights and increased retirement age, spread more evenly the burden among generations. From the angle of generational equity, a hybrid scenario could be preferable to the others.

Second, it is also important to consider the growth impact of the different measures. In the short-medium term, the main impact on activity will arise through private consumption, but to a varying degree as, among other reasons, the various measures have different generational impacts. The strongest negative effect on private consumption is found in the *write off scenario* because of its impact on both pension incomes and future pension rights (Table 2.4). In *the higher employee contribution scenario*, the impact on private consumption is

Figure 2.4. **Generational accounts for different instruments**[1]

Net benefits per capita, 1 000 EURs



1. The presented scenarios correspond to the baseline scenario and the scenarios in Table 2.3.

Source: OECD calculations.

StatLink http://dx.doi.org/10.1787/888932291757

Table 2.4. **The macroeconomic effects of the different scenarios**[1]

	2010	2013	2024
Writing off on the value of pension rights			
Private consumption (%)	– 0.9	– 1.5	– 1.2
Labor supply (%)	0.0	– 0.1	0.0
Raising employee contribution rates			
Private consumption (%)	– 0.8	– 1.5	– 1.1
Labor supply (%)	0.0	– 0.4	– 0.3
Raising employer contribution rates			
Private consumption (%)	– 0.2	– 1.2	– 1.1
Labor supply (%)	– 0.1	– 0.3	– 0.3
Reducing the indexation of pension benefits and pension rights			
Private consumption (%)	0.0	– 0.1	– 1.2
Labor supply (%)	0.0	0.0	0.0
Raising the pension entitlement age			
Private consumption (%)	0.0	– 0.1	– 1.2
Labor supply (%)	0.0	0.0	0.0
Raising the pension entitlement age and writing off on the value of accumulated rights			
Private consumption (%)	– 0.5	– 1.8	– 1.2
Labor supply (%)	0.0	– 0.1	0.0

1. The table shows the percentage deviation from a baseline scenario. Moreover, the presented results only reflects policy changes in the occupational pension system.

Source: OECD calculations.

almost as high as in the previous case. On the other hand, if the higher contribution is placed on employers the initial decline will be smaller, reflecting that the initial burden falls on (partly foreign-owned) capital and thus relatively little on wage incomes (in the long-term the effects of higher employee or employer contributions will be similar as the labour market clears). In *the increased retirement age scenario*, the fall in private consumption will be smaller as the slower build up of pension rights are unlikely to affect (myopic) households' consumption decisions in the short-term. The *reduced indexation scenario* has little short-term impact on private consumption as pension incomes are only reduced gradually over time.

In the long term, the main impact on growth will take place through the labour supply effect of each reform. Higher contributions may increase the wedge between pension contributions and benefits durably, reducing labour supply incentives and consequently long-term economic growth. Conversely, the write-off scenario have no long-term effect on the labour supply because there will be no change in the wedge between pension rights and contributions. The impact of the increase in the retirement age on labour supply is more uncertain. On one hand, increasing the retirement age also raises the wedge between pension contributions and benefits, potentially reducing the labour supply. However, this result is likely to be reversed if households are myopic regarding the impact of a later retirement age on the wedge. An expansion of the labour supply is also likely if this measure is accompanied by an equal sized increased in the retirement age in the state pension system.[7]

Comparing the macroeconomic and intergenerational effects of the different adjustment options shows that relying on a combination of recovery measures could be a better option than just relying on a single measure.[8] An optimal combination may, however, put more weight on increasing the retirement age than raising contributions rates or reducing the real value of benefits. Macroeconomic benefits of increasing the contribution rates seem to be rather limited. Moreover, the effectiveness of contribution hikes to solve funding crises is declining as the contribution base is shrinking (Box 2.6). On the other hand, extending working life could be seen as a continuation of earlier efforts, such as the ending of the tax-favoured status of early retirement programmes (VUT) and the proposal to increase the official retirement age to 67 (see Chapter 1). Moreover, the social partners have started talks within the framework of the Labour Foundation (the Stichting van de Arbeid) to examine the sustainability of the occupational pension system, including the issue of extending the retirement age. The presented calculations show that the retirement age in the occupational retirement system should be increased to at least 67 and combined with a mix of other measures, such as a reduction in the real value of pension benefits and higher contribution rates.

Box 2.6. **Future challenges for the pension funds**

As funds mature, the effectiveness of the contribution rate as a steering instrument declines – for example prior to the crisis it was calculated that an increase in contribution rate of 2½ percentage points was required to improve the funding rate by 1%, while in 2030 the necessary increase in the contribution rate would rise to 4½ percentage points (Ponds and van Riel, 2007). Moreover, sharp increases in contribution rates have detrimental labour market effects and put too much of the necessary adjustment on the shoulders of younger workers. Thus, there has been a need to have more flexible steering instruments and spread risks more evenly across all members of pension funds.

Box 2.6. **Future challenges for the pension funds** *(cont.)*

The maturing of funds is also likely to induce funds to pursue more conservative investment strategies. However, a more conservative portfolio will not be attractive to younger members as the implied lower return on investments means that contribution rates will be higher in order to fund the accrual of their new liabilities. Thus, funds may want to differentiate more in risk exposure between younger and older members, to secure higher returns for the young and more indexation certainty for the old. This can be achieved through the introduction of an age-dependent indexation policy, where active members receive an (wage) indexation that is a function of the part of the realised rate of return on investments that is above the discount rate, while other members get price indexation. With such an indexation rule, the assets could also be divided into a conservative part (to finance the part of the liabilities that is indexed to price growth) and a risky part (to finance the part of the liabilities that is related to the excess return). Alternatively and perhaps a more radical solution is to allow workers to keep their contributions in individual DC accounts, which upon retirement is converted into DB liabilities (Ponds and van Riel, 2007). The latter is similar to converting the pension rights of retirees into annuities, which in other pension systems has been difficult to establish.

A third challenge is that following the crisis, it is likely that – as recommended by the pension committee (see below) – pension regulation will lower the allowed maximum expected rate of return on equity, implying a need for increasing assets, increasing premiums or lower pensions ambitions.

Making the pension funds less vulnerable to financial crises requires reforms

During the recent crisis, almost all funds have suspended indexation, which is partly linked to regulation that prohibits indexation as long as a pension fund is under-funded. Moreover, extending the recovery period to five years explains partly why relatively few funds have raised contribution rates as the extension allowed funds to rely more on indexation suspension – nearly half of the recovery plans have suspended indexation for the next five years. Otherwise, the pension funds have a free course of action when deciding on recovery strategies under the condition that they address the interest of active members, sleepers, pensioners and sponsors in a balanced way. Funds with funding ratios below the legal minimum of 105% are further supported by regulation that prohibits transfers of pension rights away from such funds to prevent a further deterioration of funding ratios. Nonetheless, the government has established a number of committees to evaluate if there is a need for reforming pension regulation to secure the long-term stability of the system (Box 2.7).

The market based focus of the Dutch regulatory framework implies that the crisis-related turbulence on the financial markets led to volatile discount rates for the purpose of assessing funding ratios (Figure 2.5). In all, the 1¼ percentage point fall in the discount rate between mid-2008 and mid-2009 decreased the funding ratio by some 20 percentage points – a decrease that was only partly offset by the associated higher market value of the funds' bond portfolios. The discount rates have been gyrating, leading to sudden strong upward as well as downward revisions in the discounted value of future liabilities and hence in the funding ratios.

One way of diminishing the influence of short-term volatility could be to use a weighted average of swap rates. However, using an average of historical values reduces the

Box 2.7. **Possible pension reform areas**

The government has established a number of committees to investigate pension funds' actions and lessons to be learned from the current crisis. These committees reported and made policy recommendations in the beginning 2010, including the following:

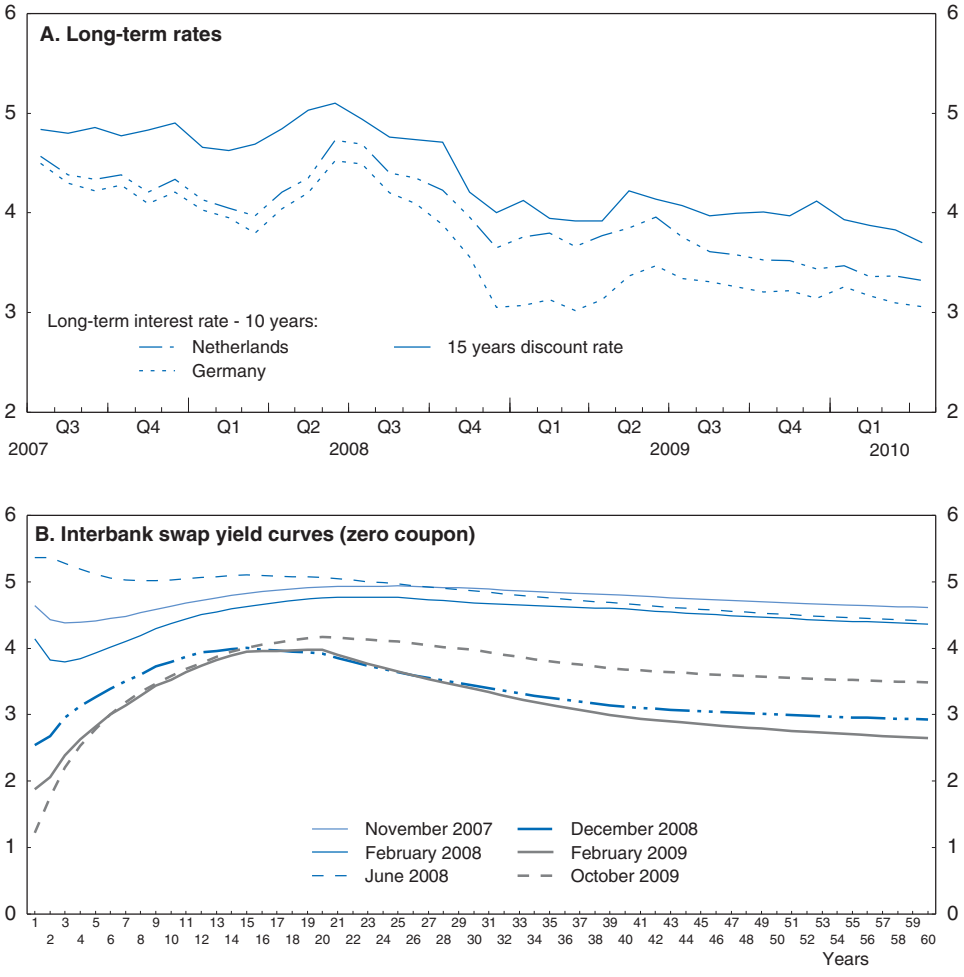
- An investment policy and risk management committee (also referred to as the Frijns committee).
  - The committee concluded that the vulnerability of the (heterogeneous and increasingly complex) pension funds will increase as a result of population ageing and longer life expectancy, affecting their recovery ability and shortening their investment horizons. Nonetheless, the funds have structurally undervalued the importance of risk management and the associated implementation of investment policies. In addition, specific fund characteristics, such as the age of members, are not adequately translated to into investment policy. Particularly, outsourcing risks arising from principal agent problems are underestimated. A particular issue is that funds have increased the riskiness of their portfolio to keep contributions down and protect the real value of pension entitlements. Part of the problem is that there is too much emphasis on nominal funding ratios, whereas in the future a real framework must serve as a guide. Moreover, the governance model must adapt to deal with increasingly complex governance duties, pointing to the need for securing adequate and professional support – which tends to lack in smaller pension funds.
- A committee on the sustainability of the supplementary pension schemes to evaluate if pension funds are future and shock proof with regard to financial and economic crises and to longevity (ageing) with the aim of providing policy recommendations that maintain the current collectively and solidarity elements.
  - The committee found that the current system lacks sufficient durability in view of population ageing, rising longevity and the increasing vulnerability to financial risks. The sustainability of the system can be improved by lowering the ambition level with respect to pension benefits for given contribution period (*i.e.* accrual rates should be lowered). Changes in life expectancy should be linked to either pension benefit levels or contribution periods. Alternatively, risks should be borne more explicitly by participants. Strategies for addressing future windfalls or setbacks should be made explicit and communication to members should be improved. The flat contribution rate should be preserved, but it should be considered to have an age based decline of accrual rights to facilitate labour market mobility (particularly of self-employed) and reduce the implicit transfer from younger to older participants.
- A parameter committee evaluated whether the currently used parameters should be adjusted, such as the maximum allowed yields on different categories of stocks, wage and inflation assumptions, etc.
  - The committee argued that the minimum expected values for wage and price inflation, 3% and 2% respectively, should be kept. Likewise for the expected nominal bond rate of 4.5%. The committee was divided on which value to use for the expected rate of return on equity, with one group arguing that future rates of return should be 1.5% lower than in historical average as windfalls effects from integration of financial markets, technology developments and an unprecedented rise in productivity cannot be expected to be repeated. The other group argued for a slight downwards revision of the expected rate of return to 7.25%, but also that pension funds should be more

Box 2.7. **Possible pension reform areas** *(cont.)*

prudent in accounting for the possibility of deviation from this historical average. If adapted, contributions have to be EUR 1.9 billion and EUR 0.6 billion higher in the view of the two groups.

Moreover, there will be an evaluation of the Financial Assessment Framework (part of the Pension Law) by the regulator (DNB) and the Ministry of Social Affairs, which is to be discussed with the social partners.

Figure 2.5. **Interest rate developments**



Source: Dutch National Bank and OECD (2010), *Analytical Database*.

StatLink http://dx.doi.org/10.1787/888932291776

forward looking value of using market rates and it would not entirely remove non-fundamental information, such as the drying up of liquidity and other crisis effects.

The problem in this area may be that the regulatory approach is still putting too much weight on short-term developments for the assessment of the long-term commitments of

the pension funds. Thus, the market based approach to establishing the discount rate should be preserved, but should rely on less volatile interest rates, pointing to using long-term bond rates. These can be obtained from investment high grade bonds, such as AA-rated corporate bonds. The regulator could also consider using the rate on long-term government bonds, either from the Netherlands or the risk free bonds in the Euro area. Such a choice would imply a lower discount rate than when using AA- rated corporate bonds, thus boosting liabilities. If this is unwarranted, then one way of preserving a more stable discount rate that reflects a safe market based return could be to add the historical difference between the corporate and government bond rates.[9] However, these other market rates also exhibited significant, though less, volatility in the recent past, and so would not have solved the discounting issue fully.

Alternatives exist to further resolve this problems, but at the considerable cost of divorcing the process from its current market basis. Fixed discount rates are used in the United Kingdom and United States and some countries (Denmark and Finland) have allowed pension funds to calculate solvency on the basis of a return to "normal conditions" – an approach that is also being discussed elsewhere (OECD, 2009).

Despite the extension of the maximum allowed recovery period, five years is still short compared with the 10-15 year recovery periods that are used in countries like the United Kingdom and the United States, with the length of the business cycle and with the maturity structure of pension funds' liabilities.[10] As argued in Chapter 1, the depth and the severity of the crisis are such that the projected recovery is likely to be relatively weak and slow in gathering speed. Thus, longer recovery periods would give funds more flexibility in restoring their funding rates, implying at least that the exceptional extension of the recovery period should be made permanent.[11]

The governance of pension funds should improve to reduce risks

Pension funds have full freedom to compose their portfolios under the regulatory risk management constraints, and the variation in equity holdings is rather large, ranging from an average of 17.6% in the relatively risk free funds to 46.9% in the funds with the largest equity exposure (Bikker *et al.*, 2009). However, there is evidence that some smaller company-based funds have relatively risky investments portfolios (*i.e.* a relatively high equity share) (Davis *et al.*, 2007). Dutch funds are obliged by law to follow an investment strategy based on the prudent-person principle. This means that investments in sponsoring firms is limited to 5-10% of total investment, and that funds have to inform members about their investment strategy and its implementation. The riskiness of investment strategies is also limited by regulation that the funds within a year have to be able to meet their obligation with 97.5% certainty. Moreover, there are maximum values for what rates of return funds can expect when calculating their funding ratios and what indexation members can expect (the so-called continuity analyses, see below).

In general, the funds have invested in assets that reflect the age composition of their active members (Bikker *et al.*, 2009). However, the committees looking into the occupational pension system highlighted that the pension funds have been increasingly pursuing more risky investment strategies in order to contain contribution rates and still meet their indexation promises, without paying sufficiently attention to fund specific characteristics, such as the age composition of all members (including sleepers and pensioners). The riskiness of the pension funds' portfolio should reflect the age structure of its members to reduce the volatility of the solvency rate as the fund matures (OECD, 2009).

Nevertheless, the regulator has found that several (smaller) pension funds have severely underestimated the inherent risk in their investment policies (DNB, 2009). This underestimation may reflect the fact that the funds' boards are dominated by representatives from the social partners, who tend to focus on the interest of active members or the average age of their members, rather than basing their portfolio choice on a cohort-specific investment policy (Teulings and De Vries, 2006).[12, 13] The latter could be addressed by increasing the representation of retirees and sleepers on the board of the funds or the professionalism of the boards. More professional boards would also address the problem that some (smaller) funds have not properly monitored that when outsourcing investment function, whether the investment firm actually implemented an investment portfolio that reflects the risk level decided in the investment strategy – a problem particularly when more advance financial instruments were used. The regulator also concluded that the risk management function could be improved as, at times, it did not adequately recognise that investment decisions were biased towards the attractiveness of the product in terms of potential returns rather than being balanced against associated risks.

The system of corporate governance for pension funds has not prevented a large dispersion of annual administration costs across pension funds, ranging from 0.1% and 1.2% of pension fund assets, although on average Dutch funds compare well with those of other countries. Such costs can be an important factor behind the final outcome of pension savings. For example a 1 percentage point higher annual administrative cost can induce a cumulative reduction of 27% in pension benefits (Bikker and de Dreu, 2006). Larger industry-wide funds are significantly more efficient than the smaller (company) funds, reflecting economies of scale and relatively straightforward pension schemes (absence of information costs, no adverse selection, etc) under the collective labour market agreement and relatively fewer transfers of pension rights, contributing to the ongoing consolidation of pension funds (Bikker and de Dreu, 2006). However, pension regulation limits the incentives to reduce administrative costs, *e.g.* by preventing members from switching pension funds. Other than allowing members greater possibility for switching funds, regulation could be adapted to promote transparency of pension plans' operating costs, which would increase merger incentives as well as reduce the cost of supervision (Bikker and de Dreu, 2006).

Changes in transfer rules could favour labour mobility and improve corporate governance

As discussed in the previous *Survey*, a recurrent issue in the Netherlands is how to mobilise underutilised labour resources (OECD, 2007). In the context of pensions, the changes implemented over the past years have potentially created a barrier to changing jobs and thus reducing labour mobility between sectors. Previously in the final pay plans, the decision to transfer pension rights was relatively straightforward, as it was generally advantageous to transfer accrual pension rights because of the embodied automatic wage indexation for active members. Presently, under the average wage plans the decision of whether to transfer accrued pension rights in connection with potential employment changes (involving another pension fund) has become highly complex because of the contingent indexation of accrual pension rights – a contingency that rules out transfers of indexation promises – creating a risk that job changing members lose pension rights. From a legal point of view there is a right to transfer accrued pension rights in connection with

job shifts and transfer periods are very short (Box 2.8). Moreover, if workers decide to become sleepers, pension funds are legally required to apply same indexation rules as for pensioners in the funds. However, the complication comes from the fact that indexation of accrual nominal pension rights is conditional on the financial position of the pension fund, requiring the member to make the non-trivial comparison of indexation promises and of investment strategies (Bikker and Vlaar, 2006).

Box 2.8. **The pension fund transfer processes**

The value transfer process requires considerable effort on the part of all the parties involved: the employee must make a request; the pension administrator must provide information; experts must provide advice; the employee must make a choice; the transferable value must be determined and transferred to the new pension administrator; the value must be translated into entitlements; the outcomes must be entered in the accounts and relevant information again passed to the employee. To ensure that the process is completed within half a year, strict time limits are imposed on each stage, and in practise the process is completed within a couple of months. The associated costs (potentially up to several hundred EUR per case) are borne by the pension funds (recovered through contributions).

To secure equal treatment, a standard method has been adopted for assessing the transferable value of accrued pension rights (but not of indexation promises) and its translation into entitlements under the new pension scheme, although in practice the transferable value will seldom be precisely equal to the value available to the pension administrator releasing it, because there is a difference between the principles for allocations to reserves and the principles applying to transferable value assessment (Stiching van de Arbeid, 2004).

The comparison of different indexation mechanisms is not only restricted to considering the type of promised indexation (to industry wages, general wage, or consumer prices) but is also often complicated by an inverse link between the quality indexation and the accrual rate in the pension plan. Thus, the first hurdle for a worker who is considering transferring his accrued pension rights is a non-trivial comparison of indexation mechanisms (including type of indexation ladders and other mechanisms) and the associated accrual rates (Table 2.5). The second major hurdle is an evaluation of the quality of the indexation promises that is linked to the financial health of the pension funds (DNB, 2006). Funds provide information in this respect through a continuity analysis (once every three years) to gauge expected indexation and, more recently, the so-called indexation label (the "toeslaglabel" in the annual pension briefs), which provide

Table 2.5. **Indexation of active and non-active members**

In per cent

	Basis for indexation of active members		Basis for indexation of passive members	
	Share of funds	Share of members	Share of funds	Share of members
Price	16.3	8.1	49.8	21.6
Wages	54.1	78.5	12.9	60.5
Mix prices and wages	7.8	1.3	5.3	0.9
Other	21.9	12.1	32.0	17.0

Source: Dutch National Bank.

information about the possibilities for pensions to keep pace with price increases over the next fifteen years (DNB, 2008). Processing such highly complex financial information and drawing the relevant conclusion is difficult even for workers with well-developed numerical skill, suggesting that such a label perhaps has a limited value for most workers who are contemplating switching pension funds. Thus, it is difficult to establish what action would be most favourable for a worker considering changing pension fund (Stichting van de Arbeid, 2004) and this lack of transparency may lead to potential welfare loss for individuals (Ponds and van Riel, 2009). The quality of indexation is from a theoretical point of view highly important, but from a more practical point of view the high complexity probably means that this issue has little impact on labour mobility across sectors and firms, particularly in view of the members' poor understanding of pension issues.[14]

The government has already taken measures, such as the indexation label, to enhance transparency in this area. It should continue efforts in this direction, so pension fund members eventually gain a broader and deeper understanding of their own pension plans. However, that will not solve the indexation problem in connection with transfers. The regulator has proposed three practical approaches (DNB, 2006):

- To base pension transfer on the expected value arising from the mandatory continuity analysis. This approach has the benefit of using an existing framework that encompasses the indexation that members can reasonably expect.
- To base pension transfers on indexation reserves – many funds have reserves specifically for future indexation, which could provide payments for indexation promises. However, to be fully operational such a system would require all funds to have indexation reserves and boils down to increasing the funding ratio.
- To base pension transfers on solvency ratios. The value of indexation is linked directly to funds' solvency ratios and thus provides a strong indication of the expected indexation.

Of the three proposals, the last two have the advantage of being easy to apply, but are rather crude. Using the continuity analysis would be an attractive alternative, but the results are parameter dependent and thus cannot be determined with a high degree of objectivity. For example, in the case of a fund with solvency problems, a relatively high indexation value may emerge because of allowances made for future contribution policies or expected returns. This is naturally not a problem for the receiving fund, but may aggravate the situation for a financial weak donor fund. Thus, this approach calls at least for some parameter standardisation.

Facilitating transfers could create a strong incentive for improving corporate governance. Such increased transfer possibilities should focus on underfunded funds, where present rules lock in members – potentially leaving them with limited real pension benefits despite lifelong contributions. Thus, persistently underfunded funds should be faced with the prospects of members leaving. This principle could be widened more generally to include persistently underperforming funds, but who nevertheless manage to maintain funding ratios above the legal minimum. Such changes, however, need to be accompanied by adjustments in transfer rules so that the value of transferred pension rights reflects the financial health of the fund from which the member is departing.

An implication of the pension transfer rules is that some firms with company based funds may be hesitant to hire older workers with large accrued pension rights. The issue arises when the company based fund has high quality indexation that has to be applied to the large accumulated accrued pension rights. This may lead to a potential decline in the

funding ratio, raising the risk that the sponsoring company has to inject additional capital (DNB, 2006). Another labour mobility problem is that older workers may refrain from becoming self-employed as there is no pension fund for self-employed (except for certain type of professions like doctors) and most of the accrued pension rights are accumulated relatively late in peoples' careers. Workers who become self-employed have the right to continue in their previous pension fund on a voluntary basis for three years and must thereafter cater for themselves and their accrued pension rights get the status of sleepers (Choi, 2009).[15] However, the indexation of sleepers' accrued pension rights are typically indexed to prices as compared with wages for active members. This means reduced incentives for becoming self-employed, potentially implying a less dynamic business sector and lower employment growth. A relatively simple solution is to allow the self-employed to stay (longer) with their pension fund and pay the full (employer and employee) contributions. The latter could, for example, be based on the wage scale that was in place when they were employed.

The issue of contingent indexation could be removed by moving the regulatory focus to real funding rates and ensuring they are high enough to support indexation for all funds. This would require increases in contributions or reductions in pension promises. Raising funding requirement would force pension funds to boost their assets, on average, by about one third to bring the average nominal funding ratio to 145%, but the assets needed would be considerably higher create sufficiently large financial buffers against unforeseen events (analogous to the current nominal funding requirement of well over 100%). In the absence of an unusually strong recovery in stock markets, this would require measures (*i.e.* much higher contribution rates, prolonged suspension of indexation, etc.) that could have strong adverse effects on economic growth.

Box 2.9. **Policy recommendations to strengthen the pension system**

Further reduce the impact of short-term economic developments on the funding ratio

- Stabilise the discount ratio by replacing the current interbank swap yield curve as the discount rate(s) with a more stable long-term interest rate from an investment high grade bond. This could be the corporate AA- bond rate, but if that market is considered insufficiently liquid, another choice is a long-term government bond rate. If this rate is considered to low, the historical difference between the corporate and government bond rate could be added.
- The normal recovery period should be extended to five years, at a minimum, making the exceptional extension permanent to avoid abrupt changes in recovery parameters.
- Longer contribution periods (equivalent to lowering the accrual rate) should be introduced to structurally improve the funding ratios. If the aim is to increase the retirement age in the pension funds to 67, this has to be supplemented by a mix of higher contribution rates and lower real value of accrued pension rights.

Securing better transfer of pension rights

- Transfer decisions should be supported by greater information provision to ensure that members take informed decisions in this area.
- To encourage self-employment, workers shifting to become self-employed should be allowed to remain active members in their pension fund, paying the full contributions (*i.e.* that of employees and employers).

Box 2.9. **Policy recommendations to strengthen the pension system** *(cont.)*

- Members should be allowed to leave persistently underfunded or underperforming funds, although in such cases transfer rules should be adjusted so that the value of transferred pension rights reflects the financial health of the fund from which the member is departing.

Corporate governance needs strengthening to align risks and investments.

- The boards of the pension funds need to be strengthened to reflect all interests. This could be achieved by increasing the representation of pensioners and sleepers in the board. There is also a need for more professional boards to ensure that the risk levels decided in investment strategies are reflected in the riskiness of the portfolio choice.
- The members should be able to evaluate the performance of boards, which requires that regulation should be put in place to promote transparency, both with respect to the link between investment strategies and portfolio choices and to operating costs of funds.

Notes

1. The non-coverage can be explained by the fact that employers are not obliged to offer pension contracts, that some workers (despite being obliged) do not participate in the pension scheme of their firms, that people covered by a pension scheme but pay zero or low contribution are not counted as participants, and that people in third-pillar pension schemes are not counted as participants.
2. With a 40 years careers and full wage indexation of acquired pension rights, plans currently yield pension benefits that are equal to 80% of average wages over their working life, which is considered to correspond to the typical final wage pension replacement rate of 70%, if accrued pension rights are fully wage indexed.
3. A baseline scenario closer to the current recovery plans would not change significantly the picture. As shown in Annex 2.A2, a scenario that assume that pension funds index pension rights only when the pension fund ratio is above the indexation ladder does not allow funds to return to a ratio of 145% by the end of the recovery period.
4. The average funding ratio of 145% level is achieved if the real rated of return on equity average 9½ per cent per year over the full 15 years period.
5. The implied reduction in replacement rates may not be acceptable to members as surveys indicate that in the Netherlands the minimum acceptable replacement rate is in the range of 60-75% of previous incomes (Binswanger and Schunk, 2009).
6. Increasing contribution rates for employers will have similar long-term effects and will only have different short term effects, reflecting the rigidity of wage formation in the Netherlands.
7. In addition, increasing the retirement age may lead to a decline in private wealth, which could boost labour supply incentives.
8. A number of OECD countries (Austria, Denmark, Finland, France, Germany, and Portugal) have gone a step further and introduced measures that link one or more components in their pension system to developments in to life expectancy, so that increases in the latter lead to lower pension payments, higher legal retirement, or longer contribution periods.
9. A more individualised approach could be to let the discount rate for individual pension funds reflect the members' risk willingness in terms of future indexation, *i.e.* their conditional pension rights.
10. Determining optimal recovery periods is probably unrealistic as this would require the formulation of an optimal response taking into account the specific circumstances of the individual fund as well as expected macroeconomic developments.
11. Other measures are necessary to increase the effective retirement age. Currently, the severance payment rules allow firms to fire employees on their 65 years birthday without paying severance

pay. Moreover, hiring older workers carries a potential high health cost, reducing demand for +65 years (OECD, 2007).

12. Applying generational accounting would also increase the incentives to extend members' working life as a measure to restore funding ratios.

13. The median equity exposure increased from about 11% in 1995 to around 30% five years later, where it has roughly remained during the 2000s. In the latter period, also funds with traditionally very low holdings of equity have increase their share to about 10, while the most risk exposed funds have lowered their equity holdings from nearly 60% in 1999 to around 50% since the mid-2000s. In terms of assets, then the equity exposure is nearly 40%, reflecting the higher exposure among the larger funds.

14. Nearly half of members do not know the type of pension scheme that they are a member of and almost two-third of members do not know their pension rights nor their future pension benefits (van Rooij *et al*., 2007).

15. If the self-employed return to paid employment with another pension fund, then s/he will be entitled to transfer past accrued pension rights as an employee to the pension scheme associated with the new employer (Dutch Government, 2005).

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ANNEX 2.A1

The Dutch pension system

The Dutch pension system has two main tiers, consisting of a flat-rate public scheme and earning-related occupational plans. The basic old age pension is payable from age 65. All residents are eligible for this benefit. The gross pension benefit reached EUR 12 017 in 2006 or about 30% of average earnings. The basic benefit accrues at 2% of the value of each year a person of age 15 to 65 lives in the country. There is also a social-assistance scheme for older people with less than 100% public pension entitlements. This schemes provides supplements to the full net basic pension.

The occupational pension system has three types of pension funds. The industry-wide funds that are organised for individual industries (*e.g.* construction, health care, transport, etc.) and which is mandatory for all firms and where the Minister of Social Affairs and Employment can declare that the collective pension agreement is binding for all in the industry. The second type is company based pension funds, where a sponsor runs its own pension plan for its employees. Companies can opt out of industry schemes by establishing a company scheme with better conditions than offered in the industry fund. In both cases, worker participation is mandatory and governed by collective labour agreements. The third type is the professional group pension funds, which organise pension schemes for specific groups of professionals (physicians, notaries, etc.) (Bikker *et al.*, 2009). Self-employed need to organise their own retirement plans, typically through savings in their companies or in the third–pillar pension system. The occupational pension system has 5.8 million active members, 2.6 million pensioners and 9.3 million inactive participants ("sleepers") – i.*e.* former active members that have accrued pension rights in the fund.

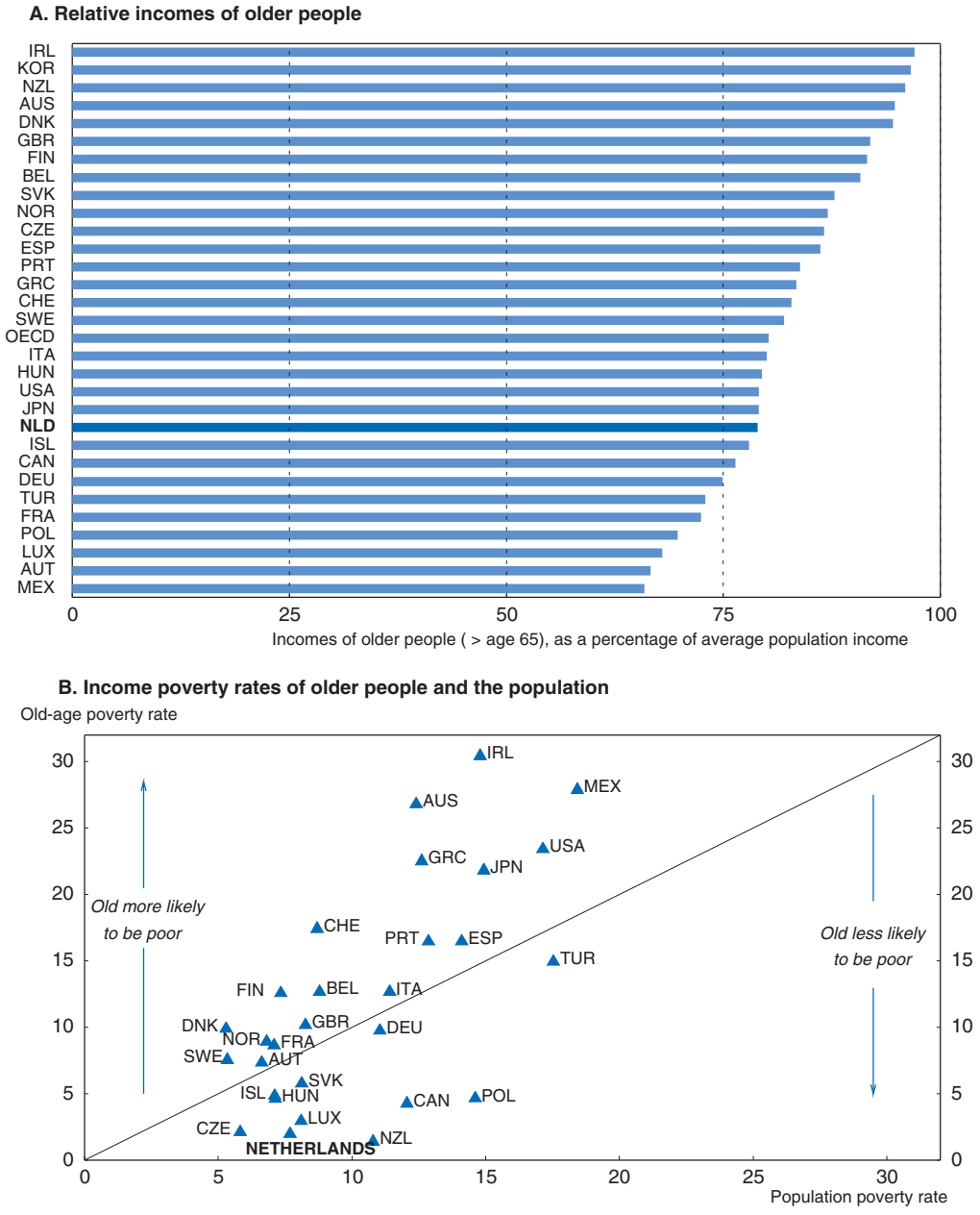
In all, the funds cover 94% of the active labour force. More than 85% of all workers are covered through the nearly 100 industry funds (which administrate more than 70% of all pension assets). The nearly 600 company based pension funds administrate more than a quarter of all assets and serve about 12% of all members (Table 2.1). Moreover, most of the funds are mature, being established in the 1950s and 1960s, with a relatively high share of pensioners and consequently a high ratio of pension-fund liabilities over contributions – currently around 2½ and expected to increase to 4½ by 2030 (Ponds and van Riel, 2007).

About 94% of the employees in the pension plans are covered by defined-benefit (DB) types of schemes and the remaining by defined contribution (DC) schemes. Nearly 85% of participants in DB schemes have pensions based on average wages. In these plans, each worker accrues nominal pension rights at a fixed rate (between 1¾ and 2¼ per cent but typically around 2%) of the salary earned each year throughout the worker's career (with both the employer and the worker contributing to the fund). Only about 3% of participants

are still in final pay plans – down from more than half in 2002. The rest of the participants either have a combination of average and final pay plans or a fixed amount (DNB, 2008). A few, mainly smaller, employers offer schemes operated by insurance companies. The accrual of pension rights is strictly related to employment with some few exceptions. There are no credits for childcare periods, although many schemes allow voluntary contributions to cover periods of absence. Neither are there credits for unemployment except for older workers, where the social partners administer a fund (FVP) to allow older

Figure 2.A1.1. **Pensioners' relative incomes**

Mid-2000s



Source: OECD (2009), *Pensions at a Glance*.

StatLink http://dx.doi.org/10.1787/888932291795

workers to accrue pension rights for a certain period during unemployment. Pension taxation follows the EET (Exempt, Exempt, Taxed) system, where contributions not taxed, nor are any taxes levied on capital or capital gains, and where pension payments are taxed (Dutch government, 2005).

The standard retirement age in the funds is 65 and used to be linked to the official retirement age in the state pension scheme. The government plans to increase the official retirement age to 67 years (Chapter 1) so a gap in the retirement age between the two systems may open up. The funds typically pay pension benefits for a period of about twenty years, but this period is increasing as life expectancies are revised up, like the recent revision from 81.5 years to 83.2 years and 84.2 years to 85.5 years for males and females, respectively. After a full working 40 years working life, pensioners may receive pension benefits (including state pension that equals about 30% of average earnings) that corresponds to 70-90% of average career income. However, the exact pension benefits are difficult to determine ex ante as they depend on the pension scheme, the accrual rate, years as a contributing member, wage developments, and the conditional indexation. As the funds are operating on the basis of actuarial neutrality, workers who retire before the age of 65 receive a correspondingly lower pension benefit.

The broad scope of the pension system has been successful in securing net replacement rates for pensioners that are among the highest in the OECD (Figure 2.A1.1, Panel A). Particularly, retirees with low-income working lives have relative pension benefits that are higher than in most other countries. Moreover, provision for widows is stronger than in most other OECD countries (due to a mix of relatively generous survivors' benefits, other protection for non-working spouses and indexation policies). In addition, pensioners' real disposable income, when taking into account the value of their in-kind benefits, their lack of work-related expenses and the fact that they often have considerable real savings, are often higher than that of working generations. These strong pension provisions are instrumental behind the much lower poverty rate among retired people than in the population at large and compared with other OECD countries (Figure 2.A1.1, Panel B).

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ANNEX 2.A2

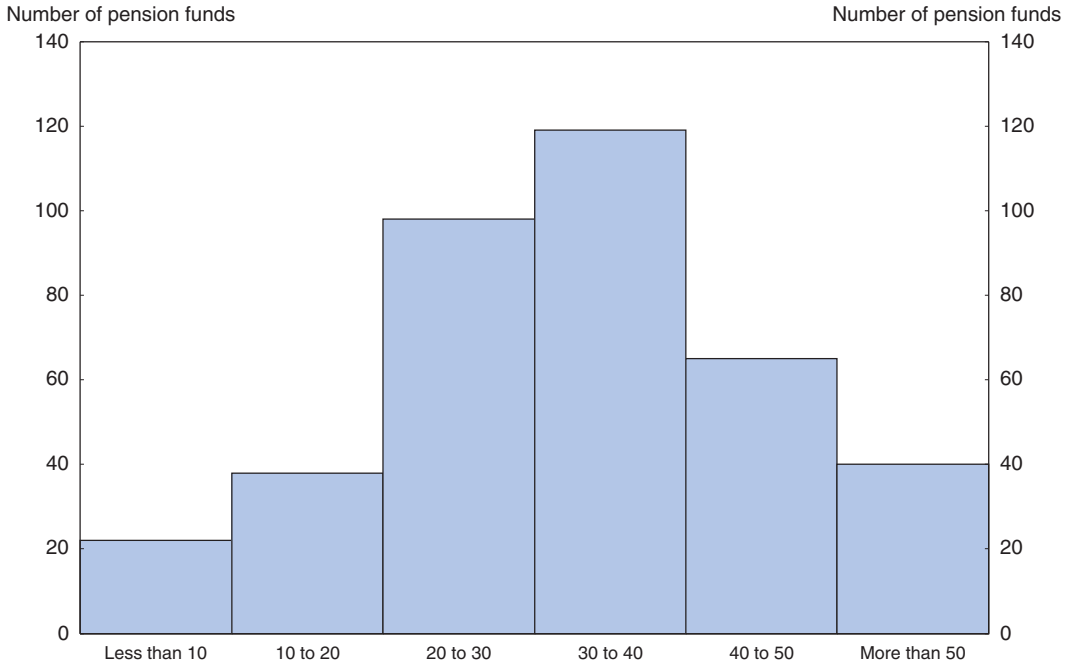
The effect of the financial crisis on the solvency of Dutch pension funds and its economic consequences – a simulation

The dual impact of crisis on pension funding

The crisis caused the pension funds' average funding ratio to fall from 144% before the crisis to a trough of 92% in the first quarter of 2009.[1] The next two quarters saw a recovery in the average funding ratio to 109%, although this figure does not take into account an estimated 7 percentage point reduction in the ratio due to the recent upward adjustment of life expectancy.[2] The collapse of share prices reduced the value of pension funds' assets, lowering the average funding ratio by an estimated 23 percentage points (2007Q4 to 2009Q3). The decline of nominal interest rates increased the present value of nominal pension liabilities, lowering the funding ratio by some 15 percentage points. The associated higher bond prices raised the funding ratio by some 3 percentage points. The varying impact of the crisis on individual pension funds reflected differences in exposure to the equity market and in the use of derivates to hedge nominal interest-rate risks. In all, the average decline was about 33%, and nearly 60% of funds experienced a decline of more than 30% (Figure 2.A2.1).

Figure 2.A2.1. **Decline of funding ratio**

In terms of percentage in 2007Q4-2009Q2 period



Source: Dutch National Bank.

StatLink http://dx.doi.org/10.1787/888932291814

Simulation of the impact of various recovery measures

Below, a number of simulations are presented to explore pension funds' different alternatives – such as higher contribution rates, longer working lives, and reduced real values of pensions – for restoring a real funding rate of 100% (corresponding to a nominal funding ratio of 145%, or about the same as before the crisis, based on the assumptions stipulated in Box 2.A2.1), under a set of conservative assumptions about future economic and financial market developments (Box 2.A2.1). Each of the policy alternatives is expressed relative to a baseline scenario in which pension funds do nothing: *i.e.* contribution rates and retirement age are kept at their initial, pre-crisis levels; and pension rights are fully indexed to wage and price inflation. The baseline thus neglects the indexation ladder that many pension funds employ to relate the rate of indexation to the funding ratio and that pensions with funding rations below 105% are not legally allowed to index.

Box 2.A2.1. **Model and parameter assumptions**

The model adopted for the analysis is non-stochastic. It is based around an accumulation equation for the financial wealth of a pension fund. This relates policy measures (the level and duration of contributions and the indexation of pension rights) to the time path of the funding ratio. The analysis distinguishes between five funds that differ (only) in their initial funding ratio, each having a different accumulation equation.

The portfolios of pension funds have equal shares of equity and bonds. Pensions and pension rights are indexed to a basket of wage and price inflation, with weights equal to 70 and 30% respectively. Other key parameters are presented in Table 2.A2.1. The assumed long-term real risk-free interest rate of 1.5% a year is below the historical average of 2.1%. This can be motivated by the prospect of population ageing which is expected to decrease interest rates. An equity premium of 3.0%, somewhat lower than the world historical average of 4.2%, matches the idea that the future equity premium will be below its historical counterpart. Dimson *et al.* (2009) put forward several arguments for this assumption, among which is the difference between the concepts of excess return (an *ex post* measure) and equity premium (an *ex ante* measure) and the increased diversification of equity risks. Our calculations show that an additional annual 1.4 percentage-point rate in returns would be needed over a period of 15 years. Under the assumption that pension funds invest half of their financial wealth in equity and that risk-free bonds earn a nominal interest rate of 3.5% a year, the equity rate of return would have to amount to 9.3% a year for a period of fifteen years.

Table 2.A2.1. **Key parameter assumptions**

Per year (percentages)

	2010-11	2012-2024
Price inflation	1.4	2.0
Wage inflation	2.4	3.7
Nominal interest rate (risk-free)	2.9	3.5
Nominal return on equity	5.9	6.5

The heterogeneity of pension funds is taken care of in the model by constructing baselines for five different pension funds. These differ only in the funding ratio and are

representative of the five classes defined in Table 2.A2.2. The table also shows the expected development of the funding ratio for these five typical pension funds under the baseline scenario. Four out of the five fund-types are expected to meet the minimum reserve requirement (a nominal funding ratio of at least 105%) by the end of 2011. However, after 15 years, under the baseline scenario, only one of them (covering only about 5% of all members) is expected to achieve a real funding ratio of 100% (nominal funding ratio of 145%). Thus, about 95% of members can expect that additional measures are needed if their funds are to achieve full funding of their real pension obligations in 15 years.

Table 2.A2.2. **Funding ratios, full indexation scenario**

End of year	Number of funds	Pension liabilities (EUR billions)	2010	2011	2013	2015	2020	2024
Group 1 (< 100)	41	46.4	97	98	100	101	101	101
Group 2 (100-110)	150	357.5	107	109	111	112	112	113
Group 3 (110-120)	115	118.4	117	119	122	122	124	125
Group 4 (120-130)	35	37.2	127	129	132	133	135	138
Group 5 (> 130)	39	31.5	138	140	143	144	147	150
Average	380	591.0	111	113	115	116	117	118

Source: The Nederlandsche Bank and own calculations.

Policies to restore solvency ratios

The simulations below evaluate different instruments that the pension funds could use to restore a 100% real funding ratio within 15 years (for a similar analysis see Van Ewijk, 2009).

Scenario 1: Applying conditional indexation

This scenario assumes that pension funds implement no recovery measures, but apply an indexation ladder. Many funds apply a rule where there is no indexation of pension rights if the funding ratio is below 105%, full indexation if the funding ratio is above 130% and partial indexation in between. On average, the indexation ladder alone does not achieve full funding of pension liabilities in 15 years, despite the loss in accrued pension rights via the accumulated 5% indexation cut. Full funding in this scenario can only be achieved if the pension contribution rate is also increased by 3.1 percentage points (Table 2.A2.3).

Table 2.A2.3. **Conditional indexation scenario**

	2009	2010	2011	2013	2015	2020	2024
Increase contribution (% wages)	–	3.1	3.1	3.1	3.1	3.1	3.1
Indexation cuts (% pension rights)	–	1.1	1.1	0.9	0.4	0.0	0.0
Funding ratio (end of year)	109	114	118	125	130	138	145

Scenario 2: Writing off on the value of pension rights

In this scenario, the nominal value of pension rights is reduced through an immediate write-off. Economically, this instrument differs from the indexation instrument in the balance between new rights and old rights. An immediate write off of the value of pension

rights implies no effect on new rights. An immediate write-off of 17.5% of pension rights is sufficient to bring back the funding ratio back to the 145% level in 15 years (Table 2.A2.4).

Table 2.A2.4. **Immediate write off scenario**

	2009	2010	2011	2013	2015	2020	2024
Increase contribution (% wages)	–	0.0	0.0	0.0	0.0	0.0	0.0
Indexation cuts (% pension rights)	–	17.5	0.0	0.0	0.0	0.0	0.0
Funding ratio (end of year)	109	135	137	140	141	143	145

Scenario 3: Raising employee contribution rates

Contributions to supplementary pension schemes are paid in the Netherlands by employees and employers in the proportion 1:2. To secure full funding, the employees' contribution rate has to be increased by 4.6 percentage points, to 17.0%, for 15 years (Table 2.A2.5). This increase is larger than the hike in the early 2000s, reflecting (partly) a smaller contribution base (Figure 2.A2.2).

Table 2.A2.5. **Employee contribution scenario**

	2009	2010	2011	2013	2015	2020	2024
Increase contribution (% wages)	–	4.6	4.6	4.6	4.6	4.6	4.6
Indexation cuts (% pension rights)	–	0.0	0.0	0.0	0.0	0.0	0.0
Funding ratio (end of year)	109	113	116	122	126	136	145

Scenario 4: Raising employer contribution rates

An alternative is to raise the contributions paid by employers. From the point of view of the pension fund there is practically no difference with respect increasing the employees' contribution rates as discussed above.

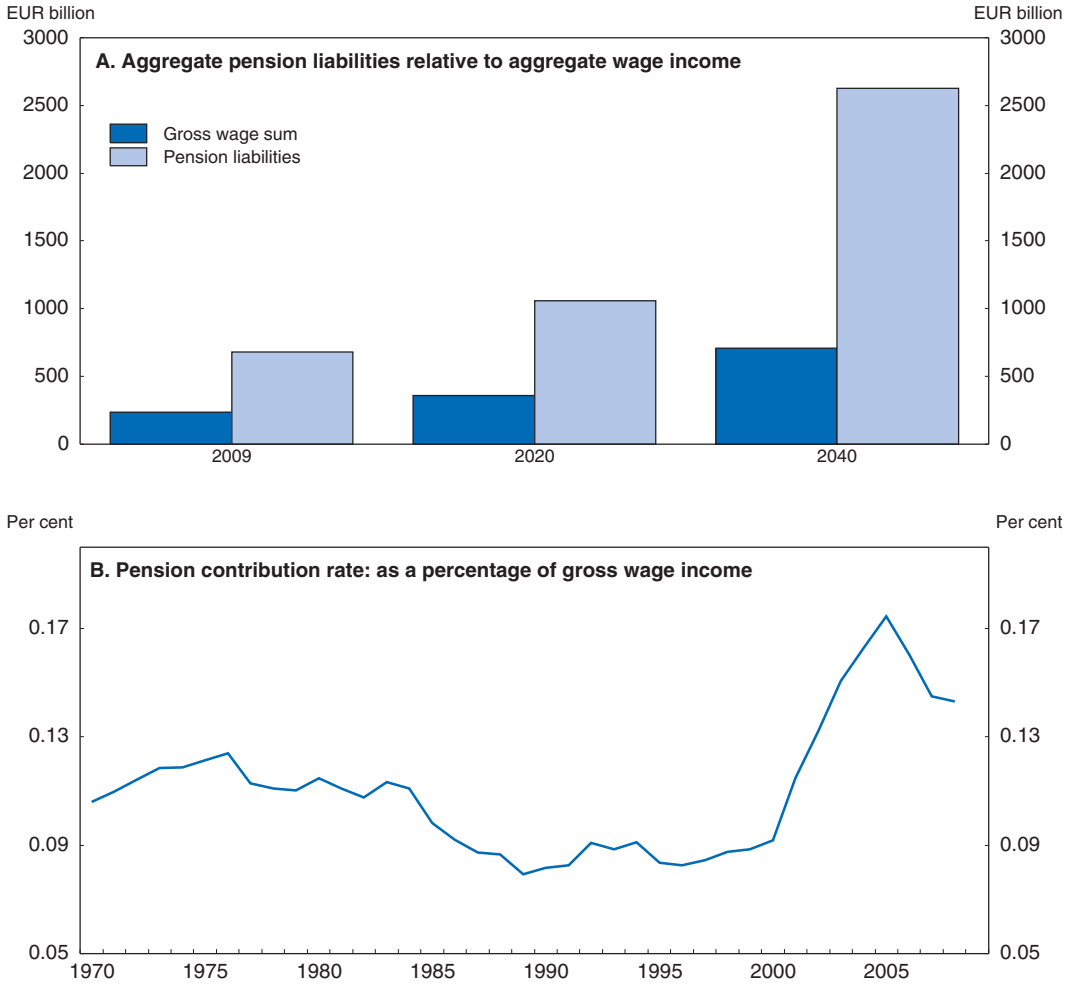
Scenario 5: Reducing the indexation of pension benefits and pension rights

This scenario shows that the indexation of pension benefits and accrued pension rights has to be reduced by 1.53 percentage points a year for 15 years for all active and non-active members of the pension fund. Since lower inflation is assumed for 2010, the indexation is negative that year. From 2012 onwards, full indexation amounts to an increase of pensions of 3.2% a year, so indexation amounts to 1.7 percentage points per year (Table 2.A2.6). Over 15 years, these indexation cuts sum up to the same 17.5% as in the immediate write off scenario.

Table 2.A2.6. **Reduced indexation scenario**

	2009	2010	2011	2013	2015	2020	2024
Increase contribution (% wages)	–	0.0	0.0	0.0	0.0	0.0	0.0
Indexation cuts (% pension rights)	–	–0.2	0.2	0.9	1.7	1.7	1.7
Funding ratio (end of year)	109	111	113	117	121	133	145

Figure 2.A2.2. **Pension and wage incomes**



Source: Bank of Netherlands.

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Scenario 6: Raising the pension entitlement age

This scenario implies a lower accrual rate for building up pension rights from 2010 onwards, but with an unchanged contribution rate. This leaves pensioners with the same pension rights as in the other scenarios, but they have to work 4 years longer to achieve the 100% real funding ratio in 15 years (Table 2.A2.7).

Table 2.A2.7. **Retirement age scenario**

	2009	2010	2011	2013	2015	2020	2024
Increase contribution (% wages)	–	0.0	0.0	0.0	0.0	0.0	0.0
Indexation cuts (% pension rights)	–	0.0	0.0	0.0	0.0	0.0	0.0
Funding ratio (end of year)	109	112	115	121	124	134	144

Scenario 7: Raising the pension entitlement age and writing off on the value of accumulated rights

The last scenario combines an increase of 2 years in the pension entitlement age with an immediate write-off on already accumulated pension rights. The simulations show that to achieve full funding in 15 years, the immediate write-off of pension rights must be 8.2% (Table 2.A2.8).

Table 2.A2.8. **Hybrid: retirement age/write off scenario**

	2009	2010	2011	2013	2015	2020	2024
Increase contribution (% wages)	–	0.0	0.0	0.0	0.0	0.0	0.0
Indexation cuts (% pension rights)	–	8.2	0.0	0.0	0.0	0.0	0.0
Funding ratio (end of year)	109	122	125	129	132	138	145

Macroeconomic impact

The main short-term macroeconomic impact of the different measures is to depress private consumption and thus economic activity. Other effects include changes in the relative prices between capital and labour, affecting investment and external competitiveness. However, these are likely to be relatively small and tend to be reversed over the longer-term as the labour market clears. The private consumption response differs importantly between different scenarios (Table 2.A2.9):

- In the immediate write off scenario, consumption declines relatively strongly because of an immediate cut in pension incomes and in future pension rights.
- In the higher employees' contributions scenario, the consumption response is slightly weaker than in the immediate write-off scenario, mostly reflecting that the higher contributions only affect the income of working cohorts. This group has a lower consumption propensity than pensioners because of more possibilities to spread out the associated wealth losses over their life cycle. The fall in private consumption can be larger if the higher contributions reduce labour supply incentives.
- In the higher employers' contribution scenario, the decline of consumption will be weaker than for higher employees' contribution, as the higher contributions fall on capital income, which is partly owned by non-residents, implying that part of the decline of consumption is exported abroad. However, increasing employer contributions increases labour costs for employers and reduces labour demand, leading to, at least temporarily, an increase in unemployment and an additional depressing effect on consumption.
- The reduced indexation scenario integrates the immediate write-off scenario (through its reduction of the value of accumulated pension rights) and the employee contribution scenario (through a similar increase in the wedge between pension rights and contributions). However, the short-term effects are modest as pension incomes are only reduced gradually over time.
- The increased retirement age scenario is similar to the higher employees' contribution scenario, as both have a similar increase in the wedge between pension rights and contributions for 15 years. However, in the short-term it is unlikely that myopic households take into account the lower build up of pension rights in their consumption decisions. In the longer run, myopic will play no role.

In the longer term, the growth effects are related to changes in the incentives to participate in the labour market. This does not exclude short-term effects, such as reduced labour demand that leads to (temporary) increases in unemployment, but implies only that the labour market are assumed to clear over the longer term. These effects fall into two distinct groups:

- The scenarios that raise contribution rates or reduce the accumulation rate of future pension rights weaken the incentives for labour supply, as the increased wedge between pension rights and contributions induces workers to spend less time on the labour market. However, if the longer contribution period is accompanied by an increase in the retirement age in the state pension system, then the labour supply effects are mitigated and likely to be reversed.
- The immediate write off scenario does not change the wedge between future pension rights and pension contributions and therefore does not change labour-supply incentives.

A note of caution is that higher contribution scenarios could lead to higher structural unemployment through the increased wedge between net wages and gross labour costs – as observed in many OECD countries. The reduced indexation of future pension right scenarios also creates a wedge between net wages and gross labour costs by reducing the value of delayed wage income, possibly leading to higher unemployment. Only scenarios that rely on reduced indexation of already accumulated pension rights escape such permanent unemployment effects.

The above discussion has assumed that changes in private wealth have no impact on labour supply decisions, which is in line with empirical studies. However, all the scenarios assume a loss of private wealth of about EUR 175 billion. Thus, it cannot be ruled out that this wealth loss is sufficiently large to induce an increase in the labour supply, mitigating or reversing the negative long-term effects on the labour supply. On the other hand, recent literature on behavioural economics suggests that people tend to discount information that relates to the (distant) future. To the extent that this is true, the calculations presented here overestimate the decline of consumption on account of a decline of future pensions or an increase of future pension contributions. In particular, if households are myopic then an increase of the pension entitlement age would have more favourable labour market consequences than the simulations suggest. Along similar lines, the immediate write-off pension rights may boost household savings more than warranted on the basis of wealth and income factors.

Table 2.A2.9. **The macroeconomic effects of the different scenarios**

	2010	2011	2013	2024
Scenario 1: Applying conditional indexation				
Private consumption (%)	– 0.5	– 0.9	– 1.1	– 1.1
GDP (%)	– 0.1	– 0.3	– 0.5	– 0.1
Labor supply (%)	0.0	– 0.1	– 0.2	– 0.2
Unemployment (% level)	0.0	0.1	0.2	0.0
Scenario 2: Writing off on the value of pension rights				
Private consumption (%)	– 0.9	– 1.3	– 1.5	– 1.2
GDP (%)	– 0.3	– 0.4	– 0.5	0.0
Labor supply (%)	0.0	0.0	– 0.1	0.0
Unemployment (% level)	0.1	0.2	0.2	0.0

Table 2.A2.9. **The macroeconomic effects of the different scenarios** *(cont.)*

	2010	2011	2013	2024
Scenario 3: Raising employee contribution rates				
Private consumption (%)	– 0.8	– 1.4	– 1.5	– 1.1
GDP (%)	– 0.2	– 0.5	– 0.8	– 0.3
Labor supply (%)	0.0	– 0.1	– 0.4	– 0.3
Unemployment (% level)	0.1	0.2	0.3	0.0
Scenario 4: Raising employer contribution rates				
Private consumption (%)	– 0.2	– 0.2	– 1.2	– 1.1
GDP (%)	– 0.3	– 0.6	– 1.4	– 0.3
Labor supply (%)	– 0.1	– 0.2	– 0.3	– 0.3
Unemployment (% level)	0.5	0.7	1.0	0.0
Scenario 5: Reducing the indexation of pension benefits and pension rights				
Private consumption (%)	0.0	0.0	– 0.1	– 1.2
GDP (%)	0.0	0.0	0.0	0.0
Labor supply (%)	0.0	0.0	0.0	0.0
Unemployment (% level)	0.0	0.0	0.0	0.0
Scenario 6: Raising the pension entitlement age				
Private consumption (%)	0.0	0.0	– 0.1	– 1.2
GDP (%)	0.0	0.0	0.0	0.0
Labor supply (%)	0.0	0.0	0.0	0.0
Unemployment (% level)	0.0	0.0	0.0	0.0
Scenario 7: Raising the pension entitlement age and writing off on the value of accumulated rights				
Private consumption (%)	– 0.5	– 0.7	– 1.8	– 1.2
GDP (%)	– 0.2	– 0.2	– 0.3	0.0
Labor supply (%)	0.0	0.0	– 0.1	0.0
Unemployment (% level)	0.1	0.1	0.1	0.0

Notes

1. Jan Bonenkamp (CPB), Lans Bovenberg (Netspar), Casper van Ewijk (CPB, Netspar) and Ed Westerhout (CPB, Netspar) carried out the simulations and contributed to the drafting.
2. In 2009 life expectancy estimates increased by 1.6 years in 2050 – for males from 81.5 years to 83.2 years and for females from 84.2 years to 85.5 years). The calculation assumes that life expectancy at the age of 65 increases as much as life expectancy at birth.

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Chapter 3

The transport system can contribute to better economic and environmental outcomes

Congestion has become a burden for the Dutch economy. Commuters and businesses are suffering from the time lost in traffic and the unreliability of travel time. Expanding infrastructure can potentially solve such problems, albeit only in the long term and at a high cost. Thus short to medium-term solutions will have to be oriented at improvements in the use of existing infrastructure, more efficient public transport and better demand management. In this light the previous government had decided to introduce an innovative country-wide road pricing scheme. This scheme aims to make users pay for road usage and can bring about significant benefits in terms of lower congestion and less pollution. The full benefits of road pricing can be reaped by adjusting the prices to encourage more efficient economic and environmental outcomes. If the implementation of a fully-fledged road price system is delayed or aborted, the government should rely on alternative measures such as fuel taxation and congestion charges to obtain similar outcomes. Reforms to the transport system, including public transport, together with the housing market reforms proposed in the subsequent chapter should reduce the economic and environmental burden of transport, thereby improving prospects for sustainable long-term growth.

Transport has a fundamental role to play because of the way it impacts on all aspects of the economy, in particular on labour mobility and the environment. Geographical labour mobility is the outcome of location and commuting decisions. In the Netherlands, a rigid housing market poses a barrier for individuals to move closer to their workplace (Chapter 4). Given the relatively small size of the country, the large amount of commuting is leading to high congestion. Despite a dense road (and in particular motorway) network, the transportation system is often clogged during rush hours, leading to lower productivity and negative environmental outcomes. This chapter provides an overview of the main transport issues in the context of facilitating labour mobility and meeting environmental objectives. It starts with an overview of the Dutch transport system, providing background for the current situation. Next, it provides insights on how to improve the provision of infrastructure and assure its more efficient use while minimising the environmental externalities. The issues discussed concern: streamlining investment planning and making it more responsive to demand; managing demand through road pricing and congestion charges; and improvements in public transport. A concluding box summarises the main policy recommendations.

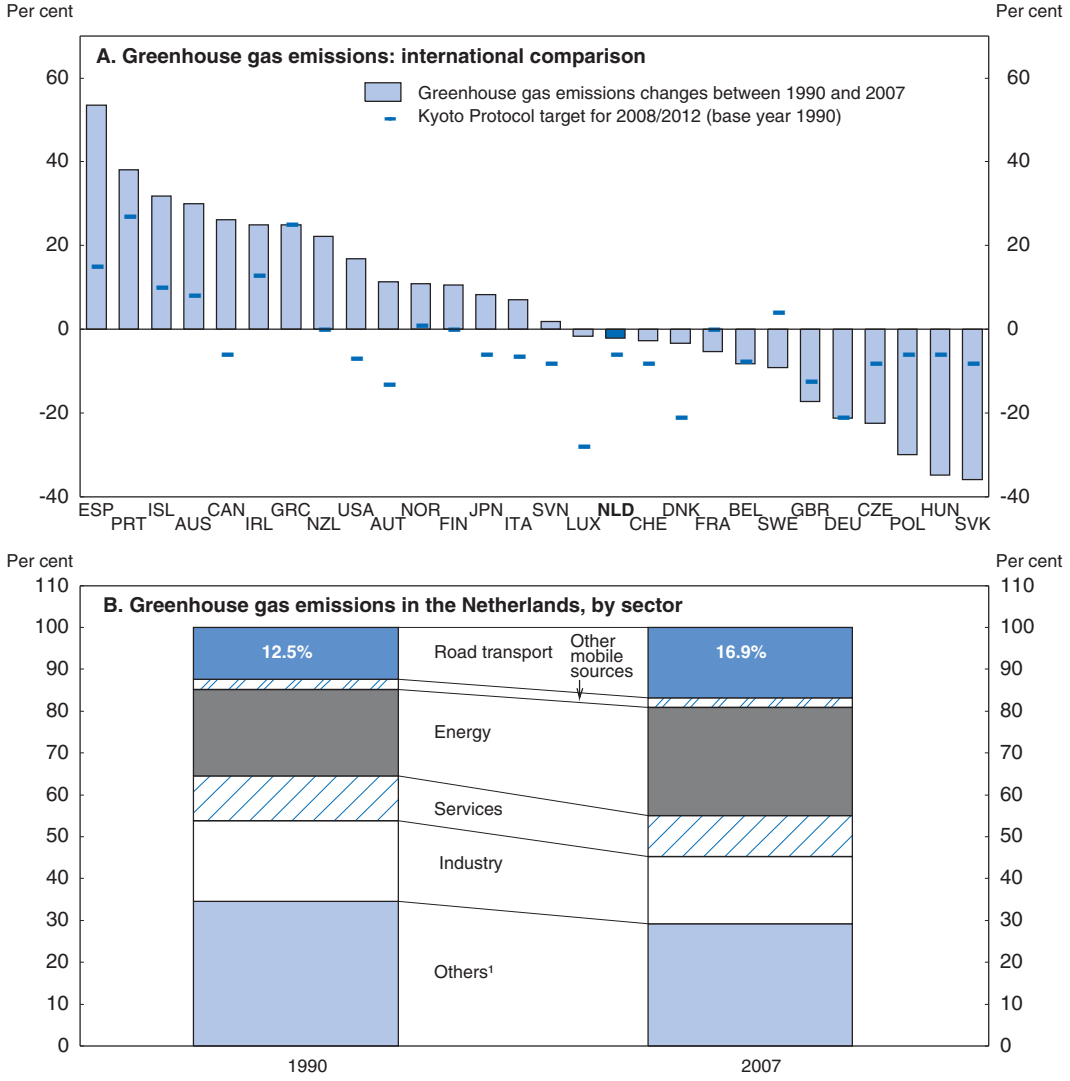
The expansion of transport has led to environmental costs and congestion

The increase in mobility and the associated rapid expansion of transport have burdened the environment and increased congestion in the Netherlands. The Kyoto Protocol emission targets stipulate a reduction of Dutch CO_2 emissions in 2008-2012 by 6% relative to 1990 benchmark (Figure 3.1, Panel A). By 2008, only half of the reduction had materialised. Achieving the Kyoto objectives is expected to be aided by measures such as Dutch capital investments abroad and transactions on the EU Emission Trading Scheme (EEA, 2009). While overall emissions have been relatively stable over the past two decades, the share of emissions from road transport has been increasing, from below 13% to 17% (Figure 3.1, Panel B). Hence containing emission growth in transport will be particularly important for meeting future abatement objectives.

The transport system has not coped with the increase in travel

Congestion in the Netherlands results largely from the fact that over the last 20 years or so commuting by car has doubled and the average commuting distance has increased by 45%. Traffic jams have become frequent, typically occurring on motorways in rush hours and often exceeding 10% of the entire network. As a result, at 51 minutes on average per working day, Dutch workers spend more time commuting than workers in other European countries (Figure 3.2). The share of commuters who spend more than one hour commuting is also the highest in Europe. While there are many potential explanations (*e.g.* differences in commuting distances, labour force, urban patterns, habits, and a rigid housing market), the amount of time spent commuting is striking given the relatively small geographical distances in the country.[1]

Figure 3.1. **Greenhouse gas emissions**



1. Includes agriculture, refineries, households, trade, services and government sectors.

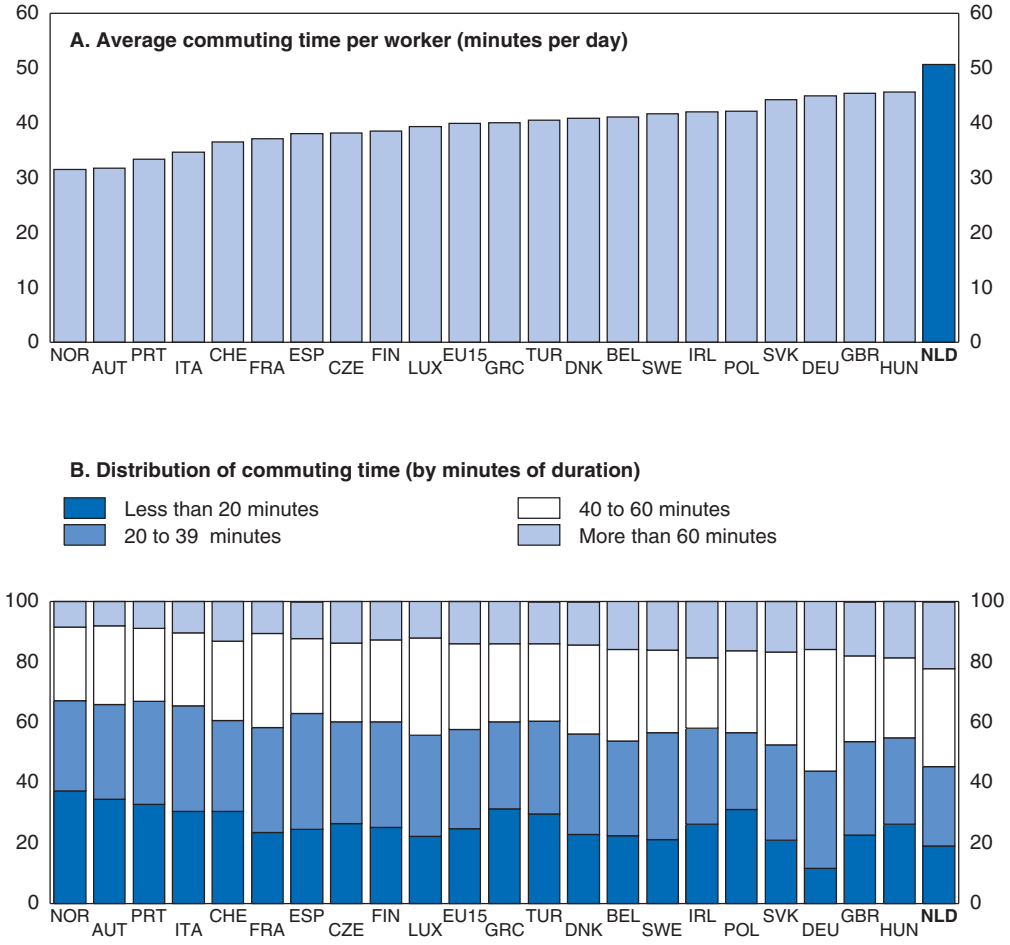
Source: United Nations Framework Convention on Climate Change (2009), "National Greenhouse Gas Inventory Data for the period 1990-2007", and Statistics Netherlands.

StatLink http://dx.doi.org/10.1787/888932291852

Overall, passenger road transport (passenger-kilometres) has increased fivefold since the 1960s, in line with economic activity. Relative to 1985, car use has increased by more than a half and freight transport has almost doubled (Box 3.1). At the same time, the length of roads only increased by 20% (by 18% for motorways). The increased car use in the past two decades reflects the growth of the average home-to-work distance (the relocation of commuters and employment to outside city centres), the higher frequency of commuting trips (due to higher labour force participation, in particular of females) and population growth (KiM, 2009a).[2] So despite the high density, road and motorway networks are among the most heavily utilised in the OECD (Figure 3.3). Most of the road traffic is by far due to passenger cars (78%), compared with delivery vans (14%) and lorries (5%). Half of all traffic is on motorways, and the majority is in the densely populated Randstad area, where

Figure 3.2. **Commuting times are longer than in other countries**

2003



Source: European Working Conditions Survey (2005).

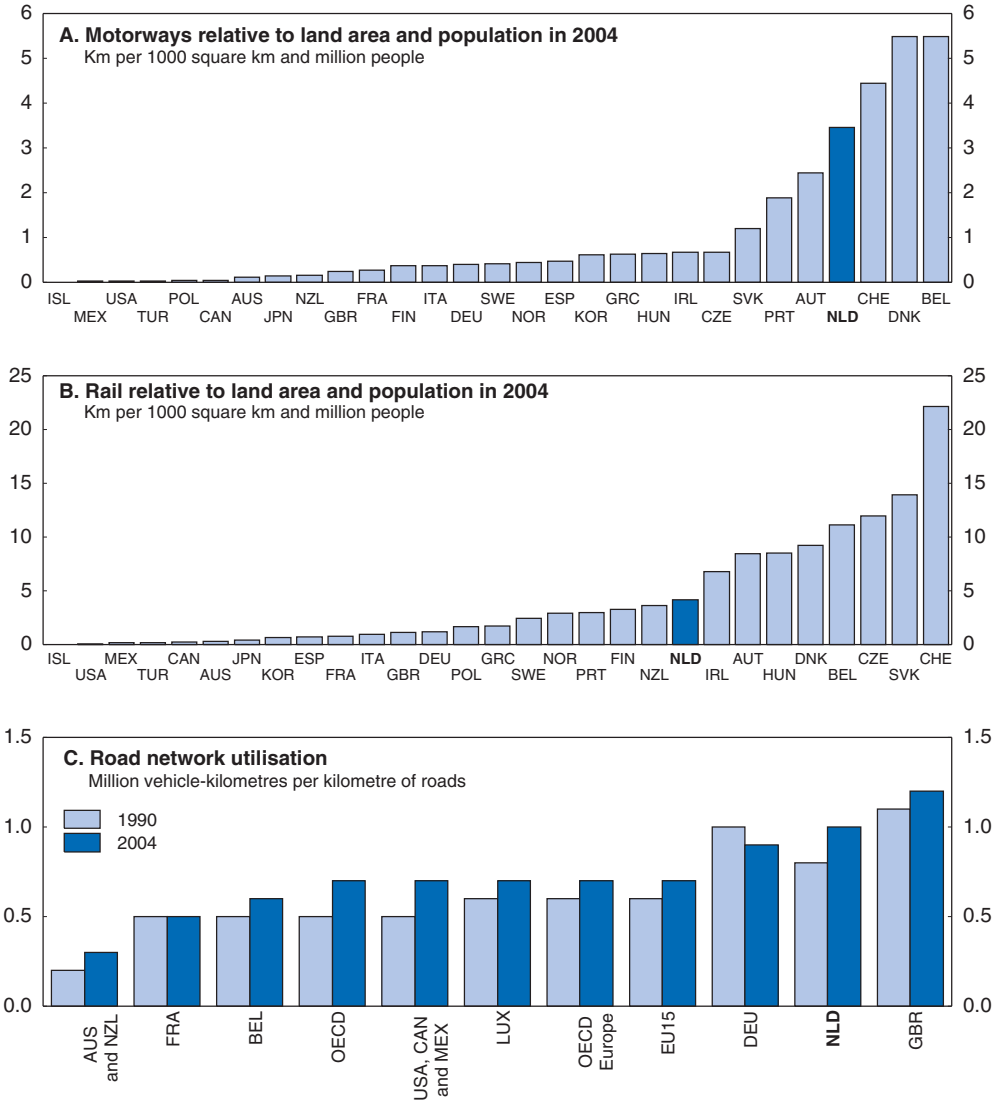
StatLink http://dx.doi.org/10.1787/888932291871

motorway use is significantly higher than in other multi-city metropolitan areas such as the Ruhr or the Flemish Diamond (OECD, 2007).

A major bottleneck in the Dutch transport system is the very limited secondary network. While the motorway network is dense and in the recent years many sections were upgraded (by adding lanes), a capacity problem remains as only a small share of the motorways have a parallel regional road network, which could unload motorway traffic of local traffic or for emergency needs (Hilbers and Wilmink, 2002). The lack of a secondary "national-road" network is a policy choice – many national roads were upgraded to motorways due to cost and safety considerations.[3] As a result, motorways deal with a large amount of short distance traffic and have relatively frequent entries and exits, which slow down the traffic flow. The dense network of local roads has limited capacity, partly due to safety considerations, not offering a viable alternative.

The use of public transport has also intensified. Passenger rail transport has doubled over the past two decades but has not been accompanied by any increase in the track length, which remains fairly short compared to other small OECD countries (Figure 3.3). Despite the capacity increases through a substantial expansion of multiple tracks, the

Figure 3.3. **Transport network characteristics**



Source: OECD Environmental Statistical Compendium, Eurostat, International Transport Forum.

StatLink http://dx.doi.org/10.1787/888932291890

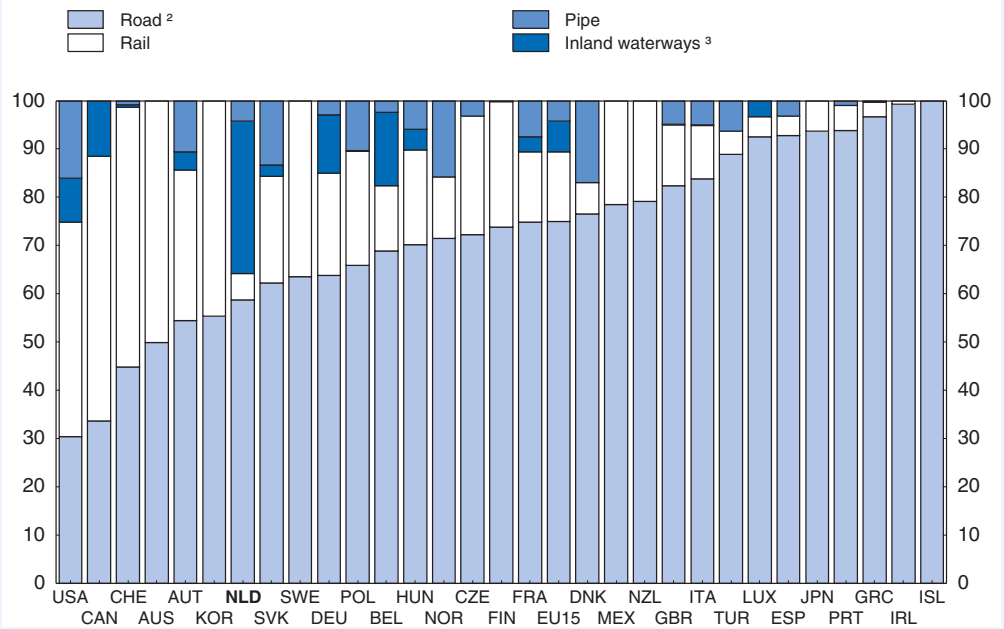
network remains one of the most heavily utilised in Europe (CBS, 2008). The network is focused primarily on passenger transport and is often described as running close to full capacity, in particular on main routes and in peak times when trains run up to 10 times an hour. The Randstad network is also regarded as strongly underdeveloped compared to major urbanised European areas (OECD, 2007). At the same time, the system is often found to be the most economically efficient in Europe (Coelli and Perelman, 1999, Freibel *et al.*, 2008, Savolainen, 2007). On the other hand, busses and coaches remain relatively few and provide less transport than in other OECD countries (Figure 3.5). Commuting is primarily done by car, with only one in ten commuters using public transport, most commonly the train (Table 3.1). Urban transport is largely done by tramway, while subway networks (in Amsterdam and Rotterdam) are relatively underdeveloped. Notably, about a quarter of trips are undertaken by bicycle, carrying an estimated 8% of all passenger-km (Box 3.2).

Box 3.1. **Freight transport patterns**

The importance of the transport sector for the Dutch economy is in line with the OECD average, both in terms of employment (7% of the non-financial sector) and share of value added (8% of the non-financial sector). Roughly half of the employment occurs in land transport, where a third of value added is generated and a quarter (both of employment and value added) is in services associated with transport. Such classification does not include the provision of transport services in specific industries (*e.g.* does not reflect the provision of in-house transport services in other sectors such as construction and retail), so the real importance of the transport sector can be significantly higher. Over the past two decades, road freight in the Netherlands increased by 80% in terms of tonne-kilometres, while rail freight more than doubled and inland waterway (IWW) freight increased by a third. Inland waterways account for an internationally high share (Figure 3.4). The different freight modes are not perfect substitutes: the just in time' transport is done by road, container transport is mainly road and rail, and most bulk transport is by IWW. The share of rail freight remains relatively low, even if IWW transport is excluded. The Netherlands is a transit country for a large part of goods traded in the EU, in particular due to the presence of the Rotterdam (and Amsterdam) container ports, among the largest in the world (den Boer and Verbraak, 2009). The share of international freight is among the highest in Europe for all three modes: road (20% of load carried), rail (80%) and IWW (75%) (Eurostat, 2009).

Figure 3.4. **In freight, the use of inland waterways is much higher than elsewhere**

Modal split of inland freight traffic, 2005[1] (tonne-km)



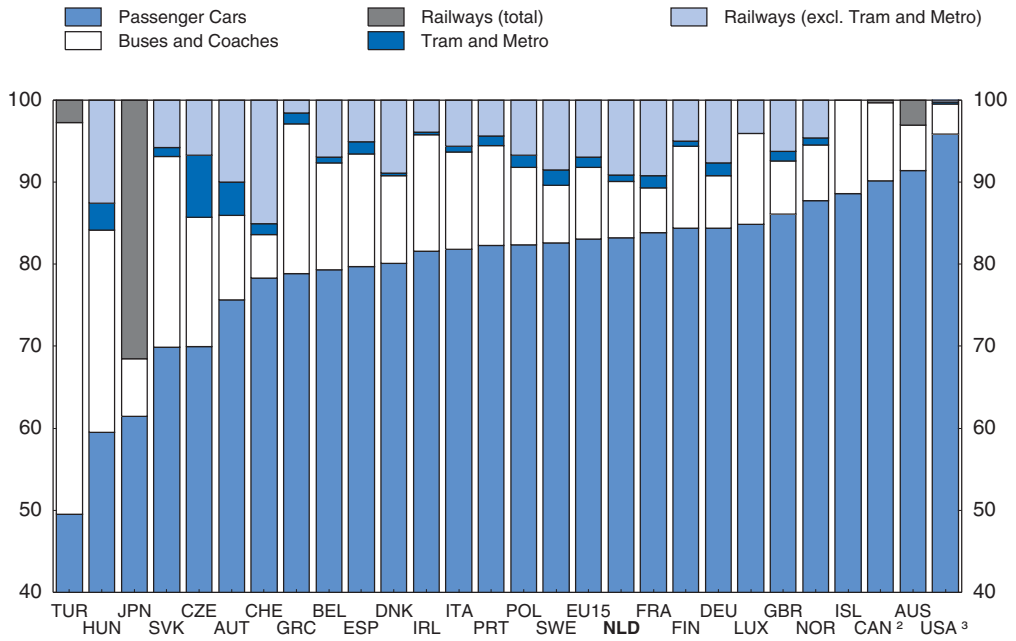
1. Or latest year available.
2. Australia for hire or reward only. Canada: for hire only, carriers with revenues over CAD 1 million. Mexico: on federal highway system.
3. For United States, inland waterways exclude traffic between United States and Canada on the Great Lakes.

Source: OECD Environmental Data Compendium, 2006/2007, Eurostat/DG Transport and Environment.

StatLink http://dx.doi.org/10.1787/888932291909

Figure 3.5. **Cars and trains are relatively popular as opposed to busses and coaches**

Modal split of passenger transport on land in 2005[1] (passenger-km)



1. Or latest year available.
2. Intercity passenger services only for rail and includes light trucks in cars.
3. Private cars include vans and recreational vehicles.

Source: DG Transport and Environment, OECD Environmental Data Compendium, 2006/2007.

StatLink http://dx.doi.org/10.1787/888932291928

Table 3.1. **The car remains the most popular mode for commuting**

2007

		All modes	Car (driver)	Car (passenger)	Train	Bus, tram, metro	Motorbike	Bicycle	Walking	Others/ Unknown
Commuters (persons)	Share in %	100	54	5	5	5	2	25	5	2
Commuting (passenger-km)	Share in %	100	69	7	11	4	1	6	1	2
Average distance (one way)	Km	17	22	25	37	14	7	4	2	20
Average time (one way)	Minutes	27	28	31	63	44	19	17	10	30

Source: CBS Statline.

Congestion has substantial economic costs

Congestion is costly in terms of lost time and in terms of the behavioural changes that it leads to (such as lower labour mobility). Businesses suffer from increased duration and unreliability of travel time. Time spent in traffic jams is not productive and congestion may encourage individuals to narrow the geographical area of job search, accept less suitable jobs (*e.g.* in terms of skill match or pay) or not to take up a job at all (due to a higher reservation wage). These effects lower welfare and long-term growth and may be further amplified in the presence of a rigid housing market, which makes it harder to locate in the vicinity of an attractive job (Chapter 4).

Box 3.2. **The Dutch and the bicycle**

The Dutch are intensive bicycle users. Although comparable data is unavailable, there is little doubt that the Dutch use the bicycle more than just about anyone else in the OECD. Bicycle ownership is unparalleled, with more than one bike per person. One quarter of all journeys is by bicycle, much higher than in most other places, and for short-distance journeys (up to 7.5 km) the bicycle is the most popular mode of transport. The most bicycle-intensive trips concern going to school/university, recreation and shopping, but also as much as a quarter of commuting trips is done by bike. An average Dutch person covers 2½ km a day cycling and travels 5 times a week. Over 8% of total passenger travel (in person-km) is done via this mode. Cycling is equally popular among groups with different education levels, slightly more popular among men and decreases somewhat with income. Although in general the flat landscape and compact nature of Dutch cities favour bicycle use, there are notable differences across the country. In the less densely populated north and north-east areas as much as 30-40% of trips are undertaken by bike, while less than 20% in some southern areas and in Rotterdam. There are a number of tax incentives that encourage bike use. Under the current legislation, once every 3 years an employer can provide his employees with a tax free bicycle (up to a value of EUR 749). From 2011, a new work-related costs scheme will be introduced. An exemption of 1.4% of the pre-tax wage will replace 29 categories of tax-free allowances and in-kind benefits (including bicycles). The surplus will be taxed against a final rate of 80% at the level of the employer. Moreover, the tax-free commuting allowance (EUR 0.19 per km of commuting) favours cheap modes of transport as the employee can keep the difference between the allowance and the actual cost of travel. The bicycle infrastructure has evolved with the support of various initiatives of the central and local governments. This is one of the factors lying behind the relatively high road safety levels of cyclists, which have been improving over the past years.

Source: *Cycling in the Netherlands*, 2009, CBS, Federation of European Employers.

Traffic jams lead to higher emissions per kilometre driven and higher localised pollution although may in principle have an overall emission-reducing effect, through discouraging travel, or shifting travel to alternative (less polluting) modes. In practice various approaches to estimating costs of congestion yield a wide spectrum of results (Table 3.2). Recent government estimates of the cost traffic jams and associated delays are around ½ per cent of GDP per year (KiM, 2008). Some older estimates indicate that Dutch congestion costs (relative to GDP) are higher than in any other of the 17 surveyed European countries (INFRAS, 2000 and 2004).[4] Congestion (measured as the time lost in traffic jams) has increased by 70% in the past decade (abstracting from a conjectural 14% reduction in 2009). It is expected to increase further, in line with economic growth (KiM, 2008, Molenkamp, 2007). If no new policies are implemented, the government expects that by 2020 (relative to 2000):

- Total traffic will increase by 50% in the whole country, including the most congested Randstad (by 2005 a fifth of this increase had materialised).
- Congestion (defined as the sum of all travel time lost as a result of recurring traffic jams) will double on main roads and increase threefold on other roads.
- The increase in congestion will be less spectacular inside the Randstad area (80% on main roads, 170% on other roads), as Randstad roads are already clogged-up during peak hours.
- Overall passenger rail traffic will increase by 15 to 40% and grow in rush hours by 60 to 70% (LCMA-Spoor, 2007).

Table 3.2. **Various estimates of congestion costs in the Netherlands**

Source	Cost of congestion % of GDP	Year	International comparison	Methodology	Remarks
INFRAS/IWW (2000)	0.8	1995	The highest in 17 European countries, average of other countries 0.5% of GDP.	Value of deadweight loss due to non-optimal pricing.	
INFRAS/IWW (2004)	1	2000	The highest in 17 European countries, average of other countries 0.5% of GDP.	Value of deadweight loss due to non-optimal pricing.	
Koopmans and Kroes (2003)	0.2-0.4	2000	–	Speed flow curves and the monetary value of consumer surplus.	Excludes freight traffic, international traffic and local trips from estimation.
KiM (2009a)	0.6	2008	–		Estimates of costs of congestion, accidents and environment are 2.5-4.4% of GDP.
INFRAS/IWW (2000)	2.9	1995	The highest in 17 European countries, average of other countries 1.8% of GDP.	Value of time lost in traffic jams.	
INFRAS/IWW (2004)	4.2	2000	The highest in 17 European countries, average of other countries 2.1% of GDP.	Value of time lost in traffic jams.	

Congestion can be eased by improving infrastructure supply

The government's goals and strategy for improving mobility and accessibility in the period 2006-2021 are summarised in its Mobility Policy Document from 2005. By 2021 the government aims to reduce hours lost due to congestion to 1992 levels, improve the reliability of transport, in particular in rush hours, and reduce travel time. The strategy consists of three pillars: building infrastructure, improving its utilisation and pricing road use. By 2020 the government plans to invest an accumulated EUR 41.3 billion in road infrastructure, mainly to widen existing motorways and add ring roads, EUR 33 billion in railways and EUR 10 billion in waterways. The road investment plans are expected to reduce congestion by 25-30%. Arguably, benefits of road investments should not be overestimated as the improvement of the network attracts ever more users, implying that often such investments are not cost-effective solutions to congestion (Winston and Lager, 2006).

New infrastructure is costly and most benefits occur in the longer term

The effects of the proposed investment programme on growth may be limited. Contrary to many of the older empirical findings, recent OECD research finds little ground for believing in strong positive effects of transport infrastructure expansion on long term growth and GDP levels (Sutherland *et al.*, 2009a). In particular, while transport infrastructure investment is likely to raise output in case of additions to underdeveloped networks (*e.g.* as in the 1960s and 1970s in many OECD countries), the additional benefits tend to evaporate in the presence of highly developed road networks, such as in the Netherlands today. Moreover, infrastructure investment costs in the Netherlands are high, despite the favourably flat landscape. The costs of building motorways and rail tracks are inflated by high population density, legal and regulatory aspects (*e.g.* complicated and

lengthy land-freeing procedures, environmental regulation), a high number of crossings with existing infrastructure and waterways and problems associated with building on wet land, particularly reclaimed from the sea. Importantly, the traffic absorption capacity of the main cities is limited; hence the expansion of capacity outside the cities may not suffice, while expanding it in the bottleneck areas, where most economic benefits can be reaped can be particularly costly (Besseling *et al.*, 2005, *The Eddington Transport Study*, 2005).

The average time from a road proposal to construction in the Netherlands is over 20 years (Molenkamp, 2007), reducing the attractiveness of infrastructure-based solutions to congestion. The implementation lags could be shortened by streamlining the strict land release procedures. Indeed, about 70% of land is devoted to agriculture, and even in the most densely populated Randstad the share of agricultural land is two thirds (TNO, 2006). This is a result of policies preserving the largely agricultural Green Heart in the middle of the highly urbanised Randstad (Chapter 4). The share of land devoted to transport purposes is low in international comparison, in particular given the high population density, and increasing it would ease some of the congestion-related problems.[5] As for the Green Heart itself, one possible solution could be to prioritise its objectives (*e.g.* recreation and nature *versus* agriculture) and align its utilisation with these purposes. This could entail releasing some of the agricultural land for transport routes.

The long-standing Dutch practice of planning and analysing infrastructure investment projects is commendable (Box 3.3). In particular, the systematic and standardised use of cost-benefit analysis (CBA) is often regarded as international best practice (Flyvbjerg, 2007) and is increasingly used to evaluate investment projects (Annema, *et al.*, 2007). CBA remains a difficult and complex task and international experience points to poor reliability of CBA for infrastructure projects as cost over-runs and benefit shortfalls are prevalent (Flyvbjerg, 2007). This situation can be improved through systematic *ex post* evaluations, which are becoming increasingly popular in a number of OECD countries (United Kingdom, France, Australia, New Zealand and Norway, among others). CBAs are carried out by a wide variety of private (and public) institutions, so a publicly available database covering general CBA results for historical projects could facilitate improvements of the applied methodology, increase its transparency and facilitate the coordination of proposals.

In a number of cases (particularly in railways) politicians have overruled negative CBA results and allowed the investment project to go ahead. In such cases, decision-makers should be required to specify the reasons behind their decision in order to enhance transparency and consistency. The planning and CBA process could be further streamlined by using the *ex post* evaluations to feed back into the CBA tool to remove systematic errors and omissions and through regular monitoring of the most commonly used parameters (such as the monetary value of mobility and costs of congestion). Such a strategy would also help understand and communicate the returns on investments. Moreover, all existing measures to reduce congestion (traffic management, peak-hour lanes, etc.) should be evaluated on a systematic and coordinated basis due to the large potential spill-over and network effects for the transport system.[6]

Infrastructure investments are financed at various levels of government (Box 3.4). Attempts to involve private financing have not lived up to initial expectations (Koppenjan, 2005). The main reasons for the relatively few public private partnerships (PPP's) included high transaction costs, the lack of experience and the lack of political commitment (according to the governmental *Ruding Commission*). However, the government will be

Box 3.3. **Cost benefit analysis and planning of infrastructure investments in the Netherlands**

Since 2000 cost benefit analysis (CBA) has been obligatory for all infrastructure projects of national importance. The minimum threshold for provincial projects is EUR 112.5 million (EUR 225 million in case of the largest urban regions). The use of CBA to assess the net social returns for investment decision-making is widespread and often applied to smaller projects. A first rudimentary CBA analysis is often made at an early explorative phase of the planning in order to select projects for consideration. One or more subsequent CBAs are made close to the point of decision-making. The provider of the project is responsible for supplying the analysis. This is usually done by a private consultancy firm in attempt to assure neutrality. The Central Bureau of Planning may provide a second opinion. No systematic assessment on the quality of CBA (such as *ex post* analysis) is in place.

In 2000, the government issued national guidelines on methodologies, including cost parameters to be used in deriving benefit values, to improve coherence and comparability of CBAs. The parameters in the guidelines (*e.g.* to value private travel time, fatalities and the discount rate) are in line with international averages (Odgaard *et al.*, 2005). The results from CBA's are indicative and hence not binding for the final decision. For example, of a sample of 9 rail and 7 road projects for which the CBA was conducted between 2000 and 2008, five of the rail projects were implemented despite zero or negative net benefits (KiM, 2008). According to the results from the CBA, the discounted net cost to society of these investments amounted to more than EUR 1 billion. Similar practice can be found in other countries and can to some degree be explained by the fact that governments take additional considerations into account (*e.g.* equity concerns).

Box 3.4. **Financing of transport infrastructure in the Netherlands**

Dutch infrastructure is financed from various sources:

- Local government budgets – can be used to finance infrastructure (and public transport) needs.
- The national infrastructure budget:
  - the so called "Chapter XII" – roughly EUR 2 billion (0.3% of GDP) is transferred to local authorities without the national government intervention. The local authorities make autonomous decisions on financing infrastructure and public transport. The national government is monitoring scores of local governments on achieving national policy objectives.
  - the Infrastructure Fund and part of the gas-revenue funded FES (Fund for Enhancement of Economic Structure). In 2009 about EUR 7.7 billion (1.3% of GDP) is to be used to finance national infrastructure.
- Special arrangements for national/local projects when needed (*e.g.* dedicated funds or co-financing).
- A small number of PPP projects.

facing mounting resource constraints as a result of the economic crisis and the increasing ageing costs in the coming years (Chapter 1). At the same time, the Dutch pension funds have an interest in low-risk long-term projects with stable incomes (Inderst, 2009) and

perhaps even more so after the recent crisis-related negative experience with equity investments (Chapter 2). Dutch pension funds are already investing in infrastructure abroad (*e.g.* in France and the United Kingdom) while their direct investment into Dutch transport infrastructure is negligible. The Ministry of Transport recently adopted a number of measures to have a more systematic approach to PPP's (*e.g.* standardisation of contracts, benchmarking and accountability issues) and to improve the involvement of local authorities (*e.g.* knowledge centres, guidelines). Toll payments or shadow toll arrangements based on traffic flow would be necessary to provide revenues to the investor. Project availability should be coupled with a systematic approach to the size and design of contracts and regulation in order to assure best results in terms of costs and value for money (Sutherland *et al.*, 2009b, Valila, 2005).

The capacity and utilisation of existing infrastructure can be improved

The need for budget consolidation in the near future emphasises the importance of assuring more efficient use of the existing infrastructure and improving its traffic capacity. In many cases this can be a less costly method of reducing congestion (for example converting hard shoulders to peak lanes has been found 2.5 times more cost-effective than building new roads, Adams, 2007). Projects to improve the use of existing infrastructure are already widely used in order to contain the effect of congestion. Between 2000 and 2007 opening of new roads resulted in a 2% reduction, while additional peak-hour lanes and road-widening schemes led to an 8% reduction. Furthermore, traffic management measures, widely used in the Netherlands (through Intelligent Transport Systems, adapting traffic management to the real-time road developments, using on-route information about bottlenecks, accidents etc.) resulted in a 3% reduction in hours of delay (KiM, 2009b). Other measures aim at discouraging car use in general or in peak-hours (*e.g.* parking fees and restrictions, or Park and Ride facilities outside city centres, van der Shaaf, 2006).[7] Dedicated lanes and parking facilities provide incentives for car-pooling, although the latter has seen its share in commuting halve over the past decade. Other measures aim to reduce the effect of freight (*e.g.* separating various types of traffic – long and short distance, freight and passengers – into physically separate corridors). In rail freight, a variation of corridor-policy is the Betuwe route from Rotterdam Harbour to Germany.

Local traffic could be shifted to the secondary road network, but this would require significant investments. At the moment, local authorities have little interest in traffic being diverted away from motorways, as this increases local pollution and worsens road safety. Thus, they are hesitant (also for budgetary reasons) to support the development of secondary road capacity. Reducing the resistance of local (and provincial) authorities to the development of such networks and encouraging their involvement can be done in two ways. Closing off some of the motorway entries and exits could provide significant improvements to the problem of congestion and safety (Commissie Luteyn, 2003, as cited in OECD, 2007). It would force local traffic to use the local roads, giving an incentive to local authorities to invest in secondary networks and ring roads. Local authorities can also be compensated for the external costs from (existing or new) secondary road traffic through shadow toll arrangements or revenue sharing from the road pricing scheme.

Road pricing can address congestion and environment concerns directly

The government has proposed an innovative and comprehensive road pricing scheme as a demand-side solution. This scheme, if adopted, would be fully operational by 2017. Road pricing in most OECD countries, including the Netherlands, consists of both a fuel tax and some kind of road tax or vignette system. Various targeted road pricing schemes are also in place, with differing primary objectives such as raising revenues or managing demand. For example, tolls are charged for motorways in many countries and in most countries for particular segments, such as bridges and tunnels. GPS-based per-kilometre charging systems exist in Germany (for trucks on motorways) and recently Slovakia (for heavy vehicles on main roads), while congestion charges for accessing city centres are present in London, Oslo and Stockholm.

The Dutch road pricing proposal is innovative in a number of ways. It will include both a per-kilometre price and a peak surcharge for busy areas and times. The system is to be GPS-based, covering all roads in the country, and practically all types of transport (Box 3.5). The road prices are to be designed in such a way that the revenue from the kilometre charge will replace current vehicle taxes without affecting gross government revenues. The per-kilometre charge will depend on vehicle type, weight, CO_2 emissions and emission class, reflecting the structure of current vehicle taxation. The peak-surcharge is to be uniform across vehicles but may vary across time and space. The surcharge is to be introduced only once all vehicles are equipped with the tracking device. The new scheme will facilitate the gathering of (anonymous) information on travel behaviour which may result in a better understanding of the weak points of the transport system. This may facilitate improvements to the system and stimulate the development of new technologies that make use of such information. However, as these are difficult to quantify, the prudent approach to such benefits is justified.

Box 3.5. **The road pricing proposal**

The cabinet approved the road pricing scheme in mid November 2009, and the scheme was expected to pass Parliament during spring 2010, had the previous government not resigned. Road pricing issues (such as higher fuel taxes, toll roads, congestion charges) had been discussed for several decades, but they failed to become concrete due to the lack of public support. In 2005 the government devised a panel of all interested parties to come up with a consensus solution. The resulting proposal is to move away from fixed taxation of vehicle purchase and ownership to charging the use of vehicles (per kilometre), which is behind congestion and emissions. The current fixed taxes include motor vehicle ownership tax (MRB), the provincial surcharges to the MRB for passenger cars and the registration tax (BPM) and, under the current plans are being gradually phased-out. The new charge will be a function of vehicle type, weight, CO_2 emissions and emission class, so owners of more polluting vehicles will pay more. The fixed per-kilometre charge is to be in the future combined with a congestion fee, applicable during peak periods and in congested areas. This fee is to be equal for all vehicles but differentiated across time and space. The Euro-vignette for lorries on Dutch highways will no longer be in place, and the technical details on how to charge foreign-registered vehicles are being established.

Box 3.5. **The road pricing proposal** *(cont.)*

The scheme would be introduced in annual steps, starting in 2012 for freight and fully implemented for all vehicles by 2017. The scheme's coverage would include all roads in the country and all cars and trucks, but not motorcycles. Revenues from the road pricing scheme are to be earmarked to the Infrastructure Fund in contrast with the current car tax revenues. Each vehicle is to be fitted with an onboard device that will use GPS technology, tracking travelled kilometres, in total and in peak hours/areas. This information is aggregated and relayed via the GSM technology to the operator, who subsequently issues a monthly bill. The gathered information will be restricted for privacy/confidentiality reasons.

The per-kilometre charge would reflect current taxation of vehicles. The base per-kilometre rate for a standard passenger car is EUR 0.03 in 2012, gradually increasing to 0.067 in 2017. The final charge would be adjusted to secure sufficient levels of revenues. Diesel and high emission cars will face higher charges. The final basic rates for delivery vans (EUR 0.017), busses (EUR 0.028) and lorries (EUR 0.024) are lower.

The one-off investment costs to get the system up and running were initially estimated to be about ¾ per cent of GDP and the annual maintenance and depreciation costs at 15 to 30% of annual revenues (Ministry of Transport, 2005). The government is aiming at reducing the operational costs to 5% of revenues. The intention is for a 5% collection surcharge to cover the operational costs while the general revenues are to be neutral with respect to vehicle taxation which is being phased out.

The government expects a 15% reduction of the number of kilometres travelled in 2020 and a halving of traffic jams. Road fatalities are expected to fall by 7% and CO_2 and fine particles emissions by 10%. The demand for public transport is expected to increase by 6%. Research conducted as part of the preparatory work for the road pricing proposal yielded estimates of an annual 0.3% positive effect on GDP, and a slightly smaller effect on welfare, by 2020 (arising from improved travel quality, labour market matching, road safety, and environmental effects). A significant part of the benefits is assumed to come from the congestion charge, which the law does not specify, leaving details to be established in the future. The estimates are highly uncertain due to the innovativeness and large scale of the scheme.

Road pricing will align private travel decisions with economic incentives

As part of preparatory work, the effects of a similar proposal have been evaluated in detail and compared with alternative schemes (Table 3.3). The (variable) financial cost of travelling will rise roughly by a half for a standard passenger car, and possibly triple during rush hours, forcing individuals to reconsider the necessity of a journey and mode of transport, thereby ultimately leading to less traffic (particularly for leisure and social reasons).[8] The scheme should lead to better economic incentives, as the per kilometre charge links higher (lower) road use with higher (lower) costs, and the congestion charge is a cost-efficient rationing mechanism for a scarce good (road capacity). The government expects a shift of the transport cost burden from households to companies, with the latter to be compensated by less congestion. Still, about 15% of households are to end up paying more. Reductions in traffic, and even more so in congestion, are expected to be significant, but all such estimates are unusually uncertain due to the unprecedented nature and magnitude of the scheme. The fall in traffic and the switch to more environmentally friendly transport solutions (increased use of public transport, bicycle and car-sharing, but also potentially a switch to less-polluting vehicles) are estimated to reduce 2020 emissions by 10%. In particular, congestion charges have the potential to secure significant

Table 3.3. **Taxation of vehicles and mobility**

Instrument	Description	Revenue (2008) % of GDP
Vehicle purchase tax (BPM)	One-time registration tax, based on vehicle type, fuel and emissions. Passenger cars and vans are subject to a tax of 40% of the net list price, with various environmentally related surcharges/ reductions. By 2013, the tax is to be transformed into a tax based on CO_2 emissions.	0.4
Vehicle ownership tax (MRB)	Annual road tax. Depends on the type of car (passenger, van, etc.), fuel type and weight of the car.	0.6
Provincial surcharges on MRB	An annual supplement to the MRB levied by the provinces.	0.2
Fuel taxes	Petrol: EUR 0.71 per litre, diesel: EUR 0.42 per litre, LPG: EUR 0.07 per litre (2009).	1.2
Income tax on company cars	If the car is used less than 500 km per year for private reasons, no income tax is levied. If it is used more, 25% (20%, 14% and 0% for low/zero emissions) of the car price is added to taxable income.	n. a.
Income tax on company-provided bicycle	A bicycle supplied for travel to work purposes is tax-free up to a value of EUR 749, plus EUR 82 per year for accessories. The bicycle can be purchased every three years and must be used on at least 50% of the days commuting (Box 3.2).	n. a.
Tax free allowance for commuting	Employers can pay a tax-exempt allowance of EUR 0.19 for every km of commuting to and from work to employees who commute more than 15 km a day, irrespective of the mode of transport.	–0.3
Tax free allowance for relocation	Fixed tax allowance for individuals who change housing.	–0.02

n.a.: not available.
Source: Dutch Government, *IEA Energy Prices and Taxes*, 3rd Quarter 2009, Federation of European Employers.

improvements in local environmental outcomes. Privacy considerations have led to requests that the data collected and made available in the payment invoice be very general (*e.g.* the sum of total kilometres and the sum of "congested" kilometres driven). While the vehicle license plate holder will have *ex post* access to all relevant data, such implementation may complicate informed *ex ante* decisions on travel, reducing the effectiveness of the scheme and impeding verification. Hence, the information on the total road price (kilometre price plus potentially the congestion charge) or the total costs of individual trips and alternatives should be easily available to the car user in real time to allow the user to realise the full incurred cost.

The full effect of road pricing will be determined by a number of factors

Road pricing is essentially equivalent to a tax on travel. According to OECD estimates, the scheme will increase the variable cost of commuting by car for an average worker (under unchanged commuting patterns) by more than EUR 60 a month, and potentially more if the congestion charge is applicable.[9] Workers may adjust in various ways, notably by switching to alternative modes of transport or travelling less. The government expects a large reduction in leisure travel and a 17% decrease in commuting by car (vehicle-kilometres). In the longer term, people will eventually adjust their habits such as moving closer to work or switching to alternatives (*e.g.* car-sharing, Park and Ride schemes, and bicycles for part of the journey).

Road pricing will increase the incentives for alternative work arrangements, for example teleworking. Studies for other countries show some (marginal) traffic-reducing potential of teleworking (Lake, 2008 and Møller-Jensen *et al.*, 2008). Teleworking does not seem more popular in the Netherlands than in other EU15 countries,[10] despite various measures to encourage it. Until early 2000s tax benefits were offered to employers and employees (a tax free allowance for setting up a home office). In 2006, employers were allowed to treat the use of the

internet and telephone by teleworking employees as business costs (van het Kaar, 2008). In 2007, the government broadened the tax-deductible commuting allowance (see below), so that all people who work at least 70% outside their home can benefit from it. In 2008 a government task force recommended further widening this rule, lowering the criterion to 60%.

In order to avoid the congestion charge, workers may also change commuting times to less expensive off-peak hours, although their ability to do so depends on working time as well as childcare flexibility and school opening hours. Encouragingly, Dutch workers have relatively flexible working time compared with other EU countries. About two-thirds of workers (both male and female) are able to make some adjustments and a full one fifth of workers are able to choose their working time freely (EWCO, 2005). To a limited extent, improvements in the time-distribution of working hours and the flexibility of working time could be achieved through further liberalisation of shop opening hours (OECD, 2006). Availability and opening hours of childcare facilities are also an important determinant of commuting times for a large part of the labour force. Recommendations in these areas were provided in the previous *Survey*. The Child Care Act of 2004 introduced several improvements and delegated supervision and quality control to municipalities. School childcare facilities are now open between 7 a.m. and 7 p.m., although in many cases pre-schools open only at 8 a.m. (van Bostelen *et al.*, 2007). These measures were primarily intended to increase female labour force participation and further steps will be necessary to encourage more flexibility. Longer opening times of child-care facilities, especially in the morning, would particularly benefit blue-collar workers, while additional facilities in non-standard hours may be desirable to facilitate extended working hours, *e.g.* for night and shift workers.[11] Furthermore, the availability of places is often problematic and should be closely monitored. Similarly, the possibilities to improve the flexibility of nationwide school time rules should be explored. Increasing the flexibility of schooling hours is under discussion in the government and pilot projects in this direction are on course (Dutchnews, 2009).

The user-pays principle is being introduced in the presence of a number of existing tax measures, some of which discourage commuting while others encourage it (Table 3.3). Road pricing will give incentives conflicting with the tax-deductible commuting allowance which allows employees to be compensated with a tax free EUR 0.19 per kilometre of commuting, regardless of the chosen mode, implying a reduced value of taxes (and social security contributions) of EUR 0.09 per kilometre for the average-income worker and higher for higher-income workers.[12] For car travel, this was initially limited to the first 30 km of a daily journey, favouring alternative travel modes, but the 2004 Tax Plan abolished this limit, increasing car use for longer distance. This led to an additional 3% of hours lost because of delays between 2000 and 2007 with a further effect of 6% expected over the following years (CPB, 2004). The allowance is intended to favour commuting over leisure travel, but nevertheless favours longer distance commuting. To make the commuting allowance neutral *vis-à-vis* distance and prevent interference with the incentives provided in the road price scheme, it should be provided as a lump-sum allowance for all commuters (*de facto* equivalent to extending the initial income-tax exemption bracket) or scrapped. However, the road pricing scheme will also increase the risks of job market exclusion for some difficult-to-employ groups, such as low-income workers commuting over long distances. In order to preserve their chances on the labour market, targeted and time-limited subsidies for such groups should be introduced. If such a subsidy turns out difficult to implement, focusing the commuting allowance on the difficult-to-employ should be considered.

More intensive use of existing measures and congestion charges are a viable alternative

If the road pricing scheme is delayed or not pursued, other measures should be considered to improve the transport system. Using existing fuel taxes more intensively and introducing congestion charges in large urban areas are a possible alternative. Fuel taxes are a kind of road use tax which in principle is particularly good at addressing negative environmental externalities (in particular greenhouse gas emissions),[13] though they are less useful for reducing congestion. Currently, fuel taxes are close to the OECD average for diesel and higher for gasoline, reflecting that gasoline is taxed some 70% more than diesel (Box 3.6) despite the fact that the carbon-content of diesel is roughly 15% higher.[14] This differential reflects the need for competitive fuel taxes to protect the international status of the main ports and to prevent fiscal leakage, given a high price elasticity of diesel (Brons *et al.* 2008). On the other hand, LPG is tax-favoured, leading to a somewhat higher share of LPG-powered cars than in most OECD countries. To offset the incentives for households to purchase relatively polluting diesel cars, the government is taxing ownership of diesel cars relatively heavily (Table 3.3).[15] The administration of fuel taxes is simple and implementation lags are short (Table 3.4). Moreover,

Table 3.4. **Evaluation of alternative road pricing schemes**

Scheme	Expected reduction in congestion in 2020, relative to baseline scenario				Details	Expected reduction in emissions		Start-up time	Expected start up costs	Expected maintenance and depreciation costs (annual)
	Entire country		Randstad							
	Main roads	Other roads	Main roads	Other roads		CO_2	NO_x and particles		Billion 2005 EUR	Billion 2005 EUR
1. Per kilometre charge + congestion charge[1]	–60%	–40%	–60%	–40%	Replaces EUR 3.4 billion of vehicle taxes: motor vehicle taxation (MRB) and 1/4 of the vehicle registration tax (BPM). A congestion charge of EUR 0.11 per km in busy locations.	–6%	–11%	By 2017	2.2-4.1	0.9-1.9
Alternative schemes										
2. Per kilometre charge (I)	–30%	–30%	–25%	–30%	Revenue neutral, replaces MRB and 1/4 of BPM.	–5%	–10%	By 2017	2.1-3.8	0.8-1.8
3. Per kilometre charge (II)	–40%	–40%	–40%	–40%	Revenue neutral replaces EUR 5.7 billion of vehicle taxes (MRB and BPM).	–7%	–14%	By 2017		
4. Congestion charge (I)	–50%	–20%	–50%	–15%	Congestion charge of EUR 0.11 per km (constant) at busy locations (flow to capacity ratio > 0.8).	–2%	–2%	By 2011	0.1	0.03-0.05
5. Congestion charge (II)	–55%	–35%	–60%	–35%	Variable congestion charge in busy areas (between EUR 0.055 and 0.22 per km depending on actual congestion).	–2%	–2%	By 2011		
6. Fuel taxes	–15%	–15%	–15%	–15%	Revenue neutral increase, replaces of EUR 3.4 billion of vehicle taxes (MRB and 1/4 of BPM).	–3%	–1%	Rapid	~0	~0
7. Toll at six locations	–15%	0%	–25%	0%	Toll in six locations on main road network.	1%	1%	By 2012	0.1	0.1-0.2
8. Morning entry charge in four major cities	–25%	–10%	–35%	–15%	EUR 2.90 charge for entering one of the four major cities during morning rush hours.	–1%	–1%	By 2011	0.1-0.2	0.04-0.07

1. A combination of the following schemes: 2. per-kilometre charge (I) and 4. congestion charge (I).

Source: A Different Way of Paying for Road Use, 2005 Ministry of Transport, Public Works and Water Management.

Box 3.6. **External costs, fuel taxation and road pricing**

The taxation of gasoline and diesel, net of VAT, is respectively EUR 0.71 and EUR 0.42 per litre (IEA, 2009) and has little relation to any external costs of travel (Vermeulen, *et al.*, 2004). With the current tax structure, passenger car transport is generally taxed higher than its estimated marginal external effects, while commercial vehicles are effectively subsidised through the tax system (Table 3.5). This discrepancy will be amplified if the road pricing proposal is introduced, as the per-kilometre price for passenger cars would be significantly higher than for commercial vehicles. Furthermore, rail and in particular inland waterway freight transport are subsidised in a similar manner, paying charges equal to a fraction of their external costs.

The assessment of external costs of transport is a complex issue and is highly dependent on the underlying assumptions, in particular on the price for CO_2 emissions. For example, taking the recent EU Emission Trading Scheme price of CO_2 emissions (EUR 14 per tonne) would yield EUR 0.033 per litre of gasoline and 0.039 per litre of diesel – a fraction of current fuel taxes. Taking an upper-bound valuation used by INFRAS (2004), based on the objective of 50% emission abatement by 2030 (relative to 1990) would yield taxes ten times as high.

Table 3.5. **Marginal external effects and level of taxation**
(2017, in 2005 prices)

		Cents/vehicle-kilometre								
		Road wear	Safety	Noise	CO_2	Non-CO_2	**Total external effects**	Fuel duty	Road pricing charge	**Total (fuel duty plus road pricing charge)**
Passenger car	Gasoline	0.2	2.7	0.3	1.0	0.3	**4.4**	4.5	6.7	**11.2**
	Diesel	0.2	2.7	0.4	0.9	1.1	**5.2**	1.9	8.5	**10.4**
	LPG	0.2	2.7	0.3	0.7	0.3	**4.2**	0.4	7.1	**7.5**
Van	Diesel	1.1	2.3	0.7	1.2	3.9	**9.2**	2.7	1.7	**4.4**
Trucks (total)	Diesel	9.6	5.4	2.4	5.5	3.9	**26.8**	9.0	2.4	**11.4**

Source: Besseling *et al.* (2005) and Vermeulen *et al.* (2004).

the risks of fiscal leakage are relatively contained and may be lower in the coming years, as neighbouring countries are likely to increase or are increasing fuel taxes (Belgium) in response to growing budgetary deficits and the need for implementing emission abatement measures.[16]

A congestion charge is a relatively low-cost measure (Table 3.4) due to the small implementation scale (only in congested areas) and the use of different technology. It has been found a cost-effective solution to combating congestion (Besseling *et al.*, 2005). Introducing a congestion charge as soon as possible would tackle the most pressing problems of bottlenecks, hence bringing forward in time substantial economic and some (mainly localised) environmental benefits. In particular it would increase the incentive for the relatively flexible freight traffic to travel outside peak times. It would also have less adverse effects on economic activity in relatively rural areas and for low-wage workers commuting by car outside peak-hours. The application of congestion charges only on main

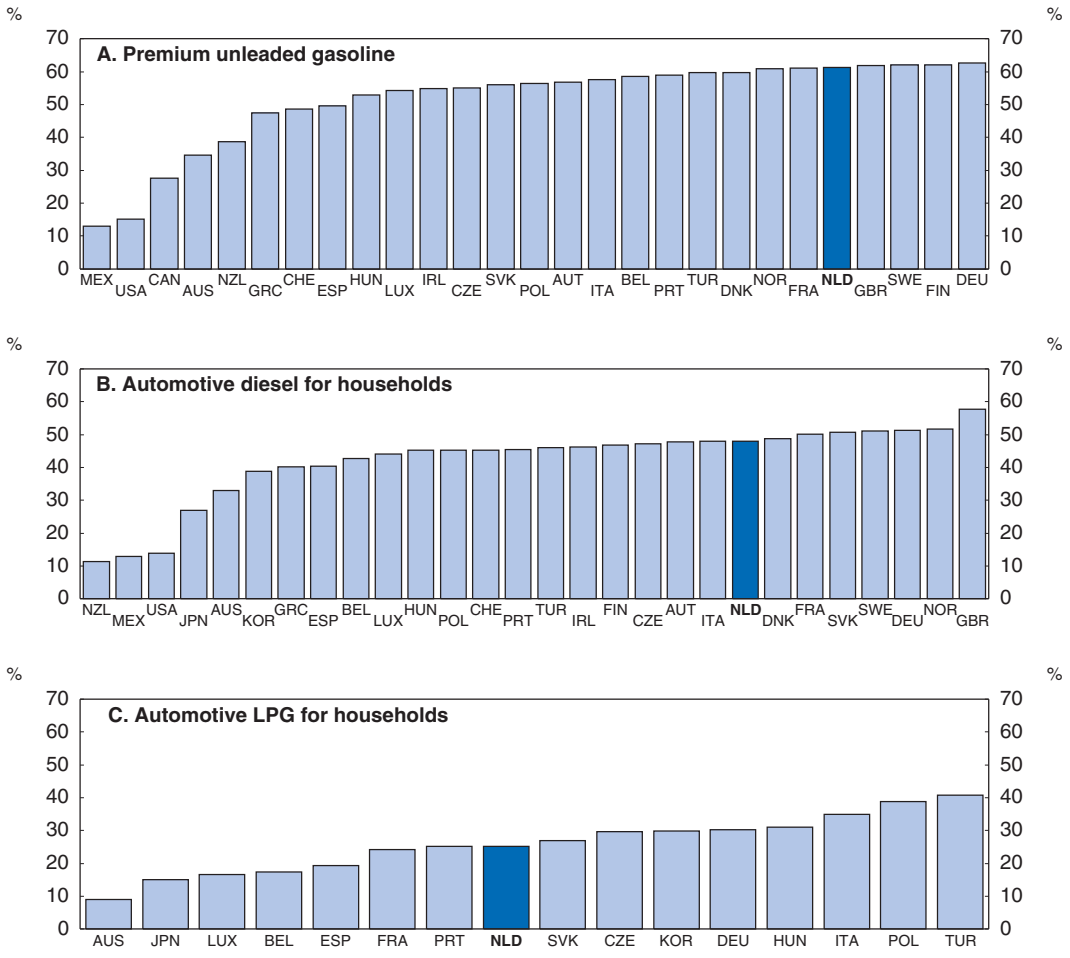
roads may increase traffic on the secondary network and on local roads, potentially providing an incentive to increase their capacity.

The road pricing system could be fine-tuned to reap further economic benefits

Once the road pricing proposal is implemented, the government should be prepared to closely monitor its effects on traffic and be able to make necessary adjustments if the outcomes are different from those desired. Moreover, the system can be fine-tuned to further improve its design in terms of economic efficiency. In the current proposal road prices would be set to reflect the original vehicle taxes and as such would not fully address the negative externalities of road transport (except for differentiating by emission class within a vehicle category), effectively subsidising relatively polluting and congestion-generating freight transport. Consideration should be given to how the price structure can better reflect the negative externalities associated with road transport, and at the least road prices for freight transport could be adjusted to discourage road haulage during rush hours and encourage travelling during low-usage periods. These measures should be combined with fuel taxes to reflect the emission abatement objectives of the government.

Figure 3.6. **Fuel taxes are high, in particular for petrol**

As a share of fuel prices, 2008



Source: OECD (2008), *Energy Prices and Taxes*, Fourth quarter 2008.

StatLink http://dx.doi.org/10.1787/888932291947

Further refinements could include differentiation of road prices according to vehicle class so as to better reflect the road maintenance costs and social costs such as noise and road safety. The exclusion of motorcycles from the scheme may pose a threat to the safety objectives, as it may increase the demand for the use of two-wheelers, which generally have a poorer safety records. Furthermore, many two-wheelers have significant negative environmental impacts, which will not be addressed under the current proposal. Thus a way to include motorcycles in the scheme should be devised.

The revenue neutrality principle, proposed largely for political reasons, may lead to some other less-than-optimal outcomes: in case the traffic-reducing effect is smaller than expected (and more revenue is generated), the road charge will be lowered (likely to further increase traffic) and *vice versa*. Furthermore, in order to keep the overall revenues constant the per-kilometre rates will be adjusted if the revenues from the congestion charge are different than currently estimated. Hence, if revenue neutrality is to be preserved, it should be done through the adjustment of other taxes, for example on income or consumption.

The revenues from road pricing are to be earmarked to the Infrastructure Fund. The political economy argument points to a higher public acceptance of a road pricing charge if the revenues are used to improve road infrastructure (Schuitema *et al.* 2008). In general, and not precluding the need for transport infrastructure investment, earmarking should be avoided to prevent a sub-optimal use of revenues.

An effective road pricing scheme needs improved public transport

The success of the road pricing scheme, or any alternative scheme (such as increase in fuel taxes and/or congestion charges), depends on whether public transport can break the trend decline in its market share (passenger-kilometres). For such a significant change to materialise, capacity and availability will need to improve substantially. The road pricing scheme is expected to result in a 6% increase of public transport use in 2020. The road-pricing induced demand for public transport is likely to occur during rush hours and on congested routes (in which case the expected increases in demand reach 50%), where public transport is already often described as running at close to maximum frequency and capacity (OECD, 2007). The government's Action Plan is aiming at a 5% annual growth of rail passenger transport (by 2012) through track capacity expansion, more and larger trains and improvements in connections between transport modes. No additional expansion is foreseen due to the road pricing scheme. Incorporating demand signals through more competition, improving pricing to take account the actual costs of travel and allowing for market initiative in route design could facilitate a more efficient service provision.

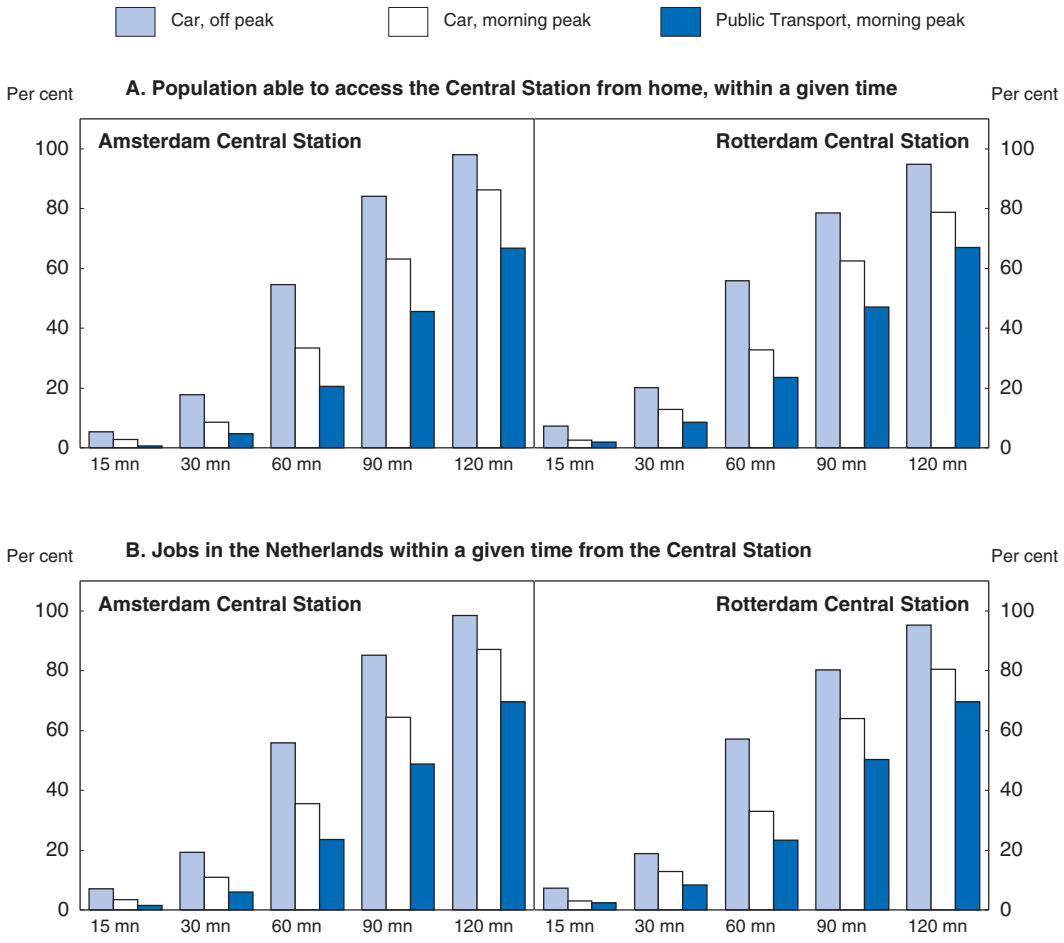
Public transport would be more efficient if more responsive to market signals

Recent years have brought significant steps in introducing competition forces in public transport. In 2001 competitive tendering was introduced in public transport contracts (mainly urban and provincial bus transport) and the public transport responsibilities were delegated to the provincial (and urban city) governments who became public transport authorities. Initially, competition did not increase, but the situation improved after the government responded with general procurement guidelines. Nevertheless, a number of further steps are required to make public transport more responsive to present and future demand. Despite the mandatory tendering, public transport remains in the hands of local authorities in the centres of the four main cities (Amsterdam, Rotterdam, The Hague and Utrecht).[17] The 2001 Law also resulted in a localised planning system, where local

governments have the monopoly to design local routes and connections, potentially impeding the adjustment of services to better meet travellers' demand through operators' own market initiatives (van de Velde, 2006). The lags in planning and its under-responsiveness to demand are particularly visible in the Randstad where over 30% of the new housing areas (with 42% of new houses) do not have public transport facilities within walking distance (*i.e.* 500 meters to a bus or tram stop or 750 meters to a metro station) and in many cases private cars remain a faster alternative (Snellen *et al.*, 2005 and Figure 3.7). One of the explanations may be that the low-density nature of such new housing makes it less economically viable to provide dense public transport coverage under the current setup. More flexibility and more reliance on market forces may thus facilitate adequate servicing of such areas.

Figure 3.7. **The car, even in peak times, is a relatively fast mode of transport**

2008, in minutes



Source: Based on *www.bereikbaarheidskaart.nl*.

StatLink http://dx.doi.org/10.1787/888932291966

For bus and coach services, where the infrastructure, set-up and route-modification costs are relatively low, the lack of market initiative inhibits making the most of the flexibility to adjust to changing demand patterns. Furthermore, there is a widely adopted guideline that new routes cannot compete with existing rail connections in rural areas –

even when these are running at full capacity. Though similar conditions exist in other countries (*e.g.* France and Germany) they help explain the internationally low share of (long distance, inter-urban) coach and bus travel. Therefore market initiative for such services should be enabled, in order to improve competition in public transport and serve commuters better. There should be no impediments for new bus and coach lines to compete with existing train lines and the provincial regulators should guarantee access to the necessary infrastructure (bus terminals/stations, bus stops). Finally, the tendering of franchises should be enforced in the main cities.

A number of steps have been taken towards liberalising rail transport. While the passenger operations on the main (international and inter-regional) rail network are franchised to the state-owned incumbent NS (Nederlanse Spoorwegen) until 2015, the responsibility for regional operations has been decentralised. Services are being gradually opened up for tender, starting 1998 on an experimental basis and more extensively after 2004. Still, the majority of operations lie with NS and only 8% of all services are decentralised and in principle subject to tendering (van Dijk, 2007). The main objective of the reform was to minimise subsidies, and the lines up for tender are rather peripheral, outside the main commuting paths, leaving the more lucrative segment to the incumbent. In 2005, the government decided it will continue the tendering of regional passenger rail services. Nevertheless, new entry of competitors remains difficult due to dominance of the incumbent arising from the ownership of rolling stock, ticket vending machines etc. The lack of market initiative in the design of connections leads to a focus on the needs of the regional authorities rather than of passengers (van Dijk, 2007). Moreover, the small size of contracts limits efficiency gains coming from the economies of scale, scope and network effects, which are further hampered by the obligation of the new contractor to employ the personnel of the previous operator. Finally, the alternative operators have complained about the infrastructure operator (Prorail) being slow to implement transparent admission procedures for new, lighter (and more efficient) rail stock and not meeting the deadlines for capacity allocation. In 2008, the company was fined for such anti-competitive practises.

In order to benefit from market signals, the personnel transfer obligation should be further restricted to core-personnel. Larger contracts would facilitate the introduction of new rolling stock. In light of the relatively long time horizon of contracts (typically 7 to 15 years), operators should be given more freedom to adjust to demand signals, *e.g.* during different periods of the day or week. The latter can be done by restricting contracts to minimum service requirements. The introduction of market initiative is more problematic than in bus and coach services, due to coordination problems on highly utilised tracks, but should be considered. Further decentralisation will require the regulator to closely monitor the coordination of connections among the regional authorities.

Public transport is often regarded as more environmentally friendly than car transport, which is likely when public transport operates at full capacity during peak-time demand (STREAM, 2008). However, off-peak services, and particular low-load routes are often operated in line with specific public service obligations and capacity utilisation can be very low. As a result, the average load factor on trains is only 0.28, implying that the environmental performance of public transport is often quite poor. Empirical studies (STREAM, 2008) show that on short journeys (the typical commuting distance of below 50 kilometres) average emissions per passenger-kilometre from a (gasoline-powered) passenger car are about 50% higher than from trains and similar to those of city busses. But whereas cars have similar average load factors in peak and off-peak times, the

environmental benefits of public transport tend to disappear during off-peak hours. Indeed, per passenger emissions of public transport can be twice as high off-peak than during peak time (Rietveld, 2002). Moreover, part of the environmental advantage of public transport may disappear as the result of strict emission standards for new passenger cars. Therefore, capacity utilisation is the key to improving the environmental performance of public transport, requiring better response to demand, in particular outside peak hours and on underutilised connections. These arguments strengthen the need for using competitive forces, and point to the need for charging public transport the full cost of the environmental externalities. This has to be combined with more flexible contracts to allow better adaptation to demand fluctuations across time and market initiative in route designs.

In order to improve the travel decision making, public transport pricing should be reconsidered. Pricing of public transport is a non-trivial issue and there is still economic debate on what is the most appropriate (and feasible) pricing mechanism (Nash, 2003). The current, recently introduced system (OV-chipcard) is based on a fixed fee per travel and a per-kilometre charge. This system has a number of virtues, including the technical easiness of adjusting prices. Nevertheless, a number of principles should be respected. Price-setting, should remain regulated, due to the imperfect competition in the sector. However, in order to improve the competitive neutrality between different modes of transport (in particular under road-pricing) ticket prices should reflect the internal (operational) and external (social, environmental) costs (and benefits) it generates so that individuals pay a price that reflects the marginal social costs of their travel. Such changes would be in line with the incentives provided by the road pricing scheme, in particular if the road prices are adjusted according to the recommendations given in this chapter.

The rationale for subsidising public transport is that it fulfils a number of government objectives which may not be dealt with otherwise, thus yielding external, public-good type benefits. At the moment ticket revenues cover roughly 35-60% of total operating costs of urban public transport (including vehicle maintenance and investment, Rietveld, 2004). Therefore, for the sake of transparency all subsidies (coming from various levels of government) should concern clearly identified objectives (*e.g.* equity considerations, improving mobility of certain social groups, universal services). Such information should be made public so that the tax-payer knows how much is being paid and for what.

Box 3.7. **Policy recommendations to improve the transport system**

Investment planning should be made more responsive to demand signals

- Streamline land release procedures and reconsider land use, in particular in the Randstad. Encourage the development of the secondary road system by giving local authorities part of the revenue coming from traffic (shadow toll or road pricing) and reducing the number of motorway entries and exits.
- Introduce systematic *ex post* evaluations for infrastructure projects and use the results to improve the cost-benefit analysis (CBA) methodology. Improve the transparency and public availability of the results of CBA and require explicit justification in cases where CBA results are overruled. Monitor the need for existing measures to improve traffic-flow under the road pricing scheme and withdraw the unnecessary or distortive ones.
- Increase the amount of infrastructure projects available for private financing with the view of encouraging pension funds to participate in financing such projects.

Box 3.7. **Policy recommendations to improve the transport system** *(cont.)*

How to make the most of the road pricing scheme

- Implement the road pricing scheme. The roll-out of the scheme should be closely monitored and the government should be ready to introduce necessary adjustments if effects are different from those initially expected.
- Relative and absolute prices should be adjusted to better reflect the social and environmental (external) costs of different modes of transport. For the same reason, the scheme should be extended to motorcycles. The relative road prices should take into account existing charges through fuel taxation. If revenue neutrality is to be preserved, it should be done through the adjustment of other taxes, for example on income or consumption.
- The tax-free commuting allowance creates incentives which interfere with the road pricing scheme and with work-place neutrality. It should be reconsidered to focus on low-wage workers for whom the higher commuting costs due to road pricing may increase the chances of dropping out of the labour market. Alternatively the allowance can be replaced with a lump sum deduction and/or a time-limited subsidy for the hard-to-employ groups (in particular low-income, long-distance commuters).
- The ability of workers to adjust their travel time would benefit from greater availability (in terms of places and longer and more flexible opening hours) of childcare facilities and lifting shop-opening hour regulation.
- If the road pricing scheme is not pursued, an alternative combining higher fuel taxes and congestion charges should be considered.
- Taxation of diesel should be raised to better reflect the relative environmental costs of fuels.

Making public transport more flexible and responsive to demand

- Increase the flexibility of regional train contracts allowing contractors to better adjust to demand over time and space. Increase the amount of connections subject to public tendering, in particular on key commuter routes, allowing contractors to reap economies of scale, scope and network effects. To facilitate new entry and environmental improvements, procedures for the introduction of (more efficient) rolling stock should be streamlined.
- New entry in public transport should be facilitated by allowing for new connections to compete with existing train services and by facilitating market initiative in the design of new routes and modifications in existing connections.
- Proceed with the tendering of public transport franchises in the main cities.
- The regulated ticket prices for public transport should better incorporate the marginal social (in particular environmental) and operational costs (and benefits) of such transport to improve the neutrality with respect to private transport. The subsidies issued to public transport should be made transparent and should be clearly targeted at well-identified government objectives (*e.g.* universal services, equity, and mobility of specific groups).

Notes

1. According to the Ministry of Transport, while the travel time and number of trips per person have remained roughly unchanged over the past 25 years, the average distance travelled in all modes increased by 25% (KiM, 2009a).

2. There are somewhat fewer vehicles per capita in the Netherlands than on average in the EU15 (about 7.5 million passenger cars and 1.1 million commercial vehicles for a population of 16.5 million), but the stock of vehicles has been growing faster over the past decade.
3. Road fatalities (per capita, per vehicle and per passenger-kilometre) have been falling and are among the lowest in the OECD.
4. Standard approaches calculate the deadweight loss due to congestion (with respect to the socially optimal level of congestion) or the value of time lost in traffic jams (with respect to free-flow). The deadweight loss arises from the fact that individual making their travel decisions do not take into account the costs imposed on others. It can be recuperated with appropriately designed (Pigovian) road prices which lead to a socially optimal level of congestion. This is not the case for the total lost time, where liquidating the costs of congestion would require (costly) infrastructure capacity expansion.
5. According to Eurostat data from 2000, the share of land used for transport and communication (4%) is significantly lower than in other relatively densely populated *e.g.* Belgium (6.4%) and Germany (4.9%).
6. Under the proposed road pricing scheme, which will address many of the congestion problems, many of the local measures (such as peak-hour, priority, and car-pooling lanes) may no longer be needed.
7. Parking in Amsterdam is among the most expensive in the world (Colliers, 2009). Parking fees constitute 20% of revenues of local governments in large cities (25% in Amsterdam, CBS, 2009b).
8. This is based on a EUR 0.067 charge per kilometre and a car consuming 8 litres of petrol per 100 kilometres. The price of petrol is assumed at EUR 1.4 per litre.
9. The figured of EUR 64.9 is obtained by multiplying the per-kilometre price (EUR 0.067) by the average daily commuting distance for workers commuting by car (44 kilometres both ways) and the average number of working days in a month (22).
10. The CBS estimates about 3% of the active labour force to be engaged in teleworking, which is somewhat below various estimates for Denmark (4%) and the United Kingdom (5-6%) but the applied definitions are not directly comparable. The European Foundation shows that in 2005, roughly 3% of the Dutch workers were teleworking most of their time, while 14% of the workers teleworked between 25% and 75% of the time, which is among the highest shares in Europe (Gareis, 2007). By the end of 2007, about half of (mainly large) Dutch companies allowed some employees to telework, up from only a quarter in 2003.
11. This could be done by offering employers part of the subsidy for the provision of child-care facilities.
12. The calculation is based on the effective marginal income taxation for the average income worker (45%).
13. On the other hand, fuel taxes may be less effective than emission standards in combating some types of emissions, *e.g.* fine particles.
14. Currently, diesel-powered engines are generally more efficient (in terms of distance driven per litre of fuel) than gasoline-powered engines of similar size. This fact does not affect the argument for environmental taxation of fuels.
15. The tax structure (purchase, ownership and fuel taxation) sets the gasoline/diesel breakeven point for an average car at 15 000 km annually (*i.e.* if one drives above this threshold, a diesel powered car becomes the cheaper alternative), however there are additional costs of buying and owning a diesel which typically set the actual break-even point higher (VROM, 2009).
16. Besseling *et al.* (2005) shows that a EUR 0.06 increase in the fuel levies would have negligible effects, while a EUR 0.30 (necessary to finance the scrapping of the MRB road tax and a quarter of the BPM purchase tax) increase would lead to a EUR 1 billion (0.2% of GDP) revenue loss. Most of the loss is due to (diesel using) freight as the majority of (gasoline-using) passenger car traffic is concentrated in the Randstad, relatively far from the border.
17. In 2007 the government introduced competitive tendering in all forms of public transport, but was blocked by parliament (van de Velde *et al.*, 2008). The four major cities have used legal loopholes to postpone or possibly avoid competitive tendering. The importance of tram and metro and strong lobbying have been raised the main reasons for this development (van de Velde, 2006).

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Chapter 4

Improving the flexibility of the housing market to enhance labour mobility

The housing market figures among the main determinants of labour mobility, as households seldom make employment and housing decisions independently of each other. This interdependence is likely to strengthen as the cost of commuting increases, due to worsening road congestion or measures that would raise fuel prices, for example to counter global warming. The Dutch housing market is more rigid than in many other OECD countries, as the result of numerous government interventions. Boosting labour mobility by easing rigidities would improve labour resource utilisation, which will be especially important as the labour force contracts with ageing. The rental sector could be made more attractive and flexible by dismantling strict rent regulation and rigid allocation mechanisms in the social housing sector. Lowering tax incentives to homeowners would improve the allocation of scarce capital and reduce house prices. Easing strict land-use and zoning regulation would increase the supply of all types of housing, reducing prices and allowing the housing stock to adjust better to residents' needs

A rigid housing market reduces the labour mobility of households, which weighs on employment rates and could lead to misallocations of labour across regions and sectors, although the empirical evidence on the extent of the link – both internationally and in the Netherlands – between housing and labour market mobility is mixed (Box 4.1).[1] The rigidity of the housing market arises from government interventions. In the Netherlands, interventions are typically directed both at home owners *(e.g.,* mortgage interest deductibility; strict zoning regulation) and at renters *(e.g.,* social housing, rent regulation, tax subsidies, etc.). Such implicit and explicit housing subsidies may contribute to disincentives to work as they increase marginal effective tax rates. Furthermore, they may increase the resistance to moving, and thus aggravate any spatial mismatch between the locations of dwellings and jobs.[2] The

Box 4.1. **International evidence on the relationship between housing and labour market mobility**

There is relatively consistent evidence that tenants in **rental dwellings** of public authorities, typically social housing (*e.g.* with below-market rent) will move less (relative to private renting) and are associated with higher local unemployment levels. Early (1980s) evidence on this topic comes from the UK (see overview of De Graaff *et al.*, 2009). More recently Battu *et al.* (2009) show that unemployed social tenants in the UK are less likely to take a job in a distant labour market than private tenants. Australian research also finds that public tenants who pay below market rents (and those living rent-free) have reduced incentives to move for job reasons (De Graaff *et al.* (2009) based on Flatau *et al.*, 2003). Danish research also shows that tenancy mobility is reduced by rent regulation (Munch and Svarer, 2002; Svarer *et al.,* 2005).

Research into the relationship between **homeownership** and the labour market mobility kicked off later than on the mobility effects of public/social renting, and mainly as a result of the observation of Oswald (1996, 1997, 1999) that countries with a higher rate of homeownership have a higher rate of unemployment (Green and Hendershott, 2001; Partridge and Rickman, 1997; Pehkohnen, 1999) and that homeowners are unemployed more often than tenants. On the other hand, tenants have lower employment rates (Dohmen, 2009). Micro-level evidence which is well suited to control for the characteristics of households, suggests somewhat different results. Homeowners tend to become unemployed less often and tend to leave unemployment earlier (Van Ewijk and Van Leuvensteijn, 2009). Evidence from Australia shows that highly leveraged owners having a greater incentive to stay employed and search hard to become re-employed quickly after job loss (Flatau *et al.*, 2003).

Dutch research results are somewhat conflicting. Micro-economic research suggests that homeowners may or may not be more mobile when a next job is at stake, while generally they tend to be unemployed less often and tend to have shorter spells of unemployment (Van Leuvensteijn and Koning, 2000, 2009; Van der Vlist, 2001; Van Vuuren, 2009). On the other hand, homeowners are generally more likely to find a job in the local labour market and less likely to find one in the distant labour market (Van Vuuren, 2009), although Van Leuvensteijn and Koning (2009) find no impact of homeownership on job mobility, perhaps reflecting the fact that the Netherlands is a relatively small country.

chapter's first section identifies rigidities in the Dutch housing market that may hinder labour mobility or result in a sub-optimal consumption of housing. The second section analyses which policy instruments should be adjusted to reduce rigidities in the owner-occupied sector. The third section discusses how to improve policy instruments directed at the rental sector. The chapter concludes with a set of policy recommendations.

Rigidities in the housing market have an impact on labour mobility

Overall household mobility is about average compared with other European countries, but well below that in the high mobility countries (Table 4.1). Relatively low mobility is particularly marked in the social rental sector. In most countries the flexible segment of the housing market is usually the rental sector, particularly the private rental sector, but this has been sharply declining, and is now quite small, segment of the Dutch housing market. Thus, low mobility in these areas should be worrisome in the context of labour mobility.

Table 4.1. **Tenants move less than in other EU countries**

Percentage of households that moved residence in the year prior to the interview, 1994-2001

	Total	Owner-occupier	Social rental tenant	Private rental tenant
Ireland	2	1	3	26
Austria	3	1	4	8
Greece	3	2	9	10
Italy	3	2	2	8
Portugal	4	3	5	6
Spain	4	3	6	12
Netherlands	5	5	6	12
Belgium	6	3	9	16
Sweden	6	3	n. a.	n. a.
Luxembourg	6	4	8	12
Germany	7	3	7	11
France	8	4	10	21
United Kingdom	8	6	9	36
Denmark	10	6	15	26
Finland	10	5	25	34
Average	6	3	8	17

n.a.: not available.

Source: De Graaff *et al.* (2009; see also Van Ommeren, 2006) based on analyses with the European Community Household Panel 1994-2001.

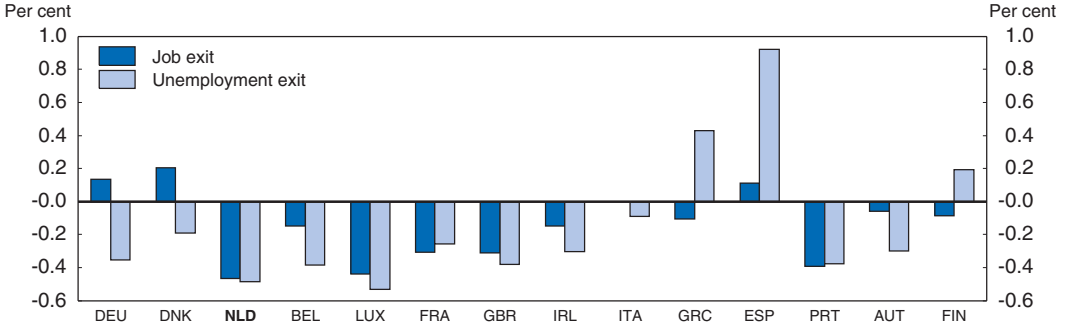
Labour mobility is, nonetheless, not particularly low in the Netherlands compared with other countries. Based on statistics from the European Foundation for the Improvement of Living and Working Conditions (2005), job mobility in the previous year (as well as over the past 5 and 10 years) scores slightly above the EU25 average. The Netherlands also has a lower share of people who have never changed employers (16% compared to 24% in the EU25 average) and, as a result, lower than average job duration (about 7 years). However, these results are more linked to the organisation of the labour market. Indeed, empirical evidence shows that the Dutch move between areas because of changes in housing supply and not because of new employment opportunities, emphasising the effects of a rigid housing supply (Vermeulen and Van Ommeren, 2006). Survey evidence indicates that less than 5% of households moved for employment reasons (RIGO Research en Advies BV, 2007). This may reflect that commuting is relatively easy, as most of economic activity is concentrated in the rather small Randstad area,

encompassing Amsterdam, Utrecht, Rotterdam and The Hague. But the choice of commuting may also reflect housing rigidities. Housing rigidities may then hinder job mobility and/or increase the social cost of commuting (Chapter 3).

Homeowners in EU countries have on average a smaller probability of moving between dwellings than tenants in private rentals, and they also have a smaller probability of becoming unemployed (De Graaff *et al*. 2007). However, there is considerable country-specific variation. The Netherlands stands out with a relatively large negative impact of homeownership on job-to-job mobility and unemployment (Figure 4.1).

Figure 4.1. **Impact of homeownership on labour mobility**[1]

1994-2001



1. The figure shows the impact that homeownership has in comparison with private renting on the probability of leaving the current job for another job or leaving the current job for unemployment.

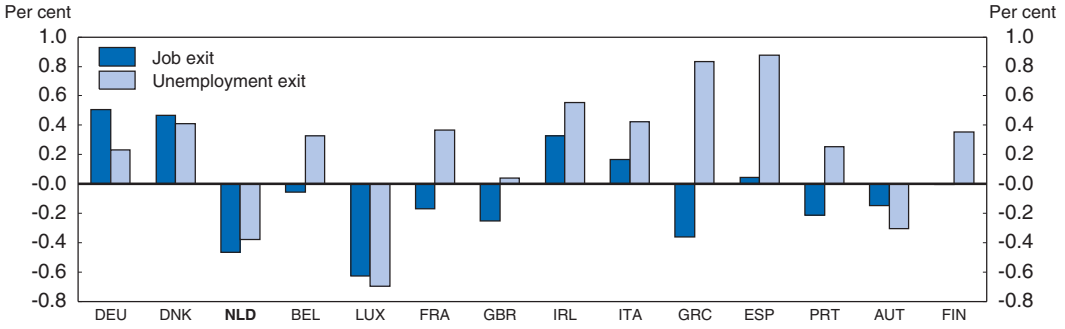
Source: De Graaff, T., M. van Leuvensteijn and C. van Ewijk (2009), *Homeownership, Social Renting, and Labour Mobility across Europe*, in: Van Ewijk, C. and M. Van Leuvensteijn (2009), *Homeownership and the Labour Market in Europe*, Oxford, Oxford University Press.

StatLink http://dx.doi.org/10.1787/888932291985

The same study found that, within the EU countries, tenants in social housing have on average higher job-to-job mobility than tenants in private rentals, but a higher risk of becoming unemployed. However, it is the opposite in the Netherlands. Tenants in social housing have lower job-to-job mobility and a lower risk of becoming unemployed than tenants in private rentals (Figure 4.2) which may be linked to the potential loss of the

Figure 4.2. **Impact of social renting on labour mobility**[1]

1994-2001



1. The figure shows the impact that social renting has in comparison with private renting on the probability of leaving the current job for another job or leaving the current job for unemployment.

Source: De Graaff, T., M. van Leuvensteijn and C. van Ewijk (2009), *Homeownership, Social Renting, and Labour Mobility across Europe*, in: Van Ewijk, C. and M. Van Leuvensteijn (2009), *Homeownership and the Labour Market in Europe*, Oxford, Oxford University Press.

StatLink http://dx.doi.org/10.1787/888932292004

implicit subsidy provided to high income tenants (see below). It should be noted, though, that Dutch social housing associations (the organisations that own and manage social housing) tend to serve a more heterogeneous group than in other countries, implying that differences in tenant characteristics could be behind this outcome.

Generous social housing policies have aggravated mobility problems

The Netherlands has the largest social rental sector in the EU, and rent regulation ensures rents well below market value (Table 4.2) (Box 4.2). Not only does this create queues, but it also gives strong incentives to tenants not to adjust their housing demand in line with changing circumstances on the labour market or with changing family situations. In particular, tenants wishing to move within the social housing segment may have to enter a new rental contract, which generally has higher rents (partly related to quality differences), or may even no longer be qualified for social housing because their incomes have risen (higher income does not disqualify those already in social housing). Mobility may be further hampered due to the creation of income traps via the interaction between housing allowances and other income support.

Table 4.2. **Housing tenures and characterisation of the social rental sector in the EU**

EU27 countries with the largest market shares of the social rental sector, 2007

	Owner occupation (%)	Private rented (%)	Other (%)	Social rented (%)	Per 1000 inhabitants	% of rented stock	New construction	% of housing construction
Netherlands	54	11	0	35	147	77	25 200	32
Austria	58	19	2	21	102	53	14 500	35
Denmark	53	26	1	20	102	43	n. a.	21
Sweden	54	22	3	21	95	48	6 000	20
United Kingdom	69	10	0	21	85	68	n. a.	11
Czech Republic	66	12	1	20	85	61	5 000	20
France	56	25	0	19	71	43	n. a.	9
Finland	63	16	3	18	74	52	4 000	12
Poland	75	13	0	12	39	47	n. a.	8
Ireland	79	13	0	9	29	38	5 127	6

n.a.: not available.

Source: Czischke, D. and A. Pittini (2007), Centraal Fonds Volkshuisvesting (2009); CBS (2007); *Housing Statistics in the European Union 2005/2006.*

Box 4.2. **Social housing in the Netherlands**

The large social rental sector is the outcome of continuous government intervention since the 1901 Housing Act (Haffner *et al.*, 2009a). In the beginning of the 1990s, social housing policies changed to become geared towards decentralisation, deregulation and (financial) independence, including securing their investment risk capacity and giving greater freedom in rent setting and asset management. Moreover, social landlords became financial independent institutions with public task via a grossing and balancing operation in 1995, when the government paid off the net present value of its annual subsidy obligations to the social landlords and the social landlords (mainly) reimbursed outstanding government loans by means of accelerated repayment, allowing social landlords to operate as (large) revolving funds subsidising social rents themselves (see also Annex 4.A1).

Box 4.2. **Social housing in the Netherlands** *(cont.)*

The core mission of the social housing associations is to provide housing for households that are unable to find an appropriate dwelling for themselves (the target group for social renting). Furthermore, the associations have to maintain a decent quality of the dwellings, to consult with the tenants, to be a financially sound organisation, to contribute to livable neighbourhoods (added in 1997) and to provide housing for the elderly and for handicapped people (added in 2001). To finance these tasks, the associations are allowed to generate income from market activities, such as (commercial) renting to non-target groups, developing owner-occupier dwellings for sale, and constructing so-called societal real estate (schools, neighbourhood centres, etc.) (Ministerie van VROM, 2009). In addition, they can raise working capital from the sales of dwellings (Centraal Fonds Volkshuisvesting, 2009).

There are about 400 non-profit housing associations, which have boards of directors as their main decision makers. (Centraal Fonds Volkshuisvesting, 2008). Most of the housing associations are relatively large (and growing) with an average size in urban areas of 9 600 dwellings/housing association and 3 600 in non-urban areas. The 2007 average market value of the housing associations' rental dwellings was estimated to be EUR 150 000 which is considerably larger than the present day value of rents (EUR 34 000), raising the issue of whether housing associations are efficient instruments to provide social housing (Centraal Fonds Volkshuisvesting, 2008). The total property value of the housing associations is estimated to amount to EUR 380 billion, close to 65% of GDP.

A main political concern is the ownership of the private housing associations which have no shareholders, questioning how the associations fulfill their public tasks in the absence of strong supervision. In response to these discussions, new tasks and the levying of corporate tax on social landlords (since 2008) have been introduced. Moreover, housing associations have to part-finance and make performance agreements with municipalities for the tackling of 40 problem neighbourhoods as well as reaching agreements with the government on improving energy efficiency of dwellings and increasing the number of affordable homes.

Rental (and particularly social) housing is more predominant in larger cities (Table 4.3). For example, in the largest metropolitan area the rental sector covers two-third of all dwellings, of which nearly three quarters are social (AFSW, 2007). The large social housing sector appears to have emerged partly at the cost of a shrinking private rental sector (Table 4.4). In terms of construction activity, social housing is also more active than in other countries, although overall construction activity is not particularly high (Table 4.2).

Table 4.3. **Housing stock by size of municipality and tenure**

2006

Size of municipality	Owner-occupier	Social rented	Market rented	Total
Less than 20 000 inhabitants	70	24	6	100
20 000-50 000 inhabitants	64	29	6	100
50 000-150 000 inhabitants	53	38	9	100
More than 150 000 inhabitants	38	47	15	100

Source: WoON 2006 database (TU Delft calculations).

Table 4.4. **Housing stock according to tenure**

	Owner-occupier (%)	Social rented (%)	Market rented (%)	Total (thousands)
1947	28	12	60	2 117
1956	29	24	47	2 547
1967	32	35	33	3 450
1971	35	37	28	3 729
1975	39	41	20	4 281
1981	42	39	19	4 957
1985	43	41	16	5 384
1989	45	41	14	5 802
1995	48	39	13	6 192
2000	51	36	13	6 590
2005	55	34	11	6 859
2006	56	33	11	6 914

Source: Haffner, M., J. Hoekstra, M. Oxley and H. van der Heijden (2009a), *Bridging the gap between market and social rented housing in six European countries*, Amsterdam, IOS Press BV.

An instrument to control access to social housing is the designation of the potential policy target group for social housing, based on income and wealth. This group increased between 2001 and 2006 to encompass 68% of all tenants and 31% of all owner-occupiers – or almost half of all households (Table 4.5).[3] This increase suggests a slow process of widening income differential between owner-occupiers and tenants, so by 2006 the average disposable household income of tenants was less than 60% of that of owner-occupiers. The potential policy target groups are, in principle, eligible for social rental dwellings (Haffner *et al.*, 2009a; Van Daalen and Van der Land, 2008). Access is often controlled through queuing (sometimes through a lottery for eligible candidates) and where income eligibility is checked upon entry, but not subsequently. Municipalities have a right to determine the rules for allocation, while social landlords allocate the dwellings usually based on a so-called choice-based letting system which requires candidates to make applications for vacant dwellings to allow

Table 4.5. **Incomes of households in renting and owner-occupation**[1]

	Renting		Owner-occupation	
	2002	2006	2002	2006
Target group[2] for housing allowances	39%	44%	10%	12%
Remainder of target group[3] for social renting	24%	24%	18%	19%
High-income group	36%	32%	72%	68%
Total	100%	100%	100%	100%
Average disposable household income per year (EUR)[3, 4]				
Target group[3] for housing allowances	12 500	13 300	15 200	17 600
Remainder of target group[3] for social renting	17 800	18 600	21 700	23 500
High-income group	32 500	32 300	43 400	44 000
Total	21 100	20 600	36 700	36 800

1. Over 300 000 households not in independent homes are not included in the analysis.
2. A target group contains the households according to income that in principle are eligible for either housing allowances (lower income limit) or social housing (higher income limit). In the rental sector more than 2 million households belonged to this target group in 2006.
3. Disposable household income excludes any income items related to housing such as tax deductions for homeowners and housing allowances.
4. Gross minimum wage was EUR 1 284.60 per month as of 1 July 2006. It amounts to a little more than EUR 15 400 per year. In net terms, this corresponds to EUR 13 100 per year, which is about equivalent to the disposable income of the target group for housing allowances in the rental sector.

Source: Haffner, M. and H. Boumeester (2009) based on WBO 2002 (revised) and WoON 2006 databases (TU Delft calculations).

candidates to choose from available dwellings rather than being just allocated a dwelling.[4] The most common criteria for allocation of dwellings are then waiting time and length of residence in the present dwelling.

Housing policy has resulted in a much larger social rental sector than in other countries. In a rich country with fairly low inequality, like the Netherlands, this seems to stretch the application of the term "social". As a result, housing consumption choices of households are distorted. Politically, it has proven very difficult to reform housing policies, often leading to reform proposals aiming at individual elements of housing policies rather than wholesale reform. Such piecemeal reforms tend be easily opposed by a relatively small group of potential losers, which is not countered by the creation of a clearly defined group of winners as the benefits tend to be diffused and only materialise over the longer term (Høj *et al.*, 2006; Tompson, 2009). The previous government did not include reform of housing markets as such in its coalition programme, but focussed on tackling the restructuring of 40 so-called problem neighbourhoods (Tweede Kamerfracties CDA, PvdA and ChristenUnie, 2007). One of the 20 committees recently established by the government to make spending cut proposals deals with housing policies (see also Chapter 2).

Policies that restrict housing supply should be reformed

The housing sector has long been shaped by intensive government intervention in the areas of housing, urban renewal and physical planning. Rationales for such intervention can be based on welfare economics (Box 4.3). The Dutch government interventions had two main consequences: a surprisingly small supply of houses for such a high income country and, partly related, the development of a large social renting sector (ECB, 2009; Tompson, 2009).

Box 4.3. **Rationale for government intervention in housing markets based on welfare economics**

A rationale for government intervention can be provided in the presence of externalities that cannot be internalised in private contracts or local government policy (Teulings *et al.*, 2003; as elaborated by Besseling *et al.*, 2008). These could include the positive and negative (social) external effects of urbanisation, of space and nature as public goods, of liveable neighbourhoods as public goods, of housing key workers, of market power (imperfect competition) of owners of land and dwellings and of income or ethnic segregation. Furthermore, there may be scale advantages achieved through coordination of new construction, renovation and urban renewal which the market by itself may not provide; and there may be situations of imperfect or asymmetric information, *e.g.* about housing quality or the "good" tenant. Also distributional considerations may warrant government interventions such as housing allowances. In this respect, government intervention, such as taxes and regulation of land use, quality and protection of recreational areas, etc., will make housing unaffordable for some lower income households. This point to the importance of evaluating whether a specific government intervention has benefits that exceed costs.

On the supply side, availability in terms of dwellings per inhabitant is 422 dwellings (of relatively good quality) per 1 000 inhabitants, which is in the middle range of EU countries. Strict land use policy has contributed to the relatively price inelastic supply of new dwellings in both the short and long-run as compared with other countries (Vermeulen

and Rouwendal, 2007; Swank *et al.,* 2002; André, 2009). Some measures have been taken to relax land use policies (the Vinex-directive from the mid-2000s and the new Law on spatial planning (WRo, 2008)) to expand land for constructible use, particularly in areas just outside city boundaries.[5] In addition, development time for new property has almost doubled since the 1990s to 94 months in 2008 (Eichholtz *et al.*, 2008). Moreover, there is a perceived shortage of housing, which public policies have tried to address. The quantification of the perceived shortage is based on stated preferences of households and demographic development (Besseling *et al.*, 2008). In 1995, the government entered construction agreements with urban regions with the aim of adding 650 000 dwellings to the housing stock between 1995 and 2004. Despite achieving the target, a new target of reducing the housing shortage to 1.5% by 2009 was set (Ministerie van VROM, 2004, 2005). Agreements were again reached with the urban regions on output targets. The social housing landlords were allocated a crucial role in meeting these targets, as they were to produce more than 25% of the output deemed necessary.

Land use planning is a top down process whereby policy targets are prescribed by central government and provinces and municipalities are in charge of implementation. Traditionally, municipalities finance infrastructure and social projects from revenues from the sale of land, the price of which includes scarcity premiums. More recently, the rules have been relaxed a little, as municipalities in rural areas are now allowed to build for their natural population growth (Ministeries van VROM, LNV, VenW en EZ, 2004). In general, municipalities are free to develop their own regulations, but these must comply with the spatial policies of central and provincial governments as well as national and EU regulations concerning issues such as noise pollution and safety. The relatively strict rules about the location of new construction have traditionally found their roots in arguments for the preservation of open space in the form of nature and agriculture, particularly the so-called Green Heart in the midst of the Randstad area. As the boundaries of the Green Heart have changed little in the past 50 years, even as the population of the Randstad has grown, they are in effect more restrictive nowadays than in the past.

Restrictive land use policy is estimated to add one third to house prices (Besseling *et al.*, 2008). Insiders gain from higher property values while outsiders pay for them via foregone housing consumption. It is estimated that these higher prices amount to about a 10% consumption tax. Net welfare losses in terms of foregone consumer surplus on the housing market are estimated at EUR 3 billion (0.6% of GDP) per year. In addition, it is difficult to estimate welfare losses because of the fact that physical planning regulations also prevent the reaping of agglomeration benefits from further growth of cities and indirectly depress labour supply. Van Oort *et al.* (2008) find that the Randstad area (especially Amsterdam and Utrecht) is a location where employment follows housing, while the present policy for housing construction is not following local economic policy: employment is growing faster than housing supply. Thus, more care should be taken in gearing housing construction to economic and labour market policies in local markets in the Randstad in order not to hamper economic development.

Land use policies may help to preserve living environments in the second most densely populated country in the EU (after Malta). A full evaluation of the cost of land use policies would have to include the associated gains, such as in terms of environment and open spaces (Besseling *et al.*, 2008). Nevertheless, land use policy has led to a situation where 70% of the Randstad area is devoted to water management and agriculture (OECD, 2007). Thus, a first step would be to subject land use to a full evaluation to inform the

debate on policy options (Van Hoek, 2009). Indeed, the effective restrictiveness of the zoning laws has increased over time, particularly in the Green Heart, as cities have expanded. Moreover, economic activity is being increasingly concentrated in the Randstad, pointing to further increases in competing demands on land use (see also Chapter 3). To assure balanced development, particularly of the "Green Heart", more housing would be necessary as well as new forests and nature parks. Thus, there is a need for easing zoning laws – a recommendation that already has appeared in previous *Surveys*. Planning, however, cannot be a standalone measure, so to create incentives for local municipalities to develop housing, they should benefit from such developments, for example in terms of greater (property) net tax revenues.

Subsidies to owner-occupied housing should be phased out

Transaction taxes increase the cost for home-owners to adjust to changes in their housing demand. Moreover, while the relatively high income tax subsidies to homeowners (arising from generous mortgage interest deductibility and low taxation of imputed rents) affect tenure choice, without a direct impact on household mobility, they may lead to suboptimal housing consumption decisions and hence have more indirect negative effects on mobility.

Owner-occupied housing is largely subsidised

Tax neutrality from the point of view of individual investors can be achieved if financial and real assets (including housing) are treated as investment goods in the personal income tax system. Since the 2001 tax reform, this principle has been applied for real and financial (non-business) assets in a special way. For tax purposes income from these assets is set at 4% of net wealth, irrespective of the actual income received (in the form of rent, interest, dividend, etc.) and is taxed at a standard rate of 30%, implying an effective tax rate of 1.2% on net wealth. The argument for introducing this system was to achieve sustainable (*i.e.* stable) tax revenues, but at the cost of no longer taxing realised income, contrary to the practice in most other OECD countries.

The exception in the system is the tax treatment of owner-occupied housing. Taxation is based on imputed rent, calculated as less than 1% of the property value, and mortgage interest payments are fully deductible at the highest marginal tax rates. Typically, the deduction of mortgage interest exceeds the amount of imputed rent. In comparison, owners of other real and financial assets pay tax on their return with no deduction of actual costs (OECD, 2004), leaving housing relatively lightly taxes, or effectively subsidised.[6] Tax neutrality would require taxing all actual income from financial assets and all imputed income from owner-occupied housing (based on market rates) at the same rate, while allowing deduction of all costs involved in producing that income at the same tax rate. This implies – in the present tax system – a 30% tax rate on imputed rent, which should be based on 4% of the value of the house, and that the tax deductibility of mortgage interest payments should be preserved. Even then, there would still be an incentive for households to rely on mortgage loan financing rather than savings as long as the mortgage interest rates are above 4%. Financing neutrality between borrowed and saved money requires that the net value of owner-occupied housing is taxed, *i.e.* that the tax deductibility of mortgage interest payments is replaced by system where the above tax parameters are applied to the net value of the house (by deducting the mortgage loan from the value of the house).

There are two other subsidisation elements for homeownership. First, there is an income tax exemption of the interest earned on an amount saved (in a special scheme) for the repayment of so-called endowment mortgage loans (up to a certain amount depending on the years saved). Such loans were designed to allow homeowners to take advantage of the full mortgage interest deduction. The effect is to allow deduction of interest on the full (initial) value of the mortgage while, in effect, paying down the principal.[7] Secondly, homeowners that have repaid their mortgages are no longer subject to the tax on imputed rent. There have been some measures to reduce the tax subsidy to owner-occupation, notably a 2001 limitation of deductions to 30 years and to the principal dwelling, and in 2004 the deductibility for second-time buyers was limited to a loan that is equal to the difference between the value of the new dwelling and the accumulated equity in the previous dwelling.

Overall, the estimated budgetary cost of the subsidisation of owner-occupied housing amounts to 2.6% of GDP (Table 4.6). This amount implies a first-round subsidy to housing of more than EUR 3 000 per owner-occupied household per year, which is equal to a subsidy of about one fifth of housing costs. All in all, the income tax position for owner-occupied housing results in a more favourable treatment of owner-occupiers in comparison with private landlords and in comparison with financial assets and pushes up house prices by 10% to 30% (Conijn, 2008).

Table 4.6. **Implicit and explicit tax subsidies for homeownership**

2006

Type of subsidy	Total in EUR billion	Average per household (EUR)	Average per household[1] (%)
Mortgage interest deduction[2]	11.75	2 750	18
Exemption from imputed return taxation as has to be paid for other assets	7.50	2 250	11
Imputed rental income	–2.00	–500	–3
Transfer tax	–3.00	–750	–5
Total	**14.25**	**3 750**	**21**
Property tax	–2.25	–500	–3
Total after property tax	**12.00**	**3 250**	**18**

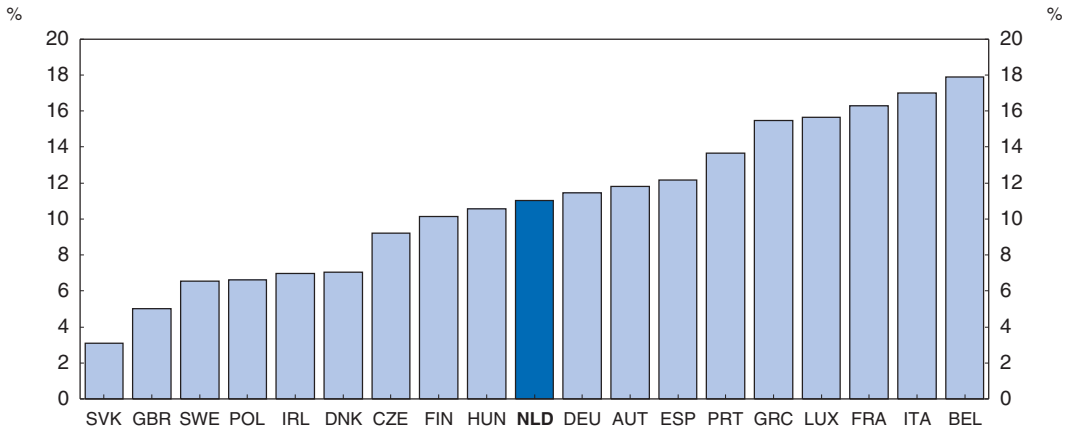
1. Percentage of housing costs (expressed as a percentage of imputed market rental income).
2. Including exemption of capital insurance policy and the deduction of mortgage costs.

Source: Besseling P., L. Bovenberg, G. Romijn and W. Vermeulen (2008; based on Koning *et al.*, 2006).

Subsidisation combined with transfer taxes leads to large welfare losses

For owner-occupied housing, while ownership is subsidised, purchasing is taxed. Transaction taxes are 6% of the acquisition price in the Netherlands, which amounts to a bit more than half of the total cost of moving (Figure 4.3). Although the latter is about average in a European context, the cost of moving is still associated with substantial welfare costs. In particular, economic studies show that transaction costs result in lock-in effects to a larger extent than taxation of ownership. This leads to suboptimal consumption decisions, implying that the welfare loss associated with transaction taxes is much higher than that of taxation of ownership (Van Ommeren and Van Leuvensteijn, 2003; Rouwendal and Van Ommeren, 2006; O'Sullivan *et al.*, 1995). The empirical evidence suggests, as in other countries, that a one percentage point decrease in the value of transactions costs increases ownership-to-ownership mobility rates by 8% (Van Ommeren and Van Leuvensteijn, 2003, 2005; Rouwendal and Van Ommeren, 2006). Moreover, the lock-in effects are pro-cyclical (inversely related to vacancy rates), implying

Figure 4.3. **Transactions costs for buyers and sellers**
As a percentage of property value in 2007



Source: De Montfort University calculations based on *Global Property Guide* – last updated 15.10.2007, Roundtrip Transaction Costs as a percentage of property value.

StatLink http://dx.doi.org/10.1787/888932292023

that mobility is reduced when faster reallocation of labour is needed to sustain such upswings (Lundborg and Skedinger, 1999).

The transfer tax and the income tax subsidisation of owner-occupied also lead to welfare losses of at least EUR 1.5 billion per year (0.3% of GDP) assuming a relatively high long-term price elasticity in supply (and 0.2% of GDP if a zero elasticity is assumed) (Table 4.7). The largest part is attributable to the direct effects of the transfer tax, followed by the losses as a result of biasing the tenure choice between owning and renting (the lack of tenure neutrality). The smaller welfare losses in the labour market mostly arise from the inefficient pairing of job offers and job seekers.

Table 4.7. **Welfare losses of homeownership tax policy**
In billion EUR, 2006

Direct welfare losses of biased tenure choice	1.2
Decrease in housing costs	0.5
Regulatory tax (transfer tax)	0.7
Welfare losses on labour market	0.3
Inefficient consumption package	0.1
Inefficient pairing on housing market	0.0
Inefficient pairing on labour market	0.3
Productivity	0.2
Labour participation	0.0
Agglomeration advantages	n. a.
Rent-buy decision/portfolio composition[1]	n. a.
Total	1.5

n.a.: not available.
1. Depends on subsidisation of renting *versus* owning; effects unknown.
Source: Besseling P., L. Bovenberg, G. Romijn and W. Vermeulen (2008; based on Koning *et al.* 2006).

To promote greater housing mobility, the tax system should be rebalanced by reducing the taxation of property purchase and increasing the taxation of ownership of real assets. In addition, taxation of ownership should aim at securing tax neutrality *vis-à-vis* other

assets. If the aim is to maximise mobility, the transfer tax should be abolished or at least lowered. To avoid the reduction in transaction taxes being capitalised into higher house prices, it is important that such reform is accompanied by measures to boost the flexibility of housing supply, notably by reforming land use regulation. This measure should be accompanied by at least a similar reduction in the income tax subsidy to owner-occupied housing to ensure budget neutrality. Overall, the tax treatment of homeowners should follow the tax treatment of investors in real estate and financial assets (OECD, 2004; Stevens, 2005). Concerning the special savings accounts for mortgage repayment, all savings should be taxed in a similar way. The reduction in income tax subsidies could be achieved by increasing the taxation of imputed rent (while applying it to all owner-occupied dwellings). In case such a reform cannot be achieved, an increase in property taxes or a reduction or abolition of mortgage interest deduction should be considered.

The regulation of the rental sector should be eased

The rental sector consists of a large concentrated social (non-profit) housing part with more than 400 large social housing organisations (Annex 4.A1) and a smaller private (commercial) part (Centraal Fonds Volkshuisvesting, 2009; Haffner *et al.*, 2009a). The latter is fragmented among several hundred thousand landlords, typically individuals who usually own a few older dwellings, but also some large scale institutional investors with newer stock, although these are leaving the private rental market because of the strict rent regulation (see below) and the politics of rent regulation that increases the uncertainty of returns. Despite the different focus of the private and social rental sectors, the policy instruments are largely the same: housing allowances (see Box 4.4), rent regulation and indefinite rental contracts.

Box 4.4. **Housing allowances provide for targeted affordability in rented housing**

Housing allowances are a relatively widely used policy instrument in the EU (in place in 14 other EU countries). One of the main advantages of this instrument is that it does not directly hamper labour-market mobility, as tenants can get housing allowances for any rental dwelling as long as the household and the dwelling fulfil the income and wealth requirements. Moreover, there is little empirical evidence that housing allowances by themselves create employment or income traps (Sociaal en Cultureel Planbureau, 2001 and 2005).

Any low-income tenant is in principle eligible for housing allowances and in 2006 the target group comprised about 44% of all tenants, although only one in three tenants actually receives the allowance. The average monthly housing allowance per recipient household was EUR 144, which constitutes more than one third of the average monthly rent of all tenants (WoON 2006, calculated by TU Delft).

The system of housing allowances is complex, depending on income, rent, age and composition of the household. Everyone has to pay a basic rent' which is income-dependent. Households are classified into four types according to whether they are single or multi-person and whether they are younger or older than 65 years. For each type of household a minimum income and a maximum income are given. Below the minimum income one receives the maximum subsidy; above the maximum income no subsidy is available. Between the minimum and maximum income the subsidy diminishes with marginal effective tax rates of between 21% and 38%. Beyond a certain rent level the share of rent subsidised goes to 75%, 50% and 0% depending on household composition and age.

Box 4.4. **Housing allowances provide for targeted affordability in rented housing** *(cont.)*

Housing allowances are an open-ended system; everyone who needs and applies for help will receive it. However, housing allowances cannot be considered a fully secure subsidy for tenants, as they are reduced when the housing allowance budget comes under pressure. Such a reduction comes about because Dutch ministries operate under medium-term spending targets fixed in the government's coalition agreement, meaning that unexpected financial setbacks on the spending side must be offset within the ministries' own budgets (OECD, 2008). This rule regularly puts the ministry responsible for housing under considerable pressure as expenditure on housing allowances rises during economic downturns. As a result, rent regulation has also become a budget policy instrument in the sense that not allowing rents to increase aids in controlling the rise in housing allowances.

Strict rent regulation does not differentiate between social and private renting

Rent regulation is in place in the Netherlands, as in many European countries. The resulting de-linking of rents from housing market conditions is most likely to have induced the long run decrease of the share of the private rental sector all over Europe (ECB, 2003). The Netherlands is no exception. Rent regulation was introduced in the aftermath of World War II to protect tenants against rent increases (Elsinga *et al*., 2006). Nowadays, however, 95% of the Dutch (social and private) rental market operates under rent regulation (henceforth referred to as the regulated rental sector, of which 85% belongs to social landlords and only 15% to private landlords).[8] Moreover, indefinite security of tenure is applicable in both the social and private rented sector, although in the private sector short-term tenancy agreements of one year or longer are sometimes allowed (Haffner *et al*., 2009b; Haffner *et al*., 2008).

Rent regulation has two elements. A maximum rent level is applied to both existing and newly-built dwellings. It is based on the quality of the dwelling as stipulated in the so-called dwelling valuation system. This system awards points to a dwelling on the basis of the quality of the housing (on objectively quantifiable characteristics such as surface area and facilities) and the housing environment. The latter is determined by rent committees which tend to focus on the accessibility of amenities (shops, public transport, schools, etc.). In fact, however, the location is scarcely taken into account in the points system, although it is often the main free-market determinant of the price of real estate. The other instrument of rent regulation is a maximum rent increase which is set every year by central government (based on a decision by parliament) and which applies to all regulated rented dwellings.[9] The government has decided to pursue an inflation-indexed rent policy in the period 2007-10 (OECD, 2009), implying a falling rent share of income over this period. This agreement led to the withdrawal of the proposal (which had gone to Parliament) to deregulate 25% of rental dwellings.

Dutch rental regulation differs from that in other European countries. Firstly, almost the same rules of rent regulation are applied in the social and private rental sector. This is usually not the case in other countries (Table 4.8). Another consequence of the Dutch system is that it allows rent differentials among comparable social dwellings, even in the same building. These arise whenever a new tenant moves in and rents are set higher than for the existing tenants. This contrast with the view that in social housing, for horizontal equity reasons households with similar income levels should pay similar rents for same quality dwellings. This practice does, however, allow some rent adjustment. Secondly, rent control applies to almost all rental dwellings. As a result, the price mechanism is switched

Table 4.8. **Rent regulation in seven European countries (length of tenancy contract)**[1]

	Cost-price regulation	Market rent regulation	No regulation
New contract	Netherlands:[2] regulated stock Sweden[3]	France: sitting tenant	Belgium[4] United Kingdom[5] Germany[6] Spain France: new tenant Netherlands: non-regulated stock
Existing contract	Belgium (9 years is standard) Spain (5 years) France (3-6 years) Netherlands:[2] regulatedstock (mostly permanent) Sweden[3] (permanent)	Germany (permanent)	United Kingdom[5] (6 months) Netherlands: non-regulated stock (permanent or shorter)

1. There appears to be no clear correlation between tenure protection (length of contract) and rent regulation.
2. Rent adjustment is a political decision based on inflation (1.1% in 2007) plus a certain percentage (that was set at 0 in 2007); rent level depends on quality norms.
3. Rent is based on costs, but negotiated between tenant unions and municipal housing companies.
4. Market rents for new contracts unless short-term contract changes into a standard contract of nine years.
5. Possible indirect rent regulation via local reference rents for housing allowance recipients in the private rental sector.
6. Separate legislation on exploitative rent setting. No written information has been found on this option for other countries, but it is not unlikely that other countries have general legislation against exploitation as well.

Source: Haffner *et al.* (2008, 2009a, b).

off with long waiting lists (queuing) and illegal subletting of rental dwellings is taking place (particularly an issue in Amsterdam; OECD, 2009). In contrast, other countries have mostly based rents for new rent contracts/tenants on housing market conditions. Finally, the annual rent adjustment is a political decision in the Netherlands, while other countries either use a price index or reference rents of comparable dwellings.

Social landlords keep rents well below the maximum rent level, leading to a situation where they are crowding out private landlords, even in the higher-quality end of the market.[10, 11] The lower rents in social housing reflect not greater efficiency in housing provision, but subsidies (see below). The social landlords work with so-called target rents, which are expressed as a percentage of the maximum rent. As a result, the social landlords are able to keep about 765 000 dwellings (the difference between the two columns in row 4 of Table 4.9) in

Table 4.9. **Number of social rental dwellings per rent level as expressed by extent of possible subsidisation via rent allowances**

2006

Percentage of the rent covered by housing allowances within the set limits[1]	Dwellings and different segments distributed according to actual rent charged by social landlords	Dwellings and different segments distributed according to maximum rents based on points
Possible subsidy of 100%	620 000	109 000
Possible subsidy of 75%	1 400 000	613 000
Possible subsidy of 50% or 0%	312 000	814 000
No subsidy (deregulation limit)	75 000	840 000
Total number of dwellings	2 400 000	2 400 000

1. Percentage of the rent covered by housing allowance within the set limits: between the share of the rent that a household has to pay and the next limit 100% of rent is subsidised; between that limit and the next limit 75% of rent is subsidised; between that limit and the next limit either 50% (elderly; and single households) or 0% (other households) is subsidised; deregulation limit is maximum rent above which no housing allowances are available. At the same time this rent limit is the limit for dwellings for which rents are regulated. About 1 million households actually receive housing allowances.

Source: Van Blokland (2009).

the regulated sector – dwellings that according to the point system should belong to the deregulated rental sector.

The substantial subsidisation of rental housing leads to large welfare losses

Social housing benefits from investment (so-called brick-and-mortar) subsidies effectively still in place.[12] This is partly the direct result of the financial independence of social landlords from government in 1995, which gave them a dowry in the form of the present value of the future subsidies. Social landlords have to use this lump-sum subsidy as a revolving fund for which a rate of return lower than the market would accept. Moreover, the social housing associations receive an indirect subsidy in the form of lower land prices, sometimes offered in exchange for the provision of other infrastructure, such as playgrounds, pools, etc. Another form of an indirect subsidy is the government guarantee for the Guarantee Fund for Social Housing (known in Dutch as the WSW) – a private fund established by the social landlords in 1983. A social landlord pays a relatively low interest rate when a loan is guaranteed by the Guarantee Fund. The financial soundness of the sector and the government safety-net contribute to the triple-A investment status of the WSW and thus enables social landlords to take out low-interest loans for social housing objectives, providing for cheaper financing than for private investors.

The sum of the direct and indirect subsidies leads to a first-order effect in the form of a reduction of estimated market rents by almost 50% (excluding the effect of property tax) (Table 4.10).[13] The annual cost of providing these subsidies has been estimated at EUR 14.5 billion (2.7% of GDP). Assuming that the property tax effect would be similar to that for homeownership (EUR 500 in Table 4.6), then on average a tenant would receive more than EUR 4 000 (4 750 in Table 4.1 less the 500 arising from the before mentioned property tax effect) in total subsidy. More than half of this comes from rent regulation, one third from rents below the maximum rent, and the rest from housing allowances. The targeting of these subsidies is poor as only a little less than half of this amount is received by low income households – the target group for housing allowances – although this group does enjoy a lowering of average rents by 56%.[14]

Table 4.10. **Implicit and explicit subsidies for tenants**

2006

Type of subsidy	Total in EUR billion	Average per household (EUR)	Average per household (percentage of housing costs)[1]
Rent regulation	8.00	2 750	26
Lower rents by social landlords	4.50	1 500	15
Housing allowances	1.75	500	7
Total	14.25	4 750	49

1. Expressed as market rent.
2. It is not known whether tenants pay property tax via their rent, as the points system does not have points for property taxes.

Source: Besseling et al. (2008; based on Romijn and Besseling, 2008).

The subsidisation of (social) rents leads to estimated welfare losses of at least EUR 5 billion per year (1% of GDP) (Table 4.11) under the assumption of a relatively elastic long-term supply.[15] More than 80% of this is attributed to the direct effects of tenure choice being biased towards (social) rentals. The rest of the welfare loss is estimated to arise on

Table 4.11. **Welfare losses of rent policies**
in billion EUR

	2006
Direct welfare losses of biased tenure choice,	3.9
Decrease in housing costs	2.5
Regulatory tax (rent regulation)[1]	1.4
Labour market	0.9
Inefficient consumption package	0.3
Inefficient pairing on housing market	0.1
Inefficient pairing on labour market	0.5
Productivity	0.4
Labour participation	0.1
Agglomeration advantages	n. a.
Rent-buy decision/portfolio composition[2]	n. a.
Total	4.8

n.a.: not available.
1. Based on the small policy target group, the households that are eligible for rent allowances.
2. Depends on subsidisation of renting *versus* owning; effects unknown.
Source: Besseling *et al.* (2008; based on Romijn and Besseling, 2008).

the labour market as a result of distorted consumption decisions and inefficient matching on the housing and labour markets. The social costs of the policy are estimated to outweigh the gains by an average of EUR 900 per rental unit per year, reflecting the fact that middle and high income households live in dwellings they actually find too small and low-income households live in dwellings which on average are too big (Romijn and Besseling, 2008).

A larger role for the deregulated rental sector to improve labour mobility

Rent regulation is the main factor responsible for the inability of the rental sector to provide geographical flexibility of labour, because of the lock-in effects of the relatively large value of discounted future subsidies provided by below-market rents. Thus, reform should aim at addressing this insider issue. Liberalisation does not necessarily imply that there needs to be a large extension of the rental sector. However, there is a need to increase the part of the rental sector with free rent setting. This implies that the social housing associations should focus on their core expertise of providing affordable housing for low-income and other targeted households. In this respect, a system has to be established to prevent the leakage of rent control subsidies to higher-income households, implying increased use of means testing. As a consequence of the need for housing associations to focus on their core activities, the part of the social housing sector that is currently providing social housing to tenants that are no longer eligible for such services should be sold off. This can either be through the sale of housing blocks to private investors (which could include spin-offs from the social housing associations themselves) or to tenants.

Attracting new investors to the private rental sector requires that rents be liberalised to generate competitive rates of return *vis-à-vis* other investment opportunities. Rent liberalisation should be phased in to avoid disruptive rent developments. As a first measure, investors should be allowed to freely set rents in new construction. Secondly, rents for new contracts for existing dwellings should be deregulated. This should be phased in by allowing that new rents are set by a formula that takes into account the previous rent plus a part of the difference between existing rents and market based rents. Subsequently, to remove

political uncertainties, rents should be indexed to a pre–determined index that reflects the cost of housing –for example construction costs. To reduce rent differentials between new and existing contracts, the rent regulation of the latter should follow the same indexation as for new contracts plus a catch-up factor that allow rents to converge within a reasonable time span. In addition, contracts should no longer be indefinite, but subject to periodic renegotiations, strengthening the position of tenants as rents approach market-based levels, particularly during economic downswings. There is also a need for allowing private landlords to enter the middle segment of the rental market. This can be achieved by lowering the maximum rent of the social dwellings with the maximum number of points (limit for deregulated rent). This could be done discretely or by (temporarily) suspending indexation.

Deregulating rents for existing social tenants should focus on those cases where household income has increased to above the threshold for social housing. A number of options exist to normalise the situation for such high-income households. As rent normalisation implies market-based rents, previously regulated rents for high income households should increase faster than regulated rents. This can be achieved in a number of ways: for example, rents could be increased at a fixed rate above that of regulated rents or they could become a function of the tenants' incomes, so that completely deregulated rents would only apply to households with incomes above a certain level. The drawback of the latter solution is the associated bureaucracy and the removal of the link between dwellings' rent levels and their quality. A less bureaucratic solution is to allow tenants who are no longer considered to be eligible for social housing to purchase their dwelling from the housing association. The government cannot force social housing associations to sell, but would have to rely on persuasion. This could for example be in the form of taxing the additional rent income higher than the capital gains associated with sale to tenants. At the same time, it should be remembered that, although the social housing associations are private entities, their capital has been built up over time through large direct and indirect subsidies from the government. Thus, excessive capital gains arising from free rent setting or sale of dwellings should be transferred to the government.

The provision of social housing should be more closely related to employment opportunities; at least until a fully functioning deregulated private rental market has been established. Thus, in order to underpin labour market mobility, the allocation of social rental dwellings should give priority to households that seek housing for employment related reasons. Moreover, the provision of social housing should not only be the prerogative of social housing associations. As rents become increasingly market based, social objectives should be increasingly pursued through housing allowances, which have the added benefit of being less mobility distorting than rent control. Such a measure would also give the government more direct control in securing heterogeneous neighbourhoods. To enhance the transparency with respect to the benefits of the social housing associations' provision of non-housing services to boost living qualities within neighbourhoods, such as urban renewal, a framework should be established to evaluate the costs and benefits of such services and the social housing associations should be compensated directly for the associated costs.

Liberalising rents while maintaining strict supply-side regulation will only lead to large rent increases. These will be capitalised into higher property prices, leading to large windfall gains for landlords without securing much more flexibility. Consequently, measures to secure a supply response are needed, preferably even before an announced deregulation of rents to secure a supply effect through expectations. This would point to

the above proposed reconsideration of the strict land use policy as well as to the importance of securing new entrants into the liberalised rental segment. Given the already high household spending on housing, a flexible supply side should secure that, at the overall level, there will not be much change in rents and house prices. Nevertheless, in a more liberalised housing market some landlords are likely to enjoy substantial windfall capital gains, which only reflect changes in the long-standing rent regulation, and should thus be transferred to the government.

Box 4.5. **Recommendations to increase the flexibility in the housing market to enhance labour mobility**

Land use policies should be adjusted to facilitate a more responsive supply side

- Land use should be evaluated with respect to economic and labour market policies as well as for creating living space to facilitate the weighing of policy options. In particular, zoning laws should be reviewed to secure the development of housing and recreational areas, such as new forest and nature parks, in the Green Heart.
- Planning needs to be supplemented by creating incentives for local municipalities to develop housing. For example, they should be allowed to benefit in terms of greater (property) net tax revenues.

In the owner-occupied sector:

- To achieve a greater degree of tax neutrality, all actual income from financial assets and all imputed income (based on market rates) should be taxed at the same rate and all costs involved in producing that income should be deductible at the same tax rate. Neutrality between mortgage financing and savings should be pursued by replacing the tax deductibility of mortgage interest payments with the principle of taxing net housing value, *i.e.* deducting the value of the mortgage loan from the value of the house.
- The transfer tax should be abolished (or lowered) and should be accompanied by measures to boost the flexibility of housing supply to avoid higher house prices. At least a similar reduction in the income tax subsidy to owner-occupied housing is required to ensure budget neutrality.
- The income tax subsidies should be reduced by increasing the taxation (and its scope) of imputed rent. Alternatively, higher property taxes or reducing the value of or abolishing the mortgage interest deduction should be considered, although this would exclude tax neutrality.

In the rental sector:

To increase the part of the rental sector with free rent setting:

- The social housing associations should focus on their core activity of providing affordable housing for low-income and other targeted type of households. The part of the social housing sector that is providing social housing to non–eligible tenants should be sold off, either through the sale of housing blocks to private investors or to tenants.

To phase in rent liberalisation:

- Rents should be freely set in new constructions. Rents for new contracts for existing dwellings should be gradually deregulated by allowing new rents to be set as the previous rent plus a part of the difference between existing and market based rents. Market based rents should be indexed to a pre–determined index that reflects the cost of housing so as to remove political uncertainties and rental contracts should no longer be indefinite.

Box 4.5. **Recommendations to increase the flexibility in the housing market to enhance labour mobility** *(cont.)*

To reduce rent differentials between new and existing contracts

- Rent regulation of existing contracts should follow the same indexation as for new contracts plus a catch-up factor to ensure convergence. Moreover, contracts should no longer by indefinite to strengthen the position of tenants as rents approach market-based levels.
- To allow private landlords to enter the middle segment of the rental market, the maximum rent of social dwellings should be (gradually) lowered.

To deregulate rents for social tenants

- To prevent the leakage of rent control subsidies to higher-income households, means testing should be extended to sitting tenants.
- Normalising rents for higher-income households in social housing implies that their previously regulated rents should increase faster than regulated rents, by for example increasing them at a fixed rate above that of regulated rents or making them a function of the tenants' incomes.
- A less bureaucratic solution is to allow high income tenants in social housing to purchase their dwelling. The housing associations should be given incentives to do so, by for example raising taxation of additional rent income. At the same time, excessive capital gains arising from free rent setting or sale of dwellings should be transferred to the government.
- Until a fully functioning private rental market is operational, labour market mobility should be supported by giving priority in social housing to households with employment related reasons.
- The provision of social housing should not only be the prerogative of social housing associations and social objectives should be increasingly pursued through housing allowances.
- A framework should be established to evaluate the cost and benefits of social housing associations' provision of non-housing services to boost living qualities within neighbourhoods and the associations should be compensated directly for the associated costs.

Notes

1. Senior Researcher Marietta Haffner from Delft University of Technology contributed research and drafting to Chapter 4.
2. Housing support could indirectly foster employment through better education, although this positive aspect is generally considered as having a smaller impact than the negative aspects.
3. Since then the target group has decreased to 43% as the income limit has not been indexed with inflation (Ministerie van VROM, 2009). Moreover, the Dutch ministry responsible for housing and the EC Directorate on Competition have agreed that if social landlords allocate at least 90% of the dwellings to the target group, then all of the social landlords' dwelling is considered to be offered on a level playing field.
4. Some municipalities experiment with the allocation rules to keep low-income tenants from certain housing complexes in order "to improve" the income mix in the neighbourhood (Wet Bijzondere maatregelen grootstedelijke problematiek).
5. Complex and time consuming building regulations will also contribute to supply inelasticity. As of 2010 the cumbersome building and environmental regulations will become less cumbersome

and time consuming (Wet Algemene bepalingen omgevingsrecht) as a one permit for the built environment merges about 25 rules and regulations for building, environment, nature, and monuments.

6. Owner-occupied housing is more subsidised in the personal income tax system than rental housing and financial assets. In addition to the lack of tax neutrality of different investment vehicles, the tax system also lacks tenure neutrality since the tax favouring of owner-occupied housing over renting biases tenure choices.
7. In practise, mortgage payments go into a savings account and these accumulated savings are used to repay the full mortgage loan on the day it expires and the tax advantage takes the form of the non-taxation of interest earned on the amount saved.
8. The deregulated rental sector contains about five per cent of the rented housing stock and consists of tenancy agreements concluded after 1 July of 1994 (1 July of 1989 for new built dwellings) and with a rent level that exceeded the so-called deregulation limit up to that date (Haffner *et al.*, 2009a). The deregulation limit is equal to the maximum rent level applicable for housing allowances.
9. One part of the rent regulation distinguishes between social and private land lords, which is relevant when rent increases above inflation are allowed. Then, a maximum permissible total annual rent increase is only set for the social sector.
10. The average rent in the social sector is 69% of the maximum rent level in 2008, while in the private sector it is 83% (Directoraat Generaal Wonen, Wijken en Integratie, 2008).
11. The umbrella organisation of institutional property investors, the IVBN, has submitted a complaint to the European Commission concerning the Dutch government's policy on social landlords. They argue that social landlords use state support for letting 'high-end' housing with relatively low rents to households are outside their target group (Priemus, 2008).
12. Tenants in social housing may at times also enjoy rents below costs (so-called unprofitable investment). This applies when the rents of new social dwellings do not cover the operational costs for the first few decades of operation. The unprofitable part of this investment in rent dwellings was on average 28% of the capital costs with average capital costs of a dwelling (including land costs) being EUR 147 000.
13. Conijn (2008) argues that the calculations of Romijn and Besseling (2008) should not take into account the market value of an unoccupied dwelling in the case of a rental dwelling, but of a dwelling which excludes the tax effect on homeownership. The subsidy as share of market rent is estimated on average to be 41% rather than 50%. In his own calculations based on the value gap between the market value of a dwelling and the market value of a social dwelling rented out, it can be concluded that the rent subsidy must be 37%.
14. Three quarters of the subsidy is distributed by social landlords implying a rent deduction of 50% for their tenants in comparison to estimated market rents, again raising the issue of poor targeting.
15. The subsidy would amount to at least two billion EUR (0.4% of GDP), if the price elasticity of supply is assumed to be zero. Also if calculations were based on policy group for social renting instead of policy group for housing allowances the costs will be lower.

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ANNEX 4.A1

Social housing policies in the Netherlands: A historical perspective

The large social rental sector is the outcome of continuous government intervention since the 1901 Housing Act (Haffner *et al.*, 2009). Government intervention increased after 1945 as the already urgent housing shortage caused by World War II was aggravated by strong population growth and new family living arrangements. Housing policies became focused on the construction of dwellings, particularly through bricks-and-mortar subsidies. Moreover, with its spatial planning policy, the government exercised a strong influence on the location, quality and quantity of new-built dwellings. The housing shortage was to a large degree eased through an expansion of the social rented sector, which was regarded as more capable of realising construction projects than the market sector – and not unimportant under government supervision and management. Since the 1970s, housing policy has been targeted towards providing more of choice for households (including low-income households) between buying and renting, and by transforming the quality of both new buildings and the existing stock (urban renewal). A combined system of bricks-and-mortar subsidies and housing allowances was chosen. Bricks-and-mortar subsidies were designed to keep new social rented dwellings within reach of households with (below) average incomes, while housing allowances were to widen the choice for residents with a lower income. At the end of the 1970s the promotion of home-ownership and cuts in the subsidies for the social rented sector became important aspects of government policy – the share in the national budget decreased from almost 9% in 1985 to 3.1% in 1995 (Sociaal en Cultureel Planbureau, 1998).

Housing policies changed tack with the 1989 publication of the policy document entitled Housing in the 1990s: from building to living' (Ministerie van VROM, 1989). The document made a case for a greater role of market forces on the housing market by reallocating responsibilities and financial risks among the players on the housing market and concentrating financial support on the low-income groups. An underlying goal was to control and reduce government spending on housing. Decentralisation was another element as housing was seen less as a task of central government and more of a task to be carried out at the provincial and municipal levels together with the relevant actors on the market. As a result, policies for the social rented sector became geared towards decentralisation, deregulation and (financial) independence, including securing their investment risk capacity and giving greater freedom in rent setting and asset management. The latter included expanding the possibilities for social landlords to sell social rented dwellings in order to raise capital for construction or improvements of

dwellings. The status of the social landlords was not changed as they had originally been given a private legal status to keep them on arm's length from government. However, they became financial independent institutions with public task via a grossing and balancing operation in 1995. This operation removed the financial ties between the social landlords and the national government by the government paying off the net present value of its annual subsidy obligations to the social landlords (emanating from the long-term subsidy arrangements from before 1992) and the social landlords (mainly) reimbursed outstanding government loans by means of accelerated repayment. Essentially, this moved the operational risks from the government to the social landlords and the social landlords began to operate as revolving fund subsidising social rents themselves. In addition, bricks-and-mortar subsidies were abolished.

Box 4.A1.1. **Dutch social landlords and the framework of policy and control**

In the social sector a little over 400 non-profit housing associations (also referred to as social landlords) are active (Centraal Fonds Volkshuisvesting, 2008). Non-profit in the sense of the Housing Act 1901's non-distribution constraint, which stipulates that any profits have be used for housing. Housing associations operate as foundations with a board of directors as the main decision makers – in contrast with the previous situation where the tenants as members were in power. Most of the housing associations are relatively large (and growing) with almost 60 housing associations owning more than 10 000 dwellings and about 250 housing associations owning between 500 and 5 000 dwellings. The average number of units per housing association differs according to urban (9 600) and non-urban (3 600) areas. The 2007 average market value of the housing associations' rental dwellings was estimated to be EUR 150 000, some two-thirds of the average market value of all dwellings. The total property value of the housing associations is estimated to amount to EUR 380 billion, close to 65% of GDP.

Since the grossing and balancing operation social landlords are required to work within the framework stipulated in the Social Housing Management Decree (1993), which is based on the Housing Act (1901). The Social Housing Management Decree (also known by its Dutch abbreviation, BBSH) stipulates six areas of performance for the housing associations which are accredited or registered institutions according to the Housing Act. The core mission is to provide housing for predominantly those who are unable to find an appropriate dwelling for themselves (the target group for social renting). Furthermore, they have to maintain a decent quality of the dwellings, to consult with the tenants, to be a financially sound organisation, to contribute to liveable neighbourhoods (added in 1997) and to provide housing (but not care) for the elderly and for handicapped people (added in 2001). In short, they are expected to operate as what is called "social entrepreneurs". This means that they are also allowed to generate income by market activities such as renting of dwellings to middle-income and higher-income groups and developing owner-occupier dwellings for sale. They are also allowed to construct so-called societal real estate (schools, neighbourhood centres, etc.; Ministerie van VROM, 2009). Housing associations thus should use their equity for housing, subsidising social rents as a revolving fund. Extra funds that can be used for lowering rents come out of sales of dwellings (Centraal Fonds Volkshuisvesting, 2009).

Box 4.A1.1. **Dutch social landlords and the framework of policy and control** *(cont.)*

A main political concern is who owns the equity of the legally private organisations that have no shareholders to which the social landlords are accountable. Related to this are the questions about how well they fulfil their public tasks and the lack of strong supervision. The ultimate sanction for housing associations that perform poorly is the removal from the register. The implications of this sanction and the sum of money to be paid to the government in such cases are unclear as in reality the situation has never arisen. A response to these discussions was the addition of tasks in due course in the BBSH. Also the considerations have resulted in the introduction of corporate tax for the social landlords as of 1 January 2008 and the levy housing associations have to pay into a fund to be spent on tackling problems in the 40 problem neighbourhoods. The housing associations are to make performance agreements with local governments for the improvements of these neighbourhoods. In addition, the government is aiming to reach agreements with the social landlords on a contribution to investments in the energy efficiency of existing dwellings and increasing the number of new affordable homes.

Large amounts of money are automatically earmarked for the social tasks that housing associations are to fulfil as a revolving fund. There is little explicit decision making whether these funds should indeed be used for the aims to which they are directed. Moreover, the large gap between market value of a social rental dwelling (EUR 150 000 in 2007) and the present day value of rents (EUR 34 000) raises the question of whether housing associations are the most efficient and effective way to house needy households (Centraal Fonds Volkshuisvesting, 2008).

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