Risk mitigation on housing and mortgage markets across Europe

A tale of contrast and hope

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Abstract - Homeownership rates have risen all over Europe during the last decades. The result of a symbiosis between changing preferences of individual households and a government that, for divers’ political and economical reasons, promoted self-reliance on housing which in many cases matured in promoting homeownership.

This paper comprises an extensive analysis of risks of mortgage borrowing by homeowners in the Netherlands and the UK. Here the riskiness of the environment in which households has to decide, the counterbalancing power of the institutional context, and household behaviour is analysed.

The results show that the riskiness of mortgage borrowing in the UK is significantly higher than in the Netherlands. We show that dominance of the institutional context of the Netherlands is the main contributor to these results.

Keywords: homeownership, mortgage markets, globalisation, risk mitigation
Introduction

Across the Globe, the consequences of the financial crisis are felt. Firstly, and most deeply by the financial sector, but increasingly other sectors of the economy are drowned in the consequences; secondly, consumer confidence is in most countries turning to an all-time low, hampering consumption and this way adding an extra impetus for a possible recession. However, while the credit crisis started in the US - many pointing to exuberant and (with hindsight) irresponsible mortgage lending to high-risk consumers as the prime cause - across continental Europe the impact of the credit crisis on homeownership markets and (national) mortgage markets is less profound. So far, consumers are still able to pay monthly mortgage costs, while banks are still able to fund their mortgage operations. There is some evidence of restraints on mortgage lending - i.e. banks are more cautious, for instance demanding higher deposits - but these restrictions stems more from a general distrust in the economy than from a negative assessment of (national) housing markets. Recent studies by, for instance, the International Monetary Fund\(^1\), are flawed and are generally not supported by national experts of housing markets. The reasons why the linkage between mortgage and housing markets in the US is so unlike that in continental Europe is partly due to divergent funding mechanisms, to a dissimilar institutional settings and partly, to different behaviour of agents on the market. While the coming ‘stress-test’ of the market may prove otherwise, this might also demonstrates that both institutions - regulations and supervision - and general credit practice on mortgage markets across Europe are superior and more robust than across the Atlantic (North Sea).

Globalisation and the adoption of the neo-liberal view on ‘free-market capitalism’ were important drivers of financial liberalisation on both sides of the Atlantic. The privatisation of housing market solutions (i.e. more homeownership), an economic boom and low interest rates fuelled the demand for mortgages which mortgages lenders were more than happy to provide. Over the years, outstanding mortgages tripled and both mortgage product innovations grew, while the accessibility of mortgage markets for (prospective) homeowners significantly enhanced. Meanwhile, increased competition contributed to lower prices (interest) of mortgages. However, while these benefits were substantially, there was a lack of transparency in the market and of individual products, while information asymmetries fuelled uneasiness on the relation between lender and consumer. In this process, (prospective) individual homeowners seem to be loosing ground.

To date, we are more preoccupied than ever, with risk management (risk avoidance) at an individual level and risk redistribution at a societal level (Beck, 1992\(^2\)). In that respect, contemporary developments on national mortgage markets were counter-cyclic, inducing governments - first on a national level, increasingly on a European level, and indeed, even on a global scale (e.g. Basel accords) - to balance these inefficiencies. Though the globalization limited the degrees of freedom for individual countries to

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formulate their own policies, the different outcomes on the market suggest that, here as well, countries are still able to find their own route (Weiss³).

In this paper, I will discuss contemporary developments in the UK and the Netherlands with respect to their responses to market inefficiencies; and their retort to the demands by the general public to mitigate the risks for individual homeowners. With this understanding, policymakers and private actors alike will have better insights on how to alter the existing set of institutions to cope with the rapidly changing environment and (prospective) homeowners will remain more at ease with their housing situation and financial commitments.

This paper is structured as follows. In the next section, I will elaborate more on the underlying global trends on the market and discuss their (possible) impact on national housing and mortgage markets; this section is proceed by a more theoretical discussion on the potential exit-routes. Next, follows an analysis of the different institutional settings in which households has to do their financial decision-making. Here the emphasis rest on contrasting the Netherlands and the UK (with some sidesteps to the US and Germany). The results of more formal approach to quantify the riskiness of mortgage borrowing (from a borrowers’ viewpoint) will be presented and discussed in the subsequent section. This paper will end with a more tentative discussion on the sustainability of the different modes of behavioural responses to the credit crisis by national governments.

Global trends and local change

The sheer volume of cross-border flows, of products, people, capital and, above all, of money is impossible to dispute. However, whether this globalization is really ‘new’ phenomenon in history or just a regularly recurring one is debatable. History shows that periods of open trade are interspersed with periods in which international trade is limited; today’s’ international trade flows (measured in percentage of GDP) are comparable as they were at the beginning of the 20e century. In fact, over the last decades, there is actually evidence of weakening of international trade flows⁴. It seems hard to disagree with the conclusion reached by Hirst and Thompson⁵ that ‘the present period is by no means unprecedented’.

However, there is one major exception: the level of international capital flows appears to have oscillated historically. Particularly in the 1990s, industrial economies have had an enormous bust in financial openness⁶. The main driver of this process was the financial liberalization of credit markets, which started

³ Weiss, L, 1997, Globalization and the myth of the powerless state, New Left Review (1/225)
⁴ The relative size of international trade flows in percentages of GDP was in the 1980s x percent, increased to y percent in the 1990s, and further decreased to z percent in the 21e century (Thomson DataStream). As way of illustration: in 1913, this percentage amounted to 16 percent.
⁵ Hirst, P. and G. Thompson, 1996, Globalization in question, CUP: Cambridge.
⁶ Financial openness is measured in two distinct ways: (1) a measure of de jure restrictions on capital flows and (2) de facto realization of capital flows. While the first indicator provides insight in actual capital controls, the second indicator captures the intensity of these controls (measured as the gross stock of foreign assets and liabilities to
in the 1980s (first in Anglo-Saxon countries, later followed by other European countries). Over this period, international capital flows increased 10-fold (from 15 percent of combined GDP in 1970 to 151 percent).

Yet, another important driver of globalisation is that the present period of more integrated economic cooperation coincides with an ideological transformation: i.e. the embracement of the neo-liberal ideal of the ‘free market’. The concept of the ‘free market’ relates to the primacy of economic growth, the importance of free trade to stimulate growth, individual choice, the reduction of government regulation and the advocacy of an evolutionary model of social development (Steger’). While many regard the ‘free market’ concept as a useful, if not simplistic, model in developing economic policies to attain social goals, neo-liberals regard the ‘free market’ as a normative rather than a descriptive concept. They claim that policies which deviate from the ideal free market solution are ‘wrong’ even if they are believed to have some immediate social benefit.

This ideology, in conjunction with increased (financial) globalisation may easily lead to the notion that the best response, to maintain both economic growth and employment, is the withdrawal of the state (or alternatively, minimizing the role of the state). The consequences of this model of economic and social development seem to be quite visible: a continuous increase in cross-country competition and down-grading fiscal and social policy. However, as we will discuss shortly, states are not at all powerless, i.e. the policy changes are not one-directional as propagates dictate; as we can readily see by comparing for instance the US on one hand and continental Europe on the other.

*How do these trends impact on local (national) housing and mortgage markets?* Since the early post-war years, there has been a gradual shift away from permanent, secure jobs to more atypical or precarious jobs. Indeed, this process has been accelerated in recent years, as this was seen, by many governments, as the best response to increased global competition. This had major implications for the social security systems in Europe as well, since its sustainability in times of economic decline could not be guaranteed. The functioning of the labour market and the social security system are, however, critical for homeownership, and increasing European cooperation and globalisation heavily influence both. I.e. homeownership is inseparable from a minimum level of income security (Ford et al.): the purchase of a home is by far the greatest financial commitment that most households ever acquire, while the monthly mortgage payments consume a major part of their net income. To many households, their home is the largest, if not the only, capital asset they possess. Deregulation of the national labour market and changes to the social security system have, however, weakened the links in the traditional triangle of homeownership, labour markets and social security systems. As a result, homeownership seems to be creating more risks for individual

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8 See Weiss, note 3.
homeowners and society at large (Doling and Ford\textsuperscript{10}).

Until recently, it seems that financial innovations on the mortgage market - in combination with high economic growth - , was able to offset these new-fangled shortcomings. As discussed, mortgage market are nowadays far more efficient, reaching more households and offering them better structured, and cheaper, mortgages\textsuperscript{11}. Though it is fair to say that both timing and depth of these innovations did differentiate by country; here the Netherlands and the UK took the lead, a some Southern European countries trailing (way) behind\textsuperscript{12}. However, to date, the discussion is whether or not we rightfully believed these innovations to be an adequate counterweight for the rapidly changing environment.

However, this globalization and finalization process seems to contradict with another post-modern pursuit. It was Ulrich Beck\textsuperscript{13} who, at the beginning of 1990s \textit{in extenso} pointed out that Western society - in which the care of the daily existence is secured for everyone - is nowadays preoccupied with the distribution of risks (external effects) of production and consumption between agents. The risk society thesis claims that modern society entails greater uncertainty, more flexibility, and change in social and economic relationships, with all the negative consequences for the individual and society.

In that respect, contemporary developments on national mortgage markets were counter-cyclic. Research showed that while many did appreciate the possibilities offered, others feel much more apprehensive towards the necessity to take responsibility. I.e. the search and information costs are relatively high and the skills and willingness of individuals to master them is rather constrained. After all, individual decision-making with respect to a mortgage requires not only knowledge of the costs and associated risks, but also, knowledge and skills to convert these insights into opportunities and choices. On one hand, the understanding of the uncertainties involved and assessing them accurately is a necessity well beyond the potential for many\textsuperscript{14}. On the other, it is no longer realistic in our complex modern society to expect each individual to have adequate knowledge of every kind of risk, let alone how to address them; then reliance on tradition, family “advice”, and the opinions of “experts” - often intermediaries with their own interests to serve - is frequently the chosen way out.

What individuals identify as risks is influenced by complex set of factors; society has its own views on risks. The creation of these views stems from an interaction between individual perceptions and visions of the political, scientific, socio-cultural elite. Which route is dominant, is slightly different on time and place, but generally, it seems more like a top-down process: it is the institutional and political context as well as the (dominant) ideology which play a determining role in defining what, at any time, is regarded


\textsuperscript{11} Though the concept of efficiency is multi-interpretable, here it refers to the fact that modern-styled mortgage have repayment schedules that better mirrors (expected) household income streams over the life-cycle.

\textsuperscript{12} See for instance, the completeness-index as discussed in: Mercer Oliver Wyman, 2003, Study on the financial integration of European mortgage markets, EMF: Brussels.

\textsuperscript{13} See Beck, \textit{note 2}.

as a risk in society (Douglas and Wildavsky\textsuperscript{15}). So, the discourse in a country is mobilized within a context of institutional arrangements; but at the same time, they help to structure and restructure it by creating particular understandings of meaning. Alternatively, in the best Foucaultian traditions\textsuperscript{16} this process on deciding what the risks are, is merely "one of the heterogeneous governmental strategies of disciplinary power by which populations and individuals are monitored and managed so as to best meet the goals of democratic humanism."; they see the process of (social) risk definition as an important instrument of the elite to push society in certain direction (top-down route).

Though uncertainties facing homeowners are quite similar across Europe, (prospective) homeowners may exhibit a view towards these uncertainties which does not run parallel. I.e. the awareness and acknowledgement of these uncertainties and the implicit understanding of how these uncertainties can sway on the household, differs. Implicitly it is assumed that not only individuals but also on a societal level the underlying risk attitudes of households might differ. The risk attitude of the more liberal Anglo-Saxon society (supposed to be ‘risk-taking’) is contrasted with the risk attitude of the continental welfare states (supposed to be ‘risk-averse’). However, a recent study by Neuteboom\textsuperscript{17} showed that in a cross-country framework - notwithstanding differences in mortgage take-up - household do act rationally, \textit{i.e.} homogeneous groups of households have remarkable similar risk attitudes (when controlled for differences in the institutional setting and structure of national mortgage markets).

In conclusion, society, the state and its inhabitants, are confronted with two seemingly contradictory developments: more individual and system risks caused by the privatization of housing market solutions and a pressing need to redistribute risks amongst the different agents on the market. The task for both individual households and society is to find a mutual balance. Of course, this question has also a temporal dimension; \textit{i.e.} the paradigm of the ‘free market’ those not rule out short-term anomalies; however, it is argued that in the long run, society is better off when gearing policy aims toward that principle. Evidently, individual households are not always driven by long-term benefits nor are they likely to put aside personal interests in favour of societal welfare. Then, the outcome of the discourse in a specific country concerning the balance between the individual and societal interest, and between short-term and long-term, will not yield necessarily in one, common, approach. As Weiss\textsuperscript{18} has put it:

\textsuperscript{18} See Weiss, 1997, page 26. This weak globalization hypothesis is a rejection of structural determinism; just an acknowledgement that there remains room to manoeuvre by nation-states.
"Convergence towards a neo-liberal model of political economy is highly improbable. This is not simply because economic 'globalization' is rather more limited and subject to counter-tendencies than many accounts would suggest. It is also because nation-states themselves exhibit great adaptability and variety - both in their responses to change and in their capacity to mediate and manage international and domestic linkages, in particular the government-business relationship."

An illustrative example of this account - here, specifically applied to the institutional environment in which households has to do their financial decision-making - will be discussed in the next section.

**Opposing approaches**

Across Europe, the Dutch response, to globalization and the call for risk avoidance, is quite distinct from the UK conduct (while both countries may be superseding by respectively Germany and the US). Here in this section, I intend to contrast the scale of riskiness of the environment in which homeowners has to operate; *i.e.* the extent to which individual households are confronted with the at times 'bleak wind' of globalization and the - either private or public - arrangements homeowners can rely on to be protected against it. These cases studies shows new light on the governments’ impact on national housing and mortgage markets and prove that still they are not powerless nor as negative as sometimes suggested by ‘free market’ adepts.\(^\text{19}\)

The Netherlands and the UK are markedly different welfare states, both in terms of regime type and in terms of the varying degree of state responsibility for income and housing. While, until very recently, in the UK the legitimacy and viability of state provided social protection measures have come under increasing pressure by the broader public, Dutch households valued their welfare state more profoundly. One of the main reasons is that - since the early 1980s, starting off with Mrs. Thatcher - the UK government has indiscriminately adapted the free market principles; and after decade’s, individuals seems to have taken over the role in pursuing the liberal agenda.\(^\text{20}\) Dutch government was less anxious to follow the free market principles, certainly not unconditionally. In this respect, homeownership appears to be a natural gateway. In the UK, some even claim that homeownership - especially the housing equity embodied in it - might be a good alternative state welfare provision.\(^\text{21}\) Wright or wrong, this view on the role of the state and the individual does shape both social security systems and the attitude towards the welfare state in general.

\(^\text{19}\) Of course, this is not say that the state - in today’s’ modern democratic societies - is ever in total control.

\(^\text{20}\) Over the past 15 years, the UK model offered, for instance, higher economic growth and less unemployment than in many continental countries.


\(^\text{22}\) See, for a more elaborated discussion of the so-called asset-based welfare state, Sherraden, M., 2003, Assets and the social investment state, in W. Paxton (eds.) Equal shares: Building a progressive and coherent asset based welfare policy, IPPR: London.
 homeowner and risks. In contrast, Dutch government plays, still, a more active role on the housing market, is more paternalistic as the ‘free market’ protagonist may pronounce\textsuperscript{23}.

First, before going in more depth on the institutional context, I will briefly discuss the profile of homeowners and the structure of the mortgage market in both countries (see Table 1 for some ‘stimulating’ data).

\begin{table}[h]
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\textbf{Within the Netherlands, the profile of homeowners (share: 56 percent) is rather atypical; i.e. there is a form of division of citizenship, in which households with high income and/or with high prospects (education) are on the homeownership market (and vice versa). Over the years, households had to spend a higher proportion of their net income on housing; net household income growth could not level out the increase in housing costs, fuelled by a tripling of house prices. In contrast, UK homeowners (share: 68 percent) are less uncharacteristic, i.e. they resemble in income, education etc. more the national average. This result is, of course, in line with the existing ideology in the UK. Over the years, more low-income households were able to enter the homeownership market, notwithstanding the fact that they could not rely on much financial support.}
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\textbf{Next, the structure of both mortgage markets is relatively comparable. Both markets are considered as the most matured in Europe, in terms of product variation and borrowers’ accessibility\textsuperscript{24}. Given the institutional diversity and preferences of households, the outcome in terms of mortgage take-up is substantially different; however, MOW\textsuperscript{25} concluded that}
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\end{tabular}
\caption{Table 1}
\end{table}

\textquotedblleft… we observe that sub-prime and non-conforming lending (where there are significant differences in price to account for differing risks) is only significant in the UK with all other markets having only an emerging or non-existent high risk lending market\textquotedblright.

Though, market concentration is relative high, competition is fierce and profitability of mortgage lending is under increased pressure. Finally, for years the funding of mortgage lending was in both countries based on deposits. The last decade, lenders in the UK, increasingly financed their mortgage operation with residential mortgage backed securities; a shift that is expected to be followed by lenders in other

\textsuperscript{23} One of the greater ‘achievements’ is, of course, the upholding of large social rental sector that is competitive, both in terms of quality and price; offering low-income households an adequate alternative to subprime mortgages.

\textsuperscript{24} See, for instance Mercer Oliver Wyman, \textit{note 12}; European Commission, 2007, Mortgage credit in the EU (Green paper), EC: Brussels.

\textsuperscript{25} See, Mercer Oliver Wyman, \textit{ibid}, page 38.
countries (Basel II, actually, favours this funding principle). However, the credit crisis does make this option far less attractive; i.e. a large part of the problem of the credit crisis lies in the destabilizing working of the secondary mortgage markets.

So far, the analysis did not reveal significant differences in either the profile of homeowners or the structure of the mortgage market. However, the riskiness of the environment in which both individual households and lenders have to reside is less comparable. The adaptation of the ‘free market’ concept to the limit, as done in the UK, has made labour market much more flexible and social safety net less procured; leaving households with less secured future income streams than households in, for instance, the Netherlands.

On a whole, households’ income has increased over the years in both countries, but the volatility is much higher in the UK than in the Netherlands. These results reflect, of course, a different starting point: in the Netherlands, fewer households have a precarious job and even when things turn for the worse, social safety nets are more generous. Though, it is fair to say that, over the years, differences between both countries did grow fainter; i.e. the Netherlands did adopt - not always wholeheartedly - the neo-liberal agenda and has gradually eased up labour markets and restructured the social security system in terms of both eligibility and generosity.

Besides this alternative starting point facing Dutch and UK homeowners, the public and private arrangements they can rely on differ; yet, they both - albeit in distinct conduct - mitigate the risks of homeownership. Here, I will address three, inter tangled, issues:

a. **Systems of housing provision**: In the UK, the state discards nearly all financial support measurements over the years (lastly, in 2001, the mortgage tax relief system was phased out). Of course, government retain a predominant role in, for instance, urban planning and setting minimum standards. UK homeowners have to rely primarily on private alternatives. Mortgage indemnity guarantee (MIG) – routinely prescribed by lenders - guarded individual homeowners against negative equity; while mortgage payment protection plans should prevent (though temporarily) households running into arrears. Flexible mortgage are, in some respect, a market

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26 Over the period 1994 – 2001, net household income grew, annually, in the UK with 0.55 percent (0.16 percent in the Netherlands). However, this result stems from two distinct developments: over the years, for 84 percent of all UK homeowners, their income increased with z percent (variance: z1); while, 16 percent of all households experienced a jump in income of a percent (variance: a1). In the Netherlands, these latter figures were: an increase for c percent of all homeowners with d percent (variance: d1); while, (1-c) percent of all Dutch households experienced a jump in income of d percent (variance: d1). These results follow from the estimation of income model advocate by Dutta, J., J.A. Sefton and M.R. Weale, 2001, Income distribution and income dynamics in the UK, in Journal of Applied Econometrics (16), pp. 599 – 617.

27 Across Europe there is a wide variety of schemes, which are designed to guarantee the affordability and accessibility of homeownership and to limit the accompanying risks. These schemes have been overhauled in most countries in recent decades. Two trends have emerged: a shift from production subsidies to consumption subsidies and a stronger focus on the market (Ball, M. and M. Grilli, 1997, Housing markets and economic convergence in the European union, The Royal Institution of Chartered Surveyors: London).
answer to balance mortgage payments and income over the life-cycle. Compared to the UK, the housing provision system in the Netherlands is far more ‘advanced’. Here the mortgage tax relief (all interest paid at marginal tax rates up to 52 percent, on average 37 percent) is the major provision for homeowners. Next, a well-developed mortgage guarantee system is protecting households from negative equity (when repossessed); since both governments and municipalities back the operation of the Mortgage Guarantee Fund (NHG) this may considered as an example of public/private partnership; moreover, this solution proves to be particularly cheap.28 Besides these general provisions, there are various co-existent schemes for first-time buyers; generally, eligibility depends on both income and age.

b. **Regulation and supervision:** A host of rules and regulations governed mortgage markets in Europe until the mid-1980s and early 1990s (Bakker29). A lot has changed since; financial deregulation, partly ‘forced’ through EU directives, has brought about major changes in the (inter)national mortgage markets. In the UK the deregulation of the financial system started in the early 1980s, followed later by other countries (including the Netherlands). The policy changes incorporated the abolition of interest-rate ceilings and the relaxation of quantitative credit controls and/or contractual restrictions. However, the pendulum might be swinging again, certainly in the Netherlands. Example: from January 2007 onwards, a new form of self-regulation is put into practice (*i.e.* a code of conduct ‘mortgage credit’), stipulating new norms for credit lending.

From the 1990s onward, independent public bodies carried out financial supervision (*e.g.* the FSA in the UK and the AFM in the Netherlands). Supervision of the ‘mortgage industry’ has several distinct features. In both countries, the central banks organize the financial supervision of lenders while the focus of the offices of fair trading is more tailored to market supervision (competition). In terms of lender-consumer relationship, the regulatory regimes are evenly equal. Both the AFM’s and FSA’s approach (the chief regulators in both countries) can be typified as business-of-conduct approach30; *i.e.* they regard the most effective form of regulation as ‘pre-emptive’, in the sense that they seek to ensure that customers are made fully aware of any risk of products in advance of these products being purchased. Equally, they are keen to stress that their approach is not direct product regulation (since the product-market fit is dependable on individual customer needs and position).

Finally, while in 2003, the FSA (!) prohibited cross-selling practice (leading to, for instance, the downturn of the market for MIG’s), in the Netherlands is still not explicitly forbidden. But here as well, the Dutch government relies on self-regulation.

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28 It cost only an up-front fee of 0.4 percent; while lenders are giving homeowners an annual discount on interest rates of ~0.3 percent.


c. Consumer protection: An important benchmark in both countries is the European code of conduct: an agreement between lenders and the European Commission regarding minimum information and ground rules for borrowers. This agreement has since been embedded in the legislative systems of all EU countries. Some countries, including the Netherlands and the UK, have added extra requirements, such as an extensive ‘duty of care’ for lenders, which makes lenders legally accountable for their (predatory) lending practices. Compared to the Netherlands, prepayment penalties are lower and pre-contractual duties of lenders higher in the UK.

Both countries provide general support for needy households through the social security system. When households in the Netherlands experience payment difficulties their best strategy is to sell their house and move to the rental sector where housing allowances are readily available. In the UK, the rental sector is not very competitive and households do better to remain in the owner-occupied sector. The UK government offers financial support (ISMI); however this allowance is available just after nine months. In between, households have to cope themselves or take out mortgage payment protection insurance to bridge the first nine months. Finally, note that across Europe, lenders have the right of recourse following repossession; in practice, there are differences on how stringent this right is executed. However, it is hardly surprising that in countries like the Netherlands and the UK - where the consequences of arrears and repossessions may be fast and severe - the number of households with payment difficulties is consistently lower than in other countries.

The lack of direct government intervention in the UK, however, should not be interpreted as a simple laissez-faire policy. Creating a level playing field between borrowers and lenders is high on the agenda. Consumer protection measurements as discussed above are important as are the efforts to improve financial literacy and capabilities. In the Netherlands and other countries on the continent, however, a more opposing view is shored up. Here, the role of the state is more prominent and (widely) accepted; a view that under the pressure of the credit crisis will become more constructive.

In short, society’s’ view towards the ‘free market’ paradigm and the ‘property owning democracy’ has broad support among UK citizens; while citizens in the Netherlands show far more reserves. What is good or wrong is not a scientific question, but first and foremost a political one. However, science can help to setup a framework to analyze whether the institutions, policies etc. are in line with the stated ambitions/preferences of countries. The next section is devoted to that analysis.

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31 Though this option is promoted by government for at least a decade; however, this insurance is still not very popular in the UK.

32 For instance, in Italy repossessions procedure may take up to five years; see Dol, C. and P. Neuteboom, 2005, Insecurity aspects of homeownership: a cross-country analysis, OTB: Delft for an overview.
Assessing the impact of institutions on the riskiness of homeownership

The profile of homeowners, the structure of national mortgage markets, the riskiness of the environment, the institutional context and, last-but-not-least, attitudes and ideologies, all sway on actual mortgage take-up. Some indicators of mortgage take-up are presented in Table 1. On a macro level, naturally, UK households have more outstanding mortgages than the Dutch have; however outstanding mortgage in relation to GDP is a finer indicator of mortgage take-up. Here the Dutch ‘beats’ the UK. Note that over the period 1994 to 2006, the growth rate in the UK was nevertheless higher (8.8 percent versus 10.4 percent, annually). Mortgage contract specifications are quite dissimilar as well - note for instance the differences in fixed interest period; however, many differences in the institutional context, as discussed above, led naturally to a different optimal mortgage for homeowners. Hence, these different outcomes do not hint to different underlying attitudes of individual homeowners.

Loan-to-value and loan-to-income ratios are significantly higher in the Netherlands than in the UK; of course, these micro differences simply mirror the macro differences discussed above. Yet, the debt-service ratio is, at least in the Netherlands relativity modest (even when one focused on specific household categories); here, the generous financial support by the state contributed to this outcome.

The ability-to-pay theory states that “mortgagers refrain from loan default as long as income flows are sufficient to meet the periodic payment without undue financial burden”\(^{33}\); In other words, people do not end up in arrears voluntarily and intentionally; however, if housing costs are no longer in balance with the monthly income, households are ‘forced’ to default. The crucial factor here is the debt-service ratio. Not unsurprisingly, Dutch households do not show a high level of arrears (and repossession)\(^{34}\). At the same time, households inhibit higher lever of housing satisfaction and confidence than comparable households in the UK. Though, it may be too early to call, it seems the Dutch solution is (far) superior to the UK approach.

Of course, this first impression should be enhanced by a more formal quantification, in order to add additional substance and rigourness to the analysis. Effectively, the riskiness of mortgage borrowing should preferably be broken down in three tranches:

a. **The riskiness of the environment**: this first tranche refers the basis socio-economic context in which households has to do their financial decision-making. As discussed above it refers to divergent issues as the flexibility of labour markets and the level of welfare protection.

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\(^{34}\) Even when controlled for difference in economic conditions, Dutch households show low default and repossession levels. Besides, low initial debt-service ratios, the payment discipline among Dutch households is recognized internationally (and, of course, highly valued by lenders).
b. **The counterbalancing influence of the institutional context**: the second tranche refers to the institutions the government has set up to support homeowners; directly by financial support and more indirectly by supervision, regulation and consumer protection measurements.

c. **The impact of household behaviour**: finally, households can add or eradicate risks by their own decision making.

The resulting riskiness of mortgage borrowing is of prime importance; however, a break-down in the aforementioned three tranches will give additional insight in the partial impact of the institutional context and household behaviour. The riskiness indicator does it all. It is beyond the purpose of this paper to discuss the underlying methodology (in order to give some insights, see Box 1, beneath).

**Box 1 The calculation of the riskiness indicator**

Given the multiple nature of the risks and the dynamics involved, transforming mortgage take-up into the costs and risks of mortgages for owner-occupiers is a complicated affair. In order to cope with that, the riskiness indicator is based on a model in which the determining factors (e.g. income, interest rates, house price and inflation) and the institutional context, the structure of the mortgage market and household characteristics are combined to calculate both the expected costs and associated risks (including default, repossession and negative equity risk). The obvious way - given the long-term volatility of the underlying factors - to accurately estimate these costs and risks (from a households' perspective) is by employing a stochastic model. A stochastic model is a 'forward-looking' analytical method, based on the historical probability distributions of parameters; it is particularly useful for tackling path-dependent or history-dependent problems.

In order to calculate the riskiness indicator a model is set-up to estimate, firstly, the expected costs and risks involved - i.e. the uncertainty of expected costs and default rates - of mortgage take-up. Secondly, the riskiness of the context, the system of housing provision and individual behaviour is disentangled by differentiating the original premises of households and contexts. The calculations are based on a set of households, representing together a paradigmatic case of the 'average' homeowner in each country.


The riskiness indicator shows the extent to which mortgage borrowing might be considered risky, from a households' perspective. The riskiness indicator is scaled from 0 to 1; here a high number reflects less risk and vice versa. Note that a riskiness indicator of less than 0.5 is highly improbable since it would imply...
that downside risks would enumerate up to 17.2 percent annually. In Table 2 the results of the analysis are presented.

Table 2

Given the discussion above, it is not surprisingly that the riskiness of the environment is higher in the UK than in the Netherlands (0.80 versus 0.86). Likewise, the institutional context is more favourable in the Netherlands than across the North Sea. The contributory power of the counterbalancing influence of the institutional context is for Dutch households nearly four times higher than for their UK counterparts (0.43 versus 0.12). And finally, while households’ behaviour in the UK adds to the riskiness of mortgage borrowing, in the Netherlands household are more cautious (+0.28 versus –0.10). The negative sign for UK households suggest that, in 2006, there mindset is even more aligned towards the ‘free market’ principles and homeownership than their government is; i.e. they seem to took over governments’ role in this respect.

In short, these results are in accordance with the results from the more qualitative analysis in the previous section.

Discussion: the route forward

First, let us summarize the main findings so far. Though, the homeownership-dictum is much widely accepted, in the UK (and the US) than in continental Europe (e.g. the Netherlands), it seems that the institutional context - here used in a broad meaning - in the UK is less appropriate in supporting homeownership. Equally, the more qualitative analysis and the result of quantitative approach (i.e. the modelling framework) lead into the same direction.

Therefore, while some claim - in any case, until recently - that UK’s housing and mortgage market are at the end of an evolutionary process, in which both markets are operating efficiently and are superiorly linked; the outcome in terms of satisfying consumer demand, risks and risk distribution and consumer confidence is far from convincing. Not only crude numbers, like the ones stipulated in Table 1, gives rise to serious doubt about the efficiency of the market, but these conclusions were confirmed in the quantitative analysis. It is however, not only the market to blame. Governments’ policies in the UK, in many cases totally absent, have assisted in preserving the unbalance; i.e., these policies do not improve the safetyness of mortgage borrowing. While we may conclude that government’s role is less positive than elsewhere, individual household behaviour of UK households does make things only worse. These statements are not simply to provoke, but it is argued here that society should make sure that its institutional context is in line with the ambitions of its inhabitants. Clearly, in the UK case it is not. The
comparison with the Netherlands shows, beyond any doubt, that government – if willing – can follow another route; the powerless state is indeed a myth. Of course, cross-cultural perceptions differ, and matter, in designing and ideology and context; but that can never be an excuse for not devising a context that is in balance with principles. A comparison between the Netherlands and the UK demonstrates that both the government had to change as well as households. 

There is of course no blue-print to mitigate the riskiness of mortgage borrowing; however, all across Europe there are plenty examples of well-functioned laws and regulation to pick-out. The analysis revealed, merely, the impact (riskiness) of household behaviour. So, prior to give advice - on how, what and when -, we should make sure (further research needed!) whether homeowners actual know what they are choosing and acting on. The criticism on the UK is not to say that in the Netherlands all is fine (though the riskiness of homeownership is significantly less).

Assessing the impact of institutional change on the riskiness of homeownership is not done regularly in practice (besides the obvious ones, like abolishing the mortgage interest tax relief). If any can be learned from this paper is that the impact of (environmental) change on homeownership can be substantial, but also that there are no automatic, let alone normative, answers for challenges facing societies today and tomorrow. However, knowledge of the consequences of institutional change may help policymakers to adjust their initial strategies, for the benefits of all.

Finally, these day no paper on mortgage markets can do without, where do these results point to, in terms of the sustainability of mortgage borrowing (and hence, homeownership) under the presence of the current credit crisis? Well, it obvious that in UK, mortgage borrowing is significantly less safe that in the Netherlands. In fact, riskiness of homeownership is in the UK even higher than in the US. This implies that a weakening of economic conditions (a recession) will have a deeper impact on UK homeowners than in other countries, including the Netherlands. Eventually this will have negative influence on the whole housing market, as one can witness today.
Table 1 Mortgage market outcomes and the context in which households has to decide: homeowners in the Netherlands versus the United Kingdom (1994, 2006)

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Profile of homeowners</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (mean)</td>
<td>years 48.9</td>
<td>years 53.7</td>
<td>years 53.7</td>
<td></td>
</tr>
<tr>
<td>Income (mean)</td>
<td>€39,572</td>
<td>€40,246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of income 1</td>
<td>a/b/c/d 73.8/6.2/3.1/16.9</td>
<td>a/b/c/d 65.3/2.8/2.6/30.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household type 2</td>
<td>a/b/c 19.2/1.6/79.2</td>
<td>a/b/c 24.2/3.1/72.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education 3</td>
<td>a 38.4</td>
<td>a 34.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Structure of mortgage markets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product variations 4</td>
<td>0.81 (2003)</td>
<td>0.77 (2003)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrowers accessibility 4</td>
<td>0.73 (2003)</td>
<td>0.92 (2003)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding 5</td>
<td>96/8/0 (2005)</td>
<td>82/10/8 (2005)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Riskiness of the environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour markets 6</td>
<td>14.8/45.5/2.5 (2002)</td>
<td>6.0/25.8/5.3 (2002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social security 7</td>
<td>71%/5 years (2003)</td>
<td>19%/0.5 years (2003)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional setting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems of housing provisions</td>
<td>Subsidy: 37.8%</td>
<td>Subsidy: 34.3%</td>
<td>Subsidy: 0.4%</td>
<td>Subsidy: --</td>
</tr>
<tr>
<td>Supervision</td>
<td>0 +</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Credit constraints (net DSR, average income)</td>
<td>35%</td>
<td>35%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Financial support when in arrears</td>
<td>None, the rental sector forms a safety net</td>
<td>Yes, the first 8 months private insurance is needed (MPPI); thereafter ISMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repossession practice</td>
<td>~6 months; 3 percent costs; notary</td>
<td>~9 – 12 months; up to 7 percent costs; court decision</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1  Mortgage market outcomes and the context in which households has to decide: homeowners in the Netherlands versus the United Kingdom (1994, 2006)

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage take-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding mortgage</td>
<td>€ 191 billion</td>
<td>€ 525 billion</td>
</tr>
<tr>
<td>Idem, in % of GDP</td>
<td>46.4%</td>
<td>98.4%</td>
</tr>
<tr>
<td>Mortgage debt (mean)</td>
<td>€ 61,612</td>
<td>€142,307</td>
</tr>
<tr>
<td>Type of mortgage 8</td>
<td>S</td>
<td>S/I/IO</td>
</tr>
<tr>
<td>Duration, f.i.p. 9</td>
<td>30/11 years</td>
<td>30/9 years</td>
</tr>
<tr>
<td>Lti, ltv, dsr 10</td>
<td>4.0/91/ c</td>
<td>4.5/96/18</td>
</tr>
<tr>
<td>Mortgage market outcome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defaults % 11</td>
<td>0.9%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Repossessions %</td>
<td>0.05%</td>
<td>0.06%</td>
</tr>
<tr>
<td>Housing satisfaction</td>
<td>n.a.</td>
<td>++</td>
</tr>
<tr>
<td>Consumer confidence</td>
<td>n.a.</td>
<td>++</td>
</tr>
</tbody>
</table>


Note: 1 Percentage salary/self-employed/on benefit/pension; 2 Percentage singles/single-parents/family; 3 Percentage higher education; 4 See MOW (2003) for an explanation of the methodology; 5 Percentage deposits/RMBS/bonds; 6 Percentage flexible/part-time/self-employed; 7 Replacement rate and duration unemployment benefits; 8 Annuity, Investment mortgage, Interest Only; Savings mortgage; 9 Fixed interest rate period; 10 Loan-to-income, loan-to-value, respectively debt-service ratio (recent buyers); 11 Self reported arrears.
**Table 2** The riskiness of the environment, the counterbalancing influence of the institutional context and household behaviour: the Netherlands versus the United Kingdom (2004)

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th></th>
<th>United Kingdom</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Partial</td>
<td>Total</td>
<td>Partial</td>
<td>Total</td>
</tr>
<tr>
<td>Riskiness of the socio-economic environment</td>
<td>0.8619</td>
<td></td>
<td>0.8043</td>
<td></td>
</tr>
<tr>
<td>Impact of the institutional context</td>
<td>0.0436</td>
<td>0.9056</td>
<td>0.0123</td>
<td>0.8166</td>
</tr>
<tr>
<td>Household behaviour 1</td>
<td>0.0286</td>
<td>0.9342</td>
<td>-0.0108</td>
<td>0.8058</td>
</tr>
</tbody>
</table>

*Note*: 1 To put these results in a broader perspective: households’ riskiness ratio in Denmark is estimated at approx. 0.99, in Italy at approx. 0.98 (both 2004), while in the US this indicator is approx. 0.82 (2007).