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Please cite this paper as:

Whitehead, C. and P. Williams (2017), “Changes in the regulation and control of mortgage markets and access to owner-occupation among younger households”, *OECD Social, Employment and Migration Working Papers*, No. 196, OECD Publishing, Paris.
http://dx.doi.org/10.1787/e16ab00e-en

OECD Social, Employment and Migration Working Papers No. 196

Changes in the regulation and control of mortgage markets and access to owner-occupation among younger households

Christine Whitehead, Peter Williams

JEL Classification: E5, G21, J3, R31, R38

OECD

Organisation for Economic Co-operation and Development

DELSA/ELSA/WD/SEM(2017)2

For Official Use **English - Or. English**

10 July 2017

DIRECTORATE FOR EMPLOYMENT, LABOUR AND SOCIAL AFFAIRS
EMPLOYMENT, LABOUR AND SOCIAL AFFAIRS COMMITTEE

Cancels & replaces the same document of 4 July 2017

CHANGES IN THE REGULATION AND CONTROL OF MORTGAGE MARKETS AND ACCESS TO OWNER-OCCUPATION AMONG YOUNGER HOUSEHOLDS, WORKING PAPER No. 196

Christine Whitehead and Peter Williams

JEL Classification: G21; E5; J3; R31; R38

Keywords: Mortgage markets; financial regulation; owner-occupation; younger households; insecure employment.

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JT03417268

OECD SOCIAL, EMPLOYMENT AND MIGRATION WORKING PAPERS

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ACKNOWLEDGEMENTS

This document was produced with the financial assistance of the European Union Programme for Employment and Social Innovation "EaSI" (2014-2020). The opinions expressed and arguments employed herein do not necessarily reflect the official views of the OECD member countries or of the European Union.

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The authors would like to thank the following experts for providing country specific evidence: Alberdi Baralides, Rolf Barlindhaug, Andreja Cirman, Kate Davies, Peter Englund, SÍ Lúðvík Elíasson, Jaime Fonseca, Marietta Haffner, Jozsef Hegedus, Jennifer Johnson and colleagues at EMF, Padraic Kenna, Jacek Laszek, , Martin Lux, Martin North, Steve Pomeroy, Magnus Arni Skúlason, Elisabeth Springler, Petr Sunega, Timo Tahtinen, Sien Winters, Katleen Van den Broeck, Bernard Vorms, Michael Voigtlander, Marta Widlak and Romana Xerez. The authors would also like to thank Jens Lunde for writing the Danish case study, Fanny Blanc for her contributions to the research, and particularly Alice Pittini for her continued support throughout the project - and beyond.

This project is co-funded by
the European Union

SUMMARY

In principle the increased scale of mortgage regulation - defined widely as both specific rules related to how mortgage lenders operate, alongside macro-prudential rules related to financial stability where specific requirements have been imposed on the housing market - since 2008 should make it more difficult for first-time buyers and younger people to access owner-occupation.

Owner-occupation has fallen in a large number of countries – a decline which often started well before 2008 and can be linked to housing affordability and wages as well as the financial crisis.

However the proportion of mortgagors has not fallen so obviously - so some people have been able either to refinance or to enter the market for the first time. Impacts have been unevenly distributed and parental wealth has been an important offsetting factor.

Most of the increases in mortgage regulation are based on macro prudential principles which via Loan-to-Value (LTV) ratios and income-related indicators impact directly on potential purchasers.

Regulation of the relationship between consumer and financial institutions is the subject of the European Union Directive on Mortgage Credit and this is now permeating national regulatory processes – but often simply codifies business practice already put in place by lenders through Conduct of Business rules.

The evidence suggests that so far increasing mortgage regulation in its widest sense has not been the key driver of reductions in first time buyer numbers - rather affordability and job and income insecurity are the starting point for the exclusion of younger households.

The one area where regulation has had some direct impact in terms of access is the growing importance of deposits and associated restrictions on borrowing to provide that deposit. LTVs have declined sometimes based on legal changes, sometimes on guidance and sometimes because of changes in business practice. Borrowing to pay for tax, transactions costs and the deposit is now more difficult. Access to parental wealth, the so called 'Bank of Mum and Dad', has become more important in many countries - note for instance France, the United Kingdom, the United States and Australia. In some cases this is simply a reversal to the norm - as in Portugal, Greece, Spain and countries where mortgage markets are still developing.

However as part of the requirement for a bigger deposit we should not ignore the impact of macro-prudential requirements to stress test a borrower's capacity regarding affordability. A variety of stress measures have been put in place across the different countries but they all have the same effect – you need a bigger income to service the hypothetical rate and if the borrower is already at maximum then the choice is simple – either borrow less (bigger deposit/cheaper home) or do not borrow at all. With interest rates so low across most countries and with the likelihood of rate rises over the next few years the imposition of stressed rates of interest was a logical step given the overriding focus on financial stability.

Flowing on from this, it is well documented that the numbers of young people living with their parents has increased since the recession in a number of countries including Canada, France, Greece, Hungary, Italy, Portugal and the United States. A number of country

experts also noted how high and increasing rental costs are stopping people saving for a deposit.

However, even in this context it should be remembered that the deposit is only one of the costs of entry. There have been increases in other transactions costs especially taxation in some countries which will have had similar impact along with factors such as student debt, notably in the United States.

Housing and mortgage markets are nowhere near back to normal and both lender institutions and households are still very risk averse. Across the OECD mortgage regulation in its widest sense is still in its infancy and we can expect to see rules refined further around employment status, the stability and security of incomes and indeed the stress tests themselves along with other aspects of macro-prudential regulation. Arguably it is only when markets return to some normality, and confidence is fully restored that we will be in a position fully to understand the impact of the controls that now exist in relation to the mortgage market.

In the meantime many governments are providing subsidies and incentives to enter owner-occupation to help lift the economy and to prevent the on-going decline in home ownership. There is a tension here between the politics around access to the housing market and the government and regulatory drive to increase stability and curb housing booms. Given the difficulties governments have in reversing the decline of home ownership they have begun looking at whether regulation properly reflects real (and apparently low) risks.

Thus, while changes in regulation and controls clearly have some impact, especially on the size of deposit required and the capacity to prove resilience in the face of economic and financial change particularly interest rate rises, it is only one part of the story.

Most notably insecurity of employment and income has a direct impact on preparedness to take on debt; how then this is expressed via the regulatory system is probably a second order effect albeit one of considerable magnitude. The general absence of detailed and independent assessments of the impacts of the widespread mortgage regulation and controls on young people and home ownership is striking. Given that regulatory tightening is continuing this should now be a priority.

RÉSUMÉ

En principe, le surcroît de réglementation du crédit hypothécaire (définie dans les grandes lignes comme regroupant les règles d'exploitation propres aux créanciers hypothécaires et les dispositions macroprudentielles relatives à la stabilité financière qui ont pu trouver à s'appliquer spécifiquement au marché immobilier) intervenu depuis 2008 devrait rendre plus difficile l'accession à la propriété des primo-accédants et des jeunes.

Du fait tant de l'accessibilité financière des biens immobiliers et des niveaux de salaires que de la crise financière, l'accession à la propriété est en recul dans de nombreux pays depuis, souvent, bien avant 2008.

Pourtant, la baisse de l'offre de crédit hypothécaire n'a pas été si patente, de sorte que certains emprunteurs ont été en mesure soit de refinancer leur emprunt, soit d'entrer sur le marché pour la première fois. Les répercussions ont été disparates et le patrimoine parental a joué un grand rôle compensateur.

Le plus souvent, le surcroît de réglementation du crédit hypothécaire repose sur des principes macroprudentiels qui, via les quotités de prêt et les indicateurs relatifs aux revenus, influent de manière directe sur les acquéreurs potentiels.

La réglementation de la relation entre consommateurs et institutions financières fait l'objet de la Directive de l'Union européenne sur le crédit hypothécaire, qui est en train d'imprégner les procédures réglementaires nationales – mais souvent sans faire davantage que codifier des pratiques professionnelles déjà mises en place par les prêteurs au travers de règles de conduite.

D'après les éléments disponibles, le surcroît de réglementation dans son sens le plus large n'a pas été jusqu'ici le principal moteur des baisses des effectifs de primo-accédants : ce sont bien les problèmes d'accessibilité financière et d'insécurité sur le double front de l'emploi et du revenu qui sont à l'origine de l'exclusion des jeunes ménages.

L'importance croissante de l'apport personnel et les restrictions d'emprunt associées sont le seul angle sous lequel la réglementation a eu un certain impact direct sur l'accès de la population à l'achat immobilier. Les quotités des prêts ont baissé du fait de modifications légales, de directives ou d'évolutions des pratiques bancaires. Emprunter pour payer des taxes, pour régler des droits de mutation, pour fournir l'apport – tout cela est aujourd'hui plus difficile. La disponibilité d'un patrimoine parental (la « banque de papa-maman ») pèse davantage dans de nombreux pays, dont la France, le Royaume-Uni, les États-Unis et l'Australie. Dans certains cas, comme au Portugal, en Grèce, en Espagne et dans les pays où le marché du crédit hypothécaire est encore balbutiant, il s'agit d'un simple retour à la norme.

En ce qui concerne la nécessité d'un apport personnel plus important, on ne peut toutefois pas faire fi de l'incidence qu'ont eue les exigences macroprudentielles sur les tests de la surface financière des emprunteurs. Différents pays ont mis en place toute une série de mesures à cet égard – avec partout le même effet : il faut à l'emprunteur un revenu plus élevé pour faire face au taux hypothétique, et si son plafond de revenu disponible est atteint, son choix est simple – emprunter moins (grâce à un apport plus important ou au choix d'un bien immobilier moins onéreux) ou renoncer à emprunter. Avec le niveau très faible des taux d'intérêt dans la majorité des pays, et leur probable hausse dans les

prochaines années, l'exigence de taux d'intérêt soumis à des tests de résistance a été une mesure logique compte tenu de la prééminence donnée à la stabilité financière.

Par suite, il apparaît clairement que les effectifs de jeunes vivant chez leurs parents ont, dans différents pays tels que le Canada, les États-Unis, la France, la Grèce, la Hongrie, l'Italie et le Portugal, augmenté depuis la récession. Un certain nombre d'experts nationaux ont par ailleurs noté que le niveau et les hausses des loyers mettaient à mal la possibilité d'épargner un apport personnel.

Il convient néanmoins de se rappeler que même dans ce contexte, l'apport n'est que l'un des coûts d'entrée. Les autres coûts ont augmenté, comme notamment la taxation dans certains pays, avec des répercussions du même ordre, ou l'endettement des étudiants – en particulier aux États-Unis.

Les marchés du logement et du crédit hypothécaire sont très loin du retour à la normale, et les organismes de crédit comme les ménages conservent une très forte aversion au risque. Dans son sens le plus large, la réglementation du crédit hypothécaire est encore balbutiante dans les pays de l'OCDE, et on peut s'attendre à un approfondissement des règles définissant la situation professionnelle, la stabilité et la sécurité des revenus, et les tests de résistance eux-mêmes – ainsi que d'autres aspects de la réglementation macroprudentielle. Ce n'est, peut-on penser, que lorsque les marchés auront retrouvé un semblant de normalité et que la confiance sera entièrement revenue que l'on sera en mesure de saisir tout l'impact des contrôles prudentiels actuellement en place pour ce qui concerne le marché du crédit hypothécaire.

Dans l'intervalle, de nombreux pays subventionnent et aident fiscalement les propriétaires-occupants potentiels, afin d'aider l'économie à se relever et de lutter contre le recul actuel de l'accession à la propriété. On observe à cette jonction des tensions entre la volonté politique de faciliter l'accès au marché du logement et l'impulsion donnée par les pouvoirs publics et les autorités de réglementation pour renforcer la stabilité et freiner les envolées des prix immobiliers. Compte tenu des difficultés qu'ils rencontrent pour inverser le recul de l'accession à la propriété, les responsables publics ont commencé à regarder si la réglementation traitait avec justesse les risques réels (et, apparemment, faibles).

Ainsi, les changements intervenus dans la réglementation et les contrôles prudentiels ont sans conteste des répercussions, en particulier sur le montant de l'apport requis et sur la résilience face aux mutations économiques et financières lorsque notamment les taux d'intérêt montent, mais ce n'est là qu'une partie du tableau.

Élément particulièrement notable, l'insécurité en matière d'emploi et de revenu a un impact direct sur la capacité d'endettement ; l'expression de cet état de fait par le dispositif réglementaire est probablement un effet de second ordre – quoique considérable. On est frappé par l'absence générale d'évaluations détaillées et indépendantes des répercussions qu'ont une réglementation et des contrôles du crédit hypothécaire tous azimuts sur les jeunes et l'accession à la propriété. Le resserrement réglementaire se poursuivant, de telles évaluations sont devenues prioritaires.

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GLOSSARY AND LIST OF ABBREVIATIONS

Basel III is the international regulatory framework for banks published by the Basel Committee on Banking Supervision

Capital ratio or Capital Adequacy ratio is the ratio of a bank's capital to its risk.

Capital Requirement Directive (CRD) is an EU legislative package covering prudential rules for banks, building societies and investment firms

Credit risk is the risk of default on a debt that may arise from a borrower failing to make required payments.

Conduct risk is any action by a lender that leads to customer detriment or negatively impacts market stability

Debt to Income ratio (DTI) is one way mortgage lenders measure an individual's ability to manage monthly payment and repay debts.

European Covered Bond Council (ECBC) is the platform that brings together covered bond market participants including covered bond issuers, analysts, investment bankers, rating agencies and a wide range of interested stakeholders

Loan to Income (LTI) is a financial term used by lenders to express the ratio of the loan to the income of a borrower or the household of a borrower

Loan to value (LTV) is a financial term used by lenders to express the ratio of a loan to the value of an asset purchased.

Macro-prudential policy considers the interconnectedness of individual financial institutions and markets, as well as their common exposure to economic risk factors with the aim of fostering stability in the financial system.

Mortgage-Backed securities (MBS) are a type of asset-backed security that is secured by a mortgage or collection of mortgages

Mortgage Credit Directive (MCD) is an EU framework of conduct rules for mortgage firms.

1. INTRODUCTION

1.1. The issues in brief

1. The starting point for this paper is concern that younger households and generally first-time buyers are facing problems in accessing owner-occupation, specifically as the result of changes in mortgage market regulation after the global financial crisis. There are a number of trends that make this a reasonable hypothesis to be tested:

- Owner-occupation rates have either fallen or stayed constant in most EU countries since the financial crisis;
- The regulatory environment for consumers and mortgagors in particular has been tightened and strengthened in most countries since the financial crisis;
- There is considerable evidence that younger households are finding it harder to leave the parental home and set up as separate households.

2. At the same time, there are other trends which could have a similar impact on access to owner-occupation. In particular young people are experiencing higher unemployment rates, rising student debt, at best stagnant wages and the increasing prevalence of insecure work contracts. Equally house prices have risen since the global financial crisis in many EU countries making it harder for potential purchasers to access mortgage finance, while rents have also risen making it more difficult to save for a deposit.

3. There are both short and longer term as well as negative and positive consequences to any changes in access to mortgage credit and all that flows from restricted housing choices. These include: on the positive side, lower risks for providers and consumers in the mortgage market which might in turn help to stabilise the growth in house prices (Lunde and Whitehead, 2016 pp 7 - 13); on the negative side lower levels of housing investment as rental demand tends to generate fewer incentives to build new homes than owner-occupation in many countries; less security of tenure for households who live in the market rental sector, especially where rental lease terms are short as in, for example, Finland, the United Kingdom and the United States; and potentially higher costs for governments if people have to pay rent into retirement.

4. The objective of this paper is to examine the issue of access to home ownership for younger people in OECD countries, from the point of view of changes in mortgage market regulation and control. It therefore does not directly address the issues associated with job and income instability but rather asks whether in principle and, where possible, in practice, changes in these mortgage regulations are likely to have impacted on the capacity of particular groups of mainly younger households to become owner-occupiers. The core objective is therefore to review mortgage market regulations and controls across a range of countries and to identify changes in the conditions applicant households must fulfil to obtain a mortgage, in particular with regards to their income and/or labour market status. A second objective is, where possible, to examine available data on mortgagors, especially first time buyers, to examine whether such changes are taking place.

1.2. Setting the scene

5. Before turning to the more detailed regulatory issues we examine the evidence on trends in owner-occupation and in mortgage debt. Although levels of household debt in many countries remain historically high (André, 2016), Table 1.1 shows that in the majority of European countries the proportion of households who are owner-occupiers has fallen during the current century. The only exceptions are some Eastern European countries and countries such as the Netherlands and Poland where there have been significant support to expand the sector.

Table 1.1. Owner-occupation rates in the 2000s

Share of owner-occupied dwellings out of the total dwelling stock, in percent

	2000	2008	2015
Austria	69.0	57.9	55.7
Belgium	81.0	73.1	72.0
Bulgaria	n/a	87.1	82.3
Croatia	96.0	n/a	89.7
Cyprus	91.0	72.3	72.9
Czech Republic	73.5	75.8	78.9
Denmark	66.0	66.5	62.7
Estonia	86.0	88.9	81.5
Finland	77.0	73.2	72.7
France	70.0	62.1	65.0
Germany	56.0	n/a	52.5
Greece	89.0	76.7	74.0
Hungary	94.0	89.0	86.3
Iceland	n/a	85.8	77.8
Ireland	85.0	77.3	69.9
Italy	82.0	72.8	73.1
Latvia	61.0	86.0	80.2
Lithuania	95.0	92.2	89.9
Luxembourg	77.0	73.8	72.5
Malta	80.0	79.9	80.0
Netherlands	56.0	67.5	67.8
Norway	85.0	86.1	82.8
Poland	71.0	66.0	83.5
Portugal	77.0	74.5	74.9
Romania	97.0	96.5	96.1
Slovakia	n/a	89.3	90.3
Slovenia	93.0	81.3	76.7
Spain	92.0	80.2	78.2
Sweden	n/a	68.8	69.3
Turkey	81.0	60.9	n/a
UK	76.0	72.5	64.8

Source: EMF, Hypostat 2016

6. This decline has been associated with significant increases in private renting across a number of European countries (see for example de Boer and Bitetti, 2014). It has also been reflected in increasing numbers of younger people continuing to live with their parents (Pittini et al, 2015; OECD, 2016).

7. In some countries the decline in owner-occupation rates has been concentrated in the period following the global financial crisis, sometimes from a maximum level of home ownership achieved in 2009 or 2010. However, in many other countries falls in owner occupation rates were as great, or even greater, during the period between the turn of the century and the offset of the crisis - when the problem was more one of affordability than access to funding. And in some cases, falls in the rate of home ownership among younger households started around the 1989/90 crisis and now affect people entering middle age (see for example for the United Kingdom: IFS, 2016).

8. Furthermore, Table 1.2 shows the share of owner-occupier households and also what has been happening to the proportion of households who have a mortgage since 2010. Data show that in the majority of countries less than half of owner-occupiers have mortgages from the formal finance market. Those where the majority of owner-occupiers are mortgagors include countries with highly sophisticated financial markets - notably Canada, Denmark, Iceland, the Netherlands, Norway, Sweden, Switzerland and the United States. At the other extreme there are Eastern European countries where the mortgage market is still in its infancy, but where there are high owner-occupation rates. In such countries historically owner-occupation has been an outcome of government policy rather than market mechanisms - but, looking to the future, these potential owner-occupiers are likely to be more dependent on formal mortgage markets.

Table 1.2. Owner-occupation and proportions of owner–occupiers with a mortgage, by country, 2010 and 2014

Share of owner occupier households, total and owners with a mortgage

	Owners		Owners with mortgage	
	2010	2014	2010	2014
Australia	65%	63%	31%	31%
Austria	50%	50%	20%	19%
Belgium	66%	66%	32%	33%
Bulgaria	86%	84%	2%	2%
Canada	69%	0%	..	..
Croatia	88%	89%	5%	3%
Cyprus	65%	65%	12%	16%
Czech Republic	77%	76%	14%	14%
Denmark	57%	54%	42%	39%
Estonia	82%	77%	12%	15%
Finland	68%	66%	33%	33%
France	59%	61%	21%	23%
Germany	44%	45%	19%	19%
Greece	73%	72%	14%	10%
Hungary	88%	87%	19%	14%
Iceland	75%	74%	59%	55%
Ireland	73%	69%	29%	28%
Italy	71%	72%	14%	14%
Latvia	82%	80%	6%	7%
Lithuania	94%	90%	5%	6%
Luxembourg	64%	69%	32%	35%
Malta	76%	76%	15%	18%
Netherlands	57%	57%	48%	47%
Norway	77%	76%	51%	55%
Poland	79%	81%	6%	10%
Portugal	73%	74%	28%	30%
Romania	97%	96%	1%	1%
Slovak Republic	90%	90%	7%	9%
Slovenia	77%	76%	7%	8%
Spain	79%	78%	31%	28%
Sweden	63%	62%	59%	52%
Switzerland	40%	40%	34%	35%
United Kingdom	68%	63%	36%	31%
United States	65%	63%	44%	40%

Notes: a) Footnote by Turkey: The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
b) Footnote by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD calculations based on European Survey on Income and Living Conditions (EU SILC) 2014 except Germany; the Household, Income and Labour Dynamics Survey (HILDA) for Australia (2014); the Survey of Labour and Income Dynamics (SLID) for Canada (2011); Encuesta de Caracterización Socioeconómica Nacional (CASEN) for Chile (2013); the German Socioeconomic Panel (GSOEP) for Germany (2014); the Korean Housing Survey (2014); Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH) for Mexico (2014); American Community Survey (ACS) for the United States (2014).Add the source here. If you do not need a source, please delete this line.

9. Tables 1.3 and 1.4 provide additional data on the relative importance of mortgage debt. More precisely, Table 1.3 shows the ratio of mortgage debt to GDP. Perhaps against expectations, on average, across the EU mortgage debt grew after the global financial crisis. In some contexts this simply reflects business as normal. More generally, it is more a result of the impact of the subsequent recession in many countries which resulted in significant declines in GDP (for example in Greece, Ireland and Spain). Falls in the ratio tend to reflect the disruption of national mortgage markets notably in countries where there had been a heavy reliance on mortgages denominated in foreign currencies and also particularly in the United States where securitisation became far more difficult.

10. Table 1.4 reinforces this picture in terms of debt to household net income. In the main the importance of mortgage debt increases - although it must be remembered that in countries with systems based on variable interest rate mortgages actual monthly payments may well have fallen considerably. The majority of countries where debt falls are in Eastern Europe where foreign currency loans were important. In a small number of countries reductions in mortgage debt are greater than falls in income - notably Ireland, Spain and to a lesser extent Denmark. The outlier in the other direction is Sweden where debt as a proportion of income has risen very rapidly.

11. These data in the main reflect the impact of economic recessions on existing mortgagors. The more limited evidence on the increase in the average proportion of households with mortgages suggests that in most countries it has proved possible to increase or at least maintain the proportion of mortgagors. However this has proved more difficult in some groups of countries which then stand out as being under particular strain, notably including: some transition economies; some relatively highly indebted economies where the mortgage system as a whole came under particular strain; and, at the other extreme, Scandinavian countries, notably Sweden, where in some cases debt has increased significantly.

Table 1.3. Total Outstanding Residential Loans to GDP Ratio, percent

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	n/a	33.6	43.2	39.0	42.1	42.6	45.5	37.4	60.4	62.3	59.7	51.9	45.3	51.4	51.8
Austria	13.5	15.9	17.2	19.9	21.7	23.2	23.3	24.7	25.7	27.2	27.2	27.2	27.1	27.5	28.7
Belgium	26.1	27.1	28.8	29.9	32.5	34.9	36.7	38.7	43.5	44.3	45.4	47.4	48.3	49.3	50.7
Bulgaria	n/a	n/a	n/a	n/a	n/a	n/a	8.5	10.2	10.2	9.8	8.8	8.6	8.4	8.2	8.0
Croatia	5.0	5.8	7.3	8.5	10.5	12.9	14.7	15.6	17.0	18.3	18.7	18.9	18.5	18.3	17.6
Cyprus (a,b)	5.9	7.2	9.1	10.7	27.6	33.6	39.7	45.2	56.2	62.4	64.2	65.1	65.6	67.0	66.8
Czech Republic	1.5	1.9	2.8	4.0	5.3	7.0	9.1	9.2	14.1	15.4	15.6	17.3	17.3	18.3	19.2
Denmark	55.6	58.4	63.4	66.6	73.8	78.8	83.8	86.0	94.1	92.8	93.0	91.2	90.8	90.0	89.7
Estonia	5.7	7.6	10.9	15.4	23.2	31.6	34.6	37.6	43.2	40.6	35.3	32.5	31.0	30.4	30.9
Finland	21.1	22.4	23.8	26.2	29.5	32.0	33.3	34.9	39.7	41.0	41.5	43.2	43.4	43.7	44.4
France	20.8	21.8	23.3	25.3	28.1	30.9	33.2	35.1	37.7	39.8	40.9	41.7	42.7	43.1	43.6
Germany	51.5	51.6	52.1	51.0	50.5	49.5	46.0	44.7	46.6	44.7	43.1	43.0	42.9	42.4	42.3
Greece	10.3	13.0	15.0	17.6	22.8	26.2	29.8	32.1	33.9	35.6	37.9	39.0	39.4	39.1	38.4
Hungary	2.2	4.6	7.6	9.3	11.7	15.0	17.1	20.8	24.0	25.1	21.8	20.2	18.3	16.4	13.7
Iceland	54.1	58.3	56.9	62.8	73.0	68.4	72.4	56.6	76.6	86.6	79.5	73.6	77.2	71.5	64.8
Ireland	31.5	34.7	40.9	49.7	58.5	67.0	71.3	79.3	87.3	62.8	58.5	56.4	53.5	48.5	41.5
Italy	8.3	9.8	11.1	12.8	14.6	15.8	16.5	16.2	17.8	21.9	22.5	22.7	22.5	22.3	22.1
Japan	34.3	34.9	35.9	35.4	36.8	34.6	36.3	45.9	39.7	42.5	45.3	36.9	36.8	39.5	41.3
Latvia	n/a	n/a	6.6	11.3	18.2	26.9	29.6	29.6	36.7	36.9	29.7	24.3	22.2	19.9	18.5
Lithuania	1.4	2.2	n/a	6.9	10.8	12.4	16.7	18.5	22.4	21.3	18.8	17.4	16.7	16.3	16.4
Luxembourg	26.2	26.8	32.0	33.7	35.6	36.0	39.9	42.3	47.1	47.0	48.0	49.8	50.3	51.2	51.0
Malta	16.9	18.5	21.5	25.8	29.6	32.9	35.0	36.2	40.0	40.4	42.1	42.8	42.8	44.4	44.3
Netherlands	68.6	75.5	79.0	82.7	88.0	88.3	89.7	92.6	99.7	100.1	100.6	101.2	96.9	95.7	94.4
Norway	41.9	48.5	48.7	53.2	54.6	55.0	59.9	50.1	67.8	64.8	63.5	65.7	62.4	64.0	69.3
Poland	2.7	3.4	3.3	4.3	5.3	7.5	10.4	12.7	16.6	18.7	18.9	20.4	20.5	20.1	20.6
Portugal	42.2	45.5	45.4	46.7	50.1	55.3	57.6	58.8	63.1	63.6	64.7	65.6	62.6	59.1	54.9
Romania	n/a	n/a	n/a	n/a	1.0	2.2	3.4	4.0	4.7	5.3	5.7	6.6	6.5	6.7	7.2
Russia	n/a	n/a	n/a	n/a	0.3	0.9	1.8	2.3	2.7	2.4	2.4	2.9	3.5	3.2	4.1
Slovak Republic	n/a	3.8	4.7	6.3	7.8	11.5	12.1	13.0	14.8	16.1	17.5	18.9	20.7	23.0	25.3
Slovenia	0.4	0.8	1.0	2.9	4.7	6.2	7.6	9.0	10.9	13.4	14.0	14.6	14.8	14.3	14.3
Spain	31.6	35.0	38.9	44.7	51.1	56.7	59.8	60.4	62.9	62.9	62.3	61.5	59.4	56.3	52.1
Sweden	45.7	44.3	45.8	53.3	56.4	61.3	61.1	58.5	77.0	79.2	76.2	79.1	78.1	78.8	84.3
Turkey	n/a	n/a	0.1	0.1	0.3	1.5	2.7	2.8	3.7	3.7	4.3	5.1	4.6	6.4	6.1
United Kingdom	52.6	54.3	59.8	63.3	68.3	73.4	70.5	63.4	78.7	76.0	76.7	72.7	72.4	71.3	67.6
United States	58.5	56.8	60.5	65.9	80.8	76.8	76.8	86.2	79.2	75.0	76.7	65.5	62.4	68.6	62.9

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Source: European Mortgage Federation National Experts, European Central Bank, National Central Banks, Eurostat, Bureau of Economic Analysis, Federal Reserve

Table 1.4. Total Outstanding Residential Loans to Disposable Income of Households Ratio, percent

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Austria	21.5	25.6	27.3	31.8	34.0	36.6	37.3	39.6	40.3	43.6	44.4	43.7	44.3	44.7	47.2
Belgium	41.2	43.9	47.1	50.6	55.2	59.1	62.3	63.9	69.6	73.6	76.8	79.9	82.1	84.6	87.7
Bulgaria	n/a	n/a	n/a	n/a	n/a	n/a	15.7	17.5	17.4	16.8	15.1	14.6	13.9	n/a	n/a
Croatia	n/a	8.5	10.9	12.9	16.4	20.8	24.4	25.7	26.3	28.0	28.2	28.2	28.2	27.5	26.7
Cyprus (a,b)	9.2	11.5	14.2	16.2	41.8	50.4	59.1	64.3	81.2	90.6	93.8	97.2	91.1	103.9	101.3
Czech Republic	2.7	3.7	4.8	7.3	10.5	13.8	17.9	19.2	23.8	28.9	29.2	30.6	30.6	32.6	37.7
Denmark	121.1	125.1	132.9	141.2	158.2	171.1	185.7	191.8	195.5	190.6	188.9	186.2	187.3	185.5	174.7
Estonia	9.8	14.0	20.2	29.0	44.7	61.5	67.6	65.9	71.4	70.4	63.4	61.0	56.5	56.5	54.1
Finland	40.5	42.2	43.7	48.0	54.7	59.8	63.6	65.4	67.7	69.5	71.0	72.8	72.4	73.1	74.0
France	32.3	33.5	35.9	39.1	43.7	48.1	51.6	54.2	56.4	59.9	62.3	63.9	65.7	66.4	67.5
Germany	76.9	77.6	76.8	75.5	74.5	74.2	71.1	68.7	69.4	68.0	66.7	66.3	66.4	66.3	66.7
Greece	14.4	18.6	21.7	25.9	32.2	37.8	43.0	45.7	46.5	50.4	53.6	55.9	57.9	58.6	57.9
Hungary	3.7	7.9	13.0	15.8	19.7	25.8	30.2	37.5	42.2	45.0	37.8	34.7	31.8	29.5	24.5
Ireland	65.8	75.4	88.8	107.4	125.4	145.7	152.5	152.1	162.6	120.9	120.1	116.9	114.4	106.4	94.6
Italy	12.0	14.2	16.1	18.5	21.2	23.0	24.0	23.5	25.5	32.1	32.7	33.4	32.9	32.6	32.6
Latvia	n/a	n/a	11.6	18.8	29.0	42.5	49.3	45.7	53.3	54.9	49.9	42.3	38.0	33.6	30.2
Lithuania	1.9	3.3	6.1	9.8	16.1	18.4	27.6	28.9	31.3	30.8	28.7	27.5	26.2	26.1	n/a
Luxembourg	n/a	n/a	n/a	n/a	n/a	95.2	109.0	108.9	113.9	118.1	123.9	127.4	139.8	145.4	149.9
Netherlands	125.4	138.9	147.6	157.5	172.6	178.2	183.9	194.9	202.6	207.2	207.2	209.0	200.0	195.9	192.6
Poland	3.7	4.6	4.6	6.4	8.3	11.7	16.9	20.6	26.4	29.8	31.1	33.4	33.5	33.3	34.6
Portugal	60.2	65.0	65.2	66.4	70.9	79.1	83.0	83.0	87.7	88.3	91.1	91.7	88.6	84.7	80.1
Romania	n/a	n/a	n/a	n/a	1.5	3.7	5.5	6.6	7.8	8.8	9.9	11.9	9.2	12.6	13.5
Slovak Republic	n/a	4.4	5.7	7.9	10.2	15.9	18.5	21.2	23.2	25.6	28.6	31.3	33.9	37.3	41.1
Slovenia	0.7	1.3	1.6	4.7	7.5	10.1	12.7	14.9	17.1	20.9	21.9	22.8	23.3	23.2	23.8
Spain	48.0	53.6	59.7	69.0	80.4	91.4	99.4	98.3	97.1	98.8	96.1	95.4	91.9	87.2	81.8
Sweden	94.9	91.2	95.9	113.9	120.8	132.7	131.5	123.0	149.6	159.5	150.8	151.5	149.5	152.3	166.4
United Kingdom	80.9	84.4	94.7	101.7	111.0	120.3	115.4	102.5	118.5	112.5	115.8	107.9	110.0	110.9	104.2
Norway	94.7	99.4	96.8	111.0	116.1	135.9	145.5	125.4	150.4	147.4	147.7	154.0	142.9	143.0	147.3
United States	79.1	75.7	80.4	88.0	110.0	103.6	103.7	113.0	102.1	97.6	98.6	83.4	81.9	89.8	n/a

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Source: European Mortgage Federation National Experts, European Central Bank, National Central Banks, National Statistics Offices, Eurostat, Federal Reserve, US Bureau of Census.

1.3. Methods

12. To address these issues we draw on information from mortgage providers and other sources to identify and analyse available information on mortgage market regulation across the European Union and selected OECD countries, looking particularly at:

- The factors that determine which types of household are able to obtain a mortgage in terms of required deposit; income; credit history; formal and informal credit rating - notably with respect to source and stability of income;
- The position with respect to regulation and access in the early 2000s up to 2008;
- Changes since then in who can gain access and why; and where available
- The attributes of first time buyers have changed since 2008.

13. The extent and quality of data vary considerably across countries so we address the questions at two levels:

- An overview of what is available from international sources/secondary data for all EU countries;
- More detailed information on a sub-set of selected EU and OECD countries covering both different types of mortgage markets and economic conditions.

14. The paper therefore provides:

- A framework that sets out the factors determining the demand for and supply of mortgages, particularly for first time buyers, to identify major variables to be analysed;
- A review of the relevant literature and comparative data;
- Findings from a survey among country experts from 21 countries, providing a snapshot of how the issue is seen in their country and identifying country specific sources;
- Case studies of a subset of countries where data are more readily available and there are known to be relevant issues, namely Canada, Denmark, the United Kingdom and the United States.

15. It then brings together the evidence from across Europe and, where relevant, comparator OECD countries to draw conclusions about the role of mortgage regulation in its broadest sense in modifying access to owner-owner-occupation especially for younger households across different regimes and market contexts.

1.4. The Framework

16. Table 1.5 sets out as simply as possible the factors that affect the demand for and the supply of mortgage finance. It takes account of:

- The ways in which the demand for mortgages is consequent on the demand for housing of all types and specifically for owner-occupation;
- The constraints both general and specific which impact on that housing demand;
- The factors that impact on the supply of funds into residential mortgages and specifically those for owner-occupation;
- The constraints including the more general regulatory framework and specific regulation that impact on the preparedness to lend; and

- The factors affecting the price of housing and the price and availability of mortgage funding including not just market variables but also specific regulations that affect pricing.

17. Some of the many variables and relationship involved are long term and can be taken as background to the analysis of the early 2000s and current conditions.

18. The main lesson to be taken from analysis presented in Table 5 is that there are many different factors which might have generated change during the period under question. All of them are relevant to the interpretation of the evidence around the impact of regulatory change.

19. As important, regulatory changes impact at different stages of consumer and institutional decision making - with consumers taking into account their expectations of being able to get a mortgage at an early stage in their decisions not just at the point of purchase; and institutions taking regulation into account when determining their overall supply of funds, i.e., not just when determining preparedness to lend to an individual but in arriving at their overall risk appetite.

Table 1.5. A framework for Mortgage Decisions

Housing Choice	Housing Constraints	Price	Mortgage funding supply factors	Constraints on the mortgage market
Demand for housing: based on age/household type; *income; price of housing v other goods;* Wealth. **Choice of tenure: based on relative *user cost* of owning and renting.** **Choice of funding: own equity; debt; gifts - based on *relative costs and availability***	Social, legal and cultural environment Availability of different types of housing by tenure Constraints on access to different types of housing: social housing regulated private rented sector etc. Access to funds of all types - depending on family circumstances; general funding opportunities and formal mortgage market Access to formal mortgage market - based on maturity of market; individual attributes of dwelling and borrower: availability of mortgageable properties; *deposit; job market position; stability of future income; credit history;* *Forms of mortgage instrument* *Risks and attitudes to risks*	*Of housing:* Supply of new and vacant units; Demand for housing units; Capacity to transfer units between tenures. Of mortgages: Funding available - depending on institutions' treasury management and *relative return in different lending markets* and national contexts Demand: *relative price of debt and equity plus access to financial support from the family* *Regulatory conditions for borrowers and lenders:* *Loan/ value ratio* *Loan /income ratio* *Other specific constraints*	Total flows of funding to institutions; Relative return achieved for mortgage product as compared to other uses of funds. Relative risks of lending in different markets - based on value of security and certainty of income stream. *Scale and form of government intervention*	Regulatory framework for different types of institution - specialist v generalist lenders Capacity to realise assets when borrower in default *Capital ratios that impact on cost of lending to different asset classes* General regulations around borrowers and borrowing Regulations specific to mortgage borrowers: definition and valuation of asset; *Requirements with respect to attributes of borrowers and attributes of loans* *Direct controls on loan to value; loan to income and other variables*

Note: Entries in italics encompass the most likely variables where change will have taken place - and thus where the research is concentrated.

2. THE REGULATORY FRAMEWORK AT DIFFERENT LEVELS OF JURISDICTION

2.1. International regulation

20. The broadest regulatory frameworks for the banking sector are currently based on the Basel II Accord which provides a global, voluntary regulatory framework on bank capital adequacy, stress testing, and market liquidity risk. Basel II began to be introduced in the early 2000s but the financial crisis intervened before it became fully effective. Its successor Basel III includes more stringent standards in the light of the financial crisis. However, the Basel III framework does not come into force until 2019 and therefore is not relevant to this paper.

21. In Europe, the Accords and other pan-European regulation have been implemented through European Union legislation. Useful summaries of regulation and housing markets across Europe are given by BBVA (2013), Davis et al (2011), Dubel and Rothemund (2011), Hartmann (2015) and Lunde and Whitehead (2016).

22. From the point of view of the mortgage market, the most significant changes introduced mainly relate to appropriate capital ratios to be required for different types of loan (notably here mortgages to individuals to purchase or refinance residential property) and the size of the loan in relation to the value of the property.

23. The changes set out in Table 2.1 mainly affect the mortgage market through their impact on the total supply of mortgage funding and the relative costs to lenders of high loan to value ratio loans. However the Mortgage Credit Directive was concentrated on the nature and quality of products available to mortgagors, mortgage product innovation and the creditworthiness of borrowers. Below we summarise the broad impacts of the different measures:

- The EU Directives on Own Funds and Solvency Ratio which introduced a preferential risk weighting for residential mortgage loans of 50% that translated into a 4% own-funds requirement and therefore had a huge positive impact on lenders' ability and appetite to finance mortgage credit;
- Partly as a result of the single currency the development of wholesale market instruments such as mortgage bonds and mortgage-backed securities (MBS) as alternatives to the traditional ways of funding mortgage loans;
- In 2006 as a result of Basel ll, risk weightings were reduced to 35% on a standardised basis and much lower on an internal ratings based approach on residential property. Reflecting this a number of countries have recently imposed minimum risk weights on mortgages (e.g. Sweden, Norway);
- The EU Mortgage Credit Directive 2014/17/EU which introduced a range of requirements on lenders with respect to marketing, advertising and consumer information notably requirements on lenders in respect of consumer creditworthiness assessment, provisions on early repayment, foreign currency loans and tying and bundling practices which limited consumer choice.

Table 2.1. Major changes in the European Regulatory Framework

	EU Policy	Market adjustments (structural, product)	Market outcomes (economic)
1990-2000	Single Market Programme: • Progress in creation of single market in banking: o 1988 Capital Liberalisation Directive o 1989 Second Banking Directive o 1989 and 1991 Directives on Own Funds and Solvency Ratio	Deregulation and consolidation of the financial sector Product innovation and allocation of substantial resources to developing internet based services	Massive expansion of EU mortgage markets, with markets more than doubling over the period
2001-2008	Focus on mortgage credit: • Voluntary European Code of Conduct on Home Loans • Assessment of Integration of EU mortgage markets 2006 Capital Requirements Directive	Focus on covered bonds: • Establishment of the European Covered Bond Council (ECBC)	Continued steady growth of EU mortgage markets, with 'booms' experienced, e.g. in Ireland, the United Kingdom and Spain
2008-	Review of the Capital Requirements Directive: CCR/CRD IV Bank Recovery and Resolution Directive Banking Union Mortgage Credit Directive Capital Markets Union	European Commission launches plan to encourage quality securitisation as part of its long-term financing agenda	Very different performance of EU mortgage markets: many countries saw some continued growth but some stagnated and others declined

Source: Lunde and Whitehead, 2016.

24. Changes in the international regulation have a number of elements:

- Deregulation processes that have enabled a wider range of funding instruments and reduced the cost of bearing risks - so supporting the expansion of the mortgage markets and opening up secondary funding markets;
- More sophisticated approaches to risk assessment which, in the main, made mortgage lending rather easier for institutions;
- The Mortgage Credit Directive which introduced a framework to make lending processes more transparent; controlling restrictive practices; clarifying risks associated with particular products and beginning to put in place a consistent approach to credit assessment associated with adequacy and security of income and capacity to sustain the mortgage in the face of economic change.

25. The majority of changes in the international framework codified existing rules and introduced more consistent approaches to risk assessment. These rules were there not just to help institutions make their own decisions but also as aids to national macro-

prudential policies which of course put financial stability at the heart of the process. But within the EU there were also two more fundamental changes which impacted differently in different countries. First the Mortgage Credit Directive encouraged countries to put these regulations formally into place - bringing countries where business practice rather than formal regulation dominated more into line with rules based systems. Secondly, the Directive shifted the emphasis towards evaluating the security and stability of an individual's income and wealth as equally or more important than the security of the dwelling. This was an extremely important change for German based systems which had always lent on the security of the property and the underlying capacity to realise the asset in the event of default. As a result of the Directive the basic approach to lending is changing. This shift towards a focus on the security of the person rather than the property had begun far earlier in countries which liberalised their mortgage markets in the 1970s and 1980s. However the implications had not always been incorporated into the more general regulatory framework. Thus, for instance, self-certification was normal in the United Kingdom and other Anglo-Saxon countries before the global financial crisis. Many of the changes that are relevant to this project can best be understood within the framework of the Mortgage Directive (In OECD countries outside the EU, regulation involves the implementation of the Basel Accord plus and national systems of regulation which address the same issues).

2.2. National Regulation

26. The European Systemic Risk Board (ESRB) was set up in 2010 to oversee the EU's financial system under the auspices of the European Central Bank. As part of its role it monitors the mortgage regulation systems of EU countries in the context of macro-prudential stabilisation. While macro-prudential measures impact on the individual decisions of mortgagors and institutions and thus on the housing market, these impacts are consequential and are not necessarily taken into account when setting the rules because the focus is on financial stability. To understand the scale of macro prudential regulation the Bank of England recently reviewed the scale of activity and noted there were 1,400 macro-prudential policies put in place across more than 60 countries over the period 1995-2015 – obviously not all were associated with housing and mortgage markets (see Reinhardt and Sowerbutts, 2016, though note this paper is subject to further revision).

27. Table 2.2 sets out the ESRB's understanding of the specific measures in place in different countries in early 2016. Many of these specific regulations have been put in place or strengthened in the last two years as a result of the Mortgage Directive.

28. As shown by Table 2.2, the most common instrument in place is a maximum Loan to Value ratio. Loan to Income, Debt or Debt service to Income rules are employed much more rarely. Where they exist, they are additional to Loan to Value requirements and Debt service to Income and their equivalents tend to be in the order of 30% - 40%.

Table 2.2. Specific measures that impact on mortgage loans and prices

Loan-to-value	**The Czech Republic, Denmark, Estonia, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Poland, Romania, Slovakia, Finland, Sweden and Norway**
Loan-to-income / Debt-to-income	Denmark, Ireland and the United Kingdom
Debt- service-to-income/Payment-to-income	Estonia, Cyprus, Latvia, Hungary, Poland and the Slovak Republic
Stress test / sensitivity test	Denmark, Ireland, Cyprus, Latvia, Luxembourg, the Slovak Republic, the United Kingdom, Poland and Norway
Loan maturity	The Czech Republic, Estonia, Latvia, the Netherlands, Poland and the Slovak Republic.
Loan amortisation	Denmark, the Netherlands, the Slovak Republic, Sweden, the Czech Republic and Norway.

Source: Table 1.1 ESRB (2016).

Table 2.3. LTV limits in place for residential mortgage lending

Member State	LTV limit	Basis for limit
Czech Republic	100%; the share of loans with an LTV > 90% cannot be more than 10% in any given quarter	Recommendation
Denmark	95%	Recommendation
Estonia	85%; 90% in the case of a KredEx guarantee	Binding regulation
Ireland	80%; for first-time buyers a sliding LTV limit starting at 90% based on property value; 70% for "buy-to-let" housing; 75% for preferential risk weighting	Binding regulation
Cyprus	70%; 80% in cases where the credit facility is granted for financing the primary permanent residence of the borrower	Binding regulation
Latvia	90%; 95% for loans covered by a state guarantee under the Law on Assistance in Resolution of Dwelling Issues (since July 2014)	Binding regulation
Lithuania	85%	Binding regulation
Luxembourg	80%	Binding regulation
Hungary	Between 35% and 80% (depending on the currency denomination of the loan)	Binding regulation
Malta	70%	Binding regulation
Netherlands	From 106% (2012) to 100% (2018)	Binding regulation
Romania	Between 60% and 85% (depending on the currency denomination of the loan)	Binding regulation
Poland	90% as of 2015, 85% as of 2016 (with a further tightening over time, until 80% in 2017)	Recommendation
Slovakia	100%; the share of loans with an LTV > 90% cannot be more 20% in any given quarter (with a further tightening over time, until 10% in 2017)	Recommendation
Finland	90%; 95% for first-time-buyers	Binding regulation
Sweden	85%	Binding regulation
Norway	85%	Binding regulation

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Source: Table 1.2 ESRB (2016).

29. Table 2.3 gives more details on how Loan to Value ratios are being implemented. Different rules for instance may apply where there is a guarantee in place; when the loan is for investment purposes; or when it is denominated in a foreign currency. Thus the exact rules depend significantly on national approach and their impact cannot be fully assessed in isolation.

30. Because these rules are in place to help maintain overall financial and institutional stability they directly address only the first charge mortgage market. In some countries it is legal and indeed normal to borrow to pay the rest of the purchase cost so in actuality the mortgagor will have far less equity than appears at first glance to be the case. This applies in Germany and to a limited extent in Sweden for instance. In others, notably the Netherlands and France, it has traditionally been possible to borrow well over 100% of the value of the property to cover the costs of acquisition as part of the mortgage. Norway has a two-pronged approach including both a maximum LTV and a minimum equity requirement. The impact of the introduction of maxima therefore has to be assessed in the context of rules associated with household's capacity to pay their overall debt.

31. Many of the countries not included in this list have advisory maxima but these are not formally part of the regulatory process. However it is important to note that, particularly because of the EU Mortgage Directive, countries are tending to make advice more formal. Many of the binding regulations have only just been put in place.

32. OECD countries outside the EU are similarly varied. In Canada for instance there has been maximum LTV of 95% but only if there is mortgage insurance in place. This has now been reduced to 80%. In Australia there continues to be no formal maximum although there has been some tightening of underwriting recommendations over the last three years. In the United States there are no national loan to value requirements although a large proportion of loans are securitised by Fannie Mae and Freddie Mac and must reach specified underwriting standards.

2.3. The Nature of Regulatory Change across Countries since the global financial crisis

33. Many countries liberalised their mortgage markets in the 1970s and 1980s while others, notably in Eastern Europe, only started to grow their markets in the late 1990s and early 2000s. Particularly after the turn of the century there was rapid growth in mortgage lending which in turn was associated with rising house prices which then provided the collateral for additional borrowing.

34. There was growing availability of mortgage products to help households enter the market in spite of increasing affordability problems - involving in particular interest only mortgages, longer terms, teaser mortgages and many other initiatives. Underwriting standards also fell in many countries enabling higher LTVs (often above 100%); higher loan to income ratios (especially as interest rates fell in money terms); and self-certification. Some countries, notably Germany and Austria, did not follow this pattern and continued to provide mortgages within a strong regulatory framework.

35. The 2008 crisis had two distinct impacts on mortgage markets today. First, banking systems were put under enormous pressure not only in the immediate aftermath of the crisis but into the longer term. This was true not just in countries with large residential mortgage exposure but also in countries such as Germany where the crisis arose from issues around internal treasury management. Strengthening macro-prudential rules to stabilise financial systems was therefore the first priority (see Carreras et al, 2016). This in turn had impacts on mortgage markets. As markets started to recover more detailed measures were put in place to help ensure greater resilience and to curb any emerging tendencies for excessive lending.

36. Second, real economies suffered into the medium and longer term. Incomes and employment fell in many countries and has still not recovered to pre-2008 levels in some. This impacted not just on the demand for mortgage finance but also on the attitudes to risk of both individuals and institutions.

37. Table 2.4 below brings together a range of evidence on the extent of regulatory change since the crisis in 19 EU countries together with Australia, Canada and the United States. The EU countries included are reflective of the major types of mortgage markets to be found in the EU. Those not covered can also be identified as belonging to distinct groups; notably e.g. Bulgaria and Croatia which have very immature mortgage markets; Eastern European countries notably in the Balkan States which experienced difficulties as a result of foreign currency denominated loans.

38. Each country sees its own experience as unique and thus not reflecting any generalised pattern. However the table provides an overall picture of how regulatory systems have been modified in the light of the global financial crisis and the consequential pressures on mortgage finance systems.

Table 2.4. Regulatory changes since 2008

Country	Significant regulatory change since 2008	Specific Macro-prudential rule changes such as maximum LTV	Additional Regulation of mortgage attributes	Mortgage market issues before/after the crisis
Australia	Limited. macro-prudential management by the Reserve Bank. Informal requirements put in place by the banking regulator to improve underwriting standards	No formal rules	No formal system - changes mainly based on informal discussion with banks. But stronger guidance put in place by the regulator including stress tests.	Growth in self certified and mortgages up to 125% LTVs before 2008. Market slowed for 2 - 3 years and then took off again.
Austria	Limited	No legal requirements	Put in place in 2016	No real problems
Belgium	Limited	2014 wide- ranging stabilisation powers were put in place	No	Concerns about affordability and lack of liquid assets among mortgagors
Canada (see detailed case study in section 4)	Although Canada was little impacted by the crisis in housing terms there has been a further tightening around the mortgage market and more is planned	October 2016 eligibility rules for insured mortgages were tightened and a "stress test" was introduced. Government insurance will no longer be available for any mortgages, high- or low-ratio, on properties valued above CAD 1 million, nor those with amortizations beyond 25years.	Yes explorations are underway to explore lender risk sharing.	Canada's mortgage insurance based system has built in safeguards.
Czech Republic	In line with EU banking regulations	No specific legal requirements - but powers to introduce them have been put in place	Government guarantees to support an immature mortgage market	25% of mortgages over 100% LTVFew market problems - objective is market growth
Denmark (see detailed case study in section 4)	2013 increased regulation to limit systemic risk	Maximum 80% LTV in place but could borrow the rest until 2015	2014 introduced a large number of advisory constraints on products, a 5% down payment, interest rates on high LTV loans etc.	Before 2008 shift to variable rate and interest only mortgages - High indebtedness mainly among existing mortgagors
France	Very little change in either regulation or underwriting criteria	No maximum LTV and borrowing above 100% with guarantees in place since 1995Some additional advice in line with Basel regulations	No - anyway a very conservative system of mortgages and 'cautions' (see Avouyi-Dovi et al, 2014)	Very few problems - continued growth
Finland	Advisory guidelines in 2010 on matching maturities of lending and borrowing	Guidelines issued in 2010 followed by increasing powers to introduce binding LTV powers and reduce this as part of macro-stabilisation policy	2010 Guidelines on lending practices	Considerable strain as a result of expansion in lending (see Table 7) but learned from earlier crisis. In 2011, 44% of first time buyer mortgages had LTVs of over 100% - many with limited ability to pay - but market is now beginning to improve
Germany	Conservative system that has remained in place Relatively little liberalisation before or after 2008	2008 Directed at supporting banks through guarantee to support the Pfandbrief (mortgage bond) market and a fund to support bank funding in general. Currently discussing a law to	Introduction of regulations in line with Mortgage Credit Directive being put in place - so increasing emphasis on ability to pay	No problems in the mortgage market either before or after but difficulties in the banking sector more generally. The main emphasis in the mortgage market has been on

		allow the discretionary use of emergency instruments (capital ratios, LTV maxima and LTI rules)		lower interest rates and easier lending
Greece	No changes in regulation specific to the mortgage market - rather reforming the whole banking system. Stricter controls introduced in 2015 on bank financing mechanisms.	No specific regulatory changes. Removal of subsidies and special housing credit institutions wound up or privatised.	No legislation but business practice has gone back to conservative principles	Prior to 2000 conservative lending based on industry rules were in place. Thereafter massive relaxation of lending rules followed by near closure of market - and return to pre-2000 rules
Hungary	Moved from state controlled system to market during the 1990s. General macro-prudential rules in place but dominated by government mortgage rescue system.	No specific rules introduced. Foreign currency based mortgage market closed and internal market affected by this	From 2008 moratorium on foreclosure. 2015 Mortgage Rescue program ended.EU advice on foreign currency based loans.	The dominant problem came from the growth of foreign currency mortgage loans. This has led to massive government intervention. Still no significant functional mortgage market
Iceland	Liberalisation of mortgage system in early 2000s. Banking system collapsed in 2008. Continuing legislation to re-structure the whole banking system and create new banks.	Powers to set maximum LTV and limit the maximum term for index linked mortgages are being put in place - but currently set by business practice.	EU Directive approach introduced including stricter criteria	Growth in mortgage lending and easier terms from 2004. Banking collapse in 2008 followed by closure of market - although growing again from 2010 (see figure in table 7below).
Ireland	Nationalisation of all Irish banks after 2008Main objective to maintain under water mortgagors in place.2015 central bank put in place macro-prudential regulations	80% maximum LTV put in place in 2015 (90%) for first time buyers). Also LTI at 3.5 times income.	Subsidy support to first time buyers with LTVs over 80% to be introduced in 2017	Mortgage lending rose very rapidly in the run up to the financial crisis and affordability worsened (see figure in table 7). Underwriting rules were loosened and new mortgage products introduced. After the crisis mortgage lending almost stopped. Now trying to revive market.
The Nether-lands	Code of practice put in place in 2006 but 30% plus of mortgages fell outside the code. Temporary Regulation of Mortgage Credit was introduced in 2012 and tightened lending rules.	Government agreement with banks to limit LTV maximum from 120% initially to 106%. To 100% in 2018. LTI rules also put in place	Staged increases in regulation together with improved business practices more in line with regulation (now only 5% outside the code rules)	Mortgage market liberalised in period before 2000 lead to overheating before 2008 Government packages to support home owners facing problems as part of wider reform. Market only just beginning to recover - but prices rising.
Norway	From 2010 financial supervisor required deposit of 10% and this is now 15%	LTV maximum of 85% but can go to 100% in certain circumstances An annual repayment of 2.5% required on all loans over 70%	Borrower must pass a stress test on capacity to pay in the face of changing interest rates etc. Guidance enforced more strongly.	Increasing proportions of loans above 100% in early 2000s. Now some pressure from government to reduce the constraints in required deposit
Poland	First regulations put in place in 2006 and modified in 2013 to put in place macro-prudential requirements. Increased regulation of foreign currency mortgages in line with EU recommendations.	Maximum LTVs announced in 2013 falling from 95% to 90% with a guarantee. Recommended decrease in maturity to 25 years	Government subsidies to base on interest rates from 2007 and on down payment from 2013	Problems restricted mainly to mortgages denominated in foreign currencies.

Portugal	Market collapse in 2008. 2009 Action Plan for Risk of Non Compliance notice from EC.	No additional mortgage regulation	From 2015 banks have been competing to increase lending of all types. More competition from foreign buyers.	Household debt grew late 1990s helped by subsidised loans. Major economic crisis starting in 2008 only now being resolved
Slovenia	Systems not in place till 2000s. 2016 Bank of Slovenia issued macro-prudential recommendations.	From 2016 guidance is 80% LTV; LTI from 50% to 67% (for higher income households)	Industry standards have tightened since 2008 requiring larger deposits and clearer future planning especially for investors.	The financial crisis had strong impact on the economy and on house prices. Only just beginning to recover.
Spain	A number of legislative changes as part of overall restructuring of banking system - e.g. Law 2011 made credit assessment mandatory. Bank of Spain Circular 4/2016 requires stronger underwriting rules.	No formal requirements - 90% of residential loans are under 80% - but house price falls have put many into negative equity.	Transposition of the Mortgage Credit Directive is underway but not yet incorporated in legislation.	Massive economic crisis from 2008 which stopped the market in its tracks and resulted in large scale defaults and evictions. System is not yet fully functional.
Sweden	Expansion of the market from the 1980s.Increasing regulation from 2010 - LTV; 2013 - on risk weighting; 2016 on amortisation	2010 Maximum LTV of 85% - but normal to borrow to pay deposit. 8% exceed limit. From 2016 amortisation of 2% per annum required over 70% LTV and 1% from 50% to 70%LTI caps are discussed but not in place	Internal bank models generate extremely low risk weights so little incentive to modify behaviour. Additional constraints have had limited effect on demand but 25% minimum risk weights are now in place	No major changes at the time of the global financial crisis, with only 6% of total credit losses coming from households. Current concerns about the rate of expansion of household debt and house prices
United Kingdom (see detailed case study in section 4)	General strengthening of capital weighting regime from 2008.Mortgages for owner-occupation fall within a tightening regulatory framework put formally in place in the Mortgage Market Review 2014. Underwriting standards upgraded.	Powers to set maximum LTV in place 2014 but not used. The Financial Policy Committee of the Bank of England has taken powers of direction over loans in both owner occupied and investor markets. These include limits of % of loan book at high LTVs.	Extensive modification of credit assessment and stress testing to ensure resilience in the face of interest rate rises. Assessment of the impact of the Mortgage Market Review suggested high proportions of first time buyers could be affected but subsequent assessments suggest that relatively few are being rejected. Concerns about the Buy to Let investor market and its impact on first time buyers.	Prior to 2008 there was rapid growth in lending led by competition between mortgagors. Relaxation of underwriting standards to enable self-certification and interest only mortgages and teaser mortgages. Since 2008 the industry has tightened rules and the 2014 Review has formalised these changes.
United States (see detailed case study in section 4)	Substantial tightening and strengthening	A number of tools used in other countries are either not available to U.S. regulators or are very far from being implemented. These include time-varying risk weights and time-varying LTV and DTI caps on mortgages.	Rollout of the highly significant Dodd-Frank Act 2010 aimed at curbing the predatory lending techniques and ensuring lenders retain some of the risks associated with their lending	The US market was the epicentre of the global financial crisis and not least in relation to sub-prime loans. Since then the market has tightened considerably albeit that regulation in the US is both fragmented and varied

Source: Lunde and Whitehead, 2016; national government and central bank publications supplemented by comments from country experts.

39. The evidence in Table 2.4 suggests that there are four main groups of countries:

- Countries such as Germany and France with sophisticated regulatory systems where the mortgage market hardly suffered directly during the global financial crisis and if anything the market is stronger now than in 2007;
- Countries such as the Czech Republic and to a lesser extent Poland where the mortgage market is of relatively limited importance and there is no history of risky lending have maintained and improved their position;
- Perhaps a majority of countries where mortgage markets suffered considerable disruption during and after the global financial crisis and where both macro-prudential and individual credit assessment rules have now been put in place;
- A minority of countries where there was almost complete breakdown of the mortgage system and the banking system more widely - as well as massive economic disruption. These countries, e.g., Ireland, Iceland, Portugal and Hungary, do not yet have fully working mortgage markets back in place.

40. There are also distinct patterns of change that can be identified including:

- The immediate responses to the global financial crisis were in terms of emergency packages to help institutions and in some cases individuals to recover from - or at least survive - the immediate shocks;
- Formal macro-prudential responses began to be put in place around 2010. Most of these were around capital ratios and risk weighting but some were mortgage market specific - notably with respect to LTVs.
- Consequential changes - such as introducing equity requirements in some Scandinavian countries - followed on relatively slowly.
- Mortgage industry and individual behaviour became much more risk averse in part as a result of guidance from central banks but also as a response of lower incomes, higher and more insecure employment. Demand for mortgages therefore declined in many countries. In this context it should be noted that this often did not result in falling repayment ratios as a result of falling interest rates and quantitative easing because incomes fell more rapidly (see tables 1.4 and 1.5).
- The European Mortgage Credit Directive codified mechanisms for ensuring safer, more transparent lending strategies which in particular took account of resilience to economic change particularly with respect to the capacity to adjust to higher mortgage interest rates. These rules have been informed by industry norms and in turn inform industry behaviour. But the Directive has not yet been fully implemented in all countries.
- As we move further away from the 2008 shock, a number of governments are looking for mechanisms to increase investment in housing and to ‘normalise’ mortgage markets. This is generating tensions between incentivising demand and reducing mortgage constraints on the one hand and putting in place a long term strategy for risk management on the other. These tensions are exacerbated by the fact that in most countries the impact in terms of evictions has been limited, not least as a consequence of falling interest rates - so residential lending is seen by many to be relatively low risk and by the fact that investment in housing remains low across most of the Union.

41. Overall therefore, regulatory changes have been based on both legislative change and on guidance from central banks and increasingly from financial regulators. The number of specific instruments available to central banks is relatively limited and they

work more on stabilising and protecting the banking system than on improving the mortgage market. However increasingly, and particularly because of the Mortgage Credit Directive, industry practice is being codified and modified to generate a more risk based approach to mortgage lending. This in turn will make it more difficult for riskier clients to borrow, or to borrow enough, to enter owner-occupation. Given the specific changes those excluded are likely to include some first time buyers who cannot raise the required deposit or who cannot pass stress tests with respect to security of income and do not have the liquidity required to be able to pay higher interest rates. Those with insecure jobs or who are self- employed are particularly likely to be affected.

3. THE POSITION OF FIRST TIME BUYERS AND YOUNGER HOUSEHOLDS

3.1. Data availability

42. Statistical time series data on first time buyers is extremely limited. Some countries do not distinguish by type of buyers but by their age; others have either regular or irregular surveys which are relevant to first time buyer experience. Table 3.1 sets out our understanding of the position across the countries included in our survey and it provides details of a small number of relevant statistics. Others can be found in section 4 which includes on four case studies of the impact in mature mortgage markets.

Table 3.1. Availability of data on First Time Buyers and Younger Households

Country	Data availability
Austria	No regular data
Belgium	No regular data
Czech Republic	No regular data
Denmark	Regular data on owner-occupation by age and household type - but not specifically first time buyers
France	Irregular survey data. Bonnet, Garbinti and Grobon (2016) for instance look at entry into owner-occupation and the role of family support
Finland	Statistics Finland provides data on first time buyers. Data show a significant decline in the number of home purchases by first time buyers between 2006 and 2015, down 40% (see http://www.stat.fi/til/asas/2015/01/asas_2015_01_2016-10-13_kat_002_en.html).
Germany	No regular data on first time buyers but material on entry costs and other attributes
Greece	No regular statistics on mortgage borrowing - first time buyers or otherwise.
Hungary	No regular data
Iceland	There are regular data on first time buyers as a proportion of total activity from 2008. Data show that transactions with residential housing by first time buyers have increased steadily since 2009, nearly doubling by 2015.
Ireland	Data on the housing purchased by first time buyer and moving households are available from 2010 from the Central Statistics Office. There are also data on arrears, evictions etc. - but the main source of data on first time buyer attributes comes from the industry. The data show a sharp decline in lending from 2006 onwards
Netherlands	Partial data are available from individual providers such as SVN which makes loans particularly to first time buyers; there are also regular market updates in the press. Statistics Netherlands have published short reports (e.g. Press Release PB10-020Netherlands Housing Research 2009) but there appear to be no national data.
Norway	Regular surveys but latest not yet analysed; data by age group from Statistics Norway
Poland	No specific data
Portugal	No specific data
Slovenia	No specific data on first time buyers, only general data on lending
Spain	There are general data on mortgages but not specifically on first time buyers
Sweden	Data by age but not by first time buyers
United Kingdom	Detailed data available on first time buyers and some assessment of the impact of regulatory change.

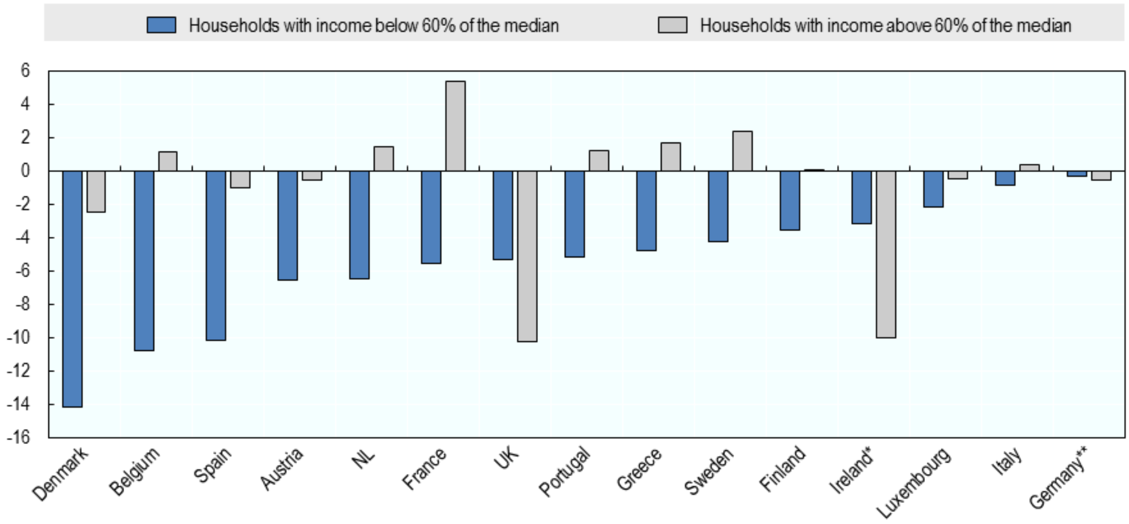
Source: Searches for statistical data on web and information from country experts.

3.2 Expert opinion and other evidence

43. For many EU countries declines in ownership rates between 2007and 2013 were concentrated among lower income groups, defined as households with income below 60% of the median (Bouyon, 2015). At the same time ownership rates among higher income households (60% above the median) increased in Belgium, Finland, Greece, Italy, Portugal and Sweden, and only slightly decreased in Austria, Germany, Luxemburg and Spain. The exceptions are Denmark, Ireland and the United Kingdom where rates among higher income households have also declined significantly (Figure 3.1).

Figure 3.1. Changes in owner-occupation rates by income groups

Share of population in owner-occupied dwellings, variation in percentage points between 2007 and 2013



Source: European Survey on Income and Living Conditions (EU SILC)

44. As part of the current research, country experts were asked directly about their understanding of the position of first time buyers and especially young people in the current housing market environment (late 2016). Responses, summarized below, suggest that there are many different factors affecting their capacity to buy.

- Australia: Tighter underwriting standards and increasing house prices mean that many first time buyers are excluded. In response some first time buyers are going direct to the investment sector, buying a cheaper property for capital gain. Around half of first time buyers need help from parents.
- Austria: Single-family housing still strongly based on self-build, inheritances, savings, family contributions and subsidized regional loans. Access to apartment stock (second hand) especially in Vienna has become now more difficult because prices rose strongly in the last few years. Young households now find it more difficult to buy an apartment, e.g. in Vienna, because prices rose more strongly than incomes.
- Belgium: General understanding is that young households find it more difficult to become homeowners because of affordability and house price rises as well as changing lending conditions. There is growing disparity in income between homeowners and renters which could be an indication of more difficult access to

owner-occupation for lower income groups. (Winters and den Broeck in Lunde and Whitehead, 2016).

- Canada: Since 2008 significantly tighter regulation has been put in place which has constrained mortgage lending (via amendments to criteria for mortgage insurance). In 2012 the elimination of insurance for mortgages whose amortization periods exceeded 25 years had a significant impact resulting in resale housing market activity 20% lower than it would otherwise have been though the negative impacts on the housing market and the economy were masked by reductions of mortgage interest rates. Most recently a new stressed rate of interest has been introduced as part of the affordability assessment which is likely to have negative impacts and will not be offset by lower interest rates. Some buyers may be able to increase their down payments, or buy a less expensive property to offset the impact.
- Czech Republic: House price have been rising for 3 years but affordability is still very good because of extremely low interest rates, generous tax subsidy, high employment rates, increasing salaries and previous house price decline (2009-2013). Differential access to family wealth is also important.
- Denmark: If the applicant has a permanent job and therefore a stable source of income, they are qualified under normal credit assessment procedures. Since 2008, the still falling interest rates have made it cheaper to become an owner-occupier even though house prices have risen. Lower demand may be in part the result of regulation but other factors such as fewer job opportunities, greater income insecurity and the general economic environment are just as important.
- France: While there are state guarantees for lower income households there is no potential for those with insecure employment to obtain a mortgage. The main reasons for lack of access are around employment and job insecurity not regulatory change.
- Finland: Prices have been stable or falling and mortgages remain available with low interest rates. The main potential impact is through LTV constraints which are only just coming legally into force. First time buyers are a smaller proportion of total mortgage borrowers than they were in 2000, but the proportion has been increasing in the last couple of years.
- Germany: Interest rates on mortgage loans with ten-year fixed interest rates are now even below 1.5 per cent. Low interest rates have recently been a significant driver of homeownership growth. There are also signs of a loosening of lending standards. Germany is a particularly good example of the issue of the importance of overall transactions costs rather than simply the deposit. Banks in Germany expect a down payment. On average, this is 20 per cent of the house price but has been rising as a result of the Directive. The down payment cannot be borrowed and most young households obtain money from their families. Transfer taxes have increased in most Bundesländer and there are no exceptions for young households - this varies from around 3.5% to 6.5%. Fees at 3.5% plus for real estate agents are also a burden. So a new purchaser needs maybe 30% of the purchase price in upfront cash (see Voigtländer, 2016).
- Greece: The overall market is almost at a standstill and there is an insignificant volume of housing credit. The whole banking system has been subject to external regulation - first time buyers are not specifically addressed as overall the system is dysfunctional.

- Hungary: House prices and rents in the private rental sector have been increasing since 2013 but the mortgage market has not yet started to revive – access for potential homeowners who cannot use their own or their family's equity is still almost impossible.
- Iceland: House prices are rising fast in the capital region as are rents. Both impact on access to homeownership especially because of deposit requirements. Mortgage funds are generally now available.
- Ireland: House prices have been growing from their low base since 2013 and with a shortage of new homes the pressure on first time buyers is growing, with one important result being greater demand in the rented sector resulting in turn in rising rents. Members of the Banking & Payments Federation Ireland (BPFI) issued 27,324 mortgages in 2015 to the value of EUR 4.9 billion. First-time buyers accounted for the single largest segment by volume (47.1%) and by value (45.1%).
- The Netherlands: Those households that have experienced repayment problems have often been recent first time buyers, who took out high LTV mortgages as are those in negative equity (Francke and Schilder, 2014, Francke et al, 2014 and Ministry of the Interior, 2013). Empirical data show that more Dutch home buyers are now using down payments. In 2015 around 45% of home buyers used down payments up from the 23% who did so in 2010 and the average down payment have increased substantially. Around 12% of Dutch home buyers took out additional personal loans to finance acquisition costs and stamp duties related to the purchase. Average house prices are also rising (at about 3% in 2015). The EC (2016) has criticised the Netherlands in its latest country report for the very high numbers of insecure jobs created (pp. 46-47). Getting a mortgage is very difficult without a permanent job.
- Norway: Ownership rates among young households increased until 2007 and then dipped from 2007 to 2012. The latest Statistics Norway data show no change in the owner-occupation rates and only a small decline among the very youngest (Statistics Norway, 2015).
- Poland: Since 2007 public subsidies have particularly helped first time buyers (see OECD Affordable Housing Database, Indicator PH 2.1). Within the national market growing GDP, falling inflation low interest rates and falling unemployment as well as slightly falling or stable (since 2008) house prices have made households more eager to take a mortgage. However the general view is that homebuyers are now more likely to be in higher income groups, with lower accessibility for young and low income households.
- Portugal: Bank of Portugal data shows that in the first seven months of 2016, loans granted by banks to buy a home grew 54% compared to same period in 2015. However youth unemployment is very high and salaries are low and jobs insecure. The greater insecurity of incomes has been one of the main characteristics in Portugal, after the crisis. About 58% of Portuguese aged between 18 and 34 still live with their parents, mostly due to unemployment or temporary contracts of employment.
- Slovenia: The latest Financial Stability Review suggests that there are now lower interest rates for housing loans, lower real estate prices, easier credit standards for housing loans, economic growth, relatively low household indebtedness, improved buyer expectations, etc. LTVs are rising with a third of loans over 70%. Unemployment has decreased since 2013. However, due to a relatively high share

of precarious types of employment especially among younger households it remains difficult to gain access to housing loans.

- Spain: As a result of risk aversion on the part of lenders and borrowers, first time buyers are finding it harder to enter the market unless they have two good incomes or wealthy parents ready to back them. There are fewer job opportunities; greater insecurity of incomes; and many temporary jobs.
- Sweden: Generally speaking the finance market has been supportive of the housing market – perhaps too supportive in the view of the Swedish Central Bank (Riksbank, 2016). The LTV cap has only put a mild brake on the development as will the amortization requirements. As a result, housing prices have continued to increase. The main obstacle to first-time home ownership is prices that are still on the rise. Some young people benefit from the parents' rising housing equity. In some cases parents would invest in small coop flats that they sublet as starter homes for their children. In other cases, parents take out a second mortgage on their own home or simply guarantee the child's mortgage. Generally speaking, intergenerational transfers are extremely important. If no such transfers exist access to the market is severely limited.
- United Kingdom: The provisions of the Mortgage Market Review, which took effect in early 2014, significantly tightened underwriting practices and have made it more difficult for marginal buyers to get loans. The reduction in availability of high LTV loans (except on some government schemes) combined with continuing house price increases mean that many young households simply cannot amass the required down payment without parental help. A number of lenders now offer specific loans to support this market - for example, loans where parents act as guarantors, or family offset mortgages where parental savings are set against the sum borrowed for the calculation of interest. High rental costs are also making it difficult to save for a deposit.
- United States: There has been a decline in home ownership amongst younger households reflecting a variety of pressures including student debt and restricted wage growth. A further strand in the tightening observed in the United States are the consequences of rollout of the Dodd-Frank Act 2010 aimed at curbing the predatory lending techniques and ensuring lenders retain some of the risks associated with their lending. The Harvard report (2016) suggests that 'these changes, along with recent enforcement actions, may have dampened lending activity as lenders adjust to the new standards. The Act brought in an Ability to Repay rule (also known as the Qualified Mortgage rule), from January 2014, which requires lenders to collect more income documentation and verify applicants' ability to afford new loans.

45. Responses from country experts provide a remarkably consistent picture across countries, with younger households almost universally facing great difficulties entering the housing market as owner occupiers. The evidence suggests that the most privileged will still gain access not least as a consequence of parental assistance. The importance of different barriers to ownership varies between countries but high prices, high transaction costs, insecure employment and low incomes are key drivers. The fact that large proportions of younger people are still living at home suggests that it has become increasingly difficult to enter both owner-occupation and renting.

46. But equally risks have increased – so even those who can afford to buy and obtain a mortgage may not be prepared to do so in the current economic environment. The strengthening of global regulatory regimes has meant that many countries have imposing

new requirements on both lenders and borrowers. These undoubtedly both constrain decisions and impact on behaviour. But their full impact may not be seen until economies experience more sustainable recovery.

47. These aspects are examined more in details in the following section, where the situation in Canada, Denmark, the United Kingdom and the United States is analysed more in depth.

4. DETAILED CASE STUDIES OF COUNTRIES WITH MATURE MORTGAGE MARKETS

4.1. Canada

48. Canada has only 28 domestic banks and indeed the mortgage market is dominated by 6 who between them have 85% of the overall market. The smaller financial institutions include pension funds, insurance companies, credit unions, and savings banks. The relatively small scale of the market has meant there is a close relationship between regulators and the market –inducing perhaps a degree of conservatism into the mortgage finance system relative to other countries.

49. Although home ownership rates are similar between Canada and the United States, in Canada interest on mortgages in not tax deductible, terms tend to be shorter than in the United States, down payments larger and pre-payment penalties are significant. When the property is for rent, mortgage interest and other expenses associated with the property (property taxes, utility cost, and house insurance) can be deducted of the rental income received by the taxpayer. 43 % of Canada's home owners are mortgage free. First time buyers make up around 30% of the market in any year.

50. Banking is regulated both at federal and provincial levels (the latter focusses on consumer protection). Canadian banking regulations prohibit banks from providing a mortgage with less than a 20 per cent down payment without mortgage default insurance. Since 2008, the Federal Government has made several changes to the rules for mortgages insured through the Canada Mortgage and Housing Corporation (CMHC) and private sector mortgage insurance providers. The changes include the following:

- Increasing premiums (the amount a borrower must pay) for mortgage default insurance.
- Reducing the maximum amortization period for insured mortgages from 40 years to 25 years.
- Requiring banks to qualify all borrowers applying for an insured mortgage at the Bank of Canada's conventional five-year fixed posted mortgage rate, an interest rate that is typically higher than what they will actually be paying.
- Limiting the maximum gross debt service (GDS) ratio to 39 per cent and the maximum total debt service (TDS) ratio to 44 per cent. These two important ratios are used when calculating a person's ability to pay down debt. GDS is the share of a borrower's gross household income needed to pay for home-related expenses, such as mortgage payments, property taxes and heating expenses. TDS is the share of a borrower's gross income needed to pay for all debts, including those relating to home ownership. These came into effect in October 2016.
- Requiring a down payment of at least five per cent of the home purchase price. A further 10 per cent must be added to the down payment for the portion of the house price between $500,000 and $999,999. For non-owner occupied properties, a minimum down payment of at least 20 per cent is mandatory (See https://www.fin.gc.ca/news-nouvelles/speeches-discours/2015/2015-12-11-eng.asp)
- Making government-backed mortgage insurance available only for homes with a purchase price of less than $1 million. Borrowers buying homes at or above this

amount will need a down payment of at least 20 per cent if their mortgage is from a federally-regulated financial institution such as a bank.

- Limiting borrowing to a maximum of 80 per cent of the value of their homes when refinancing, a drop from 95 per cent.
- Withdrawing mortgage insurance on home equity lines of credit (HELOCs).

51. These policy changes have constricted mortgage lending (via amendments to criteria for mortgage insurance). The July 2012 elimination of insurance for mortgages whose amortization periods exceeded 25 years had a significant impact resulting in resale housing market activity 20% lower than it would otherwise have been, for a prolonged period. To a degree the negative impacts on the housing market and the economy were masked by reductions of mortgage interest rates.

52. The changes on the posted rate introduced in October 2016 are likely to have negative impacts of similar magnitude and it is unlikely that lower interest rates will offset this. Indeed the evidence (Mortgage Professionals Canada, 2016; Dunning, 2015) suggests that the new rule requiring the use of a higher rate would negate their ability to complete the purchase that they actually made. Some might have been able to increase their down payments, or buy a less expensive property to offset the impact.

53. Further policy issues still under discussion including increasing capital requirements related to mortgage assets, a review of the tax treatment of mortgage insurance, increased premia for bulk insurance of mortgage and the imposition of higher stress test rates.

54. The Banks' prudential regulator, the Office of the Superintendent of Financial Institutions (OSFI) has guidelines for banks and other federally regulated lenders as well as for federally regulated mortgage insurers. The OSFI's B-20 Guideline on Residential Mortgage Underwriting Policies and Procedures, which came into effect in 2012, set out key principles for prudent mortgage underwriting that banks are required to follow. It also placed limits on home equity lines of credit (HELOC).

55. The impact of all of regulations now in place has not been fully evaluated (though see Allen et al, 2016 and Siddall, 2016) and there is an absence of data on first time buyers. The media reaction has been that these changes will alter household decision making when borrowing to purchase a house. For example, borrowers may decide to postpone their purchase of a home, buy a less expensive home or make larger down payments and larger mortgage payments. The general view is that these new rules make it harder for first time buyers in most of the major cities (Dunning, 2015). Over time if prices adjust there may be some benefits to this group. Furthermore, across Canada there are now a variety of programmes aimed at assisting home ownership (Pomeroy and Lampert, 2015), including latterly a 15% tax payable by foreign buyers in Vancouver, likely soon to be followed in Toronto.

56. More positively the conservative nature of the system has meant that less than half of one per cent of all mortgage holders with the country's largest banks is ninety days in arrears. This number has been stable for more than two decades, in times of high and low unemployment, high and low interest rates, and a strong or weak Canadian dollar.

4.2. Denmark

57. In the past few years, regulatory activity in Denmark has been intense. Regulation has changed as a result of legislation and directives/guidance rules from ministries and the regulator. In December 2014, the Danish Financial Services Authority (FSA) introduced a new regulatory 5 element approach for mortgage banks to help to avoid increased risk taking (these are in addition to existing solvency rules).

58. The five requirements are:

1. Growth in lending: The growth rate in lending to customers in four segments must be below 15 % per year. The four segments are: private owner-occupiers, private residential properties, farms, other commercials.
2. The borrowers' interest rate risk: the part of the outstanding loans, where LTV is above 75 %, and where the interest rate is for 2 years or less, must be below 25 %. Only owner-occupiers and private rental properties are included.
3. Limit on the interest-only loans: the part of outstanding loans with interest-only in the LTV-band above 75 % must be below 10 %. Interest-only loans are included without regard to their degree of risk.
4. Loan with short term funding: that part of outstanding loans which are refunded in a single quarter must be below 12.5 % of total outstanding loans and annually less than 25 % of the loan portfolio.
5. The sum of the 20 largest exposures must be less than the bank's "pure" equity.

59. Moreover the Danish FSA issued guidance for a "suitable" or "adequate" down payment related to buying of a home has in practice affected first time buyers. The suitable down payment was 5% of the buying price as equity and it was implemented as of November 1st 2015. Aimed at preventing 100 % loans this represents rather soft regulation, as the transaction costs would be around 10 % of the market price, if a home was both sold and another bought. Some exceptions are allowed, e.g. young graduates who had not had a permanent income whilst students but now had an adequate income. They could get a 100 % loan if they could reduce their debt to 95 % of the price over 2-3 years.

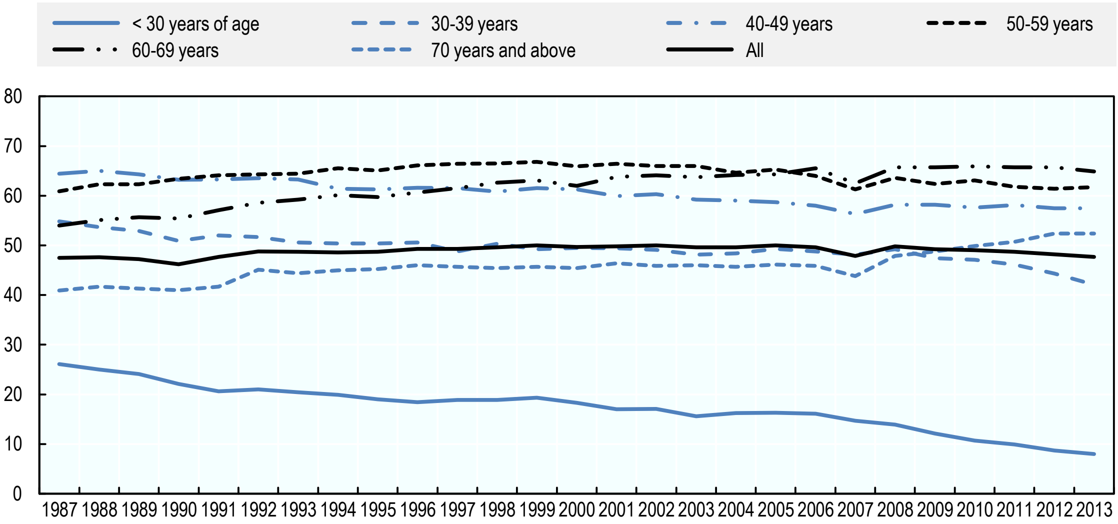
60. In November 2015 the Danish FSA issued detailed and wide ranging guidance to commercial and mortgage banks about the need for caution when lending for housing in areas with rapid house price increases. Possibly the most interesting new rule was that a borrower must be able to meet the debt service costs at a 30 years fixed rate mortgage with an interest rate at 1 percentage above the actual interest rate – with 4 % as a floor. In addition, the lender must ensure that a borrower with leverage between 4 and 5 times income should be able to maintain positive wealth even if the price of the property were to fall 10 %. If the leverage ratio was above 5, the borrower should be able to maintain positive wealth even if the price of the property were to fall 25 %. Again younger borrowers were exempted from these rules.

61. The Danish mortgage banks and largest commercial banks have been defined as Special Important Financial Institutions (SIFI) and must meet stronger capital requirements both formally and informally. The new Danish Systemic Risk Council has recently adopted the observation: "that the risk of a rapid build-up of systemic financial risks exists due to the extraordinarily low interest rates. This is particularly pronounced if the low interest rates are embedded into the expectations of borrowers and credit

institutions. New higher capital requirements for banks are expected to be announced as part of the Basel IV-requirements and this may trigger higher fees for borrowers.

62. There are no data about first time buyers in Denmark. Instead, data is about young families – below 30 years of age and between 30 and 39 years of age – are often used as a proxy for first time buyers. Denmark is experiencing important structural changes: its population is ageing, families are created later in life and women tend to give birth later in life. Indeed, in 1987 women were on average giving birth to their first child at 25.8 years old. In 2015, the average age rose to 29.1 years old. Between 1987 and 2013, the percentage of homeowners below 30 years fell from 26.1% in 1987 to 8% in 2013. Figure 4.1 below shows the big difference in homeownership between "younger" people (up to 30 years old) and other age categories. Interestingly, other age categories have seen a rise in homeownership, especially those 60 years old and above.

Figure 4.1. Percentage of owner occupier households in the different age groups in Denmark, 1987-2013.



Source: Statistics Denmark.

4.3. United Kingdom

63. Up until the 1980s the mortgage market was dominated by building societies - mutual organisations operating in a government protected sheltered circuit of housing finance which ensured a steady flow of funds for mortgages based on individual savings. In the 1980s, the Thatcher Government began a process of deregulating the financial services sector and this included banks and building societies. The former were allowed to become major competitors in the mortgage market and the latter were allowed to demutualise so that they might become banks and gain access to a wider range of funding sources. This also triggered the creation of the so-called centralised lenders, mortgage lenders who raised funds in the wholesale markets and operated very streamlined and competitive business models.

64. This new lending capacity thus supported a substantial increase in competition, resulting in more mortgage innovation and wider access to home ownership in combination with the government's Right to Buy for tenants of public housing. In 1985

over 600,000 loans were made to first time buyers and home ownership grew peaking at around 71% of households in the early 2000s when affordability constraints began to bite sharply.

65. Mortgage lending peaked in 2007 at £360 billion of gross lending and when mortgage market competition was at its highest –with huge numbers of products and relatively lax lending standards. With the onset of the crisis and the closure/merger and take-over of a number of banks, building societies and centralised lenders, we saw a major contraction in lending (both in terms of LTV and types of products).

66. The number of loans to first time buyers fell to 192,000 in 2008, before slowly recovering to 313,000 in 2015. As this commentary suggests first time buyers numbers are still around half of what they were in previous decades. Partly this is a product of rising house prices relative to wages and not least in the post- global financial crisis period when economic growth has been slow. Despite historically low interest rates which have eased mortgage payment to income ratios the major problem for buyers has been the decline in high LTV products and the need to raise very substantial down-payments or deposits.

4.3.1. Mortgage Regulation

67. The United Kingdom mortgage market has undergone a regulatory transformation over the last 30/40 years. It has moved from a system of fairly benign macro-level controls focussed on the overall scale of activity to one which is very highly regulated at all levels – macro and micro covering not only the role of the firms in the wider economy but also the detail of their conduct of business. This process really began under the 1990s Labour Government which introduced the Financial Services & Markets Act in 2000 and created the Financial Services Authority (FSA – which merged the former Securities & Investments Board and Personal Investment Authority) as the United Kingdom's primary financial services regulator.

68. Though the review concluded that the United Kingdom mortgage market was generally working well for consumers the FSA was given new powers to create rules governing the way in which mortgages should be sold. This regime was reviewed in 2005, looking at responsible lending practices in the areas of sub-prime, interest-only, self-certified mortgages and lending into retirement and weaknesses were found in responsible lending practices and assessments of a buyer's ability to afford a mortgage.

69. These problems were exacerbated by the crisis and in October 2009 the FSA published its conclusions arguing that the existing regulatory framework had proved to be ineffective in stopping risky lending and unaffordable borrowing. In the subsequent Mortgage Market Review (MMR) extensive change was proposed with final rules published in October 2012 coming into effect in April 2014.

70. Whilst work on the MMR was progressing, the Coalition Government, which had come to power following the May 2010 General Election, abolished the FSA and created two new financial services regulators: the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA). In essence there are now two parts to mortgage regulation:

- Conduct regulation, run by the FCA and via Mortgage Conduct of Business (MCOB) rules.

- Prudential regulation, which sets lenders capital requirements for offsetting their lending risks and mitigating risks in the wider financial system. The PRA oversees deposit-taking firms; and the FCA the non-deposit taking firms.
- In addition to this lenders have to have regard to additional macro-prudential regulation in the form of directions and recommendations made by the Financial Policy Committee (FPC).

4.3.2. Regulation post-MMR

71. Since the MMR came into effect, the PRA and FCA have issued a myriad of Consultation Papers (CPs), Policy Statements (PSs), the results of Thematic Reviews (TRs), Guidance Consultations (GCs), Final Guidance (FGs) and Supervisory Statements including Risks to customers from financial incentives, Arrears management and forbearance, Implementation of the Mortgage Credit Directive and the new regime for second-charge mortgages and finally the Responsible Lending Review. This last, the Responsible Lending Review, concluded as follows;

- Overall, firms have implemented responsible lending rules appropriately;
- Some firms should ensure they consistently assess and record lending decisions;
- Some firms could be more proactive/consistent in using flexibilities and exceptions to the responsible lending requirements for existing customers;
- There was no evidence that the rules were preventing lending responsibly to consumer groups such as older borrowers and the self-employed.

72. On this last point there are few in the mortgage industry who would agree with that conclusion. The new MMR rules have by design or otherwise had considerable impact although there has been no independent review of the scale of the impact. Aside from resulting in longer mortgage interviews and requiring tighter affordability checks and the use of stress tests, the effect of the new rules has been to limit lending on high LTV mortgages and on interest only mortgages, both of which were key elements of the pre-2008 mortgage market. In May 2016 the FCA announced a review of competition in the mortgage sector identifying a number of areas of concern including the challenges consumers face in making effective choices, notably around assessing/acting on information about mortgage products, and the role intermediaries play in that. The terms of reference for the competition review are to be published shortly.

4.3.3. And beyond the FCA and the PRA?

73. The mortgage industry has been adapting to the new FCA and PRA regulations since 2013 and as is evident from the above both agencies have been active in taking forward their remits. However they are now only part of the overall regulatory structures mortgage lending is now governed by. The creation of the Financial Policy Committee (FPC) at the Bank of England in April 2013 has been significant. It is charged with a primary objective of identifying, monitoring and taking action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the United Kingdom financial system. The FPC has a secondary objective to support the economic policy of the government. Though there is no specific housing/mortgage remit the FPC recognises the key roles of this market. As a result it has been active with respect to the mortgage market. For example, in June 2014, the FPC made the following recommendation:

‘When assessing affordability, mortgage lenders should apply an interest rate stress test that assesses whether borrowers could still afford their mortgages if, at any point over the first five years of the loan, Bank Rate were to be 3 percentage points higher than the prevailing rate at origination[…]’.

74. In 2015, the government gave the FPC new Powers of Direction over the PRA and the FCA in relation to loan to value and debt to income limits in respect of owner-occupied lending, and over the PRA in relation to leverage ratio tools for the rental market. The FPC published two Policy Statements for housing and leverage ratio tools in July 2015.

75. The PRA has recently undertaken a review of underwriting standards in the buy-to-let mortgage sector. This highlighted concerns about lenders’ growth plans and how they might meet them. The findings suggested a need for micro-prudential action. In March 2016 the PRA published proposals which aimed to ensure lenders conduct their buy-to-let business in a prudent manner without a marked loosening in buy-to-let underwriting standards and curtail inappropriate lending and the potential for excessive credit losses. A Supervisory Statement was published in July 2016.

76. The other recent major regulatory development is the Mortgage Credit Directive (MCD) and the creation of what is called ‘consumer buy-to-let’. It was implemented in the United Kingdom in 2016. There is a general view that the MCD offers little or no specific additional benefit for consumers over and above the United Kingdom’s existing regulatory framework. The main changes to mortgage lending resulting from the MCD are:

- Some buy-to-let mortgages (consumer buy to let) are now regulated by the FCA;
- A phased move to a Europe-wide standardised set of disclosure information to customers, via a European Standardised Information Sheet (ESIS);
- Requirements for foreign currency loans have changed;
- Lenders' sales processes and documentation have needed to be reviewed for compliance.

77. Furthermore, the MCD has implications from a property conveyancing perspective because it introduces a reflection period of at least seven days, which is to give the consumer time to compare offers and assess their implications. At the same time the MCD requires the credit agreement to be “binding” for this period.

78. In summary the evolution of mortgage regulation in the United Kingdom highlights the growing complexity of the requirements for mortgage lending. On the one hand this is recognition of the important role the mortgage market plays in the United Kingdom both at the level of the economy but also with regard to individual households. On the other hand what was once a very simple market place is now much more complex and it poses real challenges for lenders, brokers and consumers.

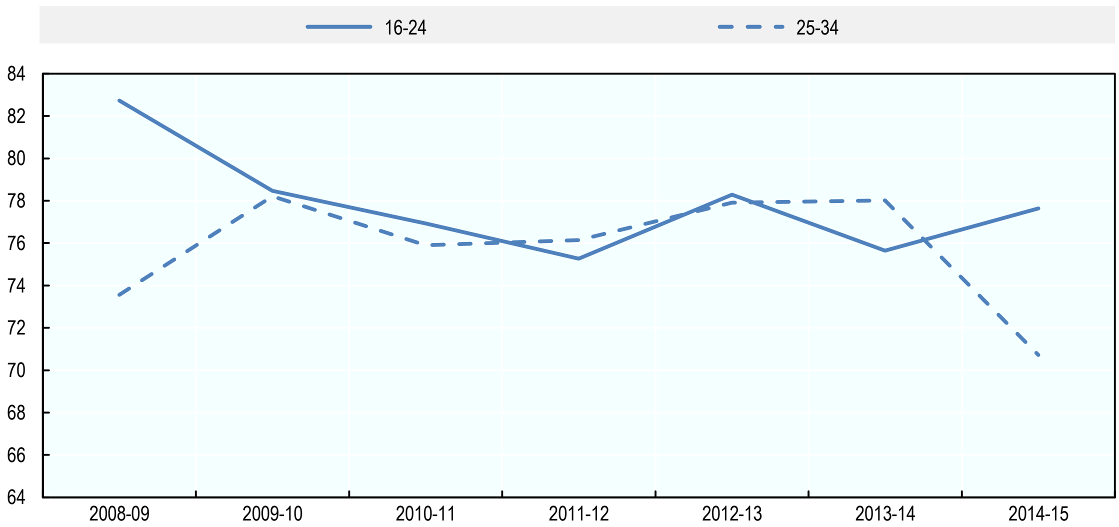
79. Although the United Kingdom now has a safer mortgage market in terms of its place within the economy and with regard to households the facts are that it is a smaller market – more households are excluded –one estimate is that since 2007 over 2 million households who would have been home owners prior to the global financial crisis failed to become owners and part of the explanation for that is mortgage regulation. It is also a more complex market –mortgage interviews now take longer and the documentation is far more complex. Firms are now spending far more on compliance and it is fortunate that

this has coincided with a period of low interest rates and considerable support to the financial sector.

4.3.4. First Time Buyers

80. This report has already highlighted the changing circumstances of first time buyers in the United Kingdom housing market over the last few decades and this is now reflected in very different home ownership rates when analysed by age cohorts – for 20-25 year olds some 35% used to be mortgaged home owners, this is now around 10%. This contraction across age bands is partly a reflection of high house prices and constrained affordability but it also reflects the changing circumstances around some younger households who now have more limited job prospects and often substantial student debts to repay alongside paying higher rents to secure a home. For 25-34 year olds, the expectation of buying a home has declined sharply since 2013 (Figure 4.2); down from 78% to 70% (while for 16-24 year olds we have seen a fall from 83% to around 78% since 2008).

Figure 4.2. Private renters' expectation to buy, by age, 2008-09 to 2014-2015



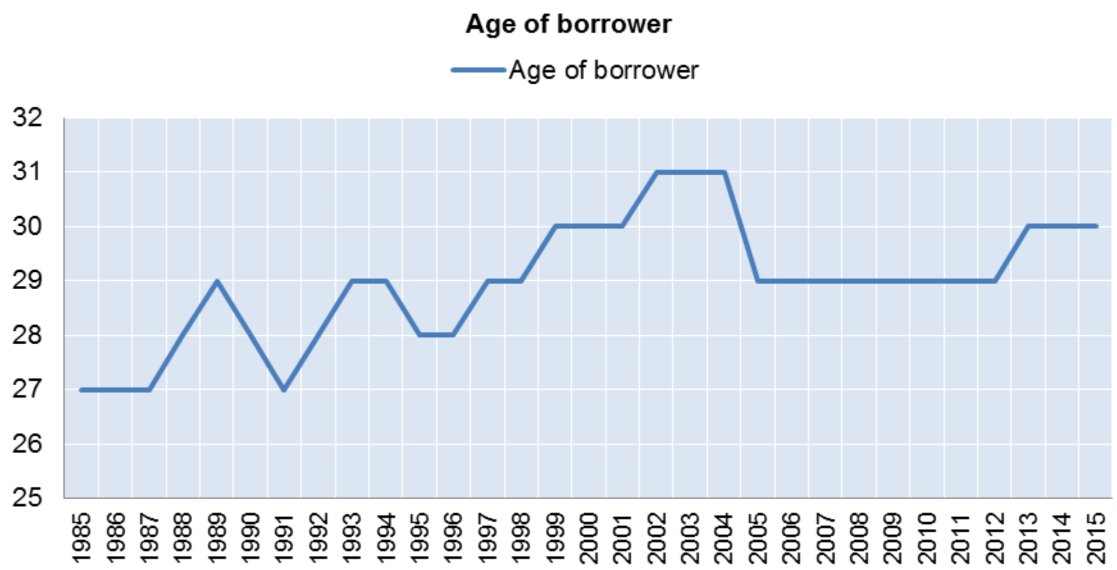
Note: Data refer to all private renters excluding those who also own a property.
Source: English Housing Survey 2015, full household sample.

81. Some 17% of young adults are now living at home with their parents and around 35% of first time buyers only enter the market though parental assistance. For single people the likelihood of being an owner has all but disappeared in many markets. The age of first time mortgage borrowers in the United Kingdom has varied for the past 30 years. It has decreased from 2004 and stabilised from 2005 to 2012 at 29 years old. However since 2013, the age of first time mortgage borrowers has risen to 30 years old (Figure 4.3).

82. Part of this is explained by the contraction in higher loan to value loans and interest only loans. Both were important in allowing younger households to access home ownership. Without them there is a need for a bigger deposit and high rents and low wage growth alongside inflating house prices makes that a considerable challenge. The number of loans for first time buyers has declined since 2003 (Figure 4.4). This can be seen for

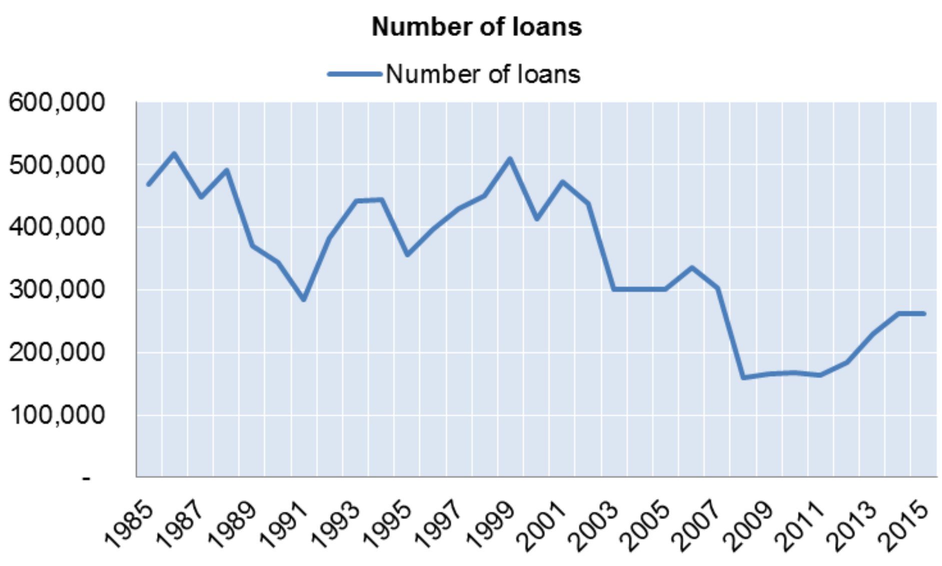
England in general but also for English regions such as South east and Greater London. It has since been increasing but did not recover its level from before the 2000s.

Figure 4.3. First-time buyers in the United Kingdom: Age of borrower, median 1985-2015



Source: CML Regulated Mortgage Survey (April 2005 onwards)

Figure 4.4. First-time buyers in England: number of loans, 1985-2015



Source: CML Regulated Mortgage Survey (April 2005 onwards)

83. The government in England (and in the other three countries) has responded to this by introducing the Help to Buy equity loan scheme where government takes an equity stake in the home with no charge being levied for this for 5 years. The government also opened up a Mortgage Guarantee scheme to help restart the high LTV market after the global financial crisis and this has had some success though the scheme closed at the

end of 2016. Other initiatives include boosting shared ownership funding – this provides part rent/part buy homes – and the launching of a starter home scheme which will be based on a 20% discount on a newly built home. Alongside these schemes which are specifically aimed at boosting access to home ownership is the other main plank of policy – boosting housing supply by which government hopes to ultimately reduce house price inflation although the evidence base for supporting such a strategy is extremely weak. Although there is some evidence to suggest first time buyers numbers are edging up it is unlikely that they will return to the numbers seen in previous decades. This may mean some households never enter home ownership or that if they do it will be much later. In that regard the United Kingdom is moving towards a more continental European model of becoming home owners in late 30s or early 40s rather than the previous pattern of entry in the early 20s.

4.3.5. Some concluding remarks on the United Kingdom

84. It would be wrong to suggest mortgage regulation is at the centre of the changes reported here. Clearly much else has gone on including the global financial crisis itself and the many measures governments and the Bank of England took. However as markets settle and as some of these measures come to an end so a new 'normal' housing and mortgage markets might emerge across the United Kingdom.

85. Without doubt mortgage regulation sets limits on who can enter home ownership. An evaluation of the draft mortgage rules produced in 2010 (Policis, 2010) suggested that 'on the basis of the central scenario for the impact analysis, we estimate that 19% of current borrowers, or 2.2 million individuals would not be able to borrow at all and a further 30% (3.4 million) would see reduced borrowing'. The final rules were probably tighter and subsequent interventions have put further limits in place which are slowly becoming binding as prices continue to rise, e.g. the FPC requirement that mortgage lenders constrain the proportion of new lending at LTI ratios at or above 4.5 to no more than 15% of the total number of new mortgage loans.

86. The distributional impacts are beginning to emerge (e.g., IFS, 2016; Redfern, 2016, Social Mobility Commission, 2016). Though we still lack the detail the evidence does suggest that those without access to parental wealth and those in lower paid jobs now find access to home ownership very difficult. Government schemes have helped bridge the gap to a degree (Finlay et al, 2016; Walker, 2016) but substantial differentials remain as is evident from the simple statistics on the numbers of first time buyers.

4.4. United States

87. As in the United Kingdom there has been an unprecedented and decade-long slide in homeownership in the United States, with the national rate down more than 5 percentage points from the 69.0 percent peak in 2004, to just 63.7 percent in 2015 according to the most recent Harvard Joint Center for Housing (2016) report on The State of the Nation's Housing 2016.

88. The report shows that renter households increased by 1.4 million from 2014 reaching 42.6 million in 2015 and some 9.3 million up from 2004. At the same time the number of homeowner households fell to 74.7 million in 2015, down 87,000 from 2014 and up just 431,000 from 2004. This decline was across all groups whether by age/race or ethnicity but the biggest drop was among 35–44 year olds, down nearly 11 percentage points from 69.2 percent in 2004 to 58.5 percent in 2015. The rate fell about 8 percentage

points among households under age 35 and about 7 percentage points among households aged 45–54, about 6 percentage points among households aged 55–64 but just 2 percentage points among households aged 65 and over.

89. As a consequence homeownership rates for all but the oldest age group are now lower than in 1994 and, as this might suggest, it is only because of increasing numbers of households in the older age groups (where rates are highest) that the overall rate has remained close to what it was in 1994. The share of sales to first time buyers declined by 1 percentage point in 2015 (32 percent from 33 percent in 2015) and was down from 40 percent in 2003–2005.

90. The Harvard report partly explains the decline as a consequence of the rise of student debt. The share of US households with outstanding student loan debt increased from 12 percent in 2001 to 20 percent in 2013 with a median outstanding loan balance of USD 17,000 (but 36 percent of borrowers in 2013 owing more than USD 25,000 and 17 percent owing more than USD 50,000). The largest increase in loan debt has been among households aged 20–39. Student loan debt impacts on the debt-to-income ratio used by lenders to establish loan eligibility. Reflecting the issues, the two government-backed mortgage re-insurers Fannie Mae and Freddie Mac reduced their down-payment requirements from 5 percent to 3 percent in 2015 as well as introducing loan products targeted at first-time homebuyers.

91. The report suggests that there will be 'modest growth in home purchase mortgage volumes to continue in 2016 and 2017' but that mortgage credit will remain tight for borrowers unable to meet strict underwriting standards. Of course these tighter standards have that default rates are low. The impact of tighter credit has been greatest on low-income and minority households. As well as lower down payment options, the FHA, Fannie Mae and Freddie Mac revised their origination and servicing standards in order to reduce additional credit requirements imposed by lenders.

92. A further strand in the tightening observed in the United States are the consequences of rollout of the Dodd-Frank Act 2010 aimed at curbing the predatory lending techniques and ensuring lenders retain some of the risks associated with their lending. The Harvard report suggests that 'these changes, along with recent enforcement actions, may have dampened lending activity as lenders adjust to the new standards. The Act brought in an Ability to Repay rule (also known as the Qualified Mortgage rule), from January 2014, which requires lenders to collect more income documentation and verify applicants' ability to afford new loans. Under these rules, lenders get greater legal protections if they make so-called "qualified mortgages", in which borrowers' monthly debt payments do not exceed 43 per cent of their income. In addition the Consumer Financial Protection Bureau's "Know Before You Owe" rule was introduced in October 2015, revising the disclosure documents that lenders must provide borrowers. These rules require that the final terms of a mortgage be shown to borrowers at least three business days before the closing date in order to prevent buyers from making rushed decisions or signing off on a mortgage without fully understanding the terms. Aimed at limiting bad lending practices the new procedures will certainly slow the system and possibly prevent a repeat of 2008 not least in relation to the so called 'teaser' interest rates that were later "reset" to much higher ones. The CFPB also passed a rule requiring banks to take on at least 5 per cent of credit risk in mortgages as part of the Dodd Frank process.

93. The impact of this is unknown at present as the system is still adjusting. The current tight credit conditions are likely to continue and the national homeownership rate

is expected to continue to decline as banks reduce mortgage lending to those with weaker credit histories. However the report suggests that ‘the aging of the large millennial generation has the potential to produce millions of new home owners in the coming years’. Demand for home ownership remains strong and it is argued the owner occupied housing market is likely to recover.

5. CONCLUSIONS

5.1. Trends

94. The comparison between what is happening now and before 2008 raises a number of distinct issues. First it is clear that, in the period running up to the global financial crisis in many countries, competition for market share in increasingly deregulated markets resulted in lenders providing loans which were outside established industry norms (Scanlon et al, 2011). Thus comparing the situation now with just before the crisis when the market was at its most expansionary phase may over-estimate the extent of any changes that have taken place.

95. Second, despite the evident lending excesses, most countries did not see as much default as was expected, so while there were major problems for banks it was not usually the case that first-time buyers lost their homes. In part this was because governments took steps to limit the impact of market collapses. Those countries with massive defaults were generally the ones where the housing market experienced major house price falls and cutbacks in housing activity, as well as loss of employment as in Ireland and Spain. Others limited the falls by underpinning the housing market by reducing the costs of mortgages, offering guarantees and putting in place safety nets for buyers in difficulty, e.g. the United Kingdom, Australia and the Netherlands, but the upshot of that has been prices were maintained at higher levels than might otherwise have been justified.

96. Third, quantitative easing has led to far lower interest rates which have made access to funding easier and of course eased the debt service burden for many existing borrowers. This therefore places more emphasis on regulations and controls as a means of limiting an individual mortgagor's exposure to risk via stress tests as well as LTV and LTI caps. However for others it has provided the potential for taking on more debt, which in turn has helped fuel the purchase of additional properties and the widespread extension and improvement of existing homes. Both have implications for those trying to enter the market for the first time.

5.2. Evidence

97. The vast majority of evidence comes from macro-prudential legislation and scrutiny - which is relatively well documented although we have yet to see any fundamental reviews of the impacts of the regulatory changes made. Even in this macro-prudential context it is not always clear what is legally binding and what is recommendation - it varies both between countries and over time. EU recommendations based on Basle II and the Mortgage Credit Directive increasingly provide the framework for national regulation but of course the rules are interpreted in varying ways.

98. Importantly, and as a generalisation, countries seem to move through phases in terms of the regulation of individual transactions, in part as a result of the financial crisis and then the EU Directive. In those countries where deregulation mainly took place in the 1970s and 1980s this pattern goes from lending being driven by general business practice (which often did not prevent the rapid expansion of lending before the global financial crisis); to a market which is led by recommendations; then to legislation on core variables; and finally to the creation of a variety of banking and regulatory organisations

with the power to undertake detailed monitoring and enforcement related to housing and mortgage markets.

99. The United Kingdom is the clearest example of this pattern (through the creation of the Financial Conduct Authority, the Prudential Regulation Authority and the Financial Policy Committee of the Bank of England –see case study) but other countries such as Ireland and Canada have similar experience. In countries where the market was only really developed in the 1990s, such as most countries in Eastern Europe, the initial legislation to enable mortgages often did not include detailed rules, so that new rules have to be developed in response to particular circumstances, such as major problems arising from foreign currency mortgage.

100. There is relatively little evidence of the impact of regulatory changes at the individual household level and indeed often nothing at all on first time buyers. Only a relatively small number of countries specifically monitor first-time buyer activity. As a result we had to rely on expert opinion on this matter. Only in the United Kingdom have we found any detailed assessment of the extent to which the changes in regulation might have led to people being turned down for mortgages. This may reflect in part the fact that the United Kingdom has always had a big first time buyer market and one where the age of entry was relatively young.

101. The evidence suggests that the countries in our sample fall into three or perhaps four major groups:

- Countries where there were few problems during the global financial crisis and where demand for owner-occupation has increased since that time (sometimes with an initial dip). The most notable is Germany but it also applies to Slovenia and to some extent the Netherlands along with countries that are trying to kick-start their housing investment. In these countries, while there are usually macro-prudential rules in place there is also evidence that there is plenty of funding around and, if anything, regulations as applied to individuals are currently being relaxed;
- At the other extreme, countries where the mortgage market has not recovered and there is very little lending of any type - notably Greece and Hungary and to a lesser extent Spain and Portugal;
- In between, countries that have strengthened their regulatory framework but where there is no evidence of this causing significant constraint given demand such as Belgium and the Czech Republic; and,
- A small number of countries where the regulatory constraint appears to be biting at least to some extent, such as for instance the United Kingdom and Canada.

102. It is mainly in countries in the last two categories that one could expect to see a clear link between changes in regulation and exclusion from owner-occupation.

5.3. The main levers

103. In the main, the changes in regulation and controls relate to:

- Setting or decreasing the maximum LTV - which in turn increases the deposit requirement;
- Requiring that there must be amortisation - especially in the Scandinavian countries - which increases outgoings;

- To a lesser degree, introducing Loan to Income (LTI) and Debt Service to Income ratios (DSTI) - which can reduce the size of mortgage allowed and therefore increase the need for a deposit;
- Capping the amount of activity lenders can undertake in specified markets;
- Stress testing against higher interest rates and in some instances liquid assets, which aims to assess potential risk to the institution - but which might to some extent mirror individual decisions. The imposition of an interest rate stress test has the consequence that for some to pass this they must have a lower mortgage and thus a bigger deposit.
- Establishing rules about the conduct of mortgage lending.

104. In principle it should be possible to isolate changes in regulation from other factors that have affected demand. However there are a number of other factors at work which make this hard.

105. First, the decline in home ownership often significantly pre-dated the introduction of regulations and the global financial crisis, in part because easier credit itself helped to increase house prices and worsen affordability (Lunde and Whitehead, 2016). Second, the onset of mortgage regulations was not the only market intervention underway –there were wider post-crisis measures related, for example, to the need to increase liquidity into the market as well as housing specific measures aimed at helping particular markets or categories of buyers. There are also a large number of reasons why people may not be coming forward for a mortgage. These include that people may think they will be rejected (and so should be seen as affected by regulation) but in the main it is likely to be for reasons relating to their individual circumstances and risk attitudes.

106. The first and most important concern relates to meeting the deposit. In this context there are four distinct reasons why it has become more difficult in addition to regulatory change:

- Private rents have increased in many countries making it more difficult for potential owners to save for a deposit;
- Real incomes, notably for younger people, have decreased in a number of countries making it harder to save;
- Interest rates on savings have declined - making it more difficult to achieve a given deposit;
- House prices have risen in many countries so deposit requirements are higher.

107. Furthermore, there is an indirect regulatory effect in that high LTVs cost the banks and thus borrowers more and therefore terms and conditions will be more difficult. The importance of parental assistance has clearly increased - so those without family support will find it harder to find a deposit than those who benefit from that support- but in a number of countries with high unemployment and falling incomes family capacity has also declined. These factors would have kicked in whatever the level of deposit required. Increased regulation will have worsened the situation but is not generally the main reason for change.

108. The second issue is that incomes in general have been less buoyant since the financial crisis. The evidence is strong that it is lower income households that have not been entering owner-occupation - but is this about regulation or simply limited increases and sometimes declines in these low incomes as well as other priorities and constraints?

109. The third issue arises from the fact that unemployment and job insecurity have risen rapidly especially among younger people. In most countries it has always been necessary to have a permanent job in order to obtain a mortgage (or sometimes to have a parental guarantee). This group of potential owner-occupiers would therefore generally not have been able to enter the sector except perhaps in the period before the crisis when there was a substantial expansion in what was called the 'subprime' market where lenders widened their criteria to include people with poor credit history and sometimes less well documented evidence on incomes and where lending was predicated on continuing house price inflation. The emergence of student debt, shorter term employment contracts and the loss of employee benefits such as pensions all further undermine the capacity of younger households to enter or sustain home ownership. Moreover for many renting a home becomes a logical choice as it gives flexibility to reflect their position in the labour market. However with higher rents the capacity to save for a mortgage has become more limited.

110. A fourth element relates to individual attitudes to risk. Before the crisis we saw individuals pull back before mainstream institutions in a number of countries and it seems possible that individual attitudes could well be more conservative than current stress tests. In this case it is demand which has declined rather than regulation that has constrained. This effect is however difficult to distinguish from a direct impact of regulation without detailed statistics and survey evidence. The outcome of risk aversion on both sides is reflected in the increases in the numbers of young people living with their parents and in lower than predicted household formation.

111. Finally, in a number of countries government are offsetting the effects of regulatory changes by a range of initiatives aimed at helping first time buyers. These include special schemes focussed on both housing demand and supply, tax measures including reduced tax liability and also tax reliefs. Of course all of these may help a larger number of younger households into owner-occupation but it could also result in house price increases which in turn make it more difficult for others to buy and indeed for successive generations to enter this market. Sometimes these schemes also shift the risk of borrowing from the lender to the buyer, for example enhancing access to home ownership via government equity loan schemes that then pass the risk of house price inflation to the borrower who has to repay the equity loan which may have implications at a later stage in the housing market cycle.

112. With more demand for renting from these younger households we have seen the market respond. This supply response, underpinned by continued house price inflation at least in some countries and alongside low savings rates, has meant that the purchase of existing homes for the provision of more private rented accommodation has become a more attractive investment. The emergence of this strong investor demand for property in response to market demand has in turn put added pressures on younger households seeking to access owner-occupation especially in pressured markets. Clearly this varies from country to country and region to region but lending to support investment is now widespread and this has brought some additional pressures on first time buyers.

113. It is quite clear that we are seeing a complex set of tensions being played out between the absolute need to develop and maintain a safe and strong financial system – expressed ultimately in detailed operational rules - and the legitimate desires and aspirations of younger households who themselves have borne some of the costs of the restructuring of economies and markets. We have both tighter regulation and unmet demand and governments have to manage the politics of this.

114. More generally there must be concern about what we are aiming to achieve. The position in 2007 in many countries was that many borrowers were overstretched. However, because of lower interest rates and other specifics of crisis management there was in most countries relatively little evidence of negative impacts on the household sector - people were able to adjust and where not, government often brought in support measures. But looking to the future stress testing in the face of housing market volatility seems to be the most important development.

115. Owner-occupation rates declined in many countries well before the crisis and are continuing to do so as the crisis has receded. In some countries falls were particularly prevalent during the period before 2007 when lending terms were particularly generous. Formal regulatory changes were not generally put in place until after 2010 or even later – and regulation specific to credit assessment usually only from 2014. Markets however became more risk averse immediately after the crisis. Clearly some households have been able to adapt to new rules of access to mortgage finance –the rise of the ‘’Bank of Mum and Dad’’ is an example, as is the increased use of cash as distinct from loans. However the capacity to adapt is not evenly distributed either between age and income groups or between countries. Many younger households are facing higher housing costs together with lower or stagnant incomes and greater insecurity of employment. Increased regulation is therefore only part of a much larger story.

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