Dutch house price fundamentals

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Abstract

This paper discusses house price developments in the Netherlands, specifically focussing on the question whether current house prices in the Dutch owner-occupied market are likely to decrease. We analyse three aspects of the question based on a literature review: (1) whether there is a house price bubble ready to burst; (2) whether house prices will decline in response to the credit crisis that started in 2007; and (3) whether it is likely that house prices will decrease as a result of reforms in the tax treatment of home owners.

The outcomes of the two available Dutch models predict that even without fiscal reform (and before any effects of the global financial crisis make themselves felt) prices in the housing market will probably come under pressure in the sense that contrary to the previous decades growth of real prices will be zero. Changing the fiscal treatment of owner-occupiers would cause real house prices to decline over the next years. The timing of such measures may be considered most unfortunate now that the global credit crunch seems to be affecting the Dutch economy as well.

Keywords

Home ownership, house prices, mortgage interest deduction, the Netherlands
Dutch house price fundamentals

1 Introduction

One year on from the start of the U.S. credit crisis, rising interest rates and tightening mortgage markets have already led to falling house prices in a number of countries, such as the UK and Spain, but not in the Netherlands (DNB, 2008). The central question of this paper is whether house prices will start falling in the Netherlands as well. This paper analyses three aspects of the question based on a literature review. First, we explore whether a house price bubble exists that is ready to burst. Second, we look at the likelihood of house prices decreasing in response to the credit crisis that began in 2007. The third aspect is concerned with the likelihood of a fall in Dutch house prices in response to modelled changes in the income tax treatment of home owners.

To address these aspects, we begin by briefly summarizing the literature. Section 2 contains a general discussion of factors affecting the movement of house prices, including both psychological and non-psychological effects and the relation between house price and income taxation of home ownership. Section 3 discusses the possibility of a house price bubble bursting and the anticipated reaction of house prices to the credit crunch. This section also contains a review of house price development in the Netherlands.

The income tax treatment of the home owner is not only ascribed to a destabilising role in the Dutch situation but an intermediating or stabilising role as well. This factor is analyzed in the remainder of the paper. Section 4 begins by setting the context and describing the relevant income tax rules and then goes on to present the outcomes of two Dutch models that predict the movement of house prices following restrictions to the mortgage interest deduction in income tax.

2 Underlying determinants of house prices

In a competitive market, house price is the result of interacting demand and supply (Girouard et al., 2006; Chen, 1998). Factors influencing these two entities are usually called fundamentals or the underlying determinants that affect house prices. Factors such as disposable income, interest rates and demographic development influence demand, while factors affecting supply, such as the price of land and the impact of building costs, influence the availability of dwellings. These ‘drivers’ may influence the house price in the short-term, the medium-term and/or the long-term.

On the demand side, an argument analogous to the one underlying the general theory of price can be made: the demand for goods is a function of (household) income and of the price of the good or service relative to other prices (Fair, 1972). Various studies demonstrate that in the long-term house price and income level are indeed in equilibrium (e.g., Malpezzi, 1999). In addition, access to capital and the conditions under which households can borrow money can play an important role. Meen (1998) draws the conclusion that in the United Kingdom and the United States access to capital has affected house prices in the past. Since the 1980s, however, financial markets have largely been liberalized and restrictive rules on eligibility for mortgages have lost much of their impact. In response, the influence of exogenous factors such as the development of income and interest rates has increased (e.g., Muellbauer & Murphy, 1997).

On the supply side, neoclassical economic theory predicts that the housing market operates as a supply market (Boelhouwer, 2005): the long-term price development of dwellings will be determined by the development of construction costs (see also Shiller, 2007). When scarcity of dwellings causes prices to rise, the supply of newly built dwellings will increase, causing prices to fall to a new equilibrium price. Only econometric studies

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1 Gallin (2006) however shows that he cannot proof the cointegration between house price and income.
carried out for the U.S. demonstrate a significant relation between the development of construction costs and sales price (Abraham & Hendershott, 1996). This result strengthens the assumption that as the government exerts less influence and building land is made available without many restrictions, the influence of construction costs on house prices will increase.

On the other hand, if government intervention intervenes with the market, Boelhouwer (2005) speaks of ‘stock’ market, a market where the price of a newly built dwelling follows the price for existing stock. Examples of such government intervention are when the government prevents the release of sufficient building land (Winky & Ganesan, 1998) by implementing restrictive spatial planning policy (see, among others, Muellbauer & Murphy, 1997; Abraham & Hendershott, 1996).

House prices and changing fiscal treatment of home ownership

A separate discussion of the fiscal treatment of home ownership is warranted here, as one of the aims of this text is to analyse how house prices may develop when the income tax treatment of home ownership is made less favorable. In general the expectation is that house prices will start falling. According to Bourassa & Grigsby (2000), the degree to which fundamental changes in the tax treatment of home ownership impact on the development of house prices depends greatly on the extent to which the existing tax advantage is capitalized into house prices. Capozza et al.’s (1998) results for the U.S. support the hypothesis that income tax advantages are fully capitalized into house prices. Bourassa & Grigsby (2000) argue that such a result requires a fully inelastic long-term supply curve, an implication that they consider questionable.

For the Netherlands Brounen & Neuteboom (2008) estimate a considerable capitalization rate of almost three-quarters of the tax advantage to households. For first-time buyers this share, at almost 96%, is calculated to be bigger than average. This seems to suggest that first-time buyers are translating most of the fiscal advantage into their bid. For a home owner moving house, the share at 57% is far lower, because usually they need a smaller mortgage loan than first-time buyers.

That house price drops have been modelled, calls for previous capitalization of tax benefits. Bourassa & Grigsby (2000) cite on the one hand calculations that place the capital losses at between 10 to 20% or more, depending on market conditions and other factors. On the other hand, using a simulation model which integrates short-term and long-term impacts of tax reform on the housing market, Bruce & Holtz-Eakin (1999) find only a slight decline in house price of a little over 1% in the short term after a tax reform.

Capozza et al. (1998) find with their model a decline of house prices of 14% with an average LTV of 0.41 in the U.S in 1992 when they include only the loss of the mortgage interest relief. If the LTV were assumed to be 0.25 on average, the price decline is estimated at almost 10%, running from almost 13% to 20% and more. The greatest losses would occur in expensive cities such as Honolulu and San Francisco.

If house prices fall after such a change in the tax system, the question becomes: when does the decline begin? Vandell (2000) argues that households will take action in anticipation of the change in policy. Asberg & Asbrink (1994) have attempted to measure such proactive behavior. They estimated the effects of income tax reform, all other things being equal, on house prices in Sweden. In their estimates they distinguish between home owners’ reactions to both an expected and an unexpected revision in the tax code. If home owners expect the revision, then a further distinction is made in the reaction, taking into account the timing of the announcement (1989) and the time at which the revision actually came into force (1991). In all three situations, the researchers expected to see the selling price decline by less than 10% (8.7% to 9.9%) with inflation running at 2%. The unexpected revision in the tax code thereby led to the greatest decline in house prices (9.9%). This was also the case when inflation was assumed to be 6%. In that event, the expected decline amounted to between 23.3 and 25.4%.
The actual development of Swedish house prices proved that no price response occurred when the reform of the tax system was announced; the real price decline only set in after the tax reform had been implemented (1991). Selling prices dropped quickly – by 26% between 1991 and 1993 at inflation rates of 10.3% in 1991, 2.2% in 1992, and 5.7% in 1993 (Eurostat, Economic Outlook). A ‘lagged’ response such as this raises questions as to whether the owner-occupiers were actually able to understand the tax changes adequately and in good time. In this regard, it should be noted that in the Swedish case the changes in the fiscal treatment of home ownership were combined with an overall reduction in taxes. This implies that it would be hard to assess the degree to which owner-occupiers understood how the changes would affect their income and housing expenditure. The oncoming economic recession may have obscured the evaluation of owner-occupiers about the measures as well.

In a descriptive study Boelhouwer et al. (2004) observed whether a change in average house price could be detected after a change in the income tax treatment of home owners in eight countries: Belgium, England, Denmark, Finland, France, Germany, the Netherlands and Sweden. The changes in income tax are listed in Table 1.

Table 1
Main policy changes in personal income tax treatment of home ownership in selected European countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Policy change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>1989</td>
<td></td>
<td>System change: reduction of highest rate</td>
</tr>
<tr>
<td></td>
<td>1992</td>
<td></td>
<td>Mortgage interest deduction extended</td>
</tr>
<tr>
<td>France</td>
<td>1997</td>
<td></td>
<td>Mortgage interest deduction abolished for new homes</td>
</tr>
<tr>
<td>Germany</td>
<td>1987</td>
<td></td>
<td>Mortgage interest deduction abolished for purchase and improvement</td>
</tr>
<tr>
<td></td>
<td>1996</td>
<td></td>
<td>More room for deductions. Imputed rent abolished</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1990</td>
<td></td>
<td>System change: reduction of highest rate affecting mortgage interest deduction</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td></td>
<td>Mortgage interest deduction limited to 30 years</td>
</tr>
<tr>
<td>Norway</td>
<td>1992</td>
<td></td>
<td>System change: reduction of highest rate affecting mortgage interest deduction</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>As of 1991 up to 2000</td>
<td>Mortgage interest tax relief phased out</td>
<td></td>
</tr>
</tbody>
</table>

This crude comparison revealed that the means and timing of the implementation of the fiscal adjustments largely determine the impact on the development of house prices. Only in Denmark and Sweden (see above) could an annual decline in house price be observed to take place in the four years after the year of the change in income tax treatment. In the other countries the effects of the changes were either considered too small to be traceable (e.g., Belgium, England, France and Germany) or were compensated for by general measures (the Netherlands and Norway).

Furthermore, changes were introduced more gradually particularly in the United Kingdom (see also Gale, 1997) but also in the Netherlands and Norway, than in Denmark and Sweden. The latter two countries had the misfortune that the change in their tax code coincided with a recession. This manifested itself in various ways, including high...
unemployment and inflation alongside a recession in the housing market. In Norway, in contrast, the tax reform carried out in 1992 made a positive contribution to economic recovery. On balance, home owners were better off – in terms of purchasing power – even though the tax advantage of owning a home was reduced.

House price bubbles

House prices appear not only to be influenced by ‘rational’ economic or policy variables, but also by some kind of ‘irrational’ consideration that works in the short term: “[E]xcessive public expectations of future [house] price increases cause [current] prices to be temporarily elevated.” (Case & Shiller, 2003: 299). This house price bubble grows because homebuyers will buy a dwelling that “they would normally consider too expensive” in the expectation that they will be compensated by future price rises. Himmelberg et al. (2005: 678) quote Stigler’s definition (1990): “[I]f the reason that the price is high today is only because investors believe that the selling price is high tomorrow – when ‘fundamental’ factors do not seem to justify such a price – then a bubble exists.” They continue (p. 68): “We think of a housing bubble as being driven by homebuyers who are willing to pay inflated prices for houses today because they expect unrealistically high housing appreciation in the future.” The underlying idea for first-time buyers may also be that houses will quickly become unaffordable (Case & Shiller, 2003). In order to prevent this they will act swiftly.

As constantly rising prices in the future are not realistic because “home prices are inherently unstable”, they could fall when people realise that making the bubble burst. However, not every house price rise will make a bubble (see also Himmelberg et al., 2005). A bubble is created only when expectations keep the market going in the sense that they stimulate buyers to buy a dwelling and only if the fundamentals in the market do not explain the increase.

Whether market fundamentals get a chance to work also seems to depend on the elasticity of supply. Based on a simple model of house price bubbles Glaeser et al. (2008) conclude that their observation of more volatile house prices (or bubbles) than observable changes in fundamentals appears to be more true in situations of less elastic supply.

The irrational beliefs that nominal house prices always appreciate more than inflation and thus explain the fast-rising house prices in recent decades are psychological or speculative short-run effects that ‘infect’ the development of house prices (Shiller, 2005; see also Levin & Wright, 1997). The idea that housing is a great investment that accompanies a speculative bubble seems actually to be caused by the bubble itself. “Boom psychology” helps to spread such thinking (Shiller, 2007: 7).

The reverse effect would be the story fuelled by pessimistic expectations of the possible duration of a recession and how long house prices might fall enforcing these expectations. In a downturn situation, the consumer may also postpone the decision to buy for as long as possible in order to avoid incurring capital loss. Such speculative behavior may force prices to further decline (Boelhouwer et al., 2004; Levin & Wright, 2008).

3 Dutch house price development and expectations

In this section we discuss the expectations that various researchers have formulated for the movement of house prices in the Netherlands. We discuss the conclusions drawn from International Monetary Fund (IMF) house price indicators. The IMF has suggested that in 2007 there may have been a house price bubble in the Netherlands. Some Dutch models, however, draw different conclusions. First, however, Dutch house price developments over the past decades are outlined.

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Dutch house price developments

Dutch house price development can be characterized by steep price rises shortly before the second oil crisis, followed by equally steep price decreases, the starting point of Figure 1, up to 1983 (Boelhouwer & De Vries, 2001). Prices then rose for a relatively long period (see also Girouard et al., 2006), until the third quarter of 2008, with the first half of 1990 forming the exception (Gulf War). The relatively long period of price rises was brought about by a favorable economic situation combining rising household incomes and falling interest rates. Also, mortgage requirements eased, such as allowing for the inclusion of the second household income when determining the loan amount in 1993 and allowing for the use, in fact the increasingly common use of mortgage types where the full amount of interest is paid during the loan term (first endowment loans and later interest-only mortgages). As a result house prices had every opportunity to rise without liquidity problems being generated for the households. The monthly housing or mortgage expenses remained affordable. During the period 1991-2000 house prices increased substantially, with average yearly growth rates of 9.7% in nominal terms and 7.1% in real terms.

During the period 2001-2007, house price increases were more moderate than before, with average yearly growth rates of 3.0% above inflation. The most important factor in this period was the increase in household disposable incomes. Furthermore, during this period, the increase in the stock of dwellings was relatively small. The downward pressure on prices therefore was also relatively small.

Figure 1
Real house price and newly built owner-occupied dwellings, 1978–2007
(Index: 1995=100)

Source: Cadastre Netherlands and Statistics Netherlands, OTB/TU Delft calculations

House price bubble in 2007?

The International Monetary Fund (IMF) recently assessed the vulnerability to housing market corrections in several countries, including the Netherlands, based on two housing market indicators (IMF, 2008). The first indicator shows the overvaluation of house prices in relation to housing market fundamentals for the period 1997-2007: affordability ratio (the lagged ratio of house prices to disposable incomes), growth of disposable income per capita, short-term and long-term interest rates, credit growth, and changes in equity prices and working-age of population. The estimated gap between real house price and the price justified by the fundamentals was, according to the IMF, at about 30% the biggest in Ireland, the Netherlands and the United Kingdom. If this gap may be interpreted as a measure of
overvaluation, it is then an indication of house prices being prone to correction. The IMF (2008: 11) cautions, however, that the unexplained increase in house prices might reflect variables omitted from the model, such as macroeconomic volatility, household formation and inward migration.

The second indicator shows per country the development in the past ten years of the residential investment-to-GDP ratio. One assumption underlying it is that large house price increases are accompanied by large increases in residential investment in 2007. Boelhouwer (2005; see also Ball, 2008) shows that this is also not the case in the Netherlands where house prices have risen exuberantly, while output stagnated as a result of the abolition in supply-side subsidies in combination with barriers in the planning, sales and building phases of the production process (see also Figure 1). As the second indicator does not apply to the Netherlands, only the question of the 30% gap remains.

In contrast to the IMF study, Kranendonk & Verbruggen (2008) argued that Dutch house prices in 2007 can be fully explained by the underlying determinants. Their study functioned as a reply to the assumed house price bubble warning of the IMF. Their model showed that the development of real house prices in the period 1980-2007 can be ascribed to fundamental demand and supply variables, such as real disposable wage income, the real interest rate, the real financial wealth of households other than stock, and the stock of dwellings. Furthermore, they concluded that the calculations of earlier models (Verbruggen et al., 2005), showing that house prices in 2003 had been overvalued by about 10%, were substantiated by the more recent calculations. After 2003 the overvaluation diminished and disappeared entirely by 2007. This was due not to a downward house price correction but to the fact that between 2003 and 2007 the increase of actual house price lagged behind the increases of the long-term equilibrium price.

Kranendonk & Verbruggen (2008) explained that their results differed from the IMF’s analysis because the IMF would not have taken national housing market specifics into account, such as the moderate increase in the supply of dwellings in the Netherlands which pushed up the equilibrium house price more than otherwise would be the case.

De Vries & Boelhouwer (forthcoming) show with their model that house prices have been out of equilibrium longer – from 2000 to the first half of 2007 to be precise – than Kranendonk & Verbruggen (2008) assert. This was caused particularly by decreasing interest rates and increasing income levels, both of which have more than likely supported the creation of the house price bubble. When interest rates began rising at the end of 2005 (3.75%), continuing to rise through the first half of 2008 (5.16%), and income growth began slowing down more than before, the affordability of home ownership worsened and house prices therefore began a gradual downward adjustment. In 2007 the house prices can be determined by the fundamentals and as from 2008 the growth of real prices will be zero according to the model of De Vries & Boelhouwer (forthcoming).

In summary, calculations based on two models for Dutch house prices counter the IMF’s warning of a possible Dutch house price bubble in 2007. Any bubble that may have existed before 2007 had vaporized by that year as a result of the period’s very moderate house price development.

Effect of credit crisis on house prices as of 2008

According to the predictions of the two Dutch models house prices were in accordance with their underlying determinants, certainly before the credit crisis (that began in the U.S. in the summer of 2007) started hitting the rest of the world. After 2000 the source of the crisis can be found in the increase in loan incentives that caused declining lending standards (Haffner, 2008; Chomisengphet & Pennington-Cross, 2006; Zelman et al., 2007). The long-run trend of rising house prices also caused financial institutions to engage in subprime loans with a

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3 Although the IMF formulated its findings with care, in the Netherlands there were strong reactions to the suggested 30% gap in house prices. The IMF responded by explaining that it is hard to predict bubbles and went on to emphasize that the results of its models do not exclude the possibility that price increases may be driven by factors other than economic fundamentals (NRC, 19 May 2008, p. 23).
heightened risk of default. The same long-run trend of rising house prices presumably encouraged households to assume riskier mortgage types in the belief that they would be able to refinance quickly at more favorable terms.

Then the interest rates began to rise in 2006 with the well-known results: refinancing became more difficult, more dwellings were seized, and foreclosures increased dramatically when initial soft terms of mortgage loans expired. Thereupon house prices started falling in the U.S. and the financial problems of the U.S. housing market especially with securities based on subprime and other types of risky mortgages triggered the global financial crisis. Will the crisis trigger house price decreases in the Dutch housing market as well?

Dutch Central Bank (DNB, 2008) argued that the risk of a downward house price correction in the Netherlands as a result of the effects of the American credit crisis will be much lower than in some other countries. Figure 2 supports this point for most of 2008 as it shows that house prices in the Netherlands (and Sweden) had not started falling in the third quarter of 2008.

DNB (2008) asserted that the reason for relatively less downward movement of house prices in the Netherlands than in some other countries can be found in the situation on the local housing market. It differs from that in other countries, even though as from 2005 the underlying affordability of home ownership has begun to decline due to interest rates rising from some 3% to 4.3% in 2007. DNB identified several variables that influence the lower risk of house price corrections. First, there is the relatively low share of home ownership (54%), making fewer households vulnerable to changes in mortgage interest rates.

Second, there is a relatively low share of mortgage loans with variable interest rate, or an interest rate fixed for a period of less than one year (15%). Case & Quigley (2008) refer to this phenomenon as ‘downward stickiness’ of house prices. Changes in interest rates will take their toll on affordability less quickly. Tsatsaronis & Zhu (2004) also show that house prices are more sensitive to short-term interest rates in countries where floating mortgage rates are used.

Third, there is a relatively high share of mortgage interest that is deductible income tax (up to 52%). Changes in mortgage interest rate are thus mitigated more than in most other countries, where interest deduction is more limited or does not exist (Haffner, 2002). Affordability of mortgage expenditure will be changed at a slower rate.

As the fourth reason, DNB argued that in countries where house production and the number of rendered building permits has been relatively high in the past decade, the drop in demand may hit harder: especially when house buyers are fed by the speculative expectation that house prices will keep on rising (compare IMF, 2008). The Netherlands is not one of those countries, as house building has been decreasing for several years of this 21st century and has not regained the higher levels of production that were achieved in the past century.4

According to DNB these factors contribute to a smaller risk of a downward house price correction in the Netherlands, even if mortgage credit becomes scarcer and economic growth perspectives are less optimistic than in the recent past.

Although it is still too early to establish statistical relations between the worldwide credit crunch that followed the American credit crisis and the Dutch housing market, sales of newly built dwellings fell sharply in the fourth quarter of 2008.5 Furthermore, the real house price seems to have started decreasing, but is volatile, as Figure 3 shows. Also the decline in number of transactions that started in the second half of 2006 (more than 195,000) intensified in 2008 (from less than 180,000 to less than 161,000).

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4 See also Peltzman (2000) who studied the phenomenon of downward stickiness of output prices as a response to an input price decrease.

5 House production expressed as investment reached almost 6% of GDP in 2007 versus e.g. more than 8% respectively 10% in Spain and Ireland. The number of rendered building permits reached 6 per 1,000 inhabitants in 2006 versus e.g. more than 19 in Spain and 6 also in Ireland, but for 2001.

6 The sales of newly built dwellings fell with 50% in comparison to a year earlier according to the database Monitor Nieuwe Woningen.
Figure 2
Nominal house price development in a number of countries
(Percentage-change in third quarter 2008 in relation to the third quarter of 2007)

Statistics like these have not been seen on the Dutch housing market in decades; nor were they expected (De Vries et al., 2008). The assumption was that in the period 2008-2009 house prices would at least follow inflation because the fundamentals were expected to show favorable development in both years. For 2009, both a decline in interest rate and an increase in disposable household income through tax measures were taken into account.

A negative short-run effect, possibly caused by the credit crunch, seems to have ‘infected’ the housing market in the fourth quarter of 2008. This psychological effect determines some 50% of price developments in the Dutch housing market according to De Vries and Boelhouwer (forthcoming). Figure 4 shows that psychology seems to have started playing a role on the owner-occupied market already as of the second quarter in 2007 when the news about the start of the problems on the financial markets became known, even before the Eigen Huis indicator for the general economic situation started falling.

Figure 3
Real house price and numbers of transactions, January-December 2008
(Percentage-changes per month compared to 12 months earlier)

Source: Kadaster, OTB/TU Delft calculations
The question remains whether the presumably positive influence of economic fundamentals can neutralize the current negative sentiment in the housing market. If an economic downturn or recession hits the main fundamental factors, especially the income situation of households, house prices as well as the number of transactions may decrease further. This is not an unrealistic scenario, as De Jong et al. (2008) forecast a 0.75% shrinkage of the Dutch economy in 2009. What may seem ‘only’ psychological effects for the moment may turn out to be in line with changing fundamentals of house price in the near future.

However, the continually lagging supply of new dwellings (Figure 1) has brought about a situation of scarcity in dwellings on the housing market, a situation which will counterbalance the threat of a price decrease. If the sharp decline in new construction and backlog orders continues, another offset to house price decreases may be at work. In total Van Hoek (2008) expects that the production of dwellings will decrease by 20% in 2009 and 2010.

4 Dutch mortgage interest deduction

In income tax two, in theory ‘pure’, options can be chosen: the own dwelling is treated as a durable consumption good or as an asset or investment good (Haffner, 2002). In the first situation the imputed rent of the owner-occupied dwelling is not taxed, nor is the capital gain. In the second situation imputed rent and capital gain are taxed as income and the costs to produce that income are deductible. That the investment approach was chosen when Dutch income tax was designed in 1914 (Bijvoet, 2001) was not illogical, if one considers the roots of income taxation in the aftermath of the Industrial Revolution. At that time most dwellings were for rent. The treatment of owner-occupied dwellings probably was a simple adaptation

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7 Dutch newspapers also mention regularly that banks have tightened up their lending policy. Also unemployment has started rising for the first time in more than three years in the fourth quarter of 2008 (CBS, 2009).
8 The policy aim is to reduce scarcity on the housing market by 2010 to 1.5% of housing stock (Ministerie van VROM 2004/2005).
9 The backlog of orders for new dwellings continued to fall from ten months to less than eight months in September 2008 (Van Hoek, 2008).
of the way rental dwellings were taxed: the taxation of profit being the difference between rental income and maintenance costs, etc. (in the absence of capital gains tax).

In due course inconsistencies in comparison with the income tax treatment of other investment goods, such as second homes, stock and savings accounts crept into the system (Haffner, 2002). One of the more important inconsistencies was that when net imputed rent expressed as a percentage of 60% of taxable house value\(^{10}\) while 100% of actual and not-imputed interest costs remained deductible (Ministerie van Financiën, 1989). The 40% was considered a political correction to the calculation of imputed rent which was applied because of the mixed investment-consumption character of the owner-occupied dwelling. The investment character of the dwelling was considered weaker than that for a share, for instance, because a dwelling also was meant to provide shelter.

Another big inconsistency in comparison with the income tax treatment of other investment goods arose with the income tax reform of 2001\(^{11}\) (see Table 1). The balance of net imputed income and actual interest expenses for the owner-occupied dwelling is treated the same way as income from work and taxed in the new Box 1 against a progressive rate with a maximum of 52%. The income from other investment goods is, however, taxed in two other boxes. Box 2 taxes actual income from shares against a rate of 30% for shareholders with a considerable interest in an organisation (more than 5% of shares) only. Other income from capital (wealth) is taxed in Box 3 against a rate of 30%. The difference with Box 2 (and the rest of the world) is the fact that net income from net wealth is imputed at 4% against a tax rate of 30%. Effectively tax is calculated as 1.2% (30% over 4%) of net wealth (wealth minus debt).

From the standpoint of the neutral treatment of private person-owners of dwellings one would expect to find the own home in Box 3. This indeed has been the case for the second home and landlord-owned dwellings in the Netherlands, but not for the principal dwelling of an owner-occupier. The exceptional income tax position for owner-occupied housing resulted in a more favorable treatment of owner-occupiers in comparison with landlords. This special position of the home owner seemed to make the owner-occupied dwelling an easy victim for tax savings for the government.

But nothing could have been further from the truth. The fundamentals of the income tax treatment of owner-occupied dwellings were not changed and various Dutch cabinets have promised not to interfere with the fiscal treatment of home ownership. Some changes were made though. The tax reform of 2001 (see Table 1) lowered the maximum taxation rate from 60% to 52%. This general measure reduced the effect of mortgage interest deductions affecting expenditure of home owners.

Three further measures have influenced the fiscal treatment of home-ownership. First, in 2001 mortgage interest deductions were limited to 30 years and to the principal dwelling only. Then in 2004, for movers to a next owner-occupied dwelling, the deductibility of mortgage interest was limited to a loan sum being the difference between the price of the new dwelling and the accumulated equity of the previous dwelling. The next measure was the bill which became standing policy in 2005 and saw to it that net imputed rent would be maximized to the amount of interest deducted. As a result of this measure, no further income tax is levied on the principal dwelling once the mortgage loan is paid off.\(^{12}\)

Although these measures will in due course limit interest deductions, the estimated budgetary importance of the outstanding balance (indicated by the net tax advantage in Table 2) of the mortgage interest deduction and the imputed rent rose in terms of Gross National Product from 1.5% in 2000 to 2.0% in 2005. Table 2 shows that net tax deduction per home owner with mortgage loan rises with income. Expressed as a percentage of

\(^{10}\) Net imputed rent is fixed as a percentage of assessed market value. It is the imputed difference between gross income and a number of costs such as local taxation and insurance. Only the interest costs of a mortgage and the leasehold costs of land may be deducted from taxable income as actual amounts instead of imputed amounts.

\(^{11}\) A type of dual tax system was introduced which separates income into two types of income: income from capital (stock, savings accounts, etc.) and income from other sources (such as work; Haffner, 2002). Such a tax taxes income from capital proportional and separate from income from work-related activities for which a progressive tax schedule applies.

\(^{12}\) This may be regarded primarily as an encouragement to pay off the mortgage loan.
disposable income, these tax reductions go precisely to those owner-occupiers with a mortgage in the lower income brackets.

Table 2
Quantification of tax treatment of home ownership in Box 1 ranked according to income and age, using estimates for 2005

<table>
<thead>
<tr>
<th>Joint aggregate income</th>
<th>Net tax advantage (€ M)</th>
<th>Home ownership (%)</th>
<th>% Home owners with mortgage loan</th>
<th>No. of households</th>
<th>Net advantage per household with mortgage interest relief (Euro)</th>
<th>Net advantage per household with mortgage interest relief as % of disposable income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households &lt; 65 years old</td>
<td></td>
<td></td>
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<tr>
<td>Up to 30,000 Euro</td>
<td>1,621</td>
<td>33</td>
<td>92</td>
<td>716,037</td>
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<td>30,000 – 45,000</td>
<td>2,620</td>
<td>70</td>
<td>95</td>
<td>945,107</td>
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<td>45,000 – 60,000</td>
<td>2,159</td>
<td>81</td>
<td>99</td>
<td>649,481</td>
<td>3,324</td>
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<td>60,000 – 90,000</td>
<td>2,020</td>
<td>88</td>
<td>94</td>
<td>478,988</td>
<td>4,217</td>
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<td>90,000 and above</td>
<td>1,219</td>
<td>89</td>
<td>92</td>
<td>187,115</td>
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<td>Total &lt; 65 years</td>
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<td>59</td>
<td>94</td>
<td>3,012,201</td>
<td>3,200</td>
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<td>Households 65+</td>
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<tr>
<td>Up to 20,000 Euro</td>
<td>26</td>
<td>17</td>
<td>44</td>
<td>65,352</td>
<td>398</td>
<td>3</td>
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<tr>
<td>20,000 – 40,000</td>
<td>103</td>
<td>43</td>
<td>54</td>
<td>119,065</td>
<td>865</td>
<td>4</td>
</tr>
<tr>
<td>40,000 and above</td>
<td>167</td>
<td>69</td>
<td>54</td>
<td>80,103</td>
<td>2,085</td>
<td>4</td>
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<tr>
<td>Total 65+</td>
<td>295</td>
<td>32</td>
<td>51</td>
<td>261,354</td>
<td>1,129</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9,934</td>
<td>53</td>
<td>88</td>
<td>3,280,070</td>
<td>3,029</td>
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</table>

Sources: First four columns, Wijn (2005); final column, Kuipers et al. (2006)

Influence on Dutch tax policy by European Union and others

The suggestion that interest deductions in the Netherlands should be abolished because of the European Union (EU) influence is, to begin with, a misunderstanding. The EU involvement is less concerned with national housing or income policy issues than with competition, focussing on modifying laws and regulations that are disruptive to competition in order to improve and ensure the free movement of persons, goods, services and capital (Elsinga et al., 2006). This need not mean, however, that Dutch policy may not be influenced by outside forces. For example, the final two decades of the 20th century saw a trend in OECD countries to reduce tax rates and abolish or reduce allowable deductions. The goal was to make labour less expensive and stimulate job opportunities and economic growth.

According to the European Commission (2005), interest deductions for home owners in the Netherlands are expected to increase and in so doing will further erode the tax basis of income tax assessment. This is undesirable because the effect will only end up in the middle and higher income brackets (inefficient) and since it keeps capital away from productive objectives, it will create a delicate fiscal situation. It also disturbs the housing market, not in the least through the undesired price rise effect, due partly to a minimal supply side elasticity, as shown in Figure 1 (see also Swank et al., 2002; Vermeulen & Rouwendal 2007).

Other national and international organisations, such as the IMF (2005) and REA (2005) have also called for changes to this unbalanced situation in the housing and labor markets. For example, the OECD (2004) called for the abolition of mortgage interest relief because of its competition-disruptive effects on the labor market: high taxation rates diminish both job opportunity as well as the intention to work. Another influence coming from outside the Netherlands could happen through the further integration of mortgage markets, for which the EU expects economic advantages (Doling, 2005; Neuteboom, 2006).
In balance, it is not unthinkable to imagine that indirect influences from outside the Netherlands might be able to stimulate the Dutch government into setting limits on the income tax treatment of owner-occupied dwellings. Fact is, the mortgage interest deduction does not stimulate households to save, but to borrow money. Also in recent years, the national exposure to risks as a result of the large financial value represented by the dwelling in combination with a large mortgage debt made the housing market increasingly sensitive to the economic climate (Van Ewijk & Ter Rele, 2008). Van den Noord (2005) developed a model in which the relatively large tax advantage in the Netherlands makes house price variability in response to changes in inflation relatively high. Van Ewijk et al. (2006) attribute welfare increases on the housing and labor markets in their model to the abolition of the fiscal treatment of the owner-occupied dwelling. Present annual welfare loss would amount to 800-2,000 million Euros, between 0.15% and 0.4% of GNP, depending on the supply elasticity of dwellings. On the other hand, DNB (2008) ascribes a positive thus mitigating effect to the mortgage interest deduction when interest rates change. The mortgager then bears only part of the change.

Dutch policy standstill

Whatever the argument, one expectation was carried broadly throughout the last election campaign and the subsequent negotiations between political parties to form a new Dutch government in 2007: that a commission of experts would be appointed to come up with reforms for the housing market. However, much to everyone’s surprise, the new coalition parties agreed to put a halt on reforms (Tweede Kamerfracties CDA, PvdA and ChristenUnie, 2007; see also Boelhouwer & Hoekstra, 2008); politicians and government officials are not to prepare or study reforms of the housing market. While the Christian Democrats won their point that the fiscal treatment of home owners should not be changed, the Social Democrats won their point that the annual rent increase for 95% of the rental market – the regulated rental market – should not exceed inflation (1.1% on July 1, 2007).

As a result, the tax position of Dutch home owners is being perpetuated. The development of this position can be summarized by the movement from tax or tenure neutrality to no neutrality across investment goods, not even across dwellings.

Modelling results

Despite the agreed policy standstill, it is not unrealistic to expect future changes in the tax treatment of home ownership. Countless in-depth arguments are forcing political parties and lobbyists to take stands on this issue (see above, VROM-Raad, 2007). The VROM-Raad, the council, which advises the government and parliament on matters including housing, has issued an advisory paper that presents the results of modelled house price developments if income tax concessions were gradually to be reduced (VROM-Raad, 2007).

The two models referred to in Section 3 were used to calculate the Dutch house price developments as a result of fiscal reform. The aim of the reform would be to increase the economic stability of the housing market and to stimulate upwards mobility in the housing market. The main scenario dealt with an annual phasing out of 5% of the tax treatment leading to the abolition of the tax treatment of home owners in 20 years’ time. Tax proceeds would be ‘returned’ to all households as a general tax advantage. The nominal interest rate was assumed 4.5% in these 20 years.

The basic assumptions in the De Vries and Boelhouwer’s macroeconomic model differ from those in the microeconomic model by Koning et al. (2006). De Vries and Boelhouwer’s model assumes that in the long-term housing expenses will develop in much the same way as income (same housing expenditure to income ratio) whereby an increase in housing expenditure through a change in tax treatment leads to a decrease in house prices. This model is also based on the assumption of an extremely inelastic supply of dwellings of

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13 The was model used by Boelhouwer et al. (2004) and updated by De Vries (2007) and De Vries & Boelhouwer (forthcoming).
between 0.2 and 0.4 (see also Vermeulen & Rouwendal, 2007; Swank et al., 2002). As a result the change in the tax treatment would return largely as a price effect.

The model by Koning et al. (2006) assumes that house buyers, in their role as investors, take into account a required market yield on the dwelling that should balance the costs and financial risks that accompany big investments. In addition, it includes the effect of change on housing supply, emphasising gradual modification because such changes do take time. The starting position is a supply elasticity of 0.65, whereby change in the fiscal treatment of the owner-occupied dwelling will return partly as a price reduction and partly as a decrease in supply. In this model, most of this effect is processed directly in the first year.

One may conclude that according to both model calculations, any change in the tax treatment of home owners will have a negative effect on house prices. The speed at which this effect appears is not easy to model. Calculations based on the De Vries and Boelhouwer model (De Vries, 2007) result in a large total price effect (real and nominal) of 23% over a period of 20 years in relation to the no-change situation. Partly because this model works with a supply elasticity of zero, this effect may to a certain extent be considered the maximum expected price effect (worst case scenario).

Koning et al. (2006) expect a total price effect of -4.4% over a period of 20 years in relation to the no-change situation, with about two-thirds of this price effect occurring in the first year. A volume effect of -3.5% will also occur because their calculations are based on a price elasticity of 0.65. However, if Koning et al. (2006) incorporate De Vries & Boelhouwer’s assumptions (inelasticity and, apart from interest expenditure, no capital expenditure) then the resulting house price will decrease considerably as well.

5 Conclusions

In this paper we focused on the question whether house prices in the Dutch owner-occupied market are likely to decrease in the near future. Three aspects of this question were analyzed on the basis of a literature study.

The first aspect was whether house prices might decline as a result of a price bubble that is ready to burst. The IMF issued a cautious warning of the possible existence of a Dutch house price bubble in 2007. Calculations based on two models of Dutch house prices counteract this warning. Any bubble that may have existed prior to 2007 had burst by that year as a result of the very moderate house price developments in the years before 2007. In 2007 house prices were in accordance with fundamentals.

The second aspect was the likelihood that Dutch house prices will start falling in response to the global credit crisis that began in the summer of 2007 on the American mortgage market. As house prices were in line with underlying determinants in 2007 and there was no statistical sign of any change in the determinants, we concluded that a psychological effect must be causing the downturn in number of transactions, construction orders and house prices in 2008. The effect of possible credit restrictions applied by financial institutions is not clear, as there is no hard evidence. The 2008-downturn may be temporary, unless it gets reinforced by a downturn in the real economy of which the first signs are being foreshadowed, e.g. in terms of increasing unemployment and forecasted shrinkage of the economy.

The third aspect to be addressed was whether it is likely that house prices will fall as a result of changes to the tax treatment of home owners. As the Dutch form of taxation of owner-occupied dwellings is relatively unique, the expectation is that in due course the Dutch government will be unable to stand alone on this matter. The Dutch models predict that house prices will decline if the income tax treatment of owner-occupiers is phased out in 20 years; at the same time savings will be returned to taxpayers as a general tax concession. The extent of the decline will depend on supply elasticity.

The outcomes of the models predicted that even without fiscal reform prices in the Dutch housing market are expected to come under pressure in the sense that contrary to the previous decades growth of real prices were predicted to be zero. The timing of such fiscal...
measures, however, may be considered most unfortunate, now that the effects of the global financial crisis seem to trigger into the Dutch housing market.

Acknowledgement

We would like to thank colleagues Marja Elsinga and Harry van der Heijden for their constructive comments.

References


