The Dutch Mortgage Market

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Nederlandse Vereniging van Banken

This memorandum was compiled by a working committee, consisting of representatives of The Dutch Banking Association (NVB), ABN AMRO Bank, ING Bank, NIBC Bank, Rabobank and SNS Bank.
The committee was assisted by Periscoop Consult.

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1 Why this memo?

On average, Dutch mortgages have high Loan-to-Value and Loan-to-Income ratios. Figure 1 and Figure 2 show that LTV and DTI (Debt-to-Income) ratios (both at origination) in the Dutch market are amongst the highest in Europe. These values are usually seen as indicators of a high-risk mortgage market.

Yet at the same time, Dutch mortgages have a good track record in terms of performance. According to Fitch (2013, see Figure 3), default rates in the Dutch mortgage market are low compared to other countries.[1] The Netherlands scores amongst the best markets. The number of foreclosures is equally low. Although losses have increased over the past years (Figure 4), and may increase further, the actual loss rate (0.08 percent in 2013) is still very low.

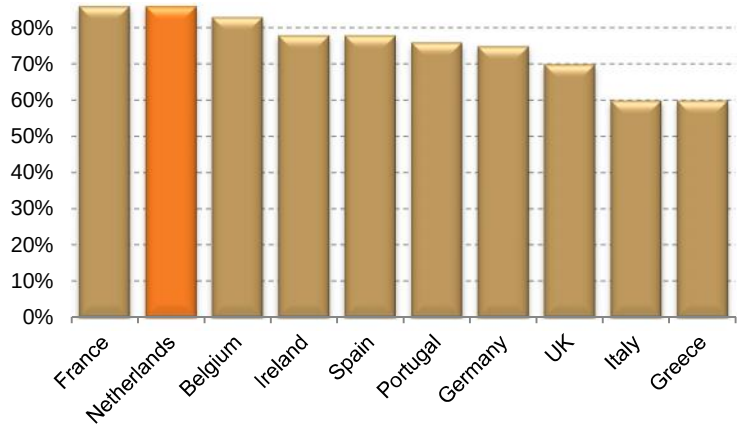
The existence of high LTV and LTI ratios on the one hand, and low defaults and losses on the other hand, leads to a paradoxical situation. Referring to this paradox, the Dutch Central Bank (DNB, 2014) recently called the Dutch mortgage market 'a market with a Janus head'. This paradox is the reason for the Dutch Banking Association (NVB) to compile this memorandum. In line with the position and the responsibilities of the NVB, the focus of the memorandum lies on industry level, i.e. banks and other mortgage lenders.[2] Where applicable, macroeconomic implications are taken into account.

The memorandum presents an overview of the Dutch mortgage market: the housing market (Chapter 2), the size of the market and outcomes in terms of defaults, foreclosures and losses (Chapter 3), mortgage market risks (Chapter 4), and risk mitigating factors embedded in the Dutch institutions, such as the tax regime, the legal framework for mortgages and the social security system (Chapter 5). Chapter 6 describes some recent reforms in Dutch legislation concerning the housing and the mortgage market. The memorandum finishes with a conclusion (Chapter 7) and a list of references.

1 Credit agencies base their reports on mortgages in RMBS portfolios. These portfolios cover about twenty percent of the entire value of Dutch mortgage loans. This share is large enough to render a reliable view of the entire market.

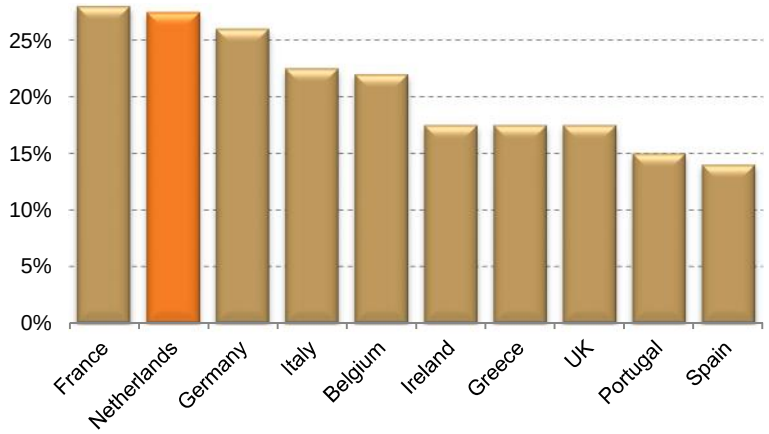
2 Market outcomes and regulatory issues referred to in this memorandum, concern all mortgage-issuing financial institutions, e.g. banks and insurance companies.

Figure 1: LTV ratio (at origination) of a typical securitized portfolio



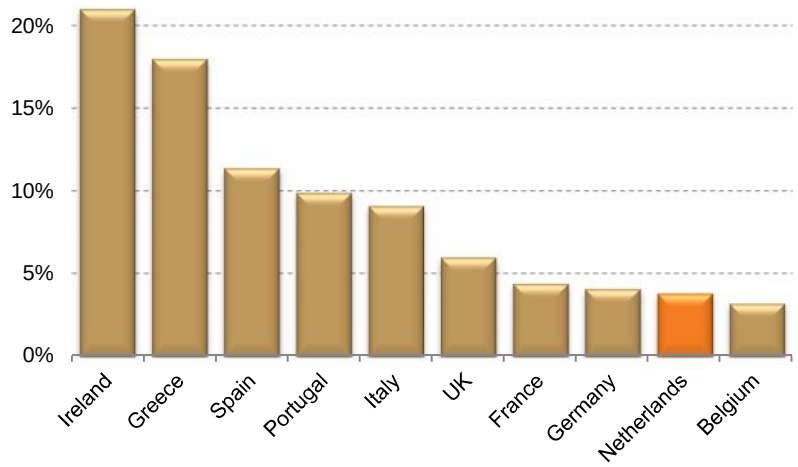
Source: Fitch (2013)

Figure 2: Market Debt-to-Income ratios for new transactions



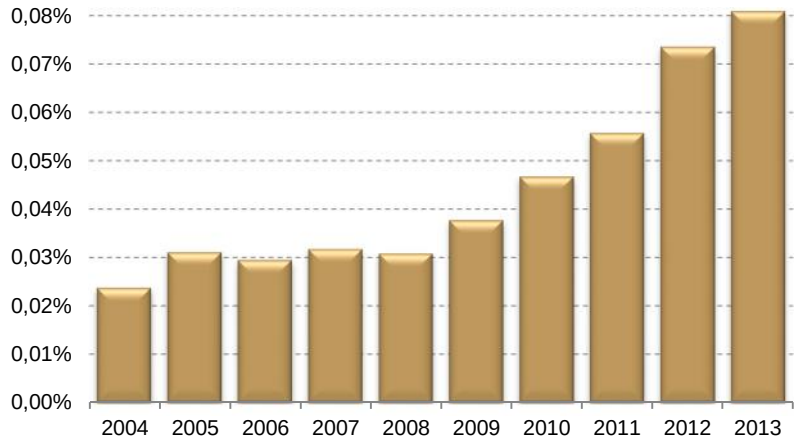
Source: Fitch (2013)

Figure 3: Expected default rates



Source: Fitch (2013)

Figure 4: Losses incurred on mortgages by Dutch banks



Source: main Dutch mortgage lenders (ABN AMRO, ING, NIBC, Rabobank, SNS), calculations by Periscoop Consult

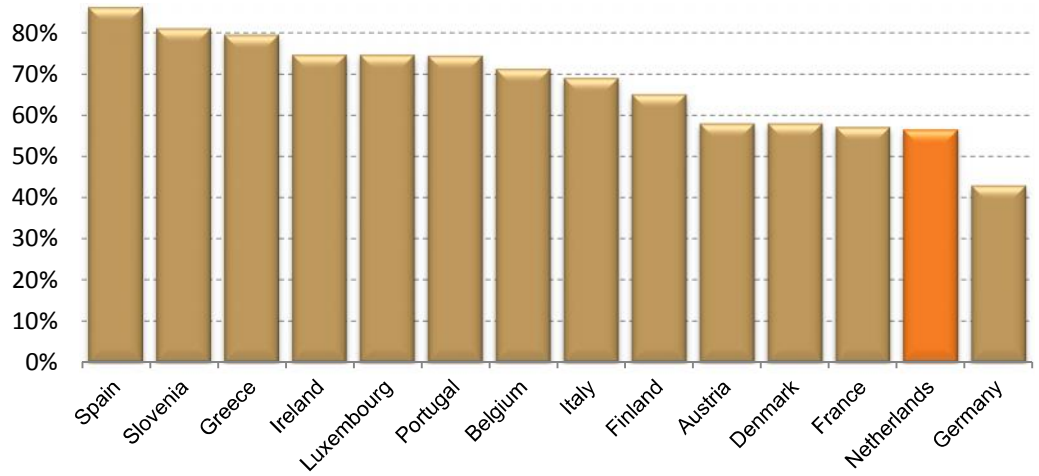
2 The Dutch housing market

In the Netherlands, tax facilities have played an important part in shaping both the housing market and the market for mortgage loans. A strongly regulated rental segment is another important factor.

The Dutch housing market is shaped by four dominant forces, which stem from former political choices: (i) income tax deductibility of mortgage interest; (ii) a rental market in which not-for-profit social housing institutions have a combined market share of 84 percent; (iii) a scheme involving rent control and strong tenant protection; and (iv) a restrictive regulatory ('zoning') regime for the development and construction of new homes.

The Dutch housing stock consists of 7.1 million houses, 56 percent of which are in the owner-occupied segment. This rate is below average in the euro-zone, see Figure 5. The low share of the owner-occupied segment in itself acts as risk filter, since access to ownership is restricted to households with a good risk profile.

Figure 5: Owner-occupancy rate euro-zone (2007, average = 62,3%)



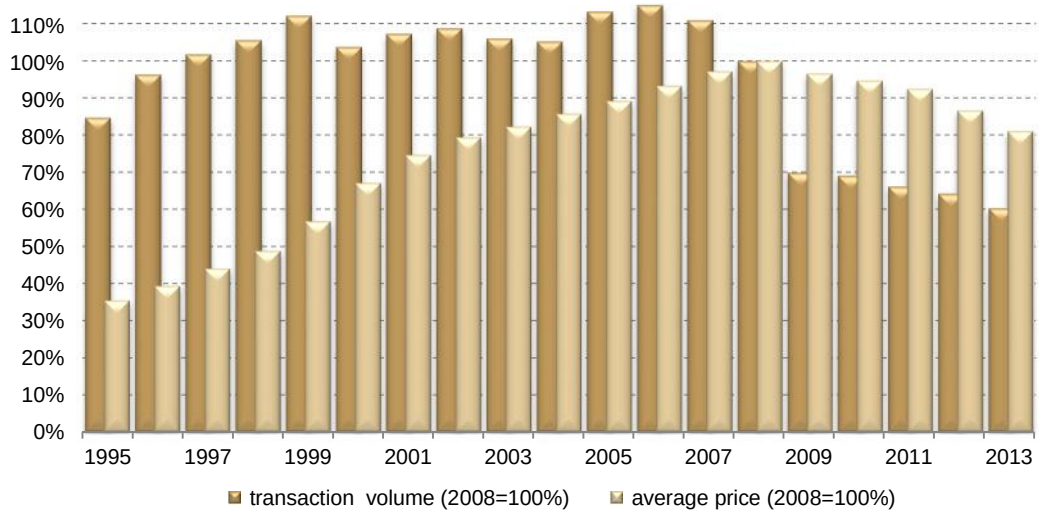
Source: ECB (2009)

Due to zoning regulations, additions to the housing stock are low: less than one percent of total stock is added each year, with an all time low rate of 0.4 percent in 2013. The lack of newly built homes results in a permanent undersupply of houses, mainly in the economic dominant region of the Netherlands, the area in

the west of the country known as the Randstad, notably in Amsterdam and Utrecht.[3]

The Netherlands has a generous tax regime for homeowners. Interest paid on mortgage loans for the main residence is fully deductible from pre-tax income for a maximum period of thirty years. Tax deductibility thus offers firm income support for homeowners. Dutch homeowners receive on average forty percent of their paid interest back as a tax benefit.[4] This mechanism is an important driver for buyer behaviour in the Dutch housing market. Tax deductibility has fuelled demand in the owner-occupied sector, causing homeownership to grow from 48 percent in 1993, to 56 percent in 2013. Demand was also enhanced by other factors, such as an enduring undersupply of houses, increasing incomes, decreasing interest rates and households being allowed to take a mortgage based on two incomes instead of one.

Figure 6: Transaction volume and price in the Dutch housing market



Source: StatLine (2014)

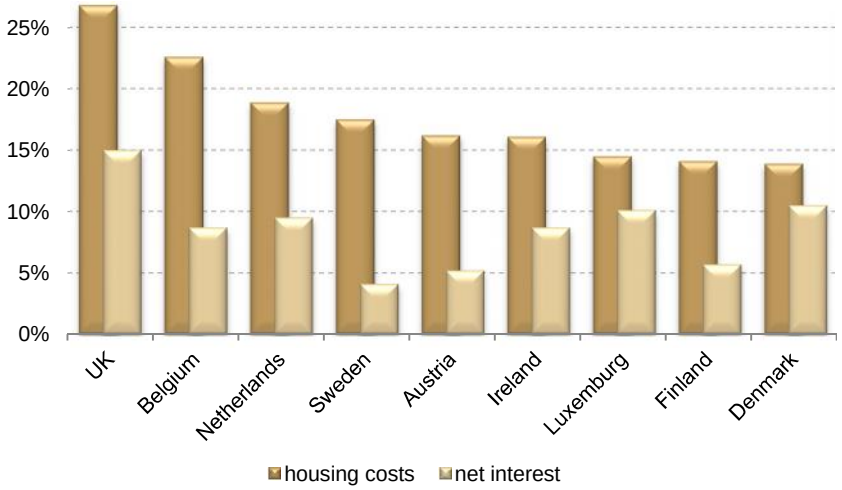
The tax benefit has been largely incorporated in house prices, which increased monotonously between 1981 and 2008, see Figure 6. Thanks to increasing incomes, rising house prices have hardly affected the relative costs of housing. On average, these costs amount to a quarter of the net income of homeowners. Haffner & Dol (2011) estimate housing costs in several European countries for

[3] The number of registered households in the Netherlands is three percent higher than the number of houses. The number of households grows at a rate of one percent per annum (source: Statistics Netherlands). The housing stock keeps apace with this growth rate, but does not catch up.

[4] Tax deductibility is partly offset, particularly in the case of low LTV-loans, by a property tax, which is based on the value of the house.

2008, the year nominal house prices in the Netherlands broke an all-time record. Their research shows (Figure 7) that housing cost ratios in the Netherlands are not high in a European context.[5]

Figure 7: Housing cost ratios for households with a mortgage loan (2008)



Source: Haffner & Dol (2011)

The Dutch rental market is dominated by social housing. One of every three houses in the Netherlands is owned by a housing corporation. The non-regulated rental market is small compared to other countries. Rent controls have ensured that renting has remained relatively cheap, also while prices in the owner-occupied segment boomed between 1981 and 2008. Rent controls and tenant protection have led to a gridlocked rental market. A quarter of the houses in the controlled rental segment are occupied by middle and even high-income households. Steps towards market liberalization have been taken recently, mainly by relaxing rent controls.

Due to the system of rent control and tenant protection, a buy-to-let segment hardly exists in the Netherlands. Investments of this kind do not tend to be attractive for small investors, also because income tax deductibility of mortgage interest is restricted to the main residence of households.

[5] It should however be noted that such an international comparison of mortgage and housing costs is very difficult, because of the differences in tax regimes, the different ways costs are measured and the unavailability of verifiable data.

Impact of the crisis

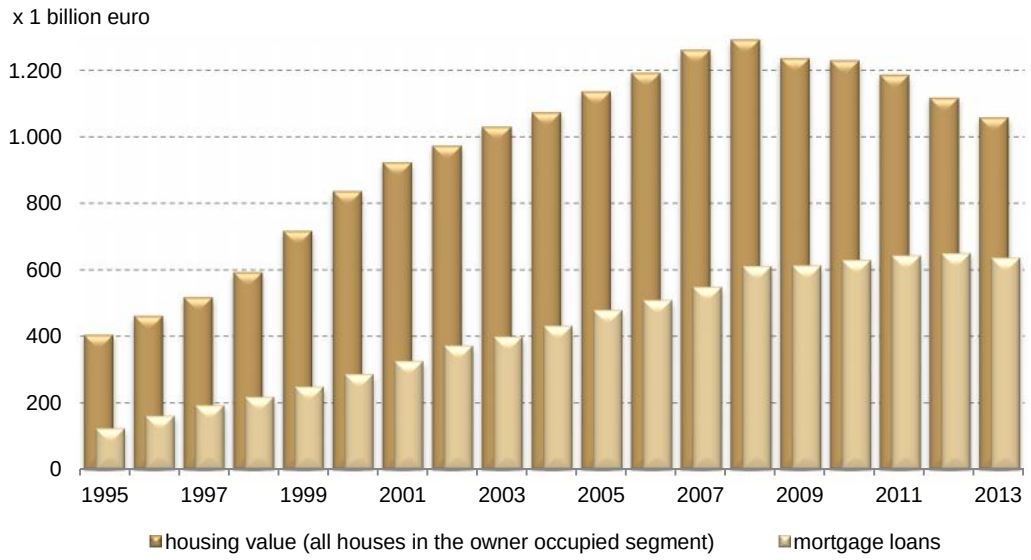
The characteristics of the Dutch housing market –in particular undersupply and the regulated and gridlocked rental sector– create a floor in the market, but they do not make the market immune to adverse circumstances. Recent history illustrates this point. The annual transaction volume in the housing market has diminished by 55 percent from peak level in 2006. In 2014, prices have come down 21.5 percent from the peak level attained in 2008 (Figure 6). As a result, about thirty percent of mortgage loans in the Netherlands exceed the value of the underlying property (DNB, 2014). However, after a period of six years of stagnation, the housing market shows signs of a revival. A higher transaction volume, combined with stabilising prices in the last months of 2013 and the first quarter of 2014, indicates a (albeit fragile) recovery.

3 Key figures for the Dutch mortgage market

The tax deductibility of mortgage interest has greatly influenced the Dutch mortgage market. It has encouraged 'interest only' mortgages, leading to high portfolio LTVs, and caused a large difference between LTIs based on gross and net income. Yet defaults and losses have remained very low, even in the recent crisis.

The mortgage portfolio of lenders in the Dutch market consists of 3.5 million households: 83 percent of the 4.3 million Dutch homeowners carry a mortgage debt, with their property as collateral. In 2013, the total mortgage debt amounted to EUR 637 billion. The value of the housing stock amounts to EUR 1.07 billion, see Figure 8.

Figure 8: Mortgage debts and housing value of Dutch homeowners



Source: DNB (2013)

Regulation concerning LTI and LTV

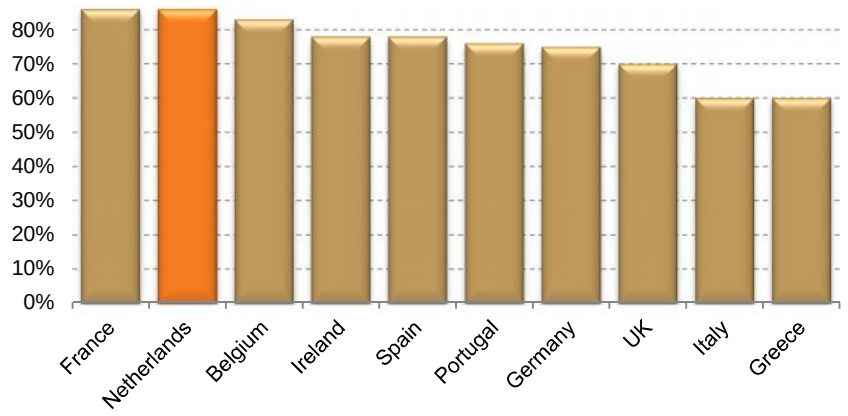
Back in 2001, lenders had already begun setting limits on LTI, at first as a form of self-regulation. A comply or explain system was introduced in 2006, with 6 as the critical explain-value for LTI. In 2011, a stricter maximum LTI at origination was defined in the Lenders' Code of Conduct. In 2013, the Dutch government incorporated the Code into law. Under the Code, subprime lending is forbidden, as it was before. The Netherlands Authority for the Financial Markets (AFM) monitors the market.

New borrowers must meet strict requirements governing their income and income expectations. Values for maximum LTI at origination, based on purchasing power and interest rates, are calculated annually by an independent budget institute (the NIBUD). In 2014, the maximum LTV is set –by law– at 104 percent. The maximum value will be brought down stepwise to 100 percent in 2018. Given these rules, the Dutch LTV-regime for mortgages is one of the most stringent in Europe.[6]

In order to prevent consumers' over-indebtedness, banks are obliged by law to check the affordability of every new mortgage loan, with the assumption of repayment in an annuity scheme, irrespective of the actual form of the loan. So, even though in the years when I/O loans were very popular, debt service capacity of the borrower was tested against an annuity repayment profile.

In order to reduce the risk of borrowers being unable to afford their mortgage after the fixed-interest period expires, banks have to calculate the applicant's borrowing capacity based on a ten-year fixed interest rate (set by the AFM), also for borrowers opting for a shorter interest fix.

Figure 9: LTV ratio (at origination) of a typical securitized portfolio



Source: Fitch (2013) [Figure 9 is identical to Figure 1]

Loan-to-Value

Up to 2005, an LTV at origination of 110 percent was not uncommon in the Netherlands. Average LTV at origination has come down from 96 percent in 2010 to 89 percent in 2013. The average share of new mortgages with an LTV of more than hundred percent has been declining, from 55 percent in 2010 to fifty percent in 2013, and is declining further in 2014.

[6] The OECD (2011) reports for most countries that there are no formal limitations on LTV.

Interest only and quasi interest only mortgages

Most mortgages are structured in such a way that maximum gain from the tax system is attained. Up to 2013 interest payments were fully deductible during the entire period of the loan. Therefore home-owners had an incentive for choosing I/O mortgages, for which during the loan period no repayments are due. These mortgages have a large impact on the development of the portfolio LTV (and LTI) of mortgage lenders.[7]

When these mortgages came into fashion (in the nineteen eighties), they were mostly accompanied by a life insurance, the redemption of which was earmarked for a bullet repayment upon maturity of the loan. These insurance schemes were treated tax-friendly. Since 2008, bank saving schemes have become popular as a way of accumulating the sum for repayment of the loan. Such mortgages are 'quasi I/O', in a sense that no repayment is done during their lifetime, but the accompanying savings schemes guarantee repayment in the end.

Particularly in the period 2004-2006 pure –or 'full', as Moody's (2013) calls them– I/O mortgages were originated, i.e. loans without an accompanying savings scheme. A typical mortgage closed during these years, would consist of a mix of pure and quasi I/O elements.

In 2013, the tax deductibility rules were changed. Deductibility for new mortgages is only granted if the mortgage is actually paid off through an annuity or a linear scheme over a maximum period of thirty years. This requirement has made I/O mortgages and quasi I/O mortgages unattractive.

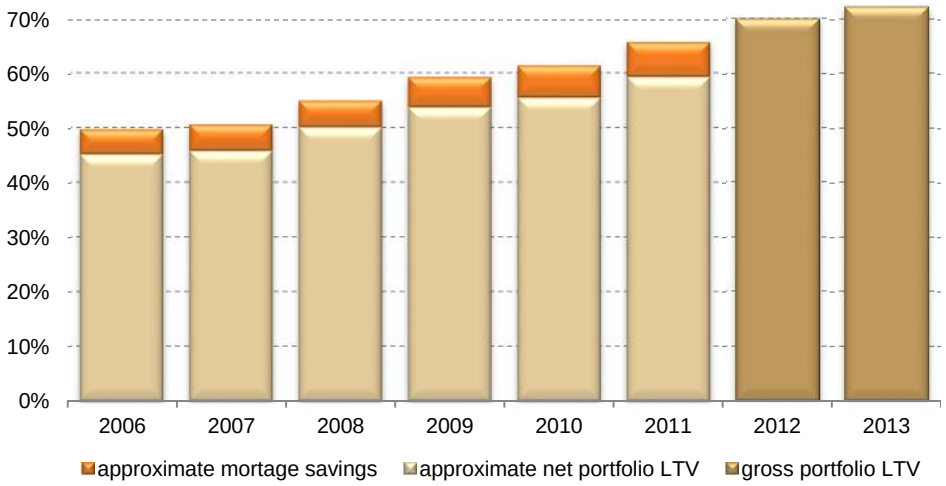
Moody's (2013) estimates the share of pure I/O loans in Dutch RMBS portfolios to be «less than thirty percent». Statistics Netherlands (2013) reports a share of 35 percent of pure I/O in all new and renewed mortgages for 2012. In 2009 that share amounted to 37 percent.

LTV at origination is a commonly used indicator, but *portfolio LTV* (or 'current' LTV) is at least as important. Before 2008, even with an I/O mortgage, LTV would drop by itself, because of increasing house prices. When house prices started falling in 2008, it worked the other way round: since then, average portfolio LTV has risen considerably.

[7] Portfolio LTV changes through changes in the loan (either through repayment or through additional loans) and changes in house value. Portfolio LTVs are calculated as current loans divided by indexed house values.

Figure 10 shows the development of portfolio LTV of Dutch mortgage lenders, increasing from fifty percent in 2006 to 72 percent in 2013. This increase is almost exclusively due to decreasing house value, as prices have fallen by 21.5 percent. Because of the share of (quasi) I/O mortgages in the portfolio, increasing portfolio LTV is only partly compensated by regular repayments.[8] Given the signs in the first quarter of 2014 that the decrease of house prices is coming to an end, and new mortgages on average having lower LTVs, 2014 might be a turning point. However, it is too early to draw a conclusion.

Figure 10: Portfolio LTV of Dutch homeowners 2006-2013



Approximate mortgage savings and net portfolio LTV add to gross portfolio LTV. Approximations are only available for 2006-2011.

Source: DNB (2013), StatLine (2014), approximations adapted from Ministerie van Financiën (2012), additional calculations by Periscoop Consult [9]

In order to calculate average net portfolio LTV, the capital accumulation in related life insurances and bank savings must be deducted from the mortgage debt. It should be noted that with I/O and quasi I/O mortgages, it is virtually impossible to measure or even estimate these savings; savings earmarked for repayment can be kept with banks or insurers other than the mortgage lender. This matching problem implies that mortgage-related savings are underestimated, and thus that net portfolio LTVs are overestimated.

[8] In 2013, many households made voluntary extra repayments on their mortgage loans. DNB (2014) notes that most repayments do not concern high LTV-mortgages, but mortgages of elder borrowers who mostly have low LTVs. DNB explains these repayments by the current low interest rate on regular savings accounts.

[9] Portfolio LTV is calculated on the assumption that the average value of houses with a mortgage loan is equal to the average value of all houses in the owner-occupied segment.

The Dutch Ministry of Finance (2012) shows an approximation for earmarked savings, see Figure 10 and Table 1. In this approximation, in 2011 savings amounted to about ten percent of the entire mortgage debt. This leads to an estimated net portfolio LTV of 59 percent in 2011, whereby gross portfolio LTV equals 66 percent. Given that most of the savings schemes originated about ten years ago, and have a planned lifetime of thirty years, the savings will start accumulating fast as from 2025.

Portfolio LTV and macro LTV

Portfolio LTV is the ratio of mortgage debt and house value for all mortgage borrowers. At macro level, LTV is defined as mortgage debt divided by the value of the entire housing stock in the owner-occupied segment. Macro LTV and portfolio LTV denote different risks, and may work out differently. For example, if only low LTV-loans are paid off, macro LTV decreases whereas portfolio LTV increases at the same time.

In 2013, seventeen percent of Dutch homeowners did not carry a mortgage debt. This means that macro LTV, as a risk indicator at national level, is seventeen percent lower than portfolio LTV.

Table 1: LTV under various definitions

	2011	2012	2013
portfolio LTV*	66%	70%	72%
net portfolio LTV**	59%	*n.a.*	*n.a.*
macro LTV*	54%	58%	60%
net macro LTV**	51%	*n.a.*	*n.a.*

** DNB (2013), StatLine (2014).*
*** Approximations Ministerie van Financiën (2012).*
Additional calculations by Periscoop Consult.

Loan-to-Income

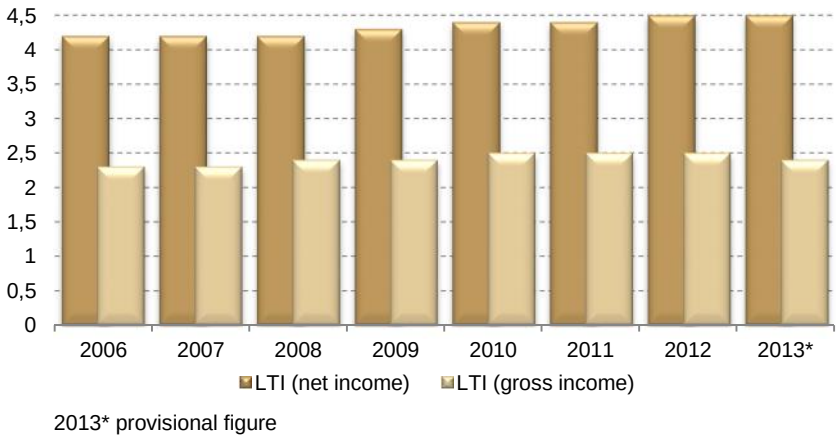
Up to the year 2000 LTI values at origination of up to six were not uncommon. Since then, LTIs at origination have come down, by virtue of the lenders' self-regulation and following government legislation. This decrease is still continuing. In the past three years, average LTI at origination has decreased further, from 4.5 in 2010 to an average of 4.25 in 2013.

Figure 11 shows how average portfolio LTI developed between 2006 and 2013: a slight increase at gross income level, and an even slighter increase at net income level. The difference between gross LTI and net LTI shows the impact of tax subsidies. As a consequence of tax deductibility, Dutch LTI-ratios turn out signifi-

cantly lower when adjusted to net income, taking more than forty percent off gross LTIs.

The proportion of their net income which homeowners spend on their mortgage and housing in general, has remained stable during the past fifteen years, even in the boom period between 1998 and 2006, when house prices rose sharply (cf. Figure 8).

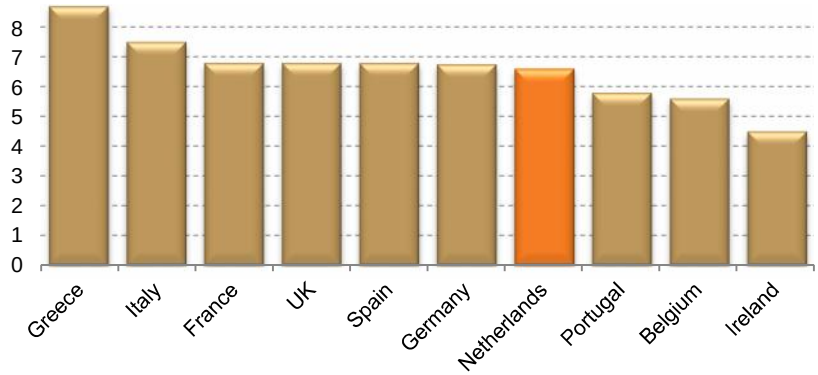
Figure 11: Portfolio LTI 2006-2013



Source: StatLine (2014)

Tax deductibility thus explains the combination of a high macro *Debt-to-Income* ratio and an average level of net LTIs. Fitch (2013) shows how this correction works out. As an alternative for *Debt-to-Income*, Fitch calculates *House Price to GDP per Capita*, to be interpreted as an indicator for affordability. Since tax facilities and other subsidies have been incorporated in house prices, this ratio is used as a proxy for net LTI at the macro level. In this 'affordability approach', the position of The Netherlands turns out to be similar to that of Germany, France and the UK, see Figure 12.

Figure 12: House Price to GDP per Capita

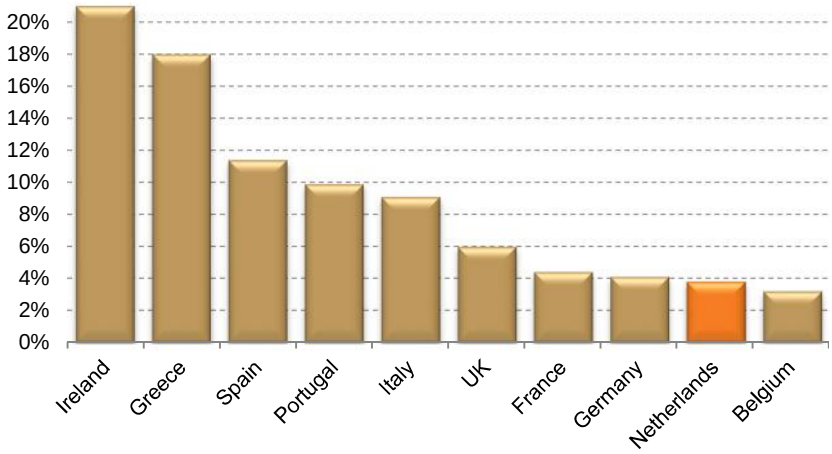


Source: Fitch (2013)

Defaults, foreclosures and losses

Dutch households have a good track record in paying off their debts. Fitch (2013) ranks default probability for Dutch mortgages amongst the lowest in Europe, see Figure 13. Moody's (2014) predicts that –provided that there will be no large shocks in unemployment and interest rates– arrears will increase only slightly in 2014.

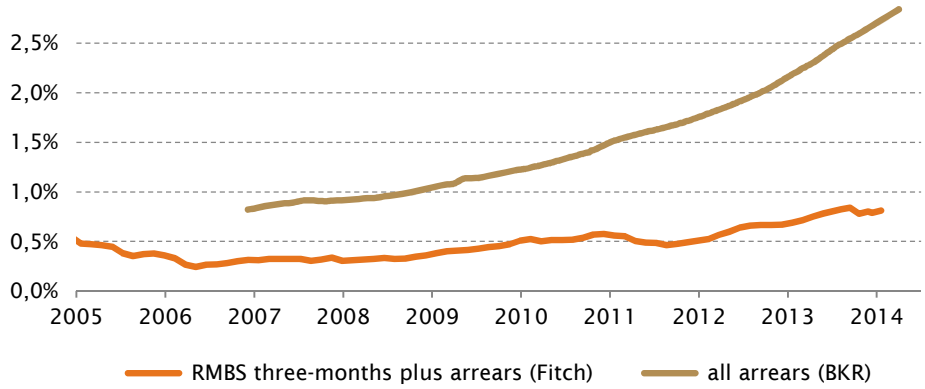
Figure 13: Expected default rates



Source: Fitch (2013) [Figure 13 is identical to Figure 2]

Notwithstanding good payment behaviour, defaults of course do occur. The *Bureau of Credit Registration* (BKR, see Chapter 5) reports increasing arrears, from less than one percent of all borrowers in 2007, to over 2.8 percent in 2014, see Figure 14. However, due to the rule that arrear notifications remain in the system for several months after they have been resolved, this large increase is clearly an overestimation of the real scale of the problem.

Figure 14: Share of households with arrears in mortgage payments

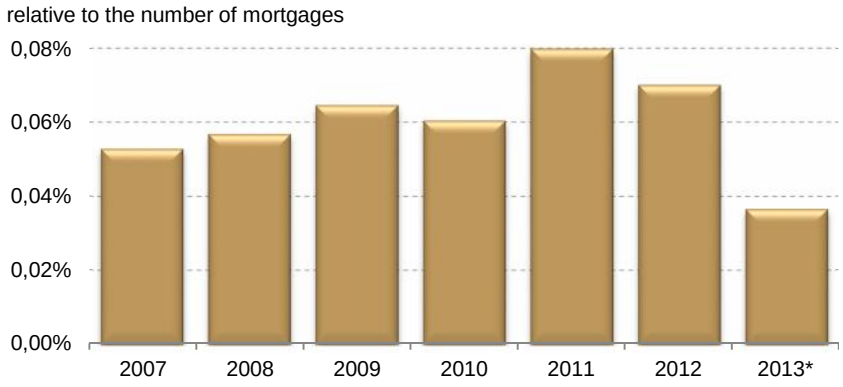


Source: Fitch (2014), adapted from Bureau Kredietregistratie (BKR, 2014)

Fitch (2014) present a more realistic approach to the scale of the problem, based on the number of 'three-months plus' arrears. The number of households with arrears of three months or more has increased, but very slightly. By 2014 the share in the total number of mortgages is 0.8 percent, see Figure 14. Fitch expects a further increase in arrears in 2014. The number of one-month arrears is twice as high (1.6 percent by 2014) as the number of three-month plus arrears: half of the problems are solved at an early stage. A lot of the arrears as shown in the BKR-statistics appear to be short-lived.

Banks play an active role in solving payment problems, usually via loan modifications. Banks also provide budget counselling for customers, aimed at balancing income and costs. Often, such assistance can avert a default. The Dutch legal framework governing mortgages (see also Chapter 5), and the efforts of the banks in 'servicing' households with defaults, both contribute to early stage problem solving.

Figure 15: Foreclosures



Source: OTB (2014), based on Kadaster

2013* three quarters

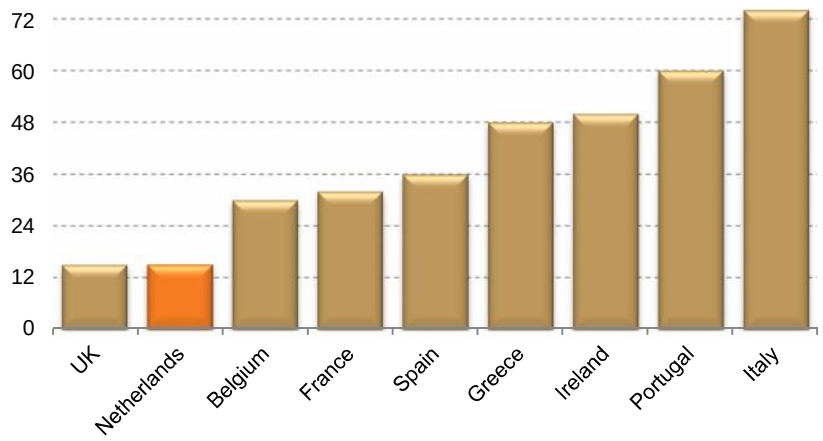
Voluntary private sales are more common than foreclosures. If payment problems occur, and these problems cannot be solved in a regular manner, a voluntary sale usually leads to a better sales value than foreclosure. The annual number of foreclosures therefore is low. It fluctuates a around 0.06 percent of the total number of mortgages. An increase occurred in 2011, but numbers have fallen since then. As a result, banks' losses have been modest over the past years.

Recovery

The Dutch mortgage market is characterized by a fast liquidation and collection process. A typical unwinding process takes about fifteen months, according to Fitch (2013), see Figure 16. This is comparable to the UK, but significantly faster

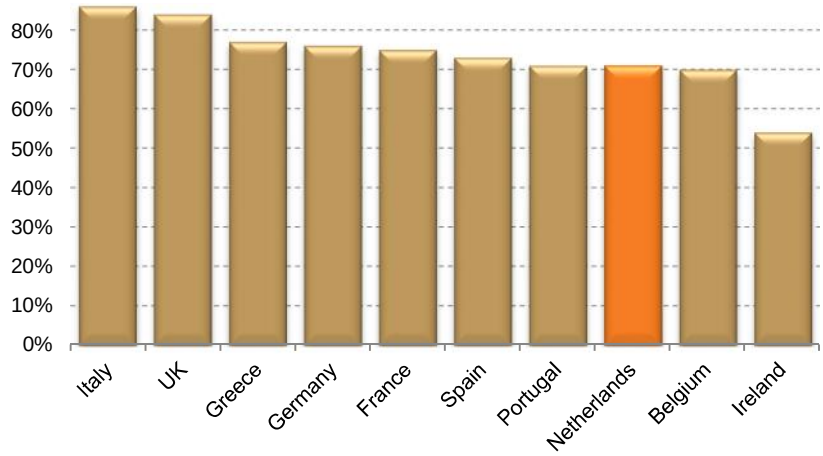
than in other European countries. The strong legal position of lenders (see Chapter 5), combined with an efficient recovery process, helps lenders to attain recovery rates in line with other European countries, see Figure 17.[10]

Figure 16: Expected recovery period (in months) by country



Source: Fitch (2013)

Figure 17: Recovery rate expectations (for RMBS) by country



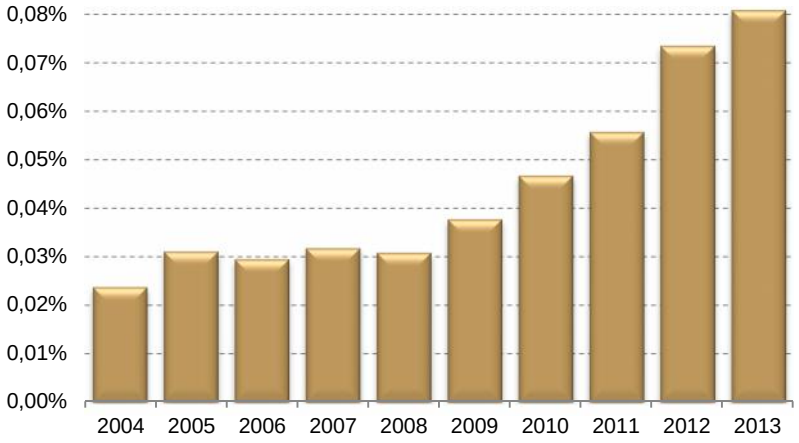
Source: Fitch (2013)

[10] The recovery rate is defined as the average share of the loan that is recovered, if a loss has to be taken. It is equal to one minus the 'loss given loss' rate.

Losses

Data provided by the leading Dutch mortgage lenders, based on their entire portfolios, show a similar trend (Figure 18). Loss rates have increased from a level of 0.03 percent in 2008 (before the crisis), to 0.08 percent in 2013. Although the rate of increase is large, the absolute level of losses remains very low.

Figure 18: Losses taken on mortgages by Dutch banks



Source: main Dutch mortgage lenders (ABN AMRO, ING, NIBC, Rabobank, SNS), calculations by Periscoop Consult [Figure 18 is identical to Figure 4]

A real life stress test

During the period 2008–2013 the Dutch mortgage market was subject to a severe real-life stress test. Faced with the worst financial crisis since 1929, the Dutch housing market was confronted with the following real-life stress test scenario:

- a GDP decrease of 3.2 percent;
- an unemployment increase from 3.8 percent in 2008 to 8.5 percent in 2013;
- average housing prices decreased by 21.5 percent from the peak level reached in 2008;
- transactions in the housing market declined by 55 percent from the peak level reached in 2006;
- RMBS and covered bond markets were significantly impacted by a lack of trust in financial markets: liquidity was low, and assumed yields were significantly higher;
- the rules for tax deductibility were amended, resulting in lower affordability for households in the longer term.

Under these circumstances, Dutch mortgages have held up relatively well. Actual losses in the mortgage books of Dutch banks have been easily absorbed by operating income on mortgages.

- Foreclosures increased from around 0.06 percent in 2008 to a peak of 0.08 percent in 2011 and then decreased to around 0.05 percent in 2013;
- actual losses by Dutch banks on their Dutch mortgages increased from 0.03 percent in 2008 to 0.08 percent in 2013;
- the main reasons for write-offs confirm the positive impact of the system of employment protection and unemployment benefits. Divorce is the main driver behind defaults and write-offs in the portfolio, not unemployment.

Signs of recovery are evident in 2014. Export and GDP are on the increase up and the housing market seems to have bottomed out. In some regional markets prices have stopped falling and transaction volume is on the increase. The situation in the labour market remains worrisome, however. Unemployed still increases, and there is an ongoing shift from permanent workers to temporary workers and self-employment.

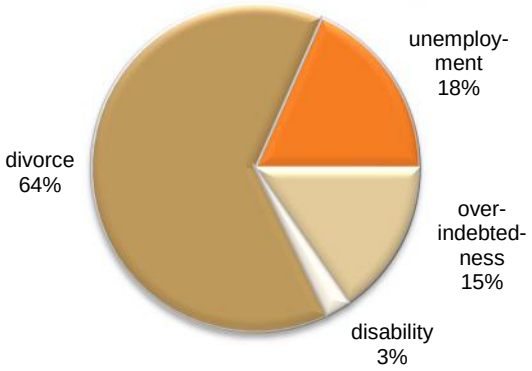
4 Risks in the Dutch mortgage market

Mortgage markets are subject to various kinds of risks: macroeconomic risks, mesoeconomic risks (at the level of mortgage lenders) and country-specific institutional risks. High values of LTV and LTI are not risky in themselves, but are rather indicators for a situation in which problems may be aggravated in the event of adverse economic circumstances.

Macroeconomic risk

Macroeconomic risk relates to the impact of a deteriorating economy on the performance of mortgages. The regular risk affecting mortgage lending, consists of borrowers not being able to pay their monthly interest and meet their loan repayment duties. A high LTV (especially an LTV in excess of hundred percent) leads to a higher risk of borrowers not being able to repay the entire debt when the house is sold – whether forced by the bank or voluntarily. Divorce is by far the most important reason for a fall in income and subsequent defaults and losses, as Figure 19 shows. Unemployment and disability together count for 21 percent. As the number of self-employed increases (see below), entrepreneurs experiencing financial distress may become a more important factor.

Figure 19: Drivers for defaults and losses (2013)



Source: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2014)

Housing price risk

For about thirty percent of Dutch mortgages, the size of the mortgage exceeds the value of the underlying property (DNB, 2014).[11] These households suffer from

[11] This figure is based on an approximated correction for mortgage-related savings (cf. Chapter 3). Without this correction, and including non-bank loans, the percentage of underwater loans amounts to 41 percent (CSB Statline).

negative home equity, their mortgages are 'underwater'. DNB (2014) shows that the underwater problem affects mainly younger households (20-40 years).

For those who are able to pay their interest and instalments, and want to continue living in their house, this situation does not cause problems with their mortgage. Yet these homeowners can only sell their home at a loss, which compels them to make up the deficit from other sources, or else remain with a residual debt after the sale. Banks in the Netherlands are permitted to finance residual debts (on the previous home) as part of a new mortgage with an LTV above the 104 percent maximum, as long as LTI (the ability to pay the mortgage) remains within the regular boundaries. The residual debt has to be repaid within a period of ten years.

Underwater mortgages do not necessarily worsen the banks' balances. Yet the situation causes problems at macro level, since it leads to a (further) slowdown of the housing market. Both economic and psychological factors play a part. Many homeowners are unable to meet the criteria for refinancing their residual debt in a new mortgage. This effectively stops them from selling their home. At least as important is the psychology that comes into play. It is known from behavioural economics that losses hurt more than equal gains satisfy. Even if they are able to take a loss on their home, many people are unwilling to do so. Van Dijk (2013), taking the work of Kahneman and Tversky as a starting point, argues that with an underwater mortgage, it is not the market value that may determine the sellers' reservation price, but rather the mortgage loan. Sellers are not ready to lower their asking price to the market level; as a result they fail to sell their house.

A slowdown of the housing market has negative effects for the entire economy. It hampers the labour market and, due to the so called 'housing wealth effect', it may decrease consumer spending. It also poses an additional risk of house prices falling further, thus impeding the mortgage market. Moreover, the Dutch government carries the largest part of the residual debt risk (DNB, 2014), with more than half of the underwater mortgages covered by the National Mortgage Guarantee Scheme (NHG, see Chapter 5). According to DNB (2014), it may take at least ten years before the underwater situation can be resolved.

Risk of a steep rise in interest rates

New borrowers assess the affordability of loans by the interest rate charged by the lender. Mortgage interest rates in Europe are currently at a historically low level. In the years to come, interest rates may rise again, with increasing risks for

borrowers and for lenders. For Dutch borrowers, this risk is reduced by the tax deductibility of mortgage interest. In effect homeowners carry only between fifty and sixty percent of the interest rate increase. Over seventy percent of Dutch mortgage loans have a fixed-interest rate of five years or more (Source: DNB). Yet the European Central Bank (ECB, 2013) ranks the Netherlands' sensitivity to interest rate shocks as above average, due to «a high proportion of adjustable interest rate mortgages», and the relative high borrowings by Dutch households.[12]

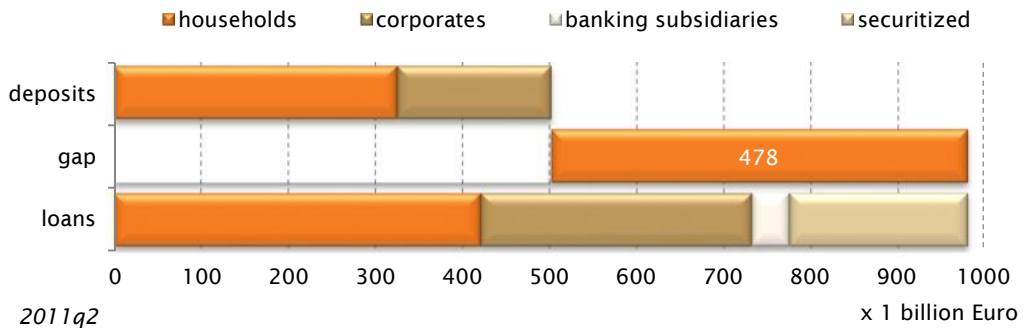
Concentration risk

Dutch banks have an above average exposure to residential real estate risk. Unbalanced asset portfolios make Dutch banks vulnerable in economic volatile circumstances, as stated by the International Monetary Fund (IMF, 2013) and the Dutch Central Bank (DNB, 2014).

Funding risk

Dutch consumers hold the main share of their savings in pension funds. The level of bank deposits is therefore relatively low. Consequently, households' and corporate deposits in the Netherlands do not suffice for the funding of loans provided by Dutch banks. At macro level, the 'deposit gap' amounted to about EUR 480 billion by the end of 2012.

Figure 20: The Dutch funding gap



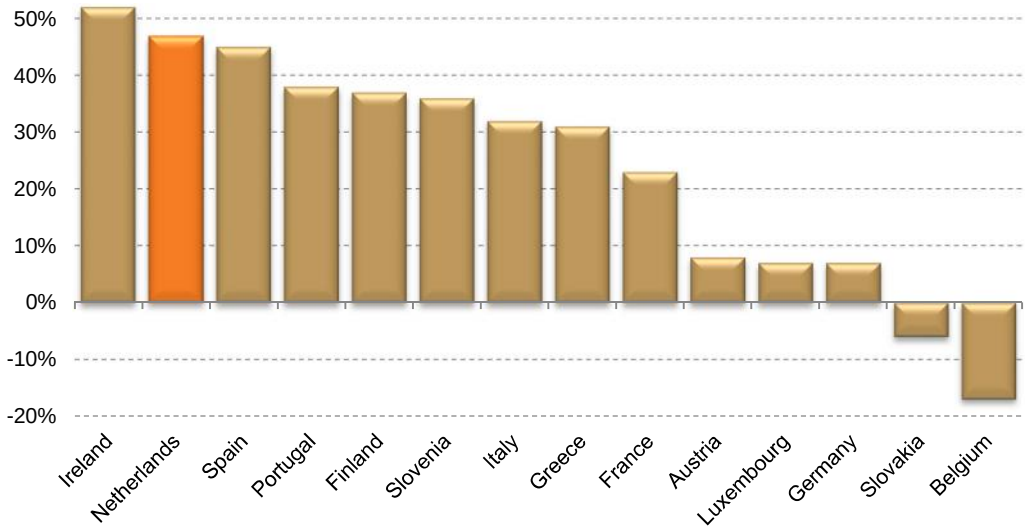
Source: adapted from Dutch Central Bank (2011), p. 28

Figure 21 shows that in relative terms, the Netherlands holds one of the largest deposit gaps in Europe. The deposit gap forces banks to fund themselves on the capital market, as pointed out by the *Commissie Structuur Nederlandse Banken* (2013). Dutch banks have been able to fund themselves successfully, notwithstanding the fact that the international market for RMBS has been difficult in re-

[12] Some countries with a high share of flexible interest mortgages (Denmark, Ireland and the UK), remain outside the scope of the ECB analysis.

cent years. About twenty percent of Dutch mortgages has been securitized (excluding covered bonds). The Dutch Central Bank (DNB, 2014) speaks of a vulnerable situation, but also confirms that access by Dutch banks to capital market finance is improving.

Figure 21: *Share of non-deposit financed loans*



Source: DNB (2012)

Regulatory risk

While tax deductibility supports homeownership and affordability, it also has exposed the Dutch mortgage market to the risk of changes in the tax regime. Dutch mortgage borrowers make optimal use of tax deductibility, see also Chapter 2. This reliance on government subsidies comes at a risk. Tax subsidies and regulation may change. The more banks and households base their long-term commitments on existing regulations, the more sensitive the Dutch mortgage market becomes to policy changes.

Uncertainty about reforms and regulation changes has immediate negative effects. Uncertainty about government policy regarding transfer tax and the deductibility of mortgage interest contributed heavily to the standstill of the Dutch housing market in the period 2009–2011. The change in the tax regime as outlined in Chapter 3 (a curtailing of tax deductibility) was supported by a broad spectrum of political parties and by the Dutch Central Bank. The risk of further shocks due to tax policy changes has therefore been substantially reduced.

Institutional risk

Transformations in the labour market carry a specific challenge for the Dutch mortgage market, and for the Dutch welfare system in general. The number of temporary workers, self-employed and business owners in the Netherlands is rapidly increasing. In 2013, together these groups made up thirty percent of the working population in the Netherlands (source: *StatLine*). Temporary workers and self-employed add flexibility to the labour market, but also contribute to erosion of the Dutch welfare system. They do not participate in pension funds, they do not enjoy employment protection, and neither do they qualify for unemployment benefits.

The impact of this labour market transformation on mortgage risk is twofold. From a macro perspective, a more flexible market should lead to lower unemployment, and thus to fewer mortgage payment problems. At an individual level, self-employed are strongly exposed to economic volatility. The decline of income in the event of bankruptcy or invalidity will be more severe than for regular employees. Moody's (2014) calculates arrear rates amongst self-employed borrowers to be 1.9 times higher than amongst employed borrowers, with foreclosure rates being 1.8 times higher. Yet, again according to Moody's, the impact on lenders' risk is limited, because self-employed have loans with lower loan-to-foreclosure values.

Lenders in the Netherlands also impose higher acceptance criteria on mortgage underwriting for self-employed and temporary workers. They need to show a track record of three years income generation capability in order to qualify for a mortgage loan.

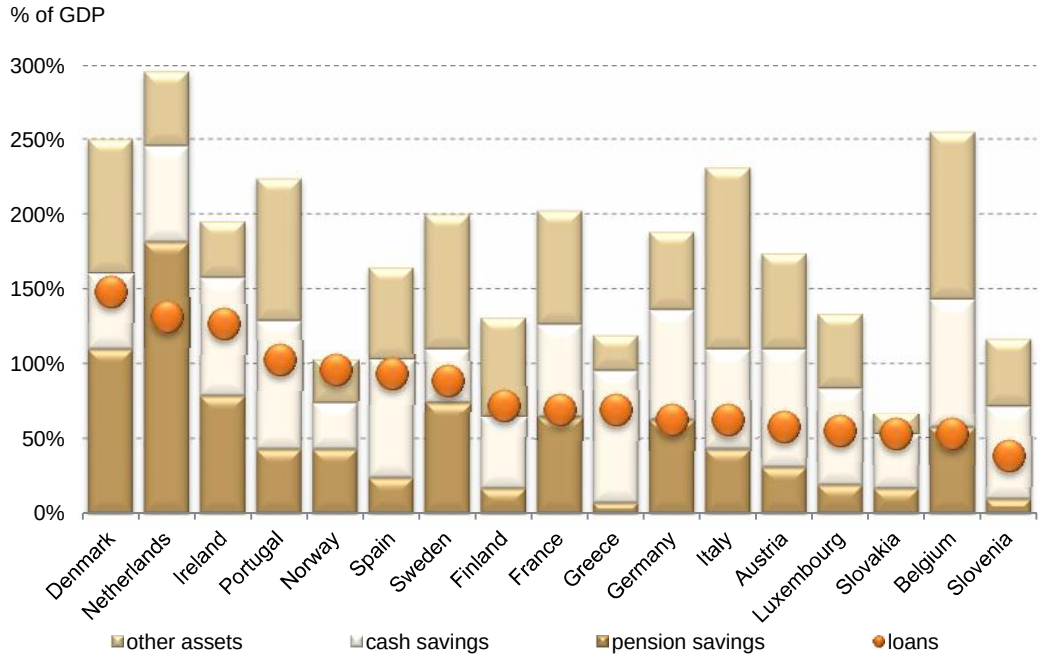
5 Risk mitigating factors

The Dutch mortgage market has held up relatively well during the crisis, despite its high LTV- and LTI-ratios. This Chapter describes a number of specific factors which contribute to the strong performance of the Dutch mortgage market.

Pension savings

The Netherlands has one of the most elaborate pension systems in the world. The first tier is a basic state pension (called AOW), to which everyone aged 65 and older is entitled. The amount of the AOW depends on the number of years the person has resided in his or her adult life in the Netherlands.[13] This tier is financed by the taxpayer on a 'pay as you go' basis.

Figure 22: Financial assets and borrowings of households euro-zone



Source: adapted from Commissie Structuur Nederlandse Banken (2013)

The second tier consists of savings in pension funds. Employees, both in the private and in the public sector, participate in collective pension funds. Contributions are proportional to income and are paid in part by employers. In 2012, the total assets in pension funds by Dutch households amounts to 189 percent of

[13] For those with a denizenship shorter than forty years, the pension is proportionally cut. Over the next seven years, pension age will be gradually raised from 65 to 67.

GDP, see Figure 22. The third tier consists of tax-efficient individual pension saving plans. These plans are attractive for business owners, who do not participate in collective pension funds, and for employees wishing to make voluntary extra savings. Like the second tier, savings in the third tier are not accessible for purposes other than pension payments.[14]

Because of the savings in the second and the third tier, the Netherlands has the largest *Pension Assets Per Capita* ratio worldwide. As a result of this, in an international comparison of *Debt to Asset Value* ratios, Dutch households rate among the lowest when comparing the level of indebtedness to total assets.

The Dutch pension system serves to reduce mortgages risks considerably. Dutch homeowners do not depend on the value of their homes for their old-age income. Thanks to their pension savings, they can afford to pay housing costs (e.g. interest and instalments) even after retirement.

Social security

The Dutch social security system mitigates the consequences of income decline for employees who lose their job. Permanent employees in the Netherlands enjoy strong job protection. If workers with a permanent contract are dismissed, they normally receive a severance payment of up to six months' salary, depending on the duration of their employment contract. Those who lose their job, are entitled to unemployment benefits, calculated at seventy percent of the former income (capped at about 150 percent of median income), for a period from 3 up to 38 months, depending on their work record.

Severance pay and unemployment benefits assist people through a period between jobs and helps them to meet their financial obligations. This also gives them time to sell their house voluntarily, and find cheaper housing if they do not find work. In this manner, the social security system lowers the risk of mortgage borrowers being unable to meet their mortgage commitments.

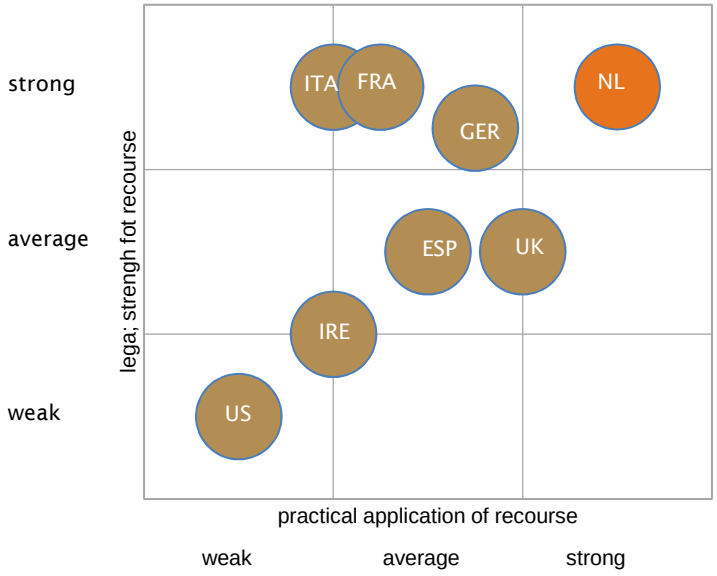
Legal environment

The Dutch have an excellent reputation for paying off their debts. Consistent payment behaviour is enhanced by the Dutch legal system. Under Dutch civil law, mortgage lenders enjoy a strong protection in relation to borrowers. Moody's

[14] The Dutch Government announced recently that it considers allowing borrowers to use pension savings for paying their mortgage debts.

(2013) ranks the Netherlands high in terms of the legal right of recourse and in the practice of enforcement, see Figure 23.

Figure 23: Recourse ranking



Source: adapted from Moody's (2013)

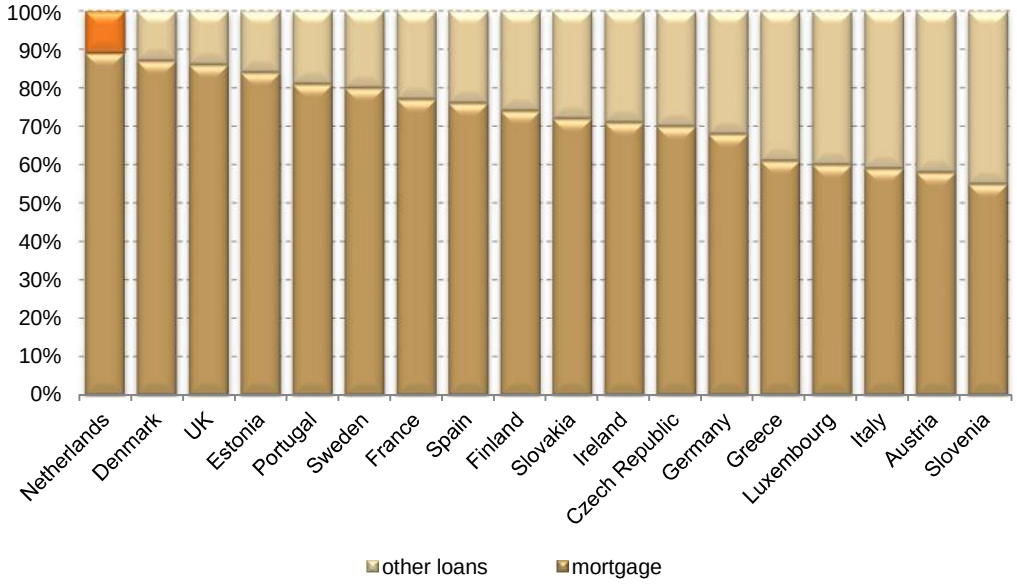
In the event the mortgage debt exceeds the sale proceeds of the house, the lender retains the right to seek recourse against the debtor. Handing in the keys to the house in exchange for full discharge of liability, as in some other countries, is not an option. Banks have full recourse to all the assets and income of borrowers who default on their mortgage loan. The personal insolvency law in the Netherlands is strict and austere. Since the banks' right of recourse generally does not expire, borrowers have a strong incentive to meet their financial obligations towards the mortgage lender.

In the rare case of a foreclosure, the actual process in the Netherlands can be completed swiftly. Lenders do not need court approval to effect a dispossession. They decide on a case-by-case basis whether to sell the house by auction (fast, but possibly at a lower than anticipated price) or on the regular market, which takes more time, but offers better chances of realizing a good price.

Central administration of all consumer loans

Dutch households may have a high LTI-ratio (at origination) on their mortgages, yet high mortgage loans go together with low consumer loans. Some 89 percent of total households' loans is in the form of a mortgage (Figure 24), and thus backed by collateral. This is the highest share in Europe.

Figure 24: Share of mortgage loans in all loans to households



Source: European Banking Federation (2012)

All households' debts are registered by the *Bureau Krediet Registratie* (Credit Registration Office, BKR). This Office registers mortgage loans and other loans, such as consumer loans and credit card loans, as well as payment arrears on these loans. Arrears information is shared with lenders. An arrear notification with the BKR counts as a serious signal. Notifications remain in the system for five years. If the number of notification exceeds a threshold, borrowers are prevented from taking out commercial loans.

This wide-ranging approach enables mortgage lenders to assess –at the moment of origination– the customers' *Debt-to-Income* (DTI) ratios, instead of the LTI ratio, which is limited to mortgage loans. Banks take DTI into consideration in all mortgage applications. The thorough assessment procedure has kept the portfolios of Dutch mortgage lenders relatively free from bad risks.

The National Mortgage Guarantee Scheme (NHG)

More than twenty-five percent of Dutch mortgages and over seventy percent of mortgage loans granted in 2013, were closed under a guarantee scheme, managed by the *Waarborgfonds Eigen Woningen* (WEW).[15] This fund, backed by the Dutch government, insures the residual debt following a foreclosure sale. As

[15] This scheme was originally aimed at providing starters and lower income households access to the housing market. In 2011 the price ceiling for participation in the scheme was raised as a stimulus for the housing market. The ceiling was lowered again in 2014, but remains at a level high enough to accommodate about half of all new mortgages.

from 2014, the first ten percent first loss risk is borne by the bank. In order to get a claim approved, both the bank and the borrower have to demonstrate that all possible steps have been taken to prevent foreclosure.

Banks benefit from this scheme by being able to claim a significant share of the loss on the mortgage. Customers benefit by a lower interest rate and –provided the claim is granted– by having the banks' right of recourse relinquished after foreclosure. A from 1997, in order to qualify for an NHG guarantee, mortgages may consist of no more than fifty percent of I/O-loans.

Skin in the game

In the Netherlands, the lion's share of mortgage loans remains on the banks' balance sheets. In securitizations and in NHG-backed mortgages, lenders almost always retain the first loss risk. This greatly reduces the risk of moral hazard. Since they cannot shift the full risk to investors, lenders cannot focus on sales volume whilst ignoring risk.

6 Reforms

Recently, the Dutch government embarked on a program of reforms in respect of taxes, social security and pensions. The main aim of these reforms is to retain the amenities of the system, yet in an affordable manner.

As shown in Chapter 5, the Dutch financial and welfare system includes a lot of rules and benefits that are directly or indirectly aimed at mitigating the impact of a fall in income for households, and other risks affecting the mortgage market. Elements of this structure are regarded by many as rigidities, prohibiting especially the labour market and the housing market from working effectively.

As for the mortgage market, the new regulations are aimed at limiting risk, e.g. by encouraging less borrowing and more repayment of mortgage loans. For new mortgage loans, a maximum share of fifty percent 'interest only' is allowed. Tax deductibility is only granted if the entire mortgage is actually paid off through an annuity or a linear scheme. This makes new I/O loans *de facto* infeasible. The amount of the tax subsidy has been cut: the maximum marginal rate at which interest can be deducted, will be gradually decreased from 52 percent in 2013 to 38 percent in 2040, both for incumbent and new mortgages.

LTI and LTV at origination are limited further. In 2014, the maximum allowed LTV is 104 percent. The maximum will be brought down stepwise to hundred percent in 2018.

Mortgage regulation and tax measures have a direct impact on the mortgage market. Other reforms concern the labour market, e.g. a gradual curtailment of job protection, and a limit on severance pay. The pension system is reformed, e.g. pension age is raised from 65 to 67, and there is a shift from DB- to DC-based pension schemes. On the housing market rent controls are liberalised. A major challenge lies in adapting the Dutch welfare system to the increasing number of temporary workers and self-employed.

The reforms are meant to improve the way the labour market and the housing market work. The curtailing of tax deductibility and job security increased the risk in the mortgage market. These additional risks are offset by tighter mortgage rules for new borrowers. However, the most important factor regarding the impact of the reforms on mortgage risk, is the fact that these reforms will be implemented gradually. A long transition period, taking up to 25 years for some elements, will allow the markets to absorb the new rules without too much upset.

7 Conclusion

The Dutch mortgage market is characterized by relatively high LTV and LTI-levels, amongst others caused by a tax subsidy on homeownership. The actual risk for mortgage borrowers and lenders is mitigated by the institutional setting of the market:

- an elaborate pension system;
- a system of job protection and unemployment benefits;
- a strong legal position for lenders;
- a credit history check and affordability check for those applying for a new mortgage; and
- the National Mortgage Guarantee Scheme.

The Dutch banks' mortgage portfolios have held up relatively well during the recent economic crisis. Operating income on mortgages has been sufficient to cover the losses. Foreclosures and losses remain, despite a significant increase, at a relatively low level compared to other countries.

A program of reforms has been initiated. Some of these have a negative impact on affordability for homeowners and on the mortgage risks for banks. However, these measures are to be implemented gradually over a long period of time and in parallel with the reduction of LTVs. This allows the market to absorb the measures without too much upset.

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