

Wealth formation of Dutch households: a policy assessment

DeNederlandscheBank

EUROSYSTEEM

Central bank and prudential supervisor of financial institutions

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Authors

Jante Parlevliet and Thomas Kooiman

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P.O. Box 98
1000 AB Amsterdam

Internet: www.dnb.nl

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1. Introduction¹

Over the last decades, Dutch households have seen a strong growth in both their pension savings and equity in their homes. At the same time, their mortgage debts have also increased. On balance, their net wealth grew while their balance sheets also expanded. In view of the ageing population, the growth in net wealth is, in principle, good news. However, the longer balance sheets have also made households more vulnerable to fluctuations in interest rates and asset prices, as housing market developments made painfully clear in recent years. The growth of the mortgage portfolio has also increased the financial risks for banks. In addition, long balance sheets have an amplifying effect on the cyclical of the Dutch economy.

The current asset landscape not only reflects households' preferences, but also various tax incentives and other forms of government intervention. Such intervention should ideally be based on a comprehensive view on the saving and borrowing behaviour of households, as their decisions on the various asset components – own home, pension and freely disposable savings – are interrelated. The purpose of this study is to explore where intervention in the asset accumulation of households is or is not justified, and where there is room for improvement. Drawing on extensive literature on household finances, the next chapter therefore first describes how households determine their optimum asset accumulation and how the government could improve the outcome. Chapter 3 provides a picture of the actual asset landscape in the Netherlands, and how various policy

¹ The authors wish to thank the participants to the 17 December 2014 expert meeting for their input and useful comments on an earlier version.

6 interventions have influenced it. Chapter 4 compares this factual picture with the optimum asset accumulation from Chapter 2 and identifies some bottlenecks. Chapter 5, finally, presents several ways forward for improved policy.

2. How do households determine their savings?

This chapter explores how rational households in the absence of government interventions decide on the level and timing of their savings (Chapter 2.1) and their savings portfolio (Chapter 2.2). Chapter 2.3 investigates how the government may improve the outcomes for households, given, for instance, the myopia of households and missing markets.

2.1 The scope and timing of savings

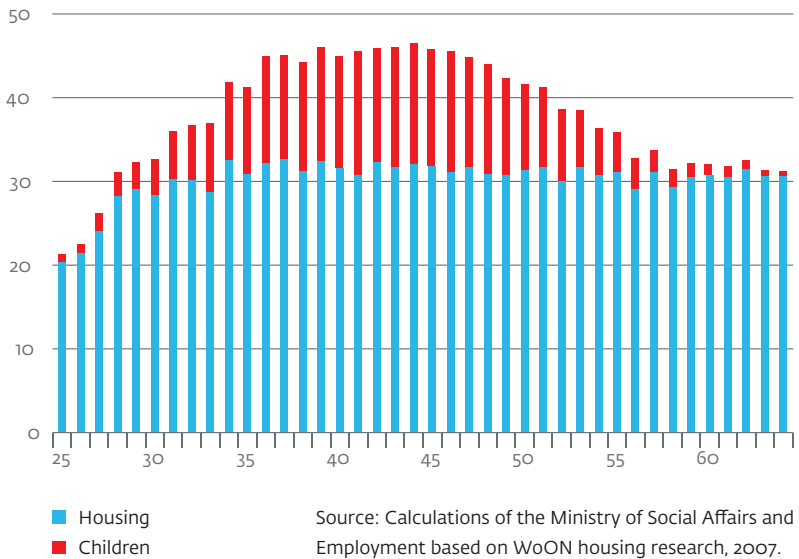
The central starting point in economic literature is the idea that households try to smooth the utility of their consumption across their lifetime through saving and borrowing. This requires non-trivial financial planning skills. In order to determine the correct level of savings, households have to make assumptions about expected returns, expected income development, career duration and longevity. Households who intend to have children have to take into account that they will have less scope for savings for a considerable period (see Chart 1; see also Warnaar and Van Galen 2012). This also applies if they have to pay off any study loans.² Finally, households have to make an estimate of their spending patterns after retirement, including on healthcare.

In addition to pension provisions, households may also have other, partly overlapping, reasons for building up assets. First, many households like to have a precautionary buffer for unforeseen circumstances, such as high health care costs (Mastrogiacomo and Alessie 2013). Secondly, households

² Choices about investments in human capital of course also play a role in decisions on the accumulation of financial/real assets. Investments in human capital mainly take place early on in people's lives, after which they produce a return throughout their career, and households can start to build up financial/real assets. These assets can then in turn be deployed towards fresh investments in human capital.

Chart 1 Net spending on housing and children during working age

In percentage of household income, spending across ages 25-65 in 2007



may want to leave a bequest (see also Chapter 4). Finally, irrational factors could play a role (more on this in Chapter 2.3). For instance, habit formation can occur (Alessie and Teppa 2010): households will get used to a certain consumption level, and when for example their savings increase because of unexpectedly high returns or as children become financially independent, they do not adjust their consumption pattern accordingly. In that case, they end up with more assets than they initially planned for their retirement.

2.2 Portfolio choice

Households also have to decide on the nature of their investments. Important considerations here are longevity risk, timing and the scope of risky investments, diversification and liquidity.

For households, life expectancy is one of the main financial planning uncertainties. Not knowing how long they will live after their retirement, many households, if they have to rely on themselves, will either live too poorly and leave money unspent or have to draw on their savings and descend into poverty. Pension insurance can take away this uncertainty by dividing the longevity risk within a generation.³ Households that want to leave money for their heirs will not want to save all their money in pension insurance (which cannot be inherited), but will also want to hold property assets or liquid financial assets (Teppa and Lafourcade 2013).

Riskier investments will on average produce higher returns in the long term, and can thus increase consumption throughout life (Berk and DeMarzo 2013). How much risk each household can and wants to run depends on personal circumstances and preferences. Another factor is a household's current life cycle phase. For example, for young households, human capital is much more important than financial capital (Luigi and Sodini 2013). They are therefore better able to bear financial investment risks than senior households. In addition, in case of disappointing financial returns, they can decide to continue to work longer. As households approach retirement age, they will want to reduce the proportion of risky investments.

³ It is much more difficult to share macro longevity risk (whereby a whole generation lives longer) (except through increasing the official pensionable age).

Moreover, all households need to diversify their portfolio in order to reduce their investment risk. The composition of their assets portfolio reflects estimates of risk and return.

Whether households decide to buy or rent a home depends on a number of considerations. Home assets offer a return in kind and in addition provide protection against inflation risk because house prices, *ceteris paribus*, follow inflation. Home equity may also double as pension insurance, since the home can be used for as long as one lives. But investing in home ownership also carries a considerable risk that cannot be shared. The purchase of a private home means that a large part of the asset portfolio represents a highly concentrated and (compared with alternatives) illiquid investment. Moreover, most households will have to take on a mortgage to finance their home. Such lengthening of household balance sheets makes households more vulnerable to interest rate and house price fluctuations. If households buy a home while also saving for their pension, they also incur additional transaction costs, because they hold several financial products at the same time, without accompanying diversification benefits. Whether households want to rent or buy a home also depends, of course, on their access to a well-functioning rental market. In a non-regulated market, the rental price should in principle equal the capital costs plus the maintenance costs of an own home.⁴ Where household have limited assets and do not want to take on a large concentration risk, they will usually prefer to rent – especially if they expect a possible change of job in the near future.

4 The price of the home is then equal to the total discounted sum of future rent amounts minus maintenance. If the rented accommodation is financed from an investor's equity capital, the capital costs are equal to the opportunity costs of alternative investment projects. Where the investment is made with borrowed capital, the lessor will charge a fee for the associated interest costs.

2.3 Welfare gain through government intervention

In practice, most households will not be able to realise optimal financial planning. The government can increase the welfare of households through targeted intervention measures. A first rationale for government intervention is provided by limitations on the part of households. Financial planning requires foresight, discipline (acting according to plans) and financial literacy. Many households are lacking in those skills (Van Els et al. 2006; Van der Schors and Warnaar 2013). In practice, households therefore save too little, and acting independently, will invest too conservatively and not diversify enough (Van Rooij, Kool and Prast 2006; Barber and Odean 2013). Furthermore, they also fail to sufficiently recognise the importance of an insurance policy that takes away their individual longevity risk (Brown et al. 2008; Teppa and Lafourcade 2013).

The government can therefore increase public welfare by interventions in the pensions domain. Such interventions should induce households to save enough for their retirement during their working lives. The government can also intervene in terms of the portfolio choice, for example by having households delegate their asset management to an insurer or pension fund. The exact form of the pension system partly depends on the preferences of society, which makes it a political choice. The government may set up pension provisions through a pay-as-you-go system (AOW state pension in the Netherlands) and/or compulsory membership in a system funded by private capital (whether or not collectively organised). The Netherlands has a combination of these two systems, which results in a diversification advantage (see also Chapter 4).

A second rationale for government intervention is to correct market failures (Frank 2009). When households want to insure themselves against unforeseen circumstances (health care costs, unemployment, disability or

longevity risk), financial markets cannot always offer cover for these at a price that evokes transactions. This is partly because there is asymmetric information, as especially households with higher risks will want to insure themselves (adverse selection) and because households adapt their behaviour after insurance (moral hazard). The government can then help to correct such market failure, for example by making it compulsory to take out private health insurance, or through social insurance (e.g. disability insurance, pension provisions and unemployment benefits). The broader the package of risks against which households are insured and the larger the share of the damage that is reimbursed, the lower the buffers they need to build up for contingencies, which may translate into a welfare benefit. In countries with an extensive welfare state, the necessity for household savings is therefore much less strong compared to countries providing only a minimum social security level.

But as government intervenes more extensively in the saving behaviour of households through imposing obligations and group insurance, the risk of government failure also increases. First of all, collective arrangements could run out of sync with the preferences and circumstances of individual households. Some households, for example, have a greater need for higher pension savings than others, or their risk appetite may vary. In addition, a government may go too far in correcting market failure on insurance markets. Government failure may then provide perverse incentives, for instance leading to unnecessarily long unemployment and overconsumption of healthcare, which in turn render collective arrangements unsustainable. A last form of government failure may arise when policies are partial and could have unintended effects in other policy areas. The high ambition level of the Dutch pension system cannot, for example, be considered separate from the high mortgage indebtedness (see Chapter 3.3).

3. An overview of the Dutch households' balance sheets

This chapter provides an overview of the actual wealth formation of Dutch households. We start with an inspection of the household balance sheet and, based on that, discuss the influence of government policy on pension savings, the housing and mortgage markets, and social insurance schemes including health insurance.

3.1 The balance sheets of Dutch households

The assets of Dutch households have increased considerably over the past decades. The balance of their assets and liabilities has increased from approximately twice the gross domestic product (GDP) in 1982 to almost four times GDP in 2012 (see Chart 2). Pension assets in particular have

Chart 2 Asset position of Dutch households

Percentages GDP



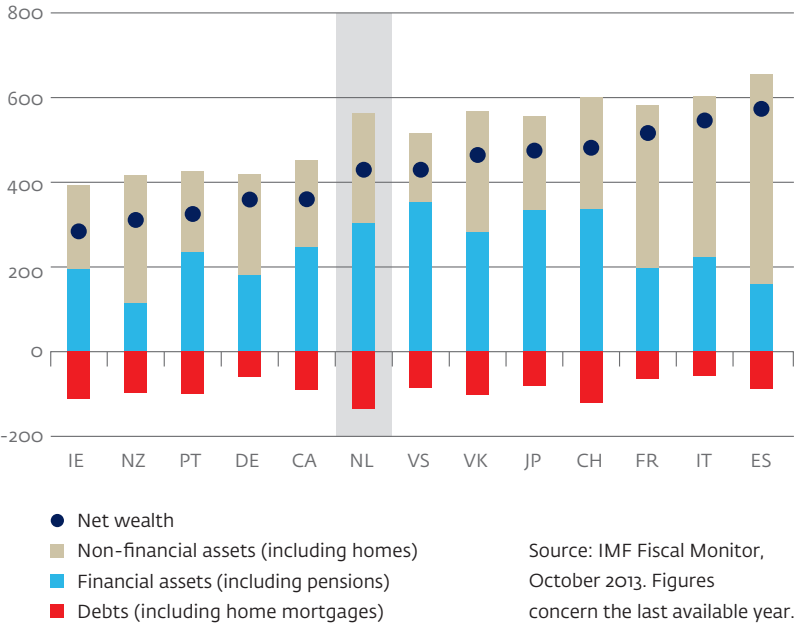
Source: DNB.

increased considerably, but home assets have also risen. On the other hand, mortgage indebtedness as a percentage of GDP rose from 30% in 1982 to 109% in 2012. Because both assets and liabilities have increased, the balance sheet of households has become considerably longer.

The net wealth that Dutch households have built up is average compared with other industrialised countries (Chart 3).

Chart 3 Net wealth and composition – international perspective

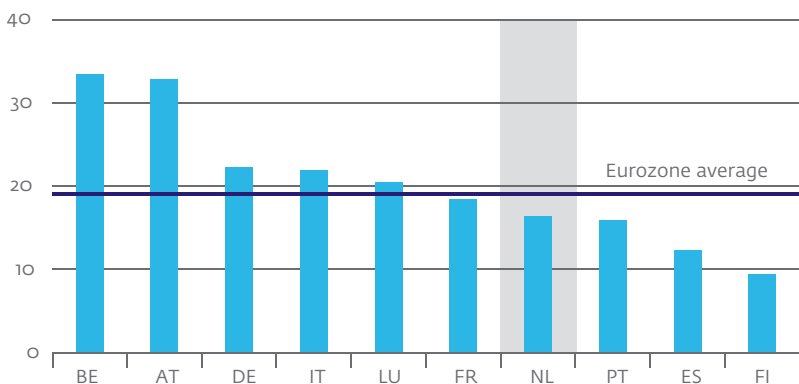
Percentages GDP



Especially in countries with a limited welfare state (Italy, Spain, the US and the UK), household assets are more substantial. When the asset components are compared, the financial asset component in the Netherlands stands out as relatively high, especially in the form of large collective pension assets (see also Chart 6). The freely disposable ('liquid') assets of households are, however, limited compared with those of peers such as Austria, Belgium and Germany (Chart 4).

Chart 4 Net liquid assets of Dutch households

Deposits and financial titles minus debts (other than mortgage) as a proportion of annual gross income, median value



Source: ECB (2013).

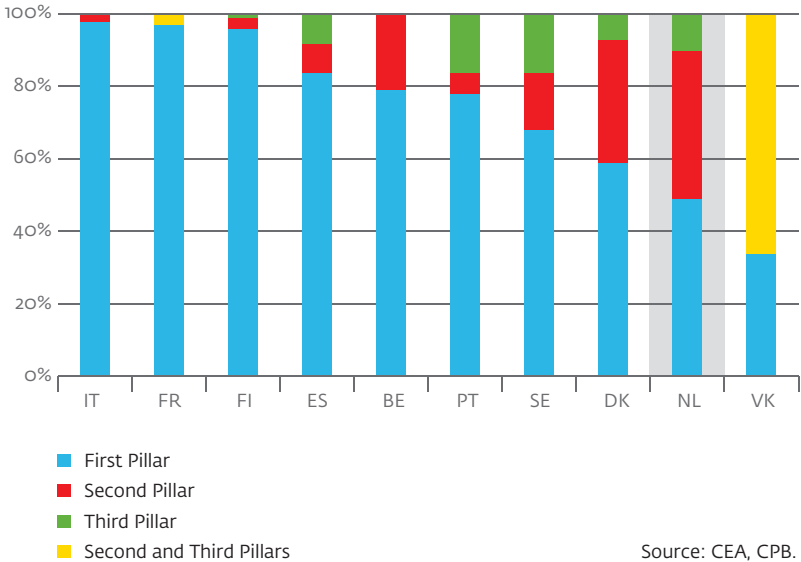
Non-financial assets – in the Netherlands mainly home equity – are average (Chart 3). Another fact worth mentioning is that the balance sheets of Dutch households are also long from an international perspective (see also ECB 2013). Of all countries considered in the chart, the Netherlands has the highest debt; and this concerns mainly home mortgages.

3.2 The pension system

As in most other countries, Dutch households are entitled to a universal pension financed through a pay-as-you-go system (the so-called 'First Pillar')⁵ (Chart 5). Moreover, Dutch households have built up substantial savings in the funded Second and Third Pillars (see also Chart 6).

Chart 5 Scope of First, Second and Third Pension Pillars

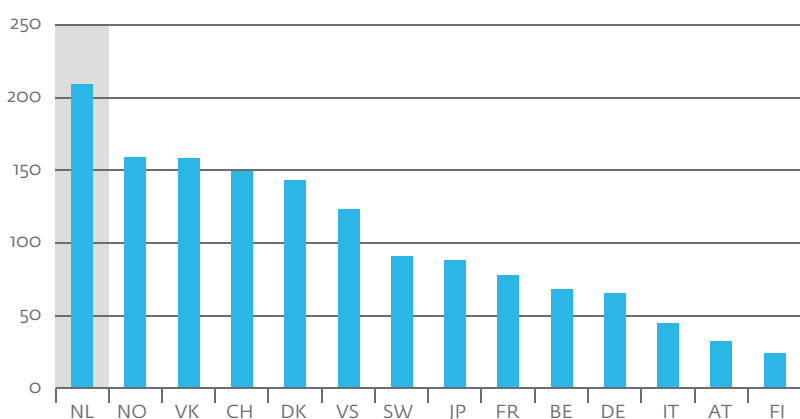
Proportion of pillars in pensions paid; 2007



5 In a purely pay-as-you-go pension system, those who are currently working pay for the full pension benefits of all current retirees. In the Netherlands, the state pension is partly funded from the state budget.

Chart 6 Wealth accumulated in pension funds and life insurance

In percentage of GDP; 2012



Source: ECB.

More than 90% of employees participate in a pension scheme of their employer or their occupational group (Second Pillar). The Third Pillar consists of voluntary pension savings of employees and of pension schemes entrepreneurs have taken out for themselves.

Government policy has played an important role in the creation of this pension mix. The government has made participation in the Second Pillar semi-compulsory for employees.⁶ In addition, pension contributions

⁶ Employers do not have an obligation to offer a pension scheme to their employees. However, any pension scheme offered has to include all employees. In addition, employee membership of industry-wide pension funds is mandatory.

in the Second and Third Pillars are promoted through tax incentives.

The government facilitates pension savings through a provision whereby the premiums paid in and accrued capital are exempted from taxation during the working life, whereas the pension benefits are taxed.⁷

Pension contributions qualifying for tax relief are capped by law (under the 'Witteveenkader'). Currently, the maximum annual contributions amount to a replacement ratio of 75% of the average earned wages, given a 40-year career.⁸ Recently, the government set an upper limit of EUR 100,000 on tax-friendly accumulation in the combined Second and Third Pillars.⁹

3.3 Home assets and mortgage debts

Over the last decades, Dutch households have also accumulated substantial home assets. First, this is because more households bought homes: the proportion of owner-occupied homes as part of the total housing stock rose from 43% in 1986 to 59% in 2012 (Ministry of the Interior and Kingdom Relations, 2013).¹⁰ In addition, house prices rose sharply.

7 This is a reversed regime compared with the tax treatment of other savings, where households save from income after taxes and in addition pay wealth tax on (the notional returns on) their accumulated savings in 'Tax Box 3'.

8 Until recently, the maximum tax-friendly accumulation percentage was 2.25%. However, in view of the increase in the retirement age from 65 to 67 – resulting in longer careers – the maximum tax-friendly accumulation percentage was lowered, first to 2.15% and more recently to 1.875%.

9 'In 2011, 145,000 employees earned salaries of EUR 100,000 or more (including perks). That is 2 percent of the total labour force (excluding workers under 20 years).

10 Households also bought homes at an increasingly early age. Whereas home owners remained a minority in the cohort born in the late 1920s, the majority of the cohort born in 1975 already owned their own homes before they turned thirty (Kullberg and Iedema 2010).

Together with the increase of housing wealth, household indebtedness strongly rose.¹¹ Various factors contributed to this. First, the government encouraged households through various tax incentives to purchase their own homes with debt. Until recently, almost any amount of mortgage interest payments on a household's first home was deductible from income tax. In addition, tax on housing wealth is lower than tax on other personal assets.¹² The government intended to encourage home ownership through these measures, but did so at a high price (Glaeser and Shapiro 2002). Because the housing supply in the Netherlands is rather inelastic to increased demand due to restricted new development opportunities, the tax incentives mainly drove up house prices. All in all, Dutch house prices rose by 150% in real terms during the 1990-2008 period.

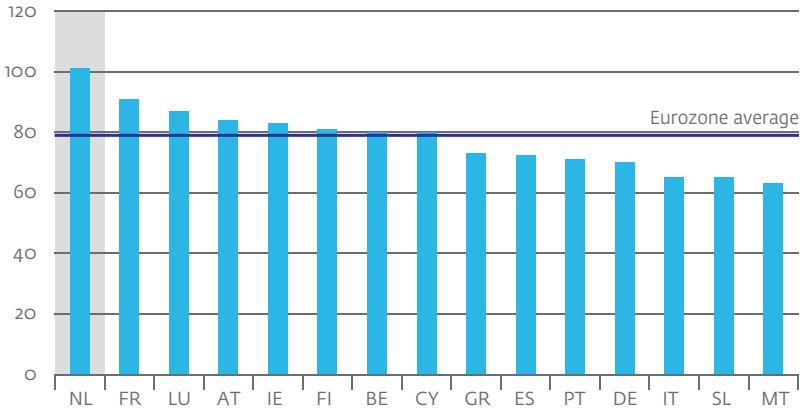
Through financial innovations such as investment mortgages, savings-linked mortgages and interest-only mortgages, financial institutions have enabled households to take full advantage of the mortgage interest tax relief. As a result of this, and because the amount of the mortgage with respect to the home value (loan-to-value – LTV) was not maximised by the government until 2013, Dutch LTVs are high from an international perspective (Chart 7). Laxer credit conditions also pushed up banks' mortgage portfolios and house prices (Francke et al. 2014). For instance, banks began, in response to the increased labour participation among women, to include second salaries in their income assessment.

¹¹ In conjunction with the growing mortgage debts, households have also built up capital in saving products linked to the mortgage. These figures have not been included in all statistics, and have for example not been deducted from the mortgage debt in Charts 2 and 3. As the estimated amount is around EUR 32-37 billion – or around 5% of the total mortgage indebtedness – the distortion is limited.

¹² 'Normal' assets are taxed at a rate of 1.2% (30% of a notional return of 4%). Housing wealth, however, is taxed on the basis of a relatively low imputed rent ('eigenwoningforfait', which comes down to 0.364% in the case of the highest income tax bracket). If the value of the home exceeds EUR 1 million, this percentage increases further, but remains below 1.2%.

Chart 7 LTV ratios in an international context

Most common LTV on purchase of first home; 2007



Source: ECB (2009).

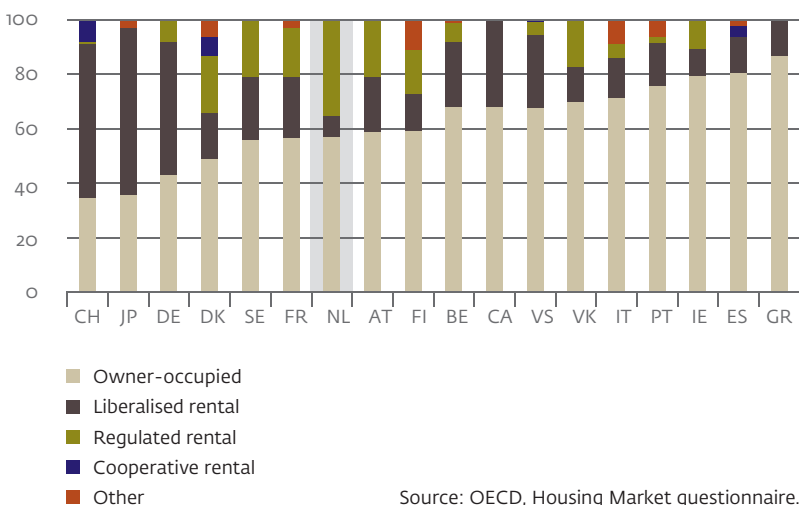
In addition to the tax incentives for owner-occupied homes, the regulation of the rental sector has also boosted home ownership and mortgage debts. For income-political reasons, the Dutch rental market is almost entirely regulated (Chart 8). The rental rates on this large, regulated rental market are low, but the waiting lists are long.¹³

The liberalised rental sector is very small and rental rates are considerably higher. As a result, there is little incentive to move from public-sector

¹³ The lower rental price is estimated to represent an implicit subsidy of approximately EUR 8 billion. This is the difference between the actual rental price and the market-conforming rental price which could be asked based on the value under the Valuation of Immovable Property Act (for details, see Ministry of Finance 2010). Because an income test is only carried out on inflow, an estimated 25% of lessees currently have an income that exceeds the threshold.

Chart 8 Buying versus renting in a number of OECD countries

Proportion in total; 2009

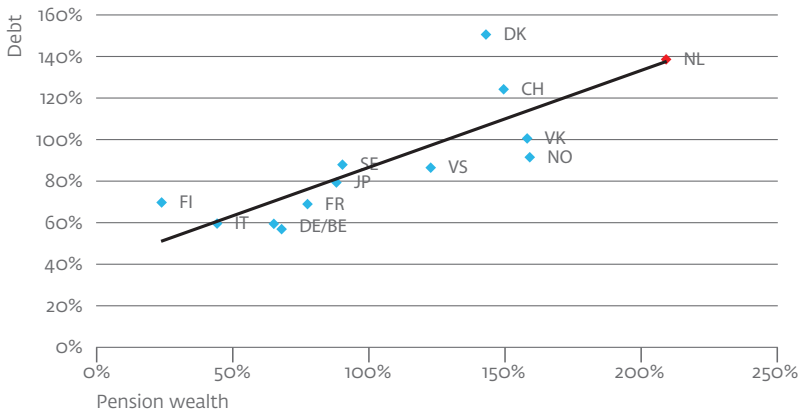


rented accommodation to the much more expensive private sector rented accommodation. At the same time, access to the owner-occupied market offers substantial tax advantages. Those who want to move but do not qualify for the regulated sector, will therefore often opt to buy a home.

In addition, note that from a macroeconomic perspective, the high household indebtedness cannot be seen separate from households' high pension savings (see Chart 9). After all, partly because households are already obliged to (collectively) save for retirement, they have both less need to accumulate wealth in their own homes and lower financial means to do so (see also Shirono 2014; IMF 2015).

Chart 9 Pension assets and household debts

In percentage of GDP; 2012



Source: ECB, IMF, OECD, national statistics bureaus and central banks.

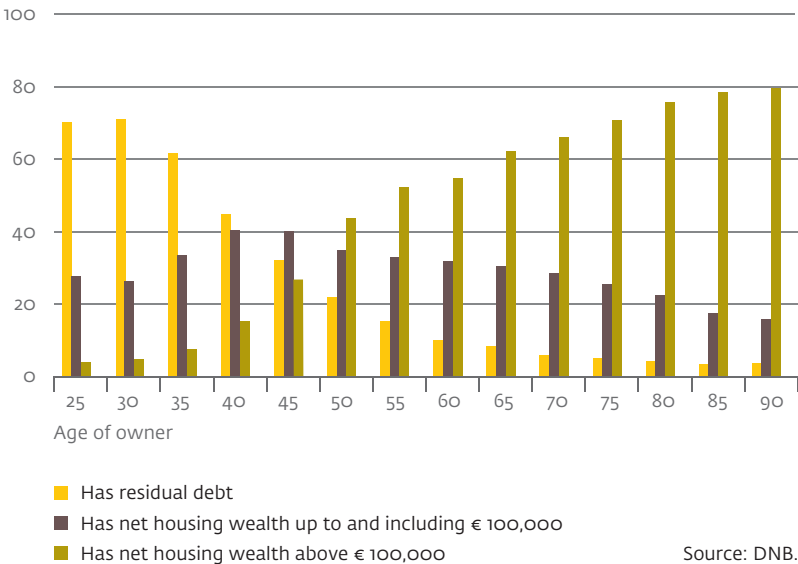
An important conclusion, finally, is that home assets and mortgage debt are distributed unevenly across households. Although in 2012 the total housing wealth (over 200% GDP) was much higher than the mortgage debt (109% GDP), at an individual level, some households have considerable net wealth in their homes while others face considerable residual debt (Chart 10).¹⁴ Age of course plays an important role in this, but there are also highly specific cohort effects. Especially households that entered the housing market before and during the 1990s have benefited considerably from tax subsidies for home owners and the increase in house prices at the time (Van der Schors et al. 2007). Households that entered after 2000 paid a high price for their homes, but many of them saw the value of their homes drop recently to a value below or far below the mortgage value. Now that the mortgage interest tax relief is being rationalised, the current young

households will probably not benefit to the same extent from increases in house prices such as those occurring in the decades before the crisis.

The government recently implemented a number of measures to reduce the current level of mortgage debt. For example, the maximum allowed LTV will be reduced in steps to 100% in 2018, which is still high from an international perspective. For new mortgages, interest tax relief is

Chart 10 Residual debt and net housing wealth broken down by age

Proportion in percentages; 2013



14 These figures have been adjusted for capital built up in saving products pledged as collateral for mortgages.

only granted for mortgages with full amortisation. That is a break in the trend, because until recently, few young households paid back their entire mortgage. In addition, the maximum mortgage interest tax relief is slowly being reduced, although a large tax incentive still remains for purchasing a home.¹⁵ In addition, in 2014 the possibility for parents to make a tax-exempt donation to their children for the purchase or repayment of a home was relaxed: the maximum tax-exempt amount was almost doubled to EUR 100,000 (in January 2015, this amount was reduced again, to EUR 50,000).

Measures are also taken on the rental market. For example, income-dependent rent increases are being introduced in the regulated sector, which could encourage outflows to the non-regulated sector. The accompanying upward price pressure can in turn make the liberalised rental market more interesting for private investors. And the decision not to index the maximum rental rate for the non-regulated sector over the coming years also offers space for the development of this market.

3.4 Social security and health care

The Netherlands has an extensive welfare state that protects households against various risks. All residents have compulsory insurance for retirement (AOW state pension) and healthcare. Via their employers, employees participate in collective unemployment and disability insurance.

As a result of collective insurance against uncertain, high costs, households do not have to maintain a large precautionary buffer which they might

¹⁵ A tax-neutral treatment of owner-occupied housing would mean reducing the mortgage interest tax relief to 30% (the rate at which return on assets is taxed in Tax Box 3) with the home assets taxed like any other assets in Tax Box 3.

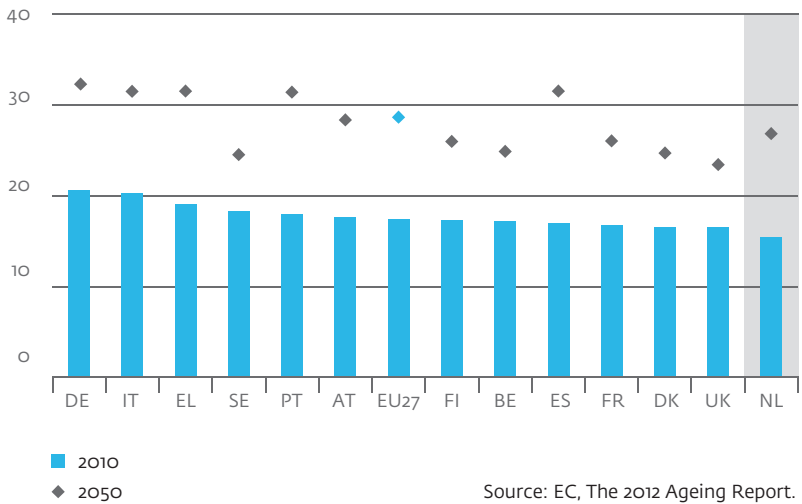
never need to use. This is, for example, relevant for health care, where the costs are distributed very unequally (Wong et al. 2008; Knoef et al. 2014c). In hospital health care, for example, during an average year, 2% of the patients claim two thirds of all health care costs. Measured over a longer period, the skewedness decreases somewhat, but 2% of the patients still claim a third of the costs. In terms of care for the elderly, twenty percent of the patients take up eighty percent of long-term health costs (De Bijl et al. 2013). This means that both in terms of curative and long-term care not everyone stands to face high costs. Therefore insurance is more efficient than individual saving (Amand 2012; De Bijl et al. 2013).

Collective insurance, however, comes at a price. In the Netherlands, some households incur health care costs worth a third of their gross wages. As a result, the scope for voluntary savings decreases. In collective insurance schemes, individual participants often don't have an incentive to moderate their claims, putting the scheme under pressure. Insurance under the former Disability Act was a major example of collective insurance that became unsustainable. As a result of inappropriate use of the scheme, among other things for early retirement, the number of 'disabled' people almost passed the limit of 1 million in 2003 (of a labour force of just over 7 million people). Over the past years, several amendments were made to the Disability Act to restrict invocation of the scheme.

Currently, the costs of curative care and long-term care insurance are threatening to spiral ever higher. Total health care costs rose from approximately 11% of GDP in 2000 to 16% of GDP in 2013. This is both the result of higher health care prices and of a larger amount of care provided because of, among other things, a higher proportion of seniors and an increase in prosperity. Over the coming years, the health care costs are likely to increase further. The proportion of older people will strongly increase over the coming decades (Chart 11). And the other trends – higher

Chart 11 Population ageing – international perspective

Proportion of 65+ in % of total population; 2010 and 2050



Source: EC, The 2012 Ageing Report.

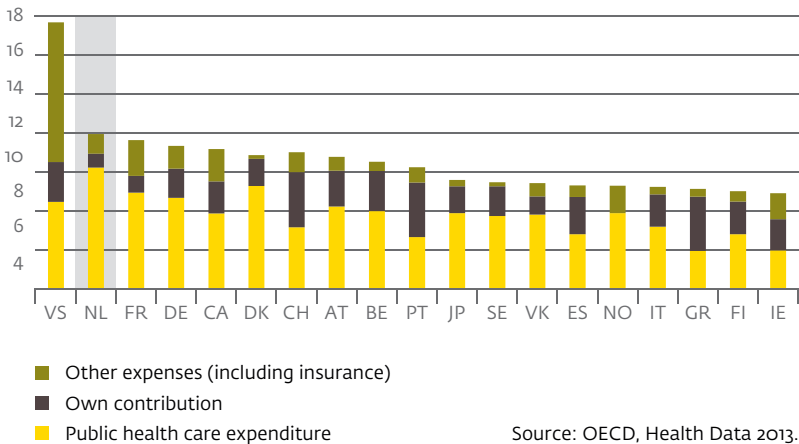
health care prices, more prosperity – are also expected to continue. Various uncertainties make it difficult to predict the exact rise in health care costs. The CPB’s scenarios for health care expenses in 2040 vary from 20% of GDP to 30% of GDP (Van der Horst et al. 2011).

The exact increase in health care costs will also depend on how collective insurance is organised. Chart 12 shows that from an international perspective, the proportion of health care costs that are collectively financed is exceptionally high in the Netherlands. Households have compulsory insurance for curative care, with a basic package that covers 80% of the costs. In addition, everyone has compulsory insurance for long-term care. Dutch households, however, pay an exceptionally low

contribution from their own pockets. But indirectly they contribute of course through the employers' levies for health care insurance and long-term care. An average Dutch household currently spends 23.5% of the gross family income on health care through their own health care insurance and social security premiums; in 2040, without government intervention, this would amount to 36%¹⁶ (Van der Horst et al. 2011; De Jong and Van der Horst 2013).

Chart 12 Public/private expenditure ratio in health care

In percentage of GDP; 2011



¹⁶ This reflects a scenario with a trend growth of health care expenses. In a scenario with better care, this could come to 47%. If health care costs rise less rapidly, it could be lower.

28 The disadvantage of this predominantly collective funding structure is that it can encourage excessive supply and consumption of care (*moral hazard*). Because the effective price of many treatments is often zero for users, there is no incentive for consumers and providers to use the system appropriately.¹⁷ Empirical studies have also found various indications of excessive care production, particularly since the changes in the system in 2001 which abandoned strict budgets in the health care sector (Van de Vijssel et al. 2011; Douven et al. 2012; Van Dijk et al. 2013). This calls for better incentives to ensure that both users and providers use health care appropriately.

¹⁷ 'Appropriate use' means health care that is necessary, effective and efficient. See the ESB file on appropriate use of health care (Volume 97, edition 4644s) for an overview.

4. Bottlenecks in Dutch households' balance sheets

This chapter confronts the actual wealth formation by households against the optimum picture and as such identifies some bottlenecks in the level and timing of savings (Chapter 4.1) and portfolio choice (Chapter 4.2). Chapter 4.3 discusses some unintended negative consequences of government intervention on the macroeconomy and financial stability.

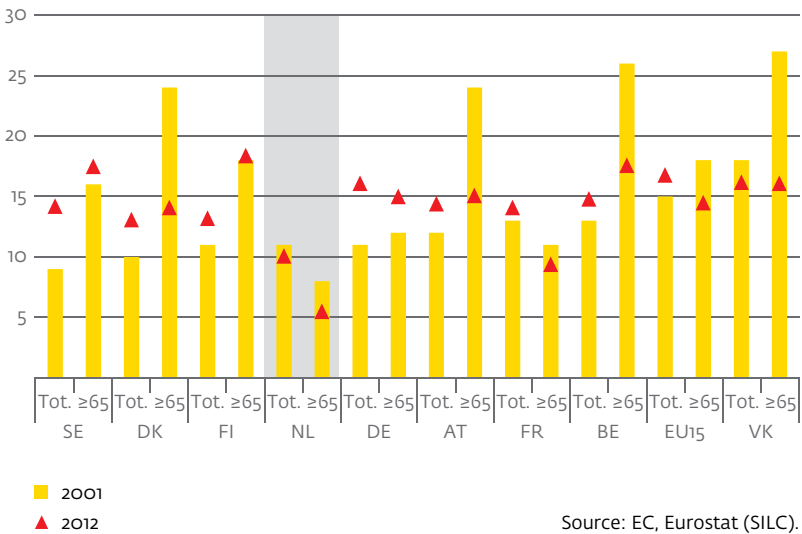
4.1 The scope and timing of savings

Government interventions have greatly facilitated households in smoothing their consumption over their working and retirement lives. All residents receive a state pension and most of the employees can count on a pension from the Second Pillar. International comparisons show that the Dutch pension system gives employees relatively high pension benefits in proportion to wages earned ('replacement rate') (OECD 2013; Mercer 2014; Knoef et al. 2014b). This applies in particular to average and high incomes; in no other OECD country is the replacement ratio as high as in the Netherlands. Mainly because of the First Pillar, the Netherlands has a relatively low level of poverty among retired people (Chart 13). In 2001, poverty among the over 65 in the Netherlands, at 8%, was the lowest of all countries considered. In addition, it is remarkable that poverty among seniors was also lower than poverty among the entire population. In 2012, poverty among seniors dropped to 5.5% – compared to 10.1% among the total population. In many other countries, poverty among seniors is higher than average (see also IBO 2013).

The government's paternalistic intervention in pension provisions, however, also has some limitations. First of all, there is a lot of heterogeneity in the scope of pension provisions. For example, there is a considerable group of households that will not obtain a replacement ratio of 70%

Chart 13 Relative poverty, entire population and seniors

Number of people below the poverty line in percentages of age group



Note: based on 60% median standardised income including social security benefits.

– a widely used yardstick for a sufficient pension. This is mainly the case for some self-employed people, also when home equity (if any) is taken into account in the analysis (Knoef et al. 2014a; Mastrogiacomo and Alessie 2015). Those renting are also vulnerable. After all, where owner-occupiers can, if necessary, use their own home for additional income (in kind and/or through a mortgage), rent expenses continue to be due during retirement.

At the same time, there are indications that some households save unnecessarily high amounts. In addition to their supplementary pensions, many retired people often have home equity at their disposal. If this were to be used for the purchase of an annuity, some households would, in net

terms, even have a replacement ratio of well above 100% (Knoef et al. 2014a). In practice, however, many such seniors will draw on this capital only to a limited extent. Some even continue to save after their retirement (Van Ooijen et al. 2014).

The high net wealth of many of the people currently retired partly concerns a cohort effect of the group of home owners who saw their housing wealth rise sharply and the employees who were able to leave the labour market with generous retirement schemes where benefits were based on final pay (instead of average pay). However, there are several indications that many of those currently working are also encouraged to have high savings at old age. First, the coverage of the Second Pillar pension strongly improved over the past decades, especially among younger generations of women, and households can therefore count on pensions that are better than many of those of the currently retired (Goudzwaard Committee 2010; CBS 2014). Because households will continue to work for longer, they also will be able to attain a relatively high ambition level at the lowered accrual percentages (CPB 2013). And finally, many of those currently working are also building up substantial assets in their own homes. This applies particularly to the current generation of first-time home buyers, who are encouraged to pay off their home entirely.

In addition, the timing of savings does not always match well with the life cycle of households. First, households are forced to pay a fixed pension contribution, also in times when their expenditure is high (for example in the child-rearing phase). In the Second Pillar, contributions are determined on the basis of a uniform price ('doorsneepremie'), which means that participants pay a uniform contribution for the same pension right at old age, irrespective of their age (see Box 1). As a result, young people pay more than is fair from an actuarial point of view, because their premiums can perform for a longer period, so that a lower contribution should

Box 1 How does the uniform pricing system work?

The uniform pricing system was introduced in the post-war years to allow the older generations to build up a solid pension in a relatively short period. Under the uniform pricing system, older people accrue more pension rights than the contributions can fund. An appeal is made to younger generations to finance the difference between the accrued pension rights and the uniform pricing contributions. Contributions made by younger members are notably higher than the rights they build up. Table 1 illustrates this for a fictitious member. As the member gets older, the difference between the entitlement and the contribution paid decreases, and at a certain moment, the participant pays less than is fair from an actuarial point of view. However, if the member decides to emigrate or become self-employed, he will never receive this compensation.

Table 1 Uniform pricing versus actuarial premium in euros*

Age	Annual premium		Cumulative**	
	Actuarial	Uniform pricing	Actuarial	Uniform pricing
25	1,376	2,907	1,376	2,907
35	2,774	4,361	25,239	45,653
45	4,802	5,617	78,105	120,276
55	7,402	6,444	174,640	230,937
66	-	-	363,926	408,785

* With respect to the originally published version, the table in Box 1 has been slightly adjusted. This change has no material consequences and the text itself has remained unchanged

** Including investments returns

Assumptions: the pension participant starts to work at the age of 25 and is expected to retire at 67. The starting salary is € 30,000. He receives 2.5% real annual salary increases until he is 40, after that 1%. The actuarial rate is 3%, inflation is 0%. Annual deduction from contribution base: € 13,192. Calculations assume a non-indexed right.

suffice. In addition, households have been buying their own homes at an increasingly early age (see also footnote 10), a choice which probably not all of them would have made without tax subsidies.

Are households perhaps deliberately saving that much for retirement in order to leave money to their heirs? There are various indications that for many households this does not hold true. First of all, households often state in surveys that they do not intend to leave a bequest to their heirs (Wildeboer Schut 2010; Van der Schors et al. 2007). Secondly, households without children also hold many assets for retirement. Thirdly, households possibly overestimate how much money they will need after their retirement. Spending for most retired people is in practice much lower than for working people, as spending on matters such as transport, leisure and housing costs – in the event of a paid off mortgage – drop sharply (Soede 2012; Knoef et al. 2014c). Finally, many households, as we saw, have accumulated assets unexpectedly, particularly in their own homes. As a result, the inheritance they leave, if any, will not always be a planned one, but rather the corollary of unexpectedly high returns amid lower than expected expenditure (Van der Schors et al. 2007; Graaf and Rouwendal 2013).

4.2 Portfolio choice

In their portfolio choice, it is important for households to have proper insurance against longevity risk, to diversify, to optimise returns and to have a freely disposable buffer. Pension funds and insurers play an important role in the realisation of the first three targets. The pension system helps households to diversify risks, both between the pillars and within the pension fund. Between the pillars, demographic, investment and inflation risks are diversified. The First Pillar is sensitive to an ageing population where an increasingly smaller group of working people has to pay the state pensions of an increasingly larger group of retirees. Because households

save for their own pension in the capital-funded Second and Third Pillars, an ageing population is less of a problem here. But as is the case with the state pensions, with an overall increase in life expectancy, households have to make do with a lower benefit or work longer. Unlike the state pension, the Second and Third Pillars are vulnerable to inflation and investment risks. Membership of group pension funds enables households, in addition, to diversify investment risks in an efficient manner, and to increase returns, so that they can make a wide range of investments at low cost.

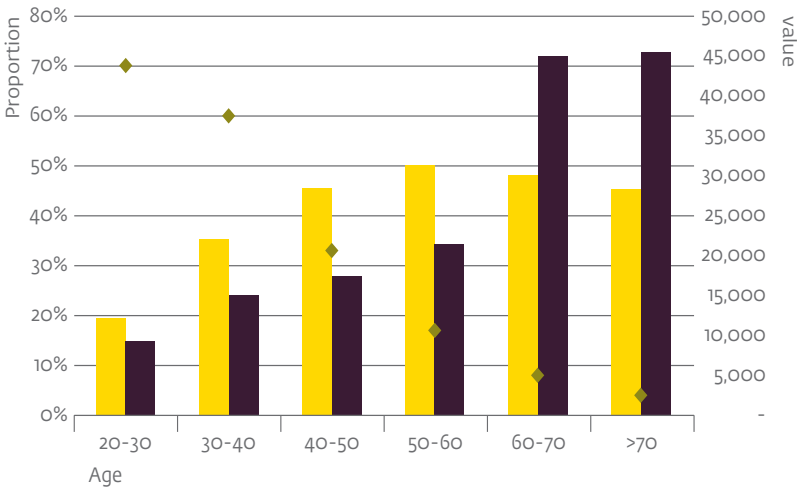
In other respects, the composition of household assets matches the optimum portfolio less well. This applies especially to the concentration of assets in real estate and high mortgages, which makes households vulnerable to fluctuations in house prices. House prices in real terms dropped by almost a third between 2008 and 2013. Because Dutch households primarily finance their houses with borrowed capital, many households (about a million) have negative equity.

Chart 14 shows, by age, the proportion of home-owners with negative equity, plus the amount of residual debt and the extent of their freely disposable financial assets (financial assets excluding second and Third Pillar pensions). Home-owners in the 30-40 age group are clearly facing the most residual debt on their home. And particularly these young households have small financial buffers and find it hard to free up capital to repay their debt. Moving house is problematic for such households.

In some other countries, households have the possibility to shorten their balance sheets by, for example, using pension money for their own homes (see Box 2). In the Dutch situation, this is not really possible because of the uniform pricing system: younger members cannot withdraw their paid contributions without endangering the fund's funding ratio. However, withdrawal of just the accrued rights is unattractive for younger households (see also Box 1).

Chart 14 Negative equity problems and financial buffer, according to age

Proportion of home-owners by age group facing negative home equity (left axis) and the amount of negative equity and the financial buffer of median households with negative equity (right axis)



- ◆ Proportion of home-owners by age group with negative equity
- Negative equity*
- Freely disposable financial assets**

* Source: DNB, LLD 2013Q1, edited by Mauro Mastrogiacommo

** Source: CBS, Income panel survey, 2010

Box 2 Flexible deployment of assets

Recent policy discussions about the assets of households often point to policy initiatives in other countries to allow shifts between different wealth components. This box highlights some examples.

In Iceland, where pension property rights are directly linked to the contributions paid, home owners are allowed to use half of their pension contributions for three years (three times 6% of the gross wages) for repaying the mortgage debt on their homes. The consequence is, however, that the final replacement ratio is 2% points lower. Switzerland has long allowed people to use pension assets (worth € 16,000 or more) to repay debt. The uniform pricing system makes it difficult to implement these alternatives in the Netherlands.

Some countries have experience with various financial products to release the net wealth in the owner-occupied home. The most popular product by far is the reverse mortgage. This is a loan which converts the repaid part of the assets in the owner-occupied home into a cash flow. Until the owner dies, an amount is transferred every month, or a lump sum payment is made. When the owner dies, the loan is repaid from the proceeds of the sale. Such reverse mortgages are, for example, available in Ireland, Norway, France, Australia, the UK and the US. In the Netherlands, too, there was an (albeit underdeveloped) market for reverse mortgages before the crisis. Since the crisis, the market almost completely came to a standstill (Taskforce Verzilveren 2013). Several factors complicate the market forces for reverse mortgages. First, there is the risk of adverse selection

– households that live longer and skimp on maintenance will be more likely to apply for a policy (Graaf and Rouwendal 2013). For this contingency, agreements will have to be made on how residual debts are dealt with in the event of a longevity risk. The absence of such a clause limits the equity that homeowners can cash without the risk of leaving a residual debt when they die. This is particularly important in the Dutch economy with its high mortgage debt. Finally, currently the large difference between investors' profitability requirements and the currently low risk-free interest rate puts pressure on the proceeds of cashing in on surplus value (Conijn et al. 2014).

In Ireland, home equity is taxed in order to pay for hospital care. The government, in the form of the Health Service Executive, provides a loan that finances the amount, after which this loan is paid back through a tax levy of 15% of home equity.

More in general, the freely disposable savings of some – mainly young – households may be too low. Even before the crisis, young households already indicated that they wished to hold larger financial buffers (NIBUD 2008). A financial buffer can help households to absorb shocks, and for small amounts, it can be more efficient than insurance because of lower transaction costs. This also applies to health care contributions, where more own-risk payments could also help counteract excessive use of health care (see Chapter 5).

4.3 Macroeconomic and financial and economic imbalances

The asset accumulation of households also affects the macroeconomy. With the rise in home ownership and house prices, the scope of the mortgage portfolios kept by the banks has increased considerably, without the deposits held by the banks keeping pace. This is partly because households have invested most of their savings in pension funds. This created a gap between the loans granted and the deposits with which these were traditionally financed (the 'deposit funding gap').¹⁸ The banks depend on the capital markets to close that gap. Since the financial crisis, those markets started to look much more critically at the Dutch mortgage market (Jansen et al. 2013), as a result of which the financing conditions of Dutch banks came under pressure.

In addition, households' long balance sheets have reinforced fluctuations in the economy. Although in theory, households can spread the impact of an asset shock, such as a drop in house prices, over the rest of their lives, in practice such a shock often engenders considerable macroeconomic effects (Van Es and Kranendonk 2014). In the current context, the negative equity problems in particular give rise to additional savings for deleveraging, which put pressure on consumption and with that, amplify the economic downturn.¹⁹ Negative equity problems also impede housing market mobility and possibly also the mobility of the labour market as a knock-on effect (Sterk 2010; Høj 2011).

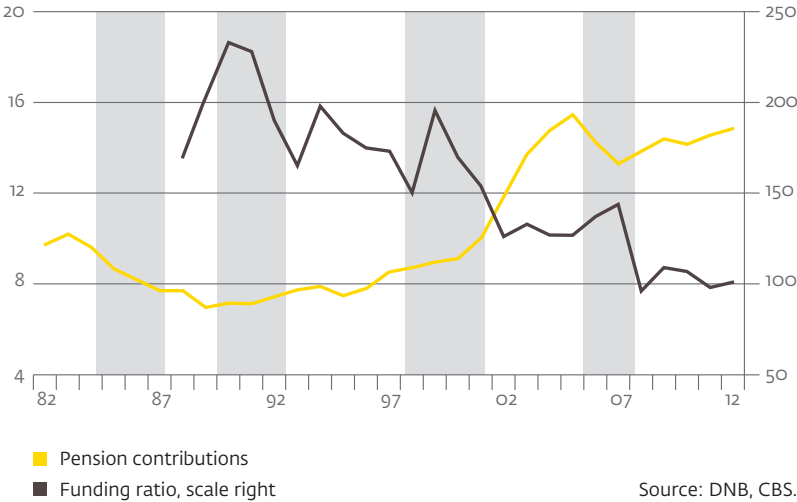
¹⁸ The total deposit funding gap in 2008 at its peak amounted to EUR 500 billion, and has since decreased to EUR 391 billion by mid-2014.

¹⁹ In the first three quarters of 2013, in total almost EUR 7 billion was repaid on mortgages voluntarily. However, only a quarter of that amount consisted of repayments by households with negative equity. See DNB (2014). Van Beers et al. (2015) think that households with a negative equity mortgage respond relatively strongly to shocks in house prices.

The design of the Dutch pension system also tends to reinforce fluctuations in the economy. With the ageing population, disappointing asset returns and the low interest rate it turned out that pensions were less well funded than had been assumed before the crisis. Many pension funds have therefore increased the contributions over the past years, albeit less significantly than around 2000 (Chart 15). This was at the expense of households' available income, and has increased the labour costs for employers. In addition, from the point of view of many households increasing savings precisely when returns are low is not an attractive proposal.

Chart 15 Pension contributions and funding ratio

In percentage of gross wages (left axis) and funding ratio (right axis)



Note: the shaded area indicates a boom period.

5. Guidelines for comprehensive government policy

40 This chapter outlines some basic guidelines for government policies formulated from a comprehensive perspective on the wealth formation of Dutch households. These policy directions can bring the wealth position of households more in line with the choices they would make if there were no distortionary incentives, while at the same time benefiting financial stability and the economy at large. To the extent that undesirable distribution effects occur, the government could mitigate these with compensating policies.

Neutrality between buying and renting

The government is currently reducing the maximum rate at which mortgage interest can be deducted in annual steps of half a percentage point to 38% in 2041. The government continues to encourage households with this deduction – and with the lower tax rate on assets in bricks and mortar – to hold high mortgage debts and a strong concentration of assets in real estate. Various analyses conclude that, from a macroeconomic perspective, the disadvantages of debt financing outweigh the advantages of home ownership (Glaeser and Shapiro 2002; CSED 2010; SER 2013). The most effective way to reduce mortgage debts in the long term, and to limit the risks for both banks and households, is to make home ownership entirely tax neutral. This makes it less attractive to purchase a home with borrowed capital.

A permanent lowering of the mortgage debt also requires a more smoothly operating rental market. At the moment, the liberalised segment offers insufficient alternatives to owner-occupied homes. A transition requires, among other things, an effective approach to the problem of high-income occupants in low-rent housing, in order to generate higher supply in the liberalised segment through higher demand. On the supply side of the liberalised segment it is also important that the urban planning policy

offers sufficient room for new developments and redevelopments. Both the reduction of mortgage debt-related tax incentives and the liberalisation of the rental market are long-term processes, because long transition periods are key to preventing severe income shocks. The government can, of course, also use the planned review of the tax system, and particularly the lowering of the marginal rates on labour, to soften these blows.

Reconsidering paternalism

In view of the limited financial planning capacity of households, the government rightly ensures that households save for their retirement through the universal state pensions and income-related supplementary pensions. Government intervention could, however, be designed in a more carefully-considered manner. This applies all the more if, in addition to interventions in the pension system, interventions in the mortgage system are also included.

Currently, as we have seen, some households – including certain groups of self-employed people – may not be accumulating enough pension savings. Government intervention in households that currently save too little is justifiable. This can be done through imposing obligations, but also through providing a more enticing offer or imposing a system where households automatically join a pension scheme unless they opt out explicitly (Bosch et al. 2014; Van Rooij and Teppa 2014). Proper information provision is also important, as some groups have too rosy a picture of the pension they will receive.

On the other hand, some households are currently encouraged to hold high savings. This applies in particular to households that, in addition to a Second Pillar pension, have also purchased their own homes or intend to do so. For such households, the incentives for high savings could be reduced. There are various options for achieving this. The first option is to

reduce tax incentives for home ownership. Households that are currently entering the housing market are, as set out above, encouraged to fully repay their mortgage, whereas many of them are also saving through their pension funds. For macroprudential reasons, it is justifiable if the government imposes limits on the maximum LTV of a mortgage. Full repayment of the mortgage is not necessary, however, neither from the perspective of households nor that of banks. It would therefore be better if the condition of full repayment is relaxed as long as the government continues to provide tax incentives. In the long term, as argued above, the tax incentives for home ownership could be reduced further, and with it the need to impose a tax obligation to make annuity-based repayments.

In addition to softening the requirement of full amortisation of home mortgages there is also scope to reduce compulsory pension savings. In practice, saving through a pension scheme offers several advantages over saving through housing wealth. Pension assets, for example, are much more diversified, and it is easier to enforce compulsory saving through pensions than through home ownership. However, especially for higher-income households compulsory savings in the Second Pillar can be lowered. Higher-income households are generally better at making their own financial planning, making paternalistic intervention less necessary. In addition, a lower pension ambition – as a proportion of wages earned – is less problematic for higher incomes compared with lower incomes. Moreover, for households with higher incomes, and often more wealth, an investment in real estate also entails less concentration risks. Against this background, such households could benefit from lower compulsory pension accrual. The space this creates could be used by them for higher consumption or the purchase of an own home. This can be achieved by introducing an income-dependent pension contribution, where the tax-friendly contribution percentage decreases with income.

More customised pensions

The current pension system can be experienced as too strict by some households. In part, this is unavoidable. Because many households would not save enough without intervention, saving for employees is compulsory. As discussed above, the compulsory pension ambition is perhaps unnecessarily high for some households, especially in combination with current tax rules to fully repay the mortgage. Also in other areas, greater customisation is possible.

First of all, this applies to contribution levels. The current uniform pricing system can disrupt career decisions and has unintended redistribution effects (see also Box 1). In addition, the system makes it difficult to use pension money to, for example, make a down payment on an own home. Phasing out the uniform pricing system could therefore offer households more flexibility. There are several options to work towards a system based on actuarial principles. The advantage of a system with progressive contributions – where young participants have to contribute less for the same rights at pension age – is that the lower contributions early on in their career fit in well with the scope for savings across their working life. A disadvantage is that it could become less attractive for employers to hire older people.²⁰ In a system with degressive accrual, where the contributions remain stable and the accrued right decreases, this is not an issue. However, the costs of changing to a new system are high, and a careful and long-term transition regime will be required.

Greater customisation may also be achieved in the choice of portfolio. For households with higher incomes, the purchase of an own home is more likely to be the optimal choice than for households with lower

²⁰ This can be counteracted by having the employee pay for the largest part of the increase in contributions, and to have the employer's part increase less.

incomes and assets. The investments by pension funds could also be better matched with the individual situations (age, home ownership or not, earning capacity) and preferences of participants (risk appetite) (Van Ewijk et al. 2014). This could also mean that households pay a more stable contribution, and in the case of disappointing returns, prefer consumption over a guaranteed pension. A more stable contribution also contributes to macroeconomic stability.

Social insurance schemes that are efficient and sustainable

Social insurance schemes for unemployment, disability, illness and health care protect households against costs that they would find difficult to pay themselves. The extensive protection Dutch households enjoy against a wide range of risks reduces the necessity of maintaining high buffers that may not have to be used at all as a precautionary measure. In this way, high welfare gains can be generated.

But these arrangements have to be sustainable, of course. Over the past few years, health care expenses in particular rose sharply. Part of this increase is unavoidable, and in view of the uneven spread of health care costs, collective insurance remains the most efficient option. There are, however, indications that some health care expenses are not necessary, cost-effective and efficient as a result of the current collective financing set-up. Stronger incentives are required here to ensure that health care use is appropriate. An own contribution to treatments that are sensitive to overutilisation could reduce expenditure. The government could also put more emphasis on cost effectiveness in determining the package covered by the group insurance. If the basic package is restricted, supplementary insurance policies could play a role in financing extra health care.

Efficient taxation

To finance the collective provisions discussed above, taxes are required. The Dutch tax system puts considerable emphasis on taxation of labour income. From an international perspective, the marginal tax on labour is high, and discourages some groups from participating in the labour process (in terms of persons and hours). In order to lower the tax burden on labour, the deployment of other tax income is increasingly considered (Study Committee Tax System 2010). The choice of tax mix is in the end a political one. However, from the point of view of household wealth formation, various considerations are important.

First, the several asset items – pension, owner-occupied houses and other assets in Tax Box 3 – are currently treated very differently from a tax perspective. Such differentiated treatment is accompanied by various distortions. For example, it is attractive to keep assets in bricks and mortar, even if households would perhaps prefer to continue to rent. A more equal treatment of various asset components could therefore generate sufficient wealth benefits for households, and also broaden the base for wealth taxation.

This also plays a role in the tax subsidies on Second Pillar savings (reverse rule),²¹ as the government already ensures, through making these savings compulsory, that households build up a supplementary pension. As the average tax rate after retirement is usually much lower than during the working life, the government is on balance missing out on tax income through the reverse rule. However, there are also advantages. The reverse

21 Because pension benefits are charged at a lower rate than wages during working lives, the government misses out on tax income as a result of the reverse rule (see footnote 7). This subsidy is paid from higher marginal tax rates. See also DNB 2007.

46 rule defers part of tax income, thereby decreasing the budgetary pressure of population ageing. The reverse rule also encourages self-employed people and others who are excluded from compulsory participation, to make pension savings. Finally, the reverse rule creates support for the mandatory nature: saving is mandatory, but cheap. These advantages will have to be weighed against a substantial budgetary burden. Secondly, there is scope to better spread taxes throughout life and therefore better enable households to spread their consumption across their lives (Budget Memorandum 2015).

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Dutch terms and their English meaning

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Term	Abbreviation	English meaning/explanation
Algemene Ouderdomswet	AOW	AOW state pension
Centraal Bureau voor de Statistiek	CBS	Statistics Netherlands
Centraal Planbureau	CPB	Dutch Bureau for Economic Policy Analysis
Commissie Goudzwaard (Commissie toekomst-bestendigheid aanvullende pensioenen)	Cie Goudzwaard	Committee on the sustainability of Dutch collective pension schemes
De Nederlandsche Bank	DNB	De Nederlandsche Bank
Netspar	-	Network for Studies on Pensions, Ageing and Retirement
Wetenschappelijke Raad voor het Regeringsbeleid	WRR	Scientific Council for Government Policy

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EUROSYSTEEM

De Nederlandsche Bank n.v.
P.O. box 98, 1000 AB Amsterdam
+31 (0) 20 524 91 11
dnb.nl