Martina Eckardt · Jörg Dötsch
Stefan Okruch *Editors*

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Martina Eckardt
Andrássy University Budapest
Budapest, Hungary

Jörg Dötsch
Andrássy University Budapest
Budapest, Hungary

Stefan Okruch
Andrássy University Budapest
Budapest, Hungary

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List of Contributors

Richard Burke Department of Accounting & Economics, Waterford Institute of Technology, Waterford, Ireland

Sean Byrne Department of Accounting & Economics, Waterford Institute of Technology, Waterford, Ireland

Sebastien Clerc-Renaud Institut für Finanzdienstleistungen Hamburg, Hamburg, Germany

Jörg Dötsch Department of Economics, Andrássy University Budapest, Budapest, Hungary

Martina Eckardt Andrássy University Budapest, Budapest, Hungary

Declan French Queen's Management School, Queens University Belfast, Belfast, UK

Marietta E. A. Haffner Faculty of Architecture and the Built Environment, Delft University of Technology, Delft, Netherlands

School of Global, Urban and Social Studies, RMIT University, Melbourne, Australia

Department of Land Economy, University of Cambridge, Cambridge, UK

Yogesh Jaiyawala Department of Accounting & Economics, Waterford Institute of Technology, Waterford, Ireland

John Maher Department of Accounting & Economics, Waterford Institute of Technology, Waterford, Ireland

Donal McKillop Queen's Management School, Queens University Belfast, Belfast, UK

Eszter Megyeri Department of Economics, Andrássy University Budapest, Budapest, Hungary

Pierluigi Murro Department of Law, LUMSA University, Rome, Italy

Doris Neuberger Department of Economics, University of Rostock, Rostock, Germany

Stefan Okruch Department of Economics, Andrássy University Budapest, Hungary

Flaviana Palmisano Department of Economics and Law, University of Rome La Sapienza, Rome, Italy

Tripti Sharma Queen's Management School, Queens University Belfast, Belfast, UK

Dirk Ulbricht Institut für Finanzdienstleistungen Hamburg, Hamburg, Germany

Part I
Old-Age Security and Homeownership in the EU: An Overview

Personal Pensions and Homeownership in the EU: An Overview

Martina Eckardt

1 Introduction and Overview

As is well known, demographic change is underway in all EU Member States, although to different degrees. By 2030, Europeans will have the highest median age of 45 years, compared to 40 years for the United States and 21 years for Africa (EU COM 2017a, p. 14, graphic). Following the EU Commission, "(a)ll this will have an impact on the financial sustainability of our welfare systems and in turn on the countries' fiscal situation. For the EU-27, associated expenditure related to pensions can be expected to rise to 12.4% of GDP by 2030, 7.7% of GDP for healthcare costs and up to 2.4% of GDP for long-term care" (EU COM 2017a, p. 15).

As a result, benefits from public pension systems and old-age income will decrease, though the significance of this has not been fully absorbed by the wider community. The Member States have already introduced a number of reforms to ensure fiscal sustainability, such as increasing the overall retirement age, setting incentives for higher employment rates for women as well as decreasing incentives for early retirement. Additional reforms may lead to a lower replacement rate of public pensions (Carone et al. 2016; Eatock 2015; EU COM 2015).[1] To counter negative effects on old-age income, policy reforms aim at increasing the share of other sources such as voluntary personal pensions and private homeownership.

Investing in personal pensions and in private homeownership are the two main investment decisions consumers make over their life cycle. Both have profound implications for old-age arrangements available to an individual and thus play an

[1] According to the OECD (2017a), the "replacement rate is defined as (. . .) pension entitlement divided by (. . .) pre-retirement earnings. It measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement".

M. Eckardt (✉)
Andrássy University Budapest, Budapest, Hungary
e-mail: martina.eckardt@andrassyuni.hu

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important role in their savings motives (Le Blanc et al. 2016). Investing in personal pension assets generates a stream of income after retirement, which supplements statutory and/or occupational pensions. Investing in homeownership not only generates a stream of in-kind services (housing services) from this durable consumer good but also establishes wealth which could be liquidated in old age if needed.

In both cases, financial markets and their characteristics play an important role for the outcome of such investments (OECD 2013). Personal pensions use capital and insurance markets for saving in younger age while liquidating when beneficiaries become old, thus smoothing disposable income levels over the life cycle. Establishing private homeownership usually involves taking out mortgages at younger ages for acquiring property, which are then repaid over the life cycle. Both investments also involve using long-term financial contracts, implying a certain degree of illiquidity of the selected investment. In the case of private personal pensions, these are concluded with insurance companies, pension funds or other financial market providers like investment funds. Homeownership, in turn, requires taking out loans from the mortgage market. The risks and uncertainties as well as the profound information asymmetries of such long-term financial contracts affect both types of investment.

Governments pursue policies to promote additional savings in personal pensions as well as to foster private homeownership. On the one hand, they use regulations to reduce the risks and uncertainties resulting from concluding long-term financial contracts. On the other hand, they set fiscal incentives through taxation and subsidies. So far, however, there is no coherent policy approach to these two investment decisions. This concerns both the policy objectives pursued as well as the instruments implemented and, finally, their impact. This is mirrored also with respect to the research devoted to these issues. There is a quite limited strand of literature about optimal portfolio allocation decisions over one's life cycle. It indicates that both investment decisions are made endogenously. However, so far there is no clear answer as to whether investments in personal pensions and homeownership act as substitutes or as complements. For example, Ho and Zhou (2016) present an elaborate simulation model for the United States which points to a complementary role, although not a balanced one. While subsidies for personal pensions seem to increase acquisition of private homeownership in younger years, this does not hold the other way round.

In addition, the empirical work on the interrelationship of private homeownership and old-age security is also far from clear. For instance, research by the OECD (2013) finds that private homeownership might increase disposable income in old age through the foregone rent payments, thus also reducing the at-risk-of-poverty rate. However, cross-country comparisons have to be treated very cautiously. This is not only due to data inconsistencies but also because of large differences between housing and mortgage markets as well as national pension systems. These variances are a consequence of the different institutional structures as well as the policies adopted by the Member States. Understanding the complex incentives which impact individual decision-making on personal pensions and homeownership requires detailed knowledge of the institutional and policy setup in a given country.

This volume sheds additional light on these issues. Chapter "Old-Age Poverty and Residential Property in the EU: An Analysis with the EU-SILC 2014 Data" presents a paper by Megyeri which empirically analyses the relationship between private homeownership and old-age poverty in the EU-28. Its results emphasise the importance of taking both personal pensions and private homeownership as additional sources for old-age income into account. Chapters "Holding on and Letting Go in Ireland: Examining the Policy and Fiscal Environment for Supplementing Retirement Income from Residential Property", "Dutch Pensions and Housing: Towards a Social Divide", "Pensions, Housing and Mortgage Markets in the United Kingdom", "Italy: An Ageing Country with Low Level of Private Pension Schemes but High Home-Ownership Rate", "My Home Is My Castle? Sustainability of Private Pensions and Private Homeownership in Hungary" and "Germany: Ageing Economy with Rising Pension Gap, Stable Mortgage Market and Well-Developed Rental Market" provide six in-depth country case studies for Germany, Hungary, Ireland, Italy, the Netherlands and the United Kingdom.[2] They give a detailed overview of the broad variety in institutional features, fiscal incentives and other public policy measures implemented in personal pension, housing and mortgage markets in the EU.

The rest of this introductory chapter is structured as follows. Section 2 gives a short overview of how households in the EU allocate their assets between personal pensions and private homeownership by using the latest data from the Household Finance and Consumption Survey (HFCS, ECB 2017). Section 3 provides a short overview of the six countries in our case studies and introduces a framework for systematically classifying the broad range of fiscal incentives and other public policy instruments which governments adopt to promote private pensions and private homeownership. Section 4 concludes with an outlook of open questions for future research.

2 Households' Allocation of Assets in the EU: Personal Pensions and Homeownership

Both investing in personal pensions and acquiring homeownership involve financial markets, although in quite different respects. Accumulating assets for old age through personal pensions implies that consumers lend money to financial intermediaries which invest them in the financial markets. Investing in homeownership usually involves borrowing money on the mortgage market for buying private property. While assets that are built up through private pensions are liquidated in old age as a lump sum or as a periodic income stream, homeownership is a much

[2]They are a result of the research project "Integrating Residential Property with Private Pensions Provision in the EU" funded by the EU Commission, DG Employment, Social Affairs and Inclusion, VP/2014/014/0037.

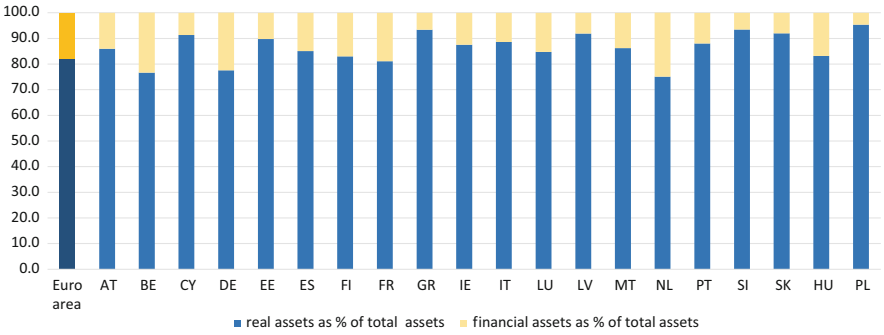

Fig. 1 Shares of real and financial assets on total assets. Source: Own composition based on HFCS (2017), 2nd wave, Table D1

more illiquid asset, which nevertheless provides a current stream of housing services. If needed, it might also be liquidated – either totally by selling the property completely or partially by releasing equity through release schemes or reverse mortgages (Reifner et al. 2009a, b; French et al. 2017). Thus, it serves both a consumption and an investment function.

The HFCS provides the most current comparable data on households' asset allocation for most EU Member States. Its second wave collects household level data on the balance sheets of 18 Eurozone members as well as on Hungary and Poland. It covers 84,000 households, with 2014 the reference year for most of the data, with data collected between 2013 and 2015 (ECB 2017). This data set provides in-depth information on households' allocation of financial and real assets as well as on debts and other liabilities. It also allows to break down the results according to wealth, income and age, among others (Arrondel et al. 2016).

Figure 1 shows that real assets account for the overwhelming share of gross wealth, with about 80% in the Eurozone.[3] But there is considerable variation among countries. Household portfolios in Belgium, Finland, France, Germany, Hungary, Luxembourg and the Netherlands have a much higher share of financial assets than it is the case in other countries.

Figure 2 shows participation rates of households in the Eurozone for different types of financial and real assets. According to this, the main financial assets held by Eurozone households are deposits (97%) followed by voluntary pensions or whole-

[3]"Real assets include the value of the household main residence for homeowners, other real estate property, vehicles, valuables (such as jewelry, works of art, antiques, etc.) and of self-employment businesses. Financial assets include deposits (sight and saving accounts), mutual funds, bonds, shares, money owed to the households, value of voluntary pension plans and whole life insurance policies of household members and other financial assets item – which includes private non-self-employment businesses, assets in managed accounts and other types of financial assets" (HFCS 2017, 2nd wave, Table D1).

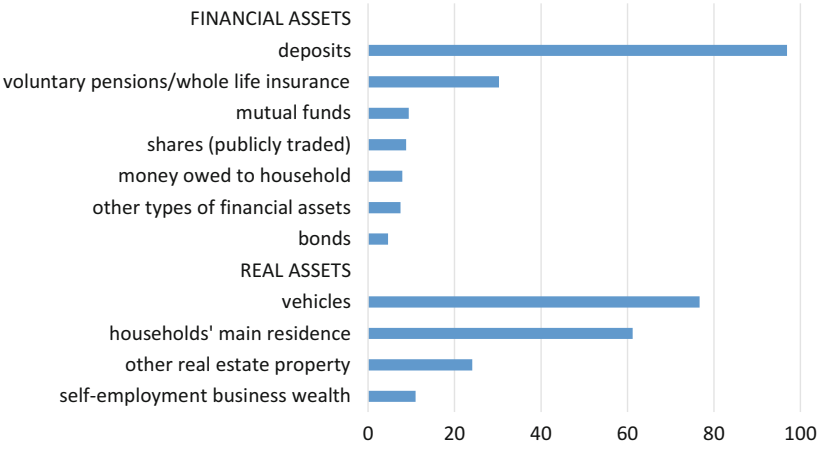

Fig. 2 Participation rates in assets (in %) – Euro area. Source: Own composition based on HFCS (2017), 2nd wave, Tables B1, C1

life insurance policies (30%). As regards real assets, 77% of households own vehicles, while 61% own their residential property.

A look at the composition of households' main types of financial and real assets by country reveals again large differences between countries (Table 1). For example, homeownership rates are below 50% in Austria and Germany, while they are above 80% in Hungary, Slovakia and Spain. In regard to voluntary private old-age schemes, Greek households show the lowest participation rate with only 1.3% followed by Ireland, Italy and Latvia, where only about 10% of households invest in voluntary old-age schemes. In contrast, Poland shows a rate of 51%, with about 45% of Belgian and German households holding voluntary pension or wholesale life insurance assets.

Table 2 shows that this variation is also found when looking at the portfolio shares of households' real and financial assets. In most countries, households' main residence (HMR) accounts for about 50% of a household's total assets, with a share of 60% and more in Italy, the Netherlands and Poland. As regards financial assets, deposits represent on average 8% of total assets in the Euro area, with households in Austria, Belgium, Germany and the Netherlands holding about 10% of their assets as deposits, compared with only 3% in Poland and 4% in Slovenia. In contrast, voluntary pensions and wholesale life insurance ranges between only about 1% of total assets in Austria, Estonia, Finland, Greece, Italy, Poland, Slovakia and Slovenia and more than 5% in France, Germany and the Netherlands. Risky financial assets such as mutual funds, bonds, and stocks amount to a larger share only in Belgium, Finland and Hungary.

Mortgages play an important role in financing private homeownership. Again, there is quite a lot of variation in the share of households which have taken them out

Table 1 Participation rates in assets – Eurozone members (except Lithuania) and Hungary and Poland

	Real assets				Financial assets						
	Main residence	Other real estate property	Vehicles	Self-employment business wealth	Deposits	Mutual funds	Bonds	Shares (publicly traded)	Money owed to household	Voluntary pensions/ whole-life insurance	Other types of financial assets
Euro area	61.2	24.1	76.7	11.0	96.9	9.4	4.6	8.8	7.9	30.3	7.5
AT	47.7	12.1	76.6	7.0	99.7	10.0	4.0	5.4	8.3	14.5	1.5
BE	70.3	18.5	76.2	8.5	97.5	21.0	7.8	11.0	6.7	44.4	3.4
CY	73.5	46.0	87.4	18.5	76.3	1.4	0.6	20.4	8.6	19.5	1.0
DE	44.3	20.2	73.0	9.3	99.0	13.1	4.2	9.6	13.3	46.3	14.5
EE	76.5	32.0	52.1	11.7	98.6	3.2	0.1	3.6	12.4	19.8	3.6
ES	83.1	40.3	78.4	14.3	99.6	5.7	2.1	11.0	11.7	24.5	2.3
FI	67.7	30.5	73.4	7.6	100	27.0	0.9	21.4	–	23.6	15.8
FR	58.7	23.4	80.0	8.8	99.6	8.6	1.2	11.7	5.0	38.5	9.9
GR	72.1	35.7	70.6	15.7	73.9	0.5	0.3	0.8	3.4	1.3	0.3
IE	70.5	23.0	82.5	20.2	93.9	3.3	4.5	13.1	5.4	10	1.5
IT	68.2	23.1	79.2	16.0	93.2	5.9	13.0	3.7	0.9	9.3	2.7
LU	67.6	26.3	88.0	3.9	96.7	14.6	2.6	9.0	7.4	32.0	4.4
LV	76.0	39.1	44.4	10.8	78.5	0.1	0.3	0.8	8.0	8.9	1.0
MT	80.2	34.4	82.7	16.3	95.2	7.8	22.4	16.4	2.9	26.0	2.1
NL	57.5	8.1	85.9	2.7	98.6	13.3	3.8	8.0	8.6	35.3	4.1
PT	74.7	30.3	73.3	12.7	96.1	3.0	0.7	5.7	9.4	17.2	1.5
SI	73.7	30.6	76.3	12.7	93.3	5.6	0.7	8.0	7.0	14.0	0.9
SK	85.4	19.4	60.7	10.8	88.2	2.0	0.3	2.1	5.4	15.5	3.6
HU	84.2	23.0	50.9	12.0	81.1	7.4	7.3	1.3	9.5	15.3	0.5
PL	77.4	18.9	63.0	18.9	82.8	4.2	1.0	3.5	5.0	51.3	2.2

Source: Own composition based on HFCS (2017), 2nd wave, Tables B1, C1

Table 2 Shares of asset categories relative to gross wealth (in %)

	Real assets				Financial assets			
	Main residence	Other real estate property	Self-employment businesses	Vehicles and valuables	Deposits	Voluntary pension/ whole-life insurance	Risky assets (mutual funds, bonds, shares)	Other financial assets (including money owed to HH)
Euro area	49.5	18.3	9.7	4.8	7.9	4.4	3.7	1.9
AT	50.0	14.5	17.4	4.1	9.3	1.3	2.6	0.8
BE	51.4	14.8	7.5	2.9	9.7	3.4	8.3	1.9
CY	36.5	31.3	21.0	2.4	4.7	2.0	1.1	0.7
DE	42.8	18.9	11.7	4.1	10.6	5.5	4.5	1.9
EE	50.0	17.4	17.7	4.7	6.9	0.8	0.5	2.0
ES	49.8	24.3	7.8	3.2	6.1	2.6	2.5	3.7
FI	53.1	21.2	4.6	4.2	8.2	1.3	6.6	1.0
FR	45.3	16.4	11.9	7.5	6.9	7.4	2.8	1.8
GR	52.9	29.2	6.6	4.6	5.8	0.1	0.0	0.2
IE	46.6	31.3	5.3	4.3	6.8	2.7	2.4	0.6
IT	62.2	15.4	6.9	4.2	5.5	0.8	4.2	0.9
LU	50.6	26.9	4.0	3.2	7.1	2.7	3.5	2.0
LV	48.4	25.0	14.2	4.3	3.9	0.6	0.0	1.9
MT	46.1	16.5	20.0	3.6	6.9	1.6	4.4	0.2
NL	60.2	9.5	1.2	4.3	9.9	9.1	4.4	1.6
PT	43.8	26.2	13.6	4.4	8.0	1.5	0.8	1.6
SI	54.2	13.7	21.3	4.2	4.1	0.6	0.7	1.1
SK	71.7	8.7	5.8	6.0	5.8	1.4	0.3	0.6
HU	56.2	13.4	9.7	4.1	7.6	2.3	5.8	1.0
PL	66.7	10.0	15.4	3.3	3.1	0.7	0.5	0.2

Source: Own composition based on HFCS (2017), 2nd wave, Tables D2, D3

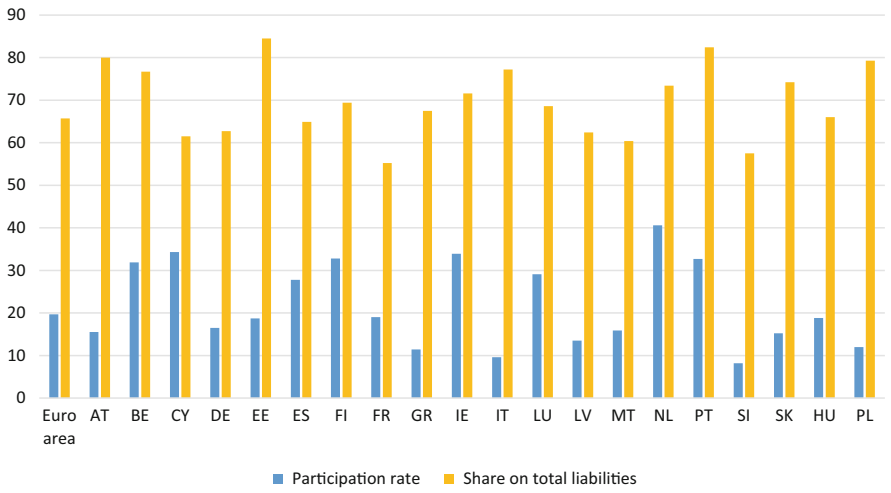

Fig. 3 Mortgage on HMR – participation rate and share on total liabilities (in %) – Eurozone members (except Lithuania) and Hungary and Poland. Source: Own composition based on HFCS (2017), 2nd wave, Tables E1, E3

for their main residence as well as in the share of mortgages on household total liabilities (see Fig. 3). While on average 20% of households in the Euro area have one on their main residence, this is the case for more than a third of all households in Belgium, Cyprus, Finland, Ireland and the Netherlands, contrasting with less than 10% of those in Italy and Slovenia. Note, however, that the participation rate in mortgages for one's main residence does not reflect in its share on total liabilities. While the average lies at about 65% for the Eurozone, it amounts to about 80% of total liabilities in Austria, Estonia, Poland and Portugal.

There is also quite a variation in the median value of HMR as well as in the outstanding balance of housing mortgages (Fig. 4). Overall, in the transition countries and in Greece and Portugal median values lie well below the Euro area average.

As regards personal old-age arrangements, Fig. 5 shows that the conditional median value in the Eurozone is EUR 13,000, with only households in Ireland and in the Netherlands showing savings of substantial value in these assets (EUR 45,000 and EUR 51,000, respectively). The median values of those households holding personal pension assets do not reflect in either the participation rate of households in such assets (30% for the Euro area; see Table 1) or in the portfolio share of these assets on all real and financial assets (4.4% for the Euro area; see Table 2).

Private homeownership rates vary also according to age group. As Fig. 6 shows, homeownership rates are much lower if the household representative is below 34 years of age. As regards elderly households, in 12 out of 20 countries, homeownership rates peak for the age group of the 55–64 or 65–74 years old, while it is usually lower for those over 75 years old. However, Greece and Ireland

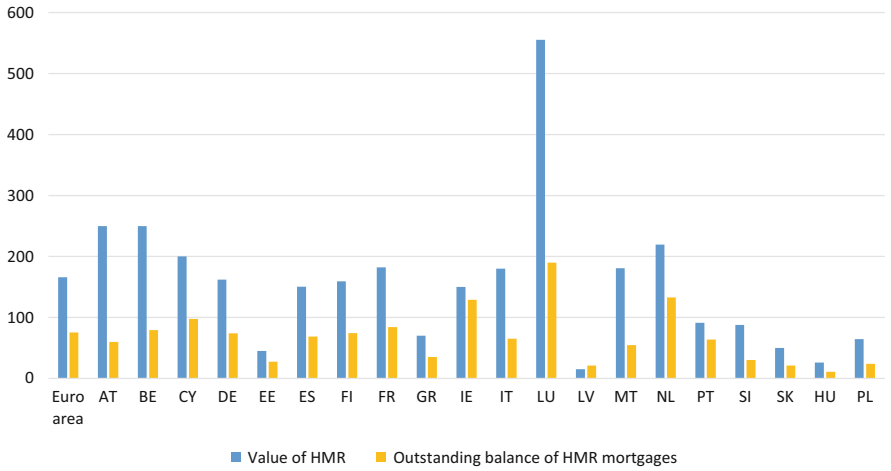

Fig. 4 Conditional median value of HMR and conditional median outstanding balance on HMR mortgages (in EUR 1000). Source: Own composition based on HFCS (2017), 2nd wave, Tables B2, E2

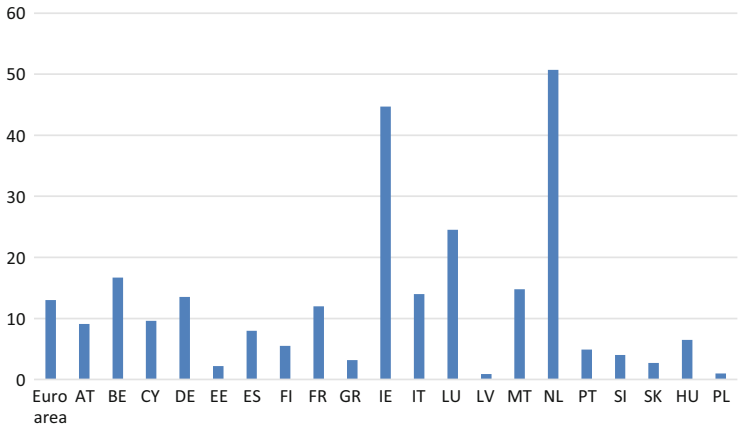

Fig. 5 Conditional median value of voluntary pension/wholesale life insurance (in EUR 1000). Source: Own composition based on HFCS (2017), 2nd wave, Table C2

are exceptions in this respect. These latter findings point to the relevance of the country-specific institutionalisation of long-term care. In seven countries, homeownership rates peak for the 45–54-year-olds. This might reflect that housing policies in these countries are particularly targeted to this age group.

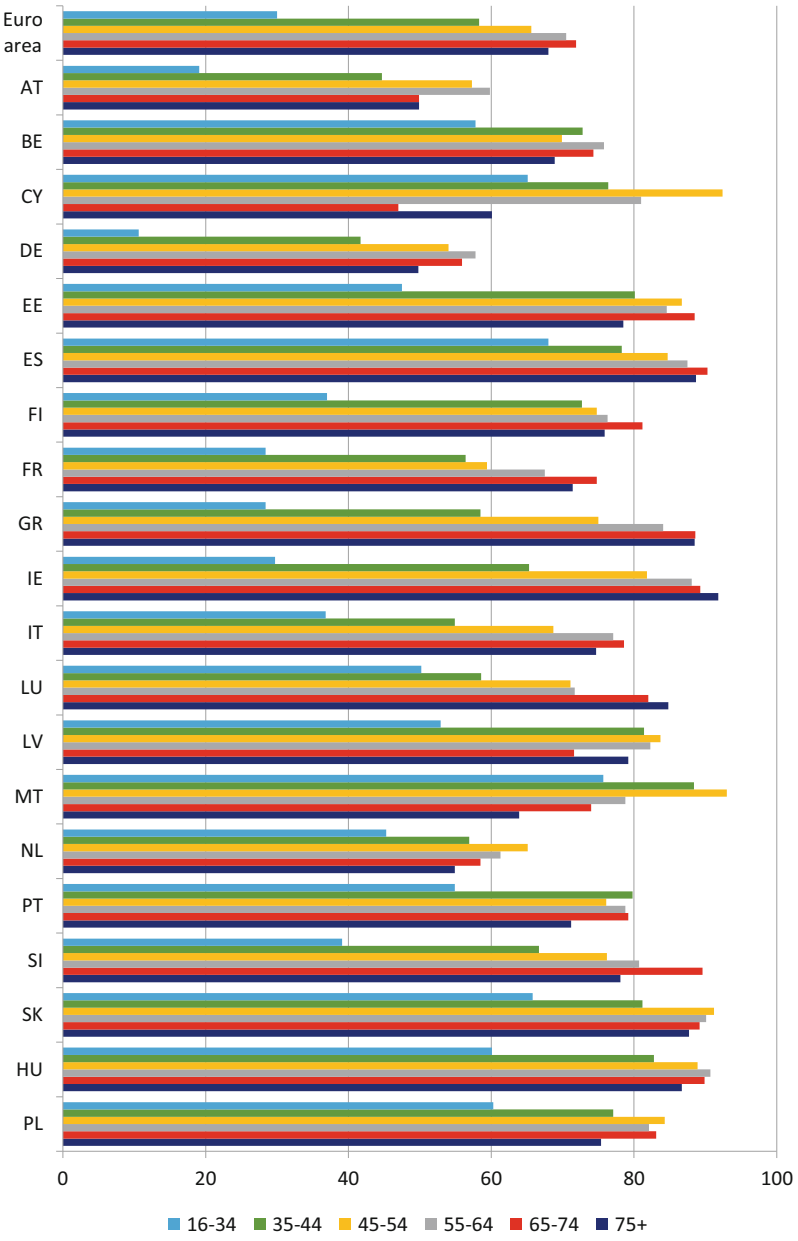

Fig. 6 Participation rate in ownership of HMR by age group (in %). Source: Own composition based on HFCS (2017), 2nd wave, Table B3

To get an impression of how income distribution affects private homeownership, Fig. 7 displays homeownership rates for the four lowest income quintiles as well as the two top deciles. We find a clear positive correlation between income and homeownership rates across all countries. In Austria, Finland, France, Germany, Luxembourg and the Netherlands, less than 40% of households from the bottom income quintile own their main residence. At the other end of the income distribution in the highest-income decile, the homeownership rate for the Eurozone is at 82%. However, there are about 25% of households in Austria and Germany even in the top income decile that do not own their main residence.

Financial assets account for less than 20% of gross wealth in the Eurozone (see Fig. 1). When looking at the age distribution of its conditional median, one again finds a positive correlation between age and median values, with liquidation in the age groups of those of 65 years and older in most of the countries (Fig. 8). Besides, in most countries the median value of financial assets shows that they can be expected to be much too low to provide for a sufficient additional income stream in old age.

As Fig. 9 shows, there is a very uneven distribution in the conditional median values of households' financial assets, with the top income decile disposing about much higher financial assets than all the other income groups. However, Estonia, Greece, Latvia, Poland, Slovakia and Slovenia are exceptions, having much more equal asset distributions.

Summarising these findings on how households allocate their assets in private homeownership and in voluntary pensions and life insurance, respectively, there are some similarities across countries. For example, real assets account for the main share in total assets, with private homeownership representing the asset type which carries the greatest weight. In comparison, voluntary pensions and whole-life insurance play only a minor, in many countries even an insignificant role in households' asset allocation. Both asset types show a positive correlation with age for younger cohorts, while in most countries, ownership rates decrease for the elderly (75+). Again, voluntary pensions and whole-life insurance assets display a very similar pattern. This holds also in regard to income distribution, where we find a positive correlation between ownership rates and value of financial assets and income.

3 Public Policies for Promoting Personal Pensions and Private Homeownership

Despite the overall patterns discussed in the previous section, there are profound differences across countries. Member States vary markedly in the overall share of homeownership vs. renting on the housing market as well as regards to the overall composition of the pension system with its different subsystems (Table 3). As a consequence, replacement rates and at-risk-of-poverty rates for the elderly also vary. Policymakers design instruments to promote investing in both private homeownership and private pensions, which are meant to enable in particular

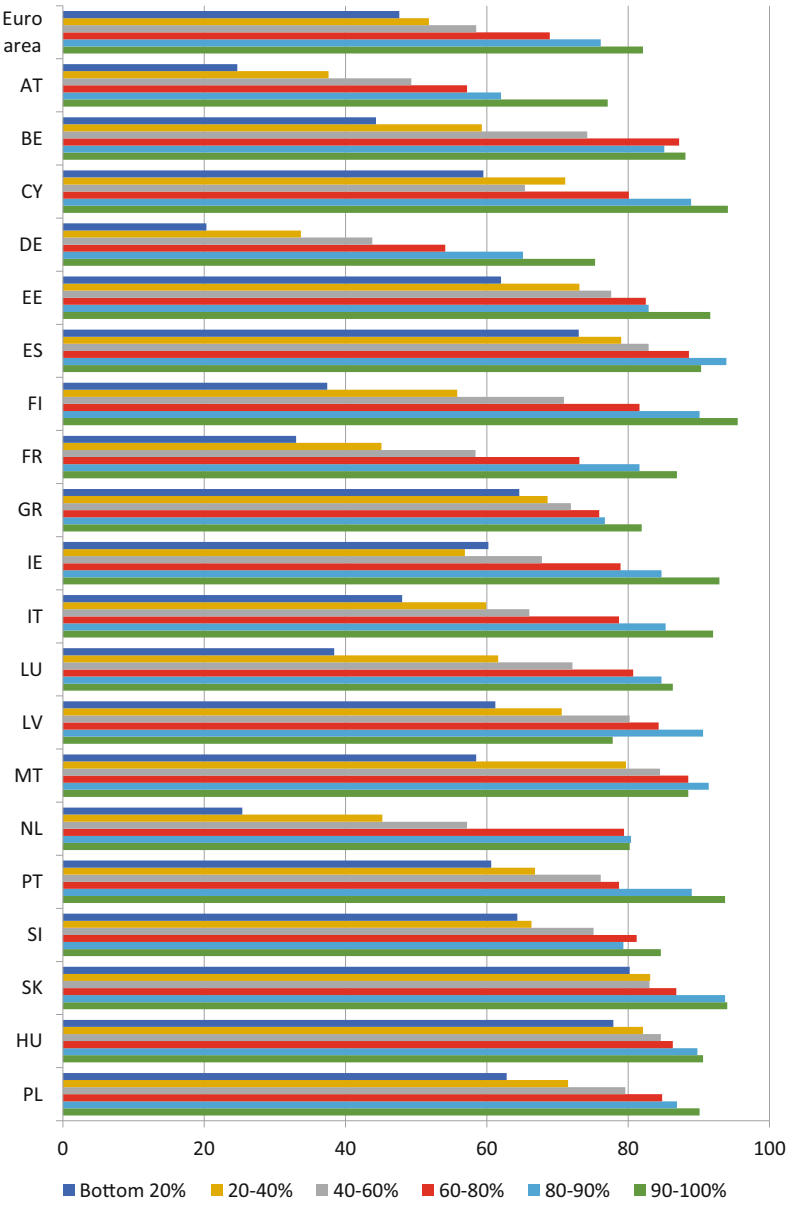

Fig. 7 Participation rate in ownership of HMR by income (in %). Source: Own composition based on HFCS (2017), 2nd wave, Table B3

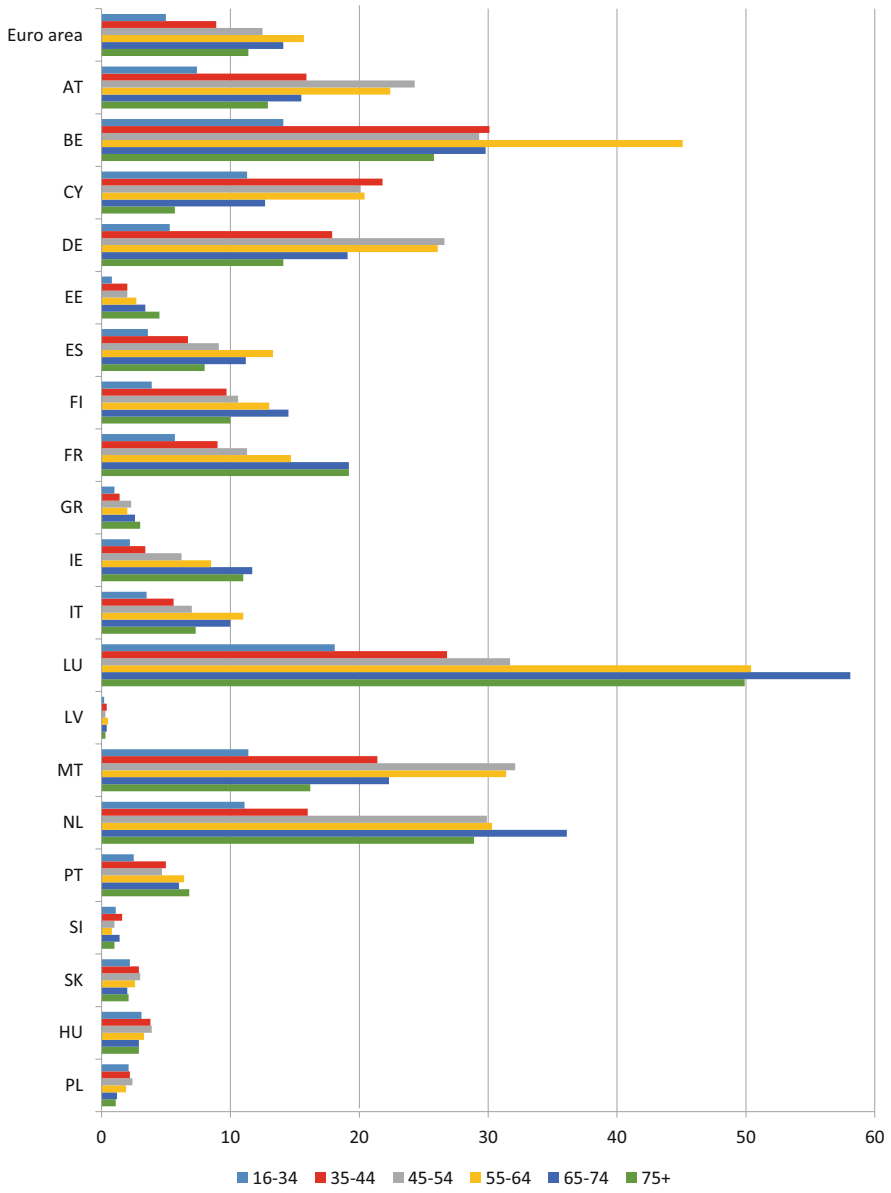

Fig. 8 Financial assets and conditional medians by age (in EUR 1000). Source: Own composition based on HFCS (2017), 2nd wave, Table C4

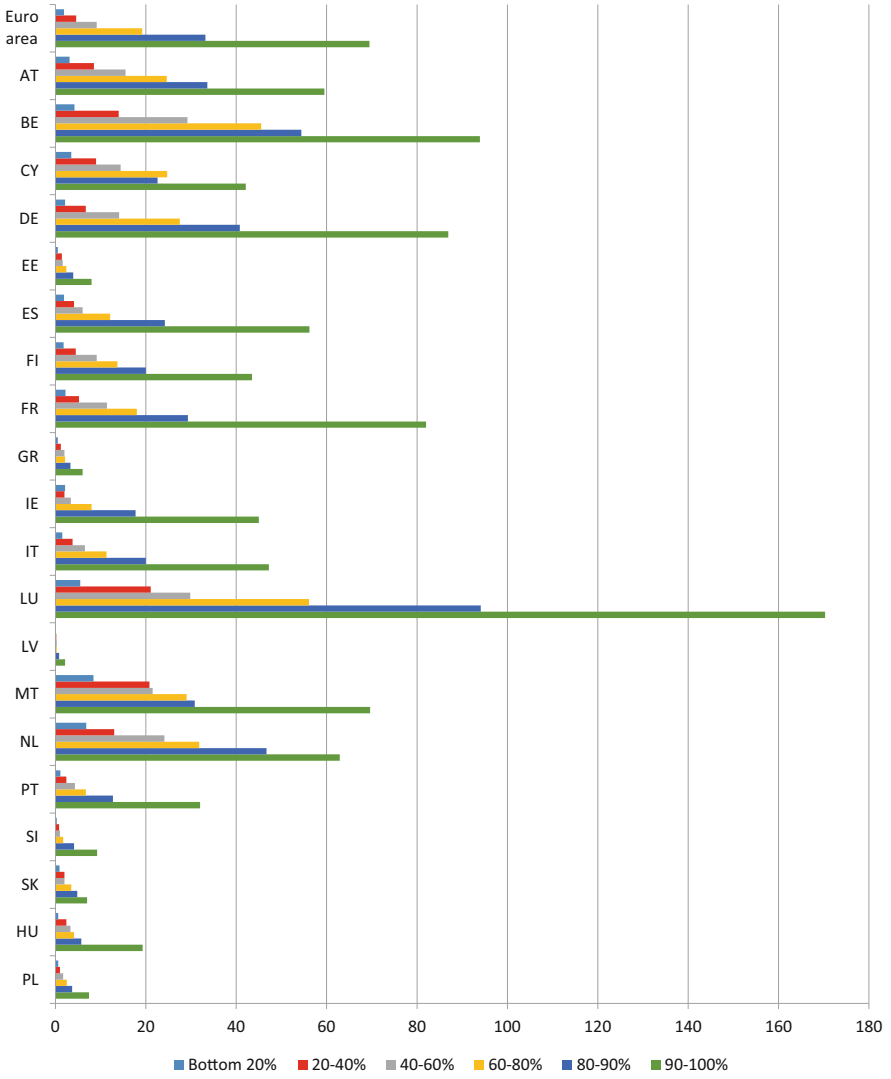

Fig. 9 Financial assets and conditional medians by income quintiles (in EUR 1000). Source: Own composition based on HFCS (2017), 2nd wave, Table C4

low-income households to invest in these assets, too. Although all Member States use at least some types of policy instruments to influence both housing and private old-age provisions, there is no unified approach. This holds in regard to policy objectives and instruments both across and within countries. The policies adopted rely heavily on countries' diverse tax and social security systems. This volume presents six case studies on Germany, Hungary, Ireland, Italy, the Netherlands and

Table 3 Basic information on sample (2016 if not stated otherwise)

	DE	HU	IE	IT	NL	UK	Source
GDP (in millions of EUR)	3,144,050.0	113,731.0	275,567.0	1,680,523.0	702,641.0	2,393,133.0	(a)
Population (million)	82.5	9.8	4.7	60.6	17.0	65.6	(b)
Population projection (%, 2015–2060)	−0.5	−7.5	27.4	−6.3	14.3	22.3	(c)
Old-age dependency ratio (%)	32.0	27.2	20.4	34.3	27.8	27.9	(d)
65+ (% of total population)	21.1	18.3	13.2	22.0	18.2	17.9	(e)
Net mandatory public and private pension replacement rates by earnings (%)	50.0	89.6	42.2	79.7	95.7	28.5	(f)
Private pension fund assets (in millions of US$, 2014)	236,204	5043	130,880	130,658	1,282,009	2,684,613	(g)
Owner occupation (% of households, 2014)	52.5	88.2	68.69	73.1	67.0	64.4	(h)

Source: Own compilation based on (a) Eurostat (naida_10_gdp), (b) Eurostat (demo_gind), (c) own calculations according to Eurostat (proj_15ndbims), (d) Eurostat (tsdde510), (e) Eurostat (demo_pjanind), (f) OECD (2015a), (g) OECD (2015c), p. 29, Table A.2, (h) Eurostat (ilc_lvho02)

the United Kingdom which provide an in-depth analysis on the working of private pension systems and housing and mortgage markets as well as on the fiscal and policy instruments implemented to set incentives for investing in private homeownership or voluntary pensions (Chapters "Holding on and Letting Go in Ireland: Examining the Policy and Fiscal Environment for Supplementing Retirement Income from Residential Property", "Dutch Pensions and Housing: Towards a Social Divide", "Pensions, Housing and Mortgage Markets in the United Kingdom", "Italy: An Ageing Country with Low Level of Private Pension Schemes but High Home-Ownership Rate", "My Home Is My Castle? Sustainability of Private Pensions and Private Homeownership in Hungary" and "Germany: Ageing Economy with Rising Pension Gap, Stable Mortgage Market and Well-Developed Rental Market"). This sample reflects the broad variety in institutional features with huge differences among Member States.

Although private homeownership increased over the last decades, partially due to public policy incentives, they still vary widely across countries (Andrews et al. 2011). Regarding homeownership rates in the EU 28, Germany shows the lowest rate and – together with the Netherlands – a very high share of persons living in rented dwellings. In comparison, the other four countries show very high rates, with Hungary leading. This partly results from the privatisation approach taken to public property during the transition process in Hungary in the early 1990s (Hegedüs and Tosics 1991; Hegedüs et al. 2014, p. 6). Well-developed mortgage markets are a key element for cost-effectively acquiring private homeownership. However, these markets are quite diverse, regarding both regulations and the main products offered. Since mortgage markets evolved under very different legal and banking systems, there are still striking differences between British, German or Hungarian mortgage markets, as the case studies show.

Pension systems differ not only with respect to their structure or relative importance of public, occupational and private pension schemes but also how they are regulated in detail. These differences also translate to the outcomes as measured by the at-risk-of-poverty rate at old age, for example (for the following, see chapter "Old-Age Poverty and Residential Property in the EU: An Analysis with the EU-SILC 2014 Data" in more detail). While Hungary, Ireland and the Netherlands show a below-average at-risk-of-poverty rate for persons aged 65+, this risk is above average for Germany, Italy and the United Kingdom. However, when looking at the percentage of severe material deprivation of persons 65+, one finds that Hungary and Italy are above the EU-28 average with the other four countries being below average. These data are much more pronounced for women than for men.

While Ireland (Chapter "Holding on and Letting Go in Ireland: Examining the Policy and Fiscal Environment for Supplementing Retirement Income from Residential Property"), the Netherlands (Chapter "Dutch Pensions and Housing: Towards a Social Divide") and the United Kingdom (Chapter "Pensions, Housing and Mortgage Markets in the United Kingdom") have well-developed markets for both private pensions and private homeownership, Italy (Chapter "Italy: An Ageing Country with Low Level of Private Pension Schemes but High Home-Ownership

Rate") and Hungary (Chapter "My Home Is My Castle? Sustainability of Private Pensions and Private Homeownership in Hungary") show high degrees of homeownership coupled with a rather low degree of private pensions. Finally, Germany (Chapter "Germany: Ageing Economy with Rising Pension Gap, Stable Mortgage Market and Well-Developed Rental Market") represents a country with both a low degree of private homeownership and of private pensions.

The selected countries differ also regarding size, living standards and financial stability (Table 3). Germany, Italy and the United Kingdom represent large countries compared to Hungary, Ireland and the Netherlands – as measured both by population and GDP. In regard to overall living standards (as measured by GDP per capita in PPP) Germany, Ireland and the Netherlands are way above, Italy and the United Kingdom are slightly above, while Hungary only reaches two thirds of the EU-28 average.

Financial stability and vulnerability are of particular importance for old-age security products as well as for homeownership values – as the Great Financial Crisis has shown. Four of the countries are members of the Euro area (Germany, Ireland, Italy, the Netherlands), while Hungary and the United Kingdom have their own currencies. Compared to the large open economy of the United Kingdom, as a small open economy, Hungary is rather vulnerable with regard to financial market instabilities. There are also large differences among Euro area members with respect to financial vulnerability, when, for example, comparing Ireland and Italy to Germany during the recent financial crisis.

Finally, countries from different legal origins also differ in many respects when it comes to regulatory and taxation rules (LaPorta et al. 1999). Four of the five types of legal origin are included in our case studies: The United Kingdom and Ireland are of British legal origin, Italy and the Netherlands are of French legal origin, and Germany represents a country with a German legal origin, while Hungary shows the legacy of socialist legal origin.

While traditional social policy concentrates on social insurance and redistribution, this view is too narrow to capture both the objectives and the policy instruments used in promoting personal pensions or private homeownership. Therefore, we follow Schelkle (2012, p. 65f.), who offers a broader perspective to social policy. She distinguishes between market-creating, market-correcting and market-compensating social policy, with only the last referring to the traditional notion of income redistribution. Market-creating social policy entails measures to "distribute resources or shift risks such that a virtual market demand can meet a virtual market supply" (ibid), while market-correcting social policy assumes market partners to be unequal, thus applying measures to "shift risks to the side with presumably higher risk-bearing capacity" (ibid). This approach allows a much better classification of the broad range of policy instruments used to promote private pensions and homeownership. Besides, it facilitates distinguishing them from other regulatory and fiscal policies which are in use to cope with the typical inefficiencies (externalities, information asymmetries, public goods, network effects) of financial markets.

Table 4 provides a compilation of policy instruments following the distinction proposed by Schelkle (2012) which are intended to promote personal pensions or private homeownership. Market-creating social policies rely mainly on fiscal incentives. Tax policy provides a broad range of instruments which aim at increasing disposable income or at reducing costs, thus effectively shifting demand upwards also for lower income groups. Besides reduced tax rates, tax exemptions, tax deductions, tax breaks, etc., subsidies also work in the same direction. In regard to

Table 4 Market-creating, market-correcting and market-compensation social policy (selection)

	Personal pensions	Private homeownership
Market-creating social policy	Tax subsidies – Tax exemption of contributions, yields and/or benefits with taxation of contribution and yields of other common savings vehicles, varying according to duration of the investment, type of asset classes, income of the pension holder – Tax deductions for matching contributions by employers Subsidies – Matching grants by the public	Tax subsidies – Tax deductions or tax credits for mortgages – Tax breaks for homeowners – Real estate taxed at lower rates – No taxation on house-buying transactions – No taxation of imputed rents for homeowners – Inheritance tax for HMR different to inheritance taxes on other assets Public guarantees – Mandatory mortgage insurances at fees that do not reflect risks in case of default Subsidised mortgages – Zero-interest loans for targeted households (according to income or number of children) – Long-term mortgages with subordinated repayment
Market-correcting social policy	Financial consumer protection regulation in pension markets regarding: – Asset classes – Sales commissions – Benefits – Consumer information	Financial consumer protection in the mortgage market – Affordability assessment – Limits to loan-to-value or loan-to-income – Regulation of type of interest rate – Mortgage equity withdrawal – Fee-free early repayment
Market-compensating social policy	– Government as guarantor-of-last resort – Insolvency and bankruptcy procedures	Housing market – Property exemptions – Recourse and garnishment regulation – Repossession procedures
Targeted policies	Measures targeted at households or individuals according to income, number of children, age, other characteristics	Measures targeted at households or individuals according to income, number of children, age, other characteristics

Source: Own compilation, for homeownership, see also Schelkle (2012); for private pensions, see OECD (2015b, 2016a, 2017b)

voluntary pensions, such tax policies might refer to contributions, yields and/or benefits. In regard to acquiring homeownership, it concerns not only the costs directly related to acquiring or owning private property, like taxes on real estate, its acquisition and imputed rents for homeowners but also costs for taking out mortgages, like tax breaks, tax exemptions, etc. When it comes to taking out mortgages, public-backed guarantees also serve as reducing the costs associated with low-income, i.e. high-risk customers.[4]

Market-correcting social policy can be seen as a specific kind of consumer protection policy. It uses regulatory instruments to account for information asymmetries and other market failures where consumers are seen as "weaker", that is, less knowledgeable and prudent than the providers. Accordingly, in personal pension markets, it prescribes what risks are to be covered and what types of investments providers are allowed to make. For example, providers must not invest in asset classes which are seen as excessively risky or complex for consumers to make an informed decision. Otherwise their products are not approved and cannot be supported by tax advantages for pension products. Besides, sales commissions for intermediaries are regulated with respect to their amount, transparency, etc. Comparable regulations apply to purchasing transactions in housing markets as well as to taking out mortgages for acquiring private homeownership. Finally, limits to loan-to-value or loan-to-income aim to prevent households from becoming over-indebted.

Market-compensating policy tries to correct market results. In the wake of the global financial crisis, in many countries a large share of homeowners encountered severe problems in meeting their obligations regarding interest and principal payments of mortgages. Governments reformed eviction, exemption and/or repossession procedures to prevent an increase in homelessness and to attenuate the severity for housing markets and the people affected. With regard to private pensions, the state is also guarantor-of-last-resort when it comes to the pay-out of the money invested. So far, personal pensions have played only a minor role for old-age income in most countries. However, should it prospectively make up a larger share of benefits in old age and should more pensioners be affected by insolvency of pension providers or by their failure to hold up their promises regarding yields and benefits, governments will surely have to stand in to mitigate particular hardship. Insolvency and bankruptcy rules play an important role in protecting entitlements. Special regulation to insure against the risk of insolvency or bankruptcy also might guarantee entitlements in case of single companies failing. However, whether this also holds in case of a systemic financial crisis is uncertain. Isolated sovereign states have acute economic limitations, the more so, the smaller they are.

All these measures might be targeted to benefit certain groups more than others. Policies might be tailored to the specific needs of households with low income and a larger number of children, of older age, from rural areas, etc. Due to such measures, certain groups of the population seen as particularly "weak" might pass the threshold

[4]For the impact of taxation on private pensions, see OECD (2017b, c), and on homeownership, see Fatica and Prammer (2017) with additional references.

for effectively acquiring personal pensions and/or private homeownership and enjoying the resulting benefits.

4 Outlook on Questions for Further Research

Private homeownership and voluntary personal pensions might play a more important role for supplementing income from statutory and occupational pension schemes in the future. As the above data on households' asset allocation showed, both homeownership rates and assets held in private personal pensions increase with income and age. Besides, as chapter "Old-Age Poverty and Residential Property in the EU: An Analysis with the EU-SILC 2014 Data" will discuss, homeowners are less likely to live in poverty than tenants. Aware of this, governments use many instruments to increase participation rates and the share of assets held for these two investment classes. Nevertheless, there are still several questions that deserve further research.

The availability of consistent and comparable data is a prerequisite. With the HFCS (ECB 2017), an important database has been introduced. It would be desirable that additional non-Euro area Member States besides Hungary and Poland take part in the next rounds. There is also a need for additional theoretical and empirical work on the relationship between households' investment decisions over the life cycle, following Ho and Zhou (2016) and Pelletier and Tunc (2015), for example. Together with a thorough mapping of tax and other policies to promote voluntary pensions and homeownership, it would grant additional insights in whether these investment decisions are more of a supplementary or a complementary nature. Additionally, it would inform policymakers regarding which policy instruments are the most effective on a longitudinal basis. Furthermore, the ongoing research on behavioural finance and on financial literacy might also provide valuable insights in how to design effective financial social policies (Campbell 2016; IBRD/World Bank 2014; Lefevre and Chapman 2017).

As regards policy conclusions, there is no consistent approach yet for either objectives or incentives applied to both investment decisions, not within a country, let alone across the EU. Today we have only a very preliminary understanding of the effects of such measures. It is not very well understood whether they indeed reach the target groups and meet the stated objectives. Further studies on the impact of taxation and regulatory policies on personal pensions (see, e.g. EU COM/EY 2017; OECD 2016a, b, 2017b, c; Whitehouse 2012) and on housing and mortgage markets (see, e.g. Fatica and Prammer 2017) should provide additional insights (Barrios et al. 2016). Continued research on the impact of house price fluctuations, imputed rents and on the options for releasing equity from homeownership is also needed to gain a more complete understanding of the potential benefits from private homeownership in old age. In addition, it is necessary to address the interrelationship between long-term care arrangements, homeownership and pensions. Moreover, distributional considerations should also be tackled in more depth, considering intergenerational

and interregional aspects but also existing and emerging gender differences of both private homeownership and personal pensions.

Finally, there is ample scope for research and experimentation as to EU-wide approaches in regard to old-age schemes. In June 2017, the EU Commission and the European Parliament published a proposal for a pan-European personal pension product (EU COM 2017b). Launching such a product would grant insights in how the differential treatment of such products by national tax systems and regulations affects their success and what further reforms are required to reap the benefits from the EU pension markets which have only been partially integrated. To the same end, the research project "Integrating Residential Property with Private Pensions Provision in the EU", from which this volume results, looked into the potential of providing a pan-European equity release scheme which should make it possible to liquidate part of the wealth stored in housing property if needed in old age (www.equity-release.eu).

References

Andrews, D., Caldera Sánchez, A., & Johansson, Å. (2011, January 25). *Housing market and structural policies in OECD countries*, Economics Department Working Paper No. 836, Eco/WKP(2011)5. Retrieved October 4, 2017, from www.oecd.org/workingpapers

Arrondel, L., et al. (2016). How do households allocate their assets? Stylized facts from the Eurosystem household finance and consumption survey. *International Journal of Central Banking, 12*, 129–220.

Barrios, S., et al. (2016). *The fiscal and equity impact of tax expenditures in the European Union*, JRC Working Papers on Taxation and Structural Reform No 1/2016, European Commission, Joint Research Centre, Seville.

Campbell, J. Y. (2016). *Restoring rational choice: The challenge of consumer financial regulation*, NBER Working Paper No. 22025. Retrieved October 4, 2017, from http://www.nber.org/papers/w22025

Carone, G., et al. (2016, December) *Pension Reforms in the EU since the Early 2000's: Achievements and Challenges Ahead*, European Economy Discussion Paper 042. Retrieved October 4, 2017, from http://ec.europa.eu/economy_finance/publications

Eatock, D. (2015, November). *European Union pension systems. Adequate and sustainable?*, European Parliament Research Service, Briefing. Retrieved October 4, 2017, from http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/571327/EPRS_BRI(2015)571327_EN.pdf

ECB. (2017). *Household finance and consumption network*. Retrieved September 19, 2017, from https://www.ecb.europa.eu/pub/economic-research/research-networks/html/researcher_hfcn.en.html

EU COM. (2015). The 2015 Ageing Report, European Economy 3/2015, Brussels. Retrieved October 4, 2017, from http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf

EU COM. (2017a). Reflection Paper on the Social Dimension of Europe, COM(2017) 206 of 26 April 2017. Retrieved October 26, 2017, from https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-social-dimension-europe_en.pdf

EU COM. (2017b). Proposal for a Regulation of the European Parliament and the Council on a Pan-European Personal Pension Product (PEPP), COM(2017) 343 final, Brussels, 29.6.2017, 2017/0143 (COD){SWD(2017) 243 final}{SWD(2017) 244 final}. Retrieved July 31, 2017, from https://ec.europa.eu/info/law/better-regulation/initiatives/com-2017-343_en

EU COM/EY. (2017). *Study on the feasibility of a European personal pension framework*, June 2017, Final report EY, FISMA/2015/146(02)/D. Retrieved October 4, 2017, from https://ec.europa.eu/info/sites/info/files/170629-personal-pensions-study_en.pdf

Fatica, S., & Prammer, D. (2017, July). *Housing and the tax system: How large are the distortions in the Euro area?*, ECB Working Paper 2087. Retrieved October 4, 2017, from https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2087.en.pdf?c370b942e22fa08e5b546690ec83bd94

French, D., McKillop, D., Sharma, T. (2017). *Analysis of housing equity withdrawal by its forms*, CHARMS – Centre for Health Research at the Management School Working Paper Series 2017-04. Retrieved October 16, 2017, from https://ideas.repec.org/p/qub/charms/1704.html

Hegedüs, J., & Tosics, I. (1991). *Privatizáció a lakásrendszerben*. Eséły, No. 3, pp. 60–67.

Hegedüs, J., et al. (2014). *TENLAW: Tenancy law and housing policy in multi-level Europe*, National Report for Hungary. Retrieved October 4, 2017, from http://www.tenlaw.uni-bremen.de/Brochures/HungaryBrochure_09052014.pdf

HFCS. (2017). HFCS_Statistical_Tables_Wave2.zip, available from: ECB (2017): Household finance and consumption network. Retrieved October 26, 2017, from https://www.ecb.europa.eu/pub/economic-research/research-networks/html/researcher_hfcn.en.html

Ho, A. T., & Zhou, J. (2016). *Housing and tax-deferred retirement accounts*, Bank of Canada Staff Working Paper 2016-24, May 2016. Retrieved August 4, 2017, from www.Bank-banque-canada.ca

IBRD/World Bank. (2014). *Global survey on consumer protection and financial literacy: Oversight frameworks and practices in 114 economies, Washington*. Retrieved September 19, 2017, from http://responsiblefinance.worldbank.org/~/media/GIAWB/FL/Documents/Publications/CPFL-Global-Survey-114econ-Oversight-2014.pdf

LaPorta, R., et al. (1999). The quality of government. *Journal of Law, Economics and Organization*, *15*, 222–279. Retrieved December 20, 2017, from http://scholar.harvard.edu/shleifer/publications/quality-government

Le Blanc, J., et al. (2016). Household saving behaviour in the Euro area. *International Journal of Central Banking, 12*, 15–68.

Lefevre, A.-F., & Chapman, M. (2017). *Behavioural economics and financial consumer protection,* OECD Working Papers on Finance, Insurance and Private Pensions, No. 42. Paris: OECD Publishing. Retrieved September 19, 2017, from https://doi.org/10.1787/0c8685b2-en

OECD. (2013). The role of housing, financial wealth and public services for adequate living standards in old age. In *OECD: Pensions at a Glance 2013: OECD and G20 Indicators* (pp. 59–118). Retrieved September 19, 2017, from https://doi.org/10.1787/pension_glance-2013-en

OECD. (2015a). Net pension replacement rates from mandatory public, mandatory private and voluntary private pension schemes. In *Pensions at a Glance 2015*. Paris: OECD Publishing. Retrieved November 5, 2017, from https://doi.org/10.1787/pension_glance-2015-table67-en

OECD. (2015b). *Stocktaking of the Tax Treatment of Funded Private Pension Plans in OECD and EU Countries*. Retrieved August 4, 2017, from http://www.oecd.org/daf/fin/private-pensions/Stocktaking-Tax-Treatment-Pensions-OECD-EU.pdf

OECD. (2015c). *Pensions markets in focus*, No.12. Paris: OECD Publishing. Retrieved November 5, 2017, from http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2015.pdf

OECD. (2016a). Does the tax treatment of retirement savings provide an advantage when people save for retirement?. In *Pension Outlook 2016*, Paris, pp. 43–77.

OECD. (2016b). Policy considerations for life annuity products. In *Pension Outlook 2016*, Paris, pp. 107–122.

OECD. (2017a). Gross pension replacement rates (Indicator). Retrieved October 4, 2017, from https://doi.org/10.1787/3d1afeb1-en

OECD. (2017b). *Tax treatment of retirement savings in private pension plans across OECD countries*. OECD Project on Financial Incentives and Retirement Savings, Policy Brief No.1,

July 2017. Retrieved August 4, 2017, from http://www.oecd.org/daf/fin/private-pensions/Tax-treatment-of-retirement-savings-Policy-Brief-1.pdf

OECD. (2017c). Long-term fiscal costs of tax incentives for private pension plans. OECD Project on Financial Incentives and Retirement Savings, Policy Brief No.2, July 2017. Retrieved August 4, 2017, from http://www.oecd.org/daf/fin/private-pensions/Long-term-fiscal-cost-of-tax-incentives-Policy-Brief-2.pdf

Pelletier, D. & Tunc, C. (2015). *Endogenous life-cycle housing investment and portfolio allocation*. Retrieved August 1, 2017, from https://www.ecb.europa.eu/pub/conferences/shared/pdf/20151217_4th_conference_hfcs/Session4_Tunc.pdf

Reifner, U., et al. (2009a). *Study on equity release schemes in the EU – Part I: General Report*. Hamburg: Institut für Finanzdienstleistungen e.V.

Reifner, U., et al. (2009b). *Study on equity release schemes in the EU – Part II: Country Reports*. Hamburg: Institut für Finanzdienstleistungen e.V.

Schelkle, W. (2012). A crisis of what? Mortgage credit markets and the social policy of promoting homeownership in the United States and in Europe. *Politics and Society, 40*, 59–80.

Whitehouse, E. (2012). Policies to encourage private pension savings: Evidence from OECD countries. In R. Hinz et al. (Eds.), *Matching contributions for pensions: A review of international experience* (pp. 27–50). World Bank. https://doi.org/10.1596/978-0-8213-9492-2

Old-Age Poverty and Residential Property in the EU: An Analysis with the EU-SILC 2014 Data

Eszter Megyeri

1 Introduction and Definitions

Old-age poverty has been a topic of particular concern for a long time. In 2014, an average of 13.8% of the elderly population (65 years and older) in the European Union (EU-28) was classified as being at risk of poverty (Eurostat tessi120 2016).[1] In the same year, an average of 17.2% of the total EU population was classified as being at risk of poverty (Eurostat tessi120 2016). Although the EU 2020 strategy includes the goal of reducing the number of Europeans living below the poverty line by 25% until 2020 (European Commission 2010), old-age poverty will remain a hot topic, not least because of the rising share of elderly citizens among the population.

Residential property is an important factor when it comes to the question of old-age poverty. However, literature on the relationship between homeownership and old-age poverty is relatively scarce. This paper therefore aims to advance research on old-age poverty and residential property in the European Union, based on an analysis of data from the 2014 European Union Statistics on Income and Living Conditions (EU-SILC). In particular, the study tackles the following questions:

- What is the extent of old-age poverty in the EU, and how is old-age poverty distributed among the member states?
- Are certain subgroups of the elderly population (according to gender, age, type of household, tenure status) more susceptible to poverty?

[1]Persons who are at risk of poverty receive incomes below the threshold of 60% of the median equivalized income after transfers (more details below).

E. Megyeri (✉)
Andrássy University Budapest, Budapest, Hungary
e-mail: eszter.megyeri@andrassyuni.hu

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- How is homeownership among the elderly distributed in the European Union? Is there a connection to old-age poverty?
- Can the EU member states be clustered into groups with similar characteristics regarding the at-risk-of-poverty and homeownership rates and accordingly a similar potential demand to release the capital tied up in retirees' real estate holdings?

This paper looks at the population of 65 years and older, basing the analysis on 2014 EU-SILC data,[2] which is available at the Eurostat website.[3] After providing definitions of poverty and the most important poverty indicators in the introduction as well as a brief survey of the literature (Sect. 2), this paper contains a two-part empirical analysis. A first descriptive part (Sects. 3 and 4) compares and discusses poverty indicators for the EU member states and for different groups of the elderly population. The second part (Sect. 5) considers old-age poverty and homeownership in conjunction. The homeownership rates among different groups of the population and in different EU member states are compared. By means of cluster analysis, the EU member states are then grouped with regard to homeownership rates and at-poverty risks. The results of the cluster analysis are described and discussed. Finally, this paper points out perspectives for reducing the threat of old-age poverty.

Various definitions of poverty can be found in the literature. In general, a distinction is made between absolute and relative poverty. The EU generally uses the concept of relative poverty.[4] In order to measure the extent of relative poverty, both monetary and nonmonetary indicators are employed.

1.1 Income Poverty

The most widely used monetary poverty indicator is the *at-risk-of-poverty rate*, which measures the percentage of the population whose equivalized disposable income lies below the at-risk-of-poverty threshold. This threshold is usually set at 60% of the national median equivalized disposable income (Eurostat Glossary 2014a).

The at-risk-of-poverty rate does, however, not provide a full picture of poverty. The indicator does not specify how far the concerned individuals fall below the poverty line. This is rather expressed by the *poverty gap*.[5]

[2] 2014 is the last year for which complete data is available.

[3] Micro datasets were not available.

[4] "'(T)he poor' shall be taken to mean persons, families and groups of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the member states in which they live" (European Council 1985, p. 24).

[5] According to the Eurostat definition, the relative median at-risk-of-poverty gap "is calculated as the difference between the median equivalized disposable income of people below the at-risk-of-poverty threshold and the at-risk-of-poverty threshold, expressed as a percentage of the at-risk-of-

1.2 Material Hardship/Deprivation

This indicator captures the nonmonetary aspects of poverty, defined by the inability to afford certain goods and services. The rate of *material deprivation* measures the population share that is not able to pay for at least one of the following items: mortgage loans, rents, or utility services; adequate heating; unexpected expenditures; regular meals containing meats and proteins; vacations; colour television; washing machine; car; and telephone. The rate of *severe material deprivation* measures the population share that is not able to pay for at least four of the listed items (Eurostat Glossary 2014b).

Old-age poverty can correspondingly be measured and compared across different EU member states by looking at the relative poverty (at-risk-of-poverty rate, rate of material deprivation, etc.) of persons over 65.

2 Old-Age Poverty and Residential Property in the EU: A Literature Overview

Many publications on the topic of old-age poverty and residential property such as Hauser (2008), OECD (2015, Chap. 8), and OECD (2013, Chaps. 2 and 5) pursue a descriptive approach, comparing the situation in the EU member states. In the main, they conclude that the EU member states display great disparity when it comes to old-age poverty, that some subgroups of the elderly population are exposed to a greater poverty risk (e.g. women), and that homeownership is distributed unevenly across member states.

In a recently published study based on EU-SILC data, Antczak and Zaidi (2016) provide a descriptive analysis of the financial situation of older people with regard to macroeconomic indicators. They furthermore examine poverty trends between 2005 and 2014, looking at the distribution of the old-age poverty risk across EU member states (EU-28) and as compared to the poverty risk of other age groups. Antczak and Zaidi (2016) conclude that a shift in poverty risk towards the elderly can be observed in almost all EU member states. They show that there are gender differences in the poverty rate and that there is a strong positive correlation between monetary poverty and material deprivation.

The 2015 Pension Adequacy Report of the European Commission assesses the current living standard of elderly people in the EU, both compared to the total population and across member states, on the basis of different monetary and nonmonetary poverty indicators and indicators of the living situation (European Commission 2015). The report finds that elderly people do not face a greater poverty risk than the rest of the population. However, some member states still have to intensify their efforts to combat old-age poverty, and in some member states, the

poverty threshold (cut-off point: 60% of national median equivalized disposable income)" (Eurostat Glossary 2014c).

problem of severe material deprivation at old age is particularly acute. The report also concludes that elderly men and women who live alone face a particularly high risk of poverty. As women over 65 own fewer real estate and financial assets than men, they are more vulnerable to poverty.

When looking at old-age poverty and residential property in the EU member states, the devil lies in the detail, as there are numerous similarities and differences between the countries. In a number of ways, the EU-28 displays a heterogeneous image. It is, however, possible to compile a classification or typology based on the different observations. Cluster analysis is the method of choice for this endeavour.

There are only few studies on poverty and residential property that employ cluster analysis, one of which is a paper by Lelkes and Gasior (2012). The authors analyse the degree of social exclusion at the EU level and cluster the member states according to the three main indicators of the Europe 2020 goals that relate to poverty and social exclusion.[6] They initially identify two groups of countries.[7] A more detailed analysis yields four groups (Lelkes and Gasior 2012). Nevertheless, Lelkes and Gasior (2012) do not expand on the question of old-age poverty or the relationship between poverty and residential property.

Lobato and Kaup (2014) examine the territorial aspects of poverty and social exclusion, identifying country groups by means of cluster analysis. They consider a data matrix of 20 poverty and social exclusion indicators in 30 European countries. Some of the indicators are housing- or age-related. The data is taken from different Eurostat surveys.

The market conditions for equity release schemes (ERS) (reverse mortgage or lifetime mortgage) are at the centre of a paper by Hennecke et al. (2016). The study examines demand and indicators for the potential realization of ERS products. The demand indicators (share of the population over 65, old-age ratio, life expectancy at the age of 65, at-risk-of-poverty rate of people over 65, net replacement rate of pensions, and private retirement assets) and the indicators for the potential realization of ERS products (homeownership rate, mortgage debt at retirement age, stability of housing prices, and household size) are combined into overall indices. The comparison of these overall indices highlights the differences between the EU member states. Three groups can be distinguished (low, medium, and high overall indices). For their analysis, Hennecke et al. (2016) rely on data from Eurostat, OECD, and the European Mortgage Federation. Their results will be discussed in Sect. 6 as they relate to our own analysis.

[6]The share of the population that is at risk of poverty, suffering from severe material deprivation and living in a household with extremely weak labour market participation.

[7]Six Eastern European countries (Hungary, Poland, Lithuania, Latvia, Bulgaria, and Romania) as well as the rest of the EU.

3 The Extent of Old-Age Poverty in the European Union

This study is based on the data from the European Statistics on Income and Living Conditions (EU-SILC). The EU-SILC dataset is a yearly survey performed under the same conditions in all EU member states, which was first conducted in six member states and Norway in 2003 and expanded to all (at that time 25) member states, Norway and Iceland in 2005. The survey serves as a reference source for comparable statistics on income distribution, poverty, deprivation, social exclusion, and living conditions.[8] The dataset is thus ideally suited for a comparative analysis of the relationship between old-age poverty and residential property in the EU.

The EU-SILC database provides information both on households (basic information, living conditions, material deprivation, and income) and on individuals (basic information, demographic information, education, health, employment, income) (Eurostat List of Variables 2016). The database furthermore offers multidimensional datasets. Many indicators can be extracted for the age group of 65 and older.

Since the analysis below uses data aggregated at the country level, the data on households (type of household: "adult who is 65 years or older" as well as "two adults, one of which is 65 years or older") and individuals (age class 65 years or older) cannot be connected. The analysis therefore relies on data on the level of individuals.

Figure 1 provides an overview over the poverty risk of persons over 65 compared to the total population of the EU member states. As mentioned above, in 2014 the at-risk-of-poverty rate of individuals over 65 in the EU-28 was 13.8%.

The at-risk-of-poverty rate of the elderly differs across EU member states and in some cases quite considerably. For the year 2014, the indicator ranges from 4.5% (Hungary) to 32.6% (Estonia). In Estonia, a third; in Latvia, more than a quarter; and in Croatia, Bulgaria, and Cyprus, more than a fifth of the elderly population were at risk of poverty. In contrast, Hungary, the Netherlands, Slovakia, Luxemburg, the Czech Republic, France, and Germany show a relatively small at-risk-of-poverty rate among the elderly (less than 10%).

Comparing the at-risk-of-poverty rate among the elderly to the at-risk-of-poverty rate among the total population shows that in approximately half of the EU member states, the age group of 65+ is at a higher risk of poverty than the rest of the population.

In countries, in which the at-risk-of-poverty rate among the elderly is relatively high, the rate is also higher than the at-risk-of-poverty rate of the total population. The difference is particularly marked in Estonia (10.8%). In countries with a relatively low at-risk-of-poverty rate among the elderly, the at-risk-of-poverty rate

[8] Further information on the EU-SILC datasets can be found on the following webpages: http://ec.europa.eu/eurostat/web/income-and-living-conditions/overview and http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:EU_statistics_on_income_and_living_conditions(EU-SILC)/de

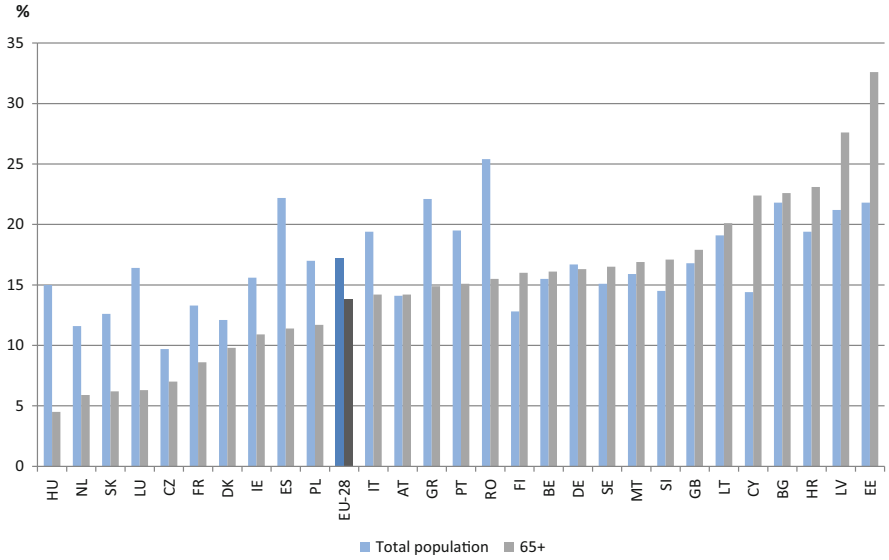


Fig. 1 Share of the elderly population (65+) and the total population at risk of poverty (threshold, 60% of the median equivalized income after transfers) in 2014. Source: Own composition based on Eurostat (Code: ilc_li02) (The country abbreviations are listed in Annex 1)

among the total population tends to be higher. The difference is especially large in Spain (10.8%), Hungary (10.5%), and Luxemburg (10.1%).

Figure 2 illustrates the relative median poverty gap of the elderly population in the EU. In 2014, the median income of elderly persons at risk of poverty was on average 16.6% below the poverty line. The spread between the countries was considerable. While Ireland, Croatia, and Portugal had a poverty gap of 20%, the Czech Republic and Denmark had a poverty gap of below 10%.

The countries with the highest poverty gaps also display higher at-risk-of-poverty rates. The correlation is, however, very weak (0.1). The at-risk-of-poverty rate in Estonia, Latvia, and Cyprus is above the EU average, while the extent of poverty is below the EU average. In Ireland, by contrast, the at-risk-of-poverty rate is low, while the poverty gap is above average.

4 Groups of the Elderly Population at High Risk of Poverty

This section analyses the at-risk-of-poverty rate among the elderly with regard to gender, age, household type, and tenure status in order to determine the characteristics of subgroups that are at a particularly high risk of poverty.

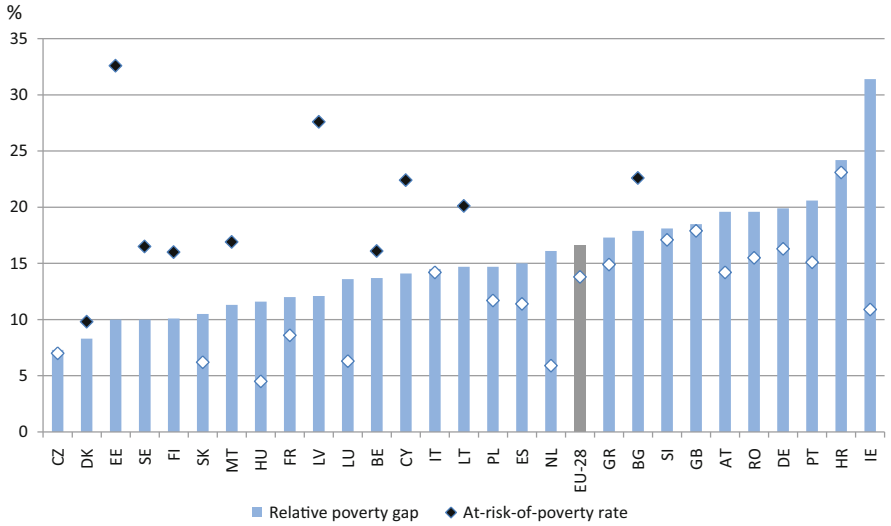


Fig. 2 Relative median at-risk-of-poverty gap and at-risk-of-poverty rate of the elderly (65+) in 2014. Source: Own composition based on Eurostat (Code: ilc_li02 und ilc_li11)

4.1 At-Risk-of-Poverty Rates and Gender

In all EU member states, *women* at retirement age are at a higher risk of poverty than men.

Figure 3 illustrates the differences in the poverty risk between women and men in selected countries. In the EU-28, an average of 15.8% of women and 11.2% of men above 65 were at risk of poverty in 2014. The smallest gender gap can be observed in Malta (0.4%) and the largest gender gap in the Baltic States (Estonia 21.2%, Latvia 17.3%, Lithuania 12.4%). In Estonia and Latvia, more than one in three elderly women was affected by poverty.

In countries, in which the poverty risk among the elderly is high, the poverty risk of elderly women is also markedly high. This is particularly true for the Baltic States, Bulgaria, and Cyprus (poverty risk above 25%).

4.2 At-Risk-of-Poverty Rates and Age

According to the design of this study, two subgroups of the elderly population, namely, the "young elderly" (65–74) and the "old elderly" (75 and above), should be compared. However, since EU-SILC does not provide data on the young elderly, it is merely possible to compare the age groups of 65+ and 75+, drawing conclusions on

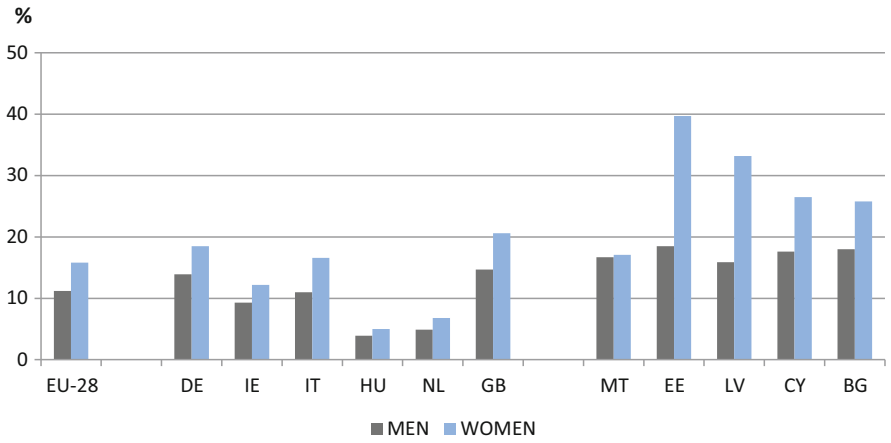


Fig. 3 At-risk-of-poverty rates of the elderly (65+) according to gender in selected EU member states in 2014. Source: Own composition based on Eurostat (Code: ilc_pns7)

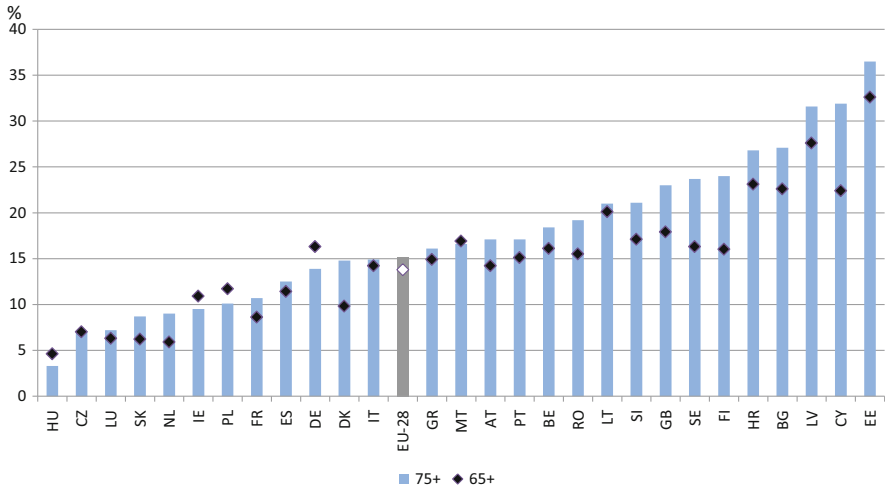


Fig. 4 At-risk-of-poverty rates of the elderly (65+) according to age in the EU member states in 2014. Source: Own composition based on Eurostat (Code: ilc_pns7)

the missing age group. Figure 4 shows the at-risk-of-poverty rate for the age groups of 65+ and 75+ in the EU member states in 2014.

The largest difference between the two age groups can be observed in Cyprus, Finland, Sweden, and the UK.

In general, the elderly over 75 are at a higher risk of poverty than the younger elderly. A possible explanation is that the share of women, who are at a higher risk of poverty than men, is larger among the old elderly. In Germany, Ireland, Hungary,

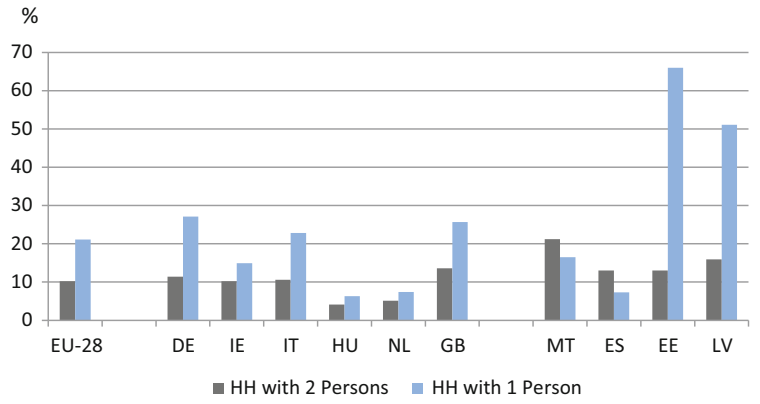


Fig. 5 At-risk-of-poverty rates of the elderly (65) according to household types ("one adult who is 65 years or older" and "two adults, one of which is 65 years or older") in selected EU member states in 2014. Source: Own composition based on Eurostat (Code ilc_li03)

Malta, and Poland, however, the old elderly are slightly better off than the young elderly.

4.3 At-Risk-of-Poverty Rates and Household Type

This subsection compares the poverty risk of one-person and two-person households.

Figure 5 illustrates the at-risk-of-poverty rates of the elderly population, looking at the household types "one adult who is 65 years or older" as well as "two adults, one of which is 65 years or older". Persons of 65 years and older living in *one-person households* are generally at a higher risk of poverty than persons living in two-person households. Again, this can be attributed to the higher life expectancy of elderly women.[9] In 2014, Spain and Malta constituted the only exceptions in the EU-28, as two-person-households were at a higher risk of poverty.

On average, 21.1% of one-elderly-person households and 10.2% of two-person households with at least one-elderly person were at risk of poverty in the EU-28 in 2014. The largest difference between one- and two-person households was observed in Estonia (53%) and Latvia (35.2%).

[9] A hypothesis is that more women than men over 65 live in single households.

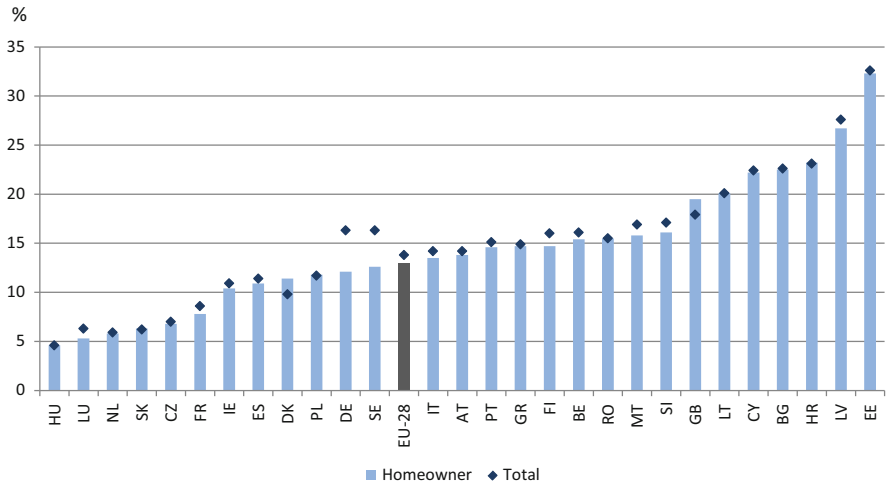


Fig. 6 At-risk-of-poverty rate of the elderly (65+) according to tenure status in the EU member states in 2014. Source: Own composition based on Eurostat (Code: ilc_pns7)

4.4 At-Risk-of-Poverty Rates and Tenure Status

This subsection compares the at-risk-of-poverty rates among elderly homeowners with those among the total elderly population.

Figure 6 depicts the difference in poverty risk between homeowners over 65 and the total elderly population. In general, elderly persons who own residential property are at a slightly lower risk of poverty than persons who do not own a home. With regard to this finding, Denmark and the UK (with relatively larger differences) as well as Croatia, Poland, and Slovakia (with relatively smaller differences) were exceptions among the EU member states in 2014. In Lithuania, Hungary, and Romania, there was no difference based on tenure status.

On average, 13% of elderly homeowners in the EU-28 were at risk of poverty, compared to 13.8% of the total elderly population. The largest difference between the subgroups was observed in Germany (4.2%) and Sweden (3.7%).

Except for the cases of Germany and Sweden, tenure status does therefore not seem to have a decisive influence on the poverty risk of the elderly.

4.5 Conclusion

Based on the results presented in this section, it can be concluded that the subgroups of women, the old elderly (75+), elderly persons living in one-person households, and to some extend elderly persons who do not own residential property are on average at a higher risk of poverty. Women make up a larger share of the old elderly and the single households.

5 Residential Property and Old-Age Poverty Risk

Residential property is a highly relevant factor, as people need a roof over their head, and real estate constitutes an important asset. Persons living in their own home have lower current expenditures and can possibly live on a smaller income or smaller retirement benefits, respectively. While the homeownership rate among the elderly is high, the at-risk-of-poverty rate does not account for residential property. The at-risk-of-poverty rate refers to disposable income only, that is, the retirement or work income. This leads to the question whether there is a relationship between consumption opportunities based on home ownership or asset status on the one hand and old-age poverty on the other hand.

This section firstly discusses and compares the share of elderly homeowners in the EU member states (Sect. 5.1). Then subsection 5.2 sorts the member states according to their poverty risk and residential property characteristics. The goal is to obtain a more realistic picture than the analysis of single characteristics could yield. On this basis the member states are divided into groups by means of cluster analysis considering both a complex at-risk-of-poverty index and the homeownership rate of the elderly population. In conclusion, the results are discussed.

5.1 Homeownership Rate of Elderly Persons

As Fig. 7 illustrates, the share of homeowners among the elderly population in the EU ranges from 55% (the Netherlands) to 99.4% (Romania). On average, 78% of the population over 65 in the EU owns a home.

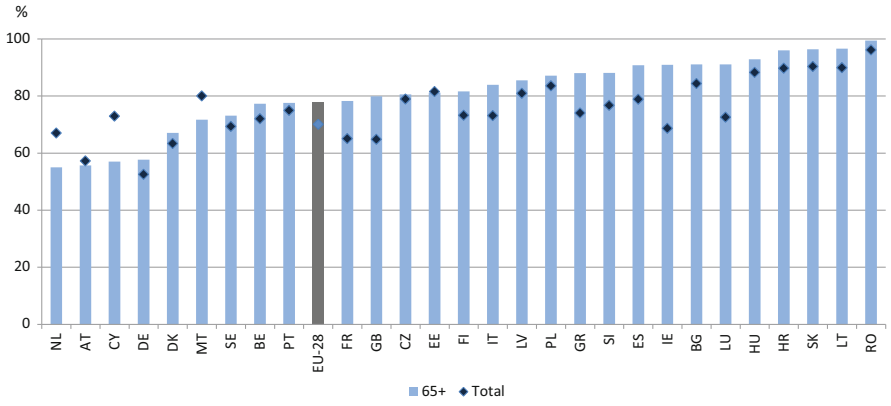


Fig. 7 Homeownership rate among the elderly population (65+) and the total population in the EU member states in 2014. Source: Own composition based on Eurostat (Code: ild_lvps15 and ilc_lvho02)

The Eastern European countries show the highest homeownership rates, followed by the Southern European countries. With less than 60%, the lowest rates are observed in Germany, Cyprus, Austria, and the Netherlands. On average, the homeownership rate of the elderly is larger than the homeownership rate of the total population in the EU-28. The difference between the elderly and the rest of the population is particularly high in Ireland, Luxemburg, and the UK (more than 15%). In Cyprus, the Netherlands, Malta, Austria, and Estonia, however, the homeownership rate of the total population is higher than the homeownership rate of the elderly.

5.2 *Relationship Between Old-Age Poverty and Residential Property of the Elderly*

5.2.1 At-Risk-of-Poverty Rate and Homeownership

Figure 8 presents the relationship between the at-risk-of-poverty rate and the homeownership rate of persons over 65, providing a first impression of country groups.[10]

In the countries on the upper right—Estonia, Latvia, Bulgaria, Croatia, and Lithuania—both the homeownership and the at-risk-of-poverty rate among the elderly are above the EU-28 average. In the countries on the left side of the graph—the Netherlands, Austria, Germany, and Cyprus—homeownership rates are below average, while the at-risk-of-poverty rates differ (in the Netherlands below average, Germany, and Austria the rates are average, in Cyprus above average). In the third country group (the rest of the countries), the at-risk-of-poverty rates are scattered around the EU average. The homeownership rates range from slightly below average to substantially above average.

However, the at-risk-of-poverty rate, plotted on the vertical axis, does not account for all components of poverty risk (e.g. poverty gap, material deprivation).

The at-risk-of-poverty rate should thus not be interpreted as an indicator of living standard. When comparing EU member states, it is important to keep in mind that poverty is measured against the national at-risk-of-poverty threshold, which differs across countries and is dependent on the respective economic situation. Some countries might seem to do particularly well, but the at-risk-of-poverty rate has to be considered in context.

In Hungary, for example, the at-risk-of-poverty rate of the elderly is the lowest in the EU (see Fig. 1). Still, a large part of the elderly population lives at the edge of the

[10]A cluster analysis with the classification characteristics homeownership rate and at-risk-of-poverty rate yields an optimal cluster number of three. The clusters are marked by colour, and the country groups are circled.

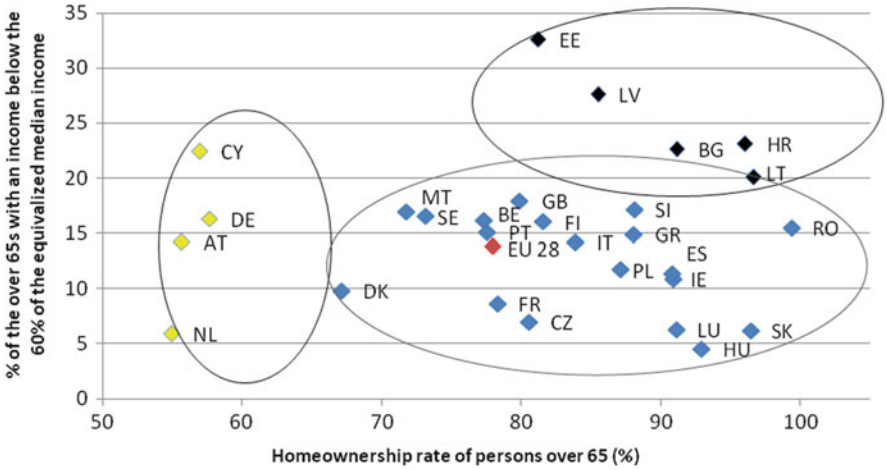


Fig. 8 Homeownership rate and at-risk-of-poverty rate among the elderly population in the EU in 2014. Source: Own composition based on Eurostat (Code ilc_lvps15 and ilc_li02)

subsistence level. This is due to the extremely low at-risk-of-poverty threshold in Hungary (the third lowest in the EU after Romania and Bulgaria).[11]

5.2.2 At-Risk-of-Poverty Index and Homeownership

In order to obtain a more realistic picture of poverty in the EU, the following section constructs a complex at-risk-of-poverty index for the elderly based on the EU-SILC poverty indicators and the availability of data. The index, which is summarized in Table 1, includes both monetary and nonmonetary indicators.

The EU refers to the indicators marked by (*) as indicators for the evaluation of the elderly's current living standard (European Commission 2015). In order to include a value that is not relative, the index furthermore accounts for an absolute monetary indicator (income 65+ in Euro) (**). In addition, tenure status is highly relevant for the expenditure side. In order to capture the importance of homeownership, the housing-related poverty indicators marked by (***) are also included in the index.

The at-risk-of-poverty index is compiled as the arithmetic mean of the standardized indicators. The arithmetic mean for compilation is based on the respective weights of the indicators. A higher index value corresponds to a higher poverty risk.[12]

[11] While the at-risk-of-poverty threshold of single persons in Luxemburg was, for example 20,592 Euro, in Hungary the threshold was 2707 Euro (see Eurostat – Code: ilc_li01).

[12] When calculating the mean, it has to be taken into account that the indicators "average equivalized total net income" and "relative median income ratio" have a negative sign. For the other indicators, a higher value corresponds to a higher risk of poverty. For these two indicators, it is the other way round; thus the negative sign is needed.

Table 1 Indicators of the at-risk-of-poverty index

Monetary indicators	At-risk-of-poverty rate 65+ *
	Relative median at-risk-of-poverty gap 65+ *
	Income 65+ in Euro **
	Inequality of income distribution S80/S20 income quintile share ratio 65+ *
	Relative median income ratio of persons 65+ compared to persons under 65 *
Nonmonetary indicators of the living situation	Rate of severe material deprivation 65+ *
	Material deprivation in the "housing" dimension 65+ (number of items = min 1 signifying material deprivation) ***
	Rate of severe housing deprivation 65+ *
	Overcrowding rate 65+ ***

Source: Own compilation

Annex 2 summarizes the indicators of the at-risk-of-poverty index, their definitions according to Eurostat, as well as the EU-SILC datasets used as data sources. In order to group EU member states with similar characteristics, a cluster analysis with the classification characteristics at-risk-of-poverty index and homeownership rate (both standardized) is used.

The method of hierarchical cluster analysis is chosen, as the number of grouping cases (countries) is relatively small (28).[13] Since the variables are available at metric level, the squared Euclidean distance is chosen as measure of distance.[14] The linkage between the groups serves as method of agglomeration.[15]

All variables are standardized and thus aligned on a common scale for the cluster analysis in order to avoid distortions due to different value ranges.[16]

Prerequisite for the use of cluster analysis is that the variable attributes are not strongly correlated (Brosius 2013). The correlation value (according to Pearson) between homeownership rate and at-risk-of-poverty index is 0.394, and the correlation is therefore weak.

The cluster analysis yields the optimal cluster number 5.[17] Annex 3 shows the dendrogram of the analysis and provides a graphical overview of the classifications conducted and the group assignment of the countries. The result of the cluster analysis is depicted in Fig. 9.

For further description, the variable means for the clusters are summarized in Table 2, where they are ranked according to homeownership rate. Figure 10 illustrates the distribution of the values in a box plot.

[13]The SPSS software programme (version 23) was used.

[14]This measure is widely used; see Brosius (2013, p. 720).

[15]This method is recommended due to higher transparency; see Brosius (2013, p. 720).

[16]For more information on hierarchical cluster analysis and the methods used, see Bühl (2014, pp. 633–656), and Brosius (2013, pp. 711–744).

[17]For more information on the optimal cluster number, see Bühl (2014, p. 640). The method of agglomeration was "linkage between the groups" (see above). The also widely used Ward method yields the same optimal cluster number.

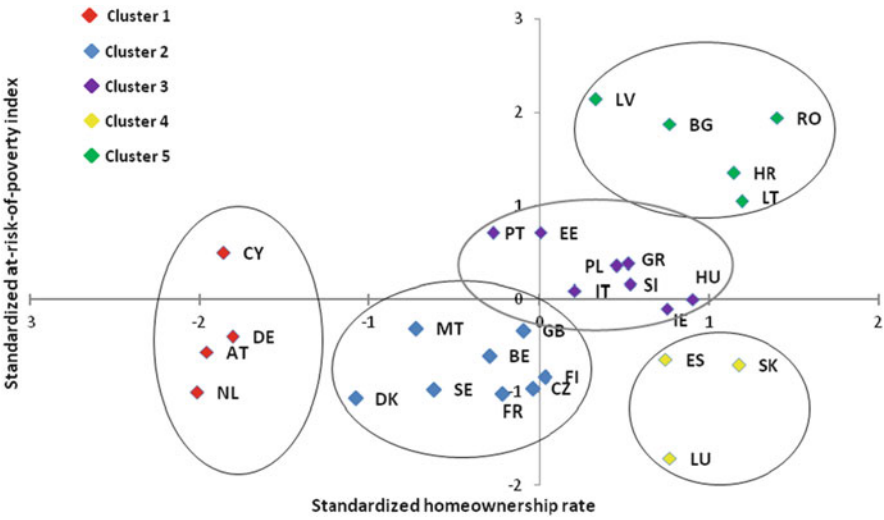


Fig. 9 Country groups of the cluster analysis. Source: SPSS output, own composition

The countries of *cluster 1* (the Netherlands, Austria, Germany, and Cyprus) are characterized by a relatively low homeownership rate among the elderly and—with the exception of Cyprus—below-average old-age poverty.

Cluster 2 shows homeownership rates that are higher but still below average, combined with below-average old-age poverty. The Western and Northern European countries, that is, Denmark, France, Sweden, the Czech Republic, Finland, Belgium, the UK, and Malta belong to this cluster.

The countries of *cluster 3* are characterized by slightly above-average homeownership rates and old-age poverty. The Southern and Eastern European countries Ireland, Hungary, Italy, Slovenia, Poland, Greece, Portugal, and Estonia fall under this category.

In the countries of *cluster 4* (Luxemburg, Spain, and Slovakia), the homeownership rates are above average, while old-age poverty is below average. Overall, this cluster is heterogeneous.

Cluster 5 demonstrates high homeownership rates among the elderly and above-average old-age poverty. Lithuania, Croatia, Bulgaria, Romania, and Latvia are part of this group.

When comparing these clusters to the country groups derived in Fig. 8, it is striking that *cluster 1* and *cluster 5* contain the same countries with the exception of Romania and Estonia. Yet, the comparison of *clusters 2–4* to the remaining countries in Fig. 8 emphasizes that the cluster analysis based on the at-risk-of-poverty index provides a more precise and realistic picture of old-age poverty.[18] A striking

[18]The other classification characteristic (homeownership rate) has not been changed but only standardized.

Table 2 Cluster profiles

Cluster		*Z*-factor value homeownership rate	*Z*-factor value at-risk-of-poverty index	Countries
1	Mean	−1.9067	−0.3723	NL; AT; DE; CY
	N	4.0000	4.0000	
	Standard deviation	0.0941	0.6281	
2	Mean	−0.3792	−0.7625	DK; FR; SE; CZ; FI; BE; GB; MT
	N	8.0000	8.0000	
	Standard deviation	0.3907	0.3072	
3	Mean	0.3912	0.2869	IE; HU; IT; SI; PL; GR; PT; EE
	N	8.0000	8.0000	
	Standard deviation	0.3890	0.3047	
4	Mean	0.8955	−1.0218	LU; SK; ES
	N	3.0000	3.0000	
	Standard deviation	0.2424	0.5945	
5	Mean	0.9689	1.6718	LT; HR; BG; RO; LV
	N	5.0000	5.0000	
	Standard deviation	0.4218	0.4549	

Source: SPSS output, own compilation

example is Hungary. When using the at-risk-of-poverty index instead of the at-risk-of-poverty rate, old-age poverty in Hungary falls below average to a lesser extent.

Especially the countries of *cluster 5*, followed by the countries of *cluster 3*, might be rewarding target markets for ERS products that can release the capital tied up in the real estate holdings of the elderly in order to alleviate old-age poverty. The countries in both clusters register relatively high homeownership rates combined with relatively severe old-age poverty.

6 Conclusion and Outlook

This study has analysed different aspects of old-age poverty and homeownership among the elderly population in the EU member states based on EU-SILC data.

On the one hand, the analysis above has established that among the population of 65 years+ women, the old elderly (75+) and persons living in single households and to a lesser extent persons who do not own a home are particularly vulnerable to old-age poverty.

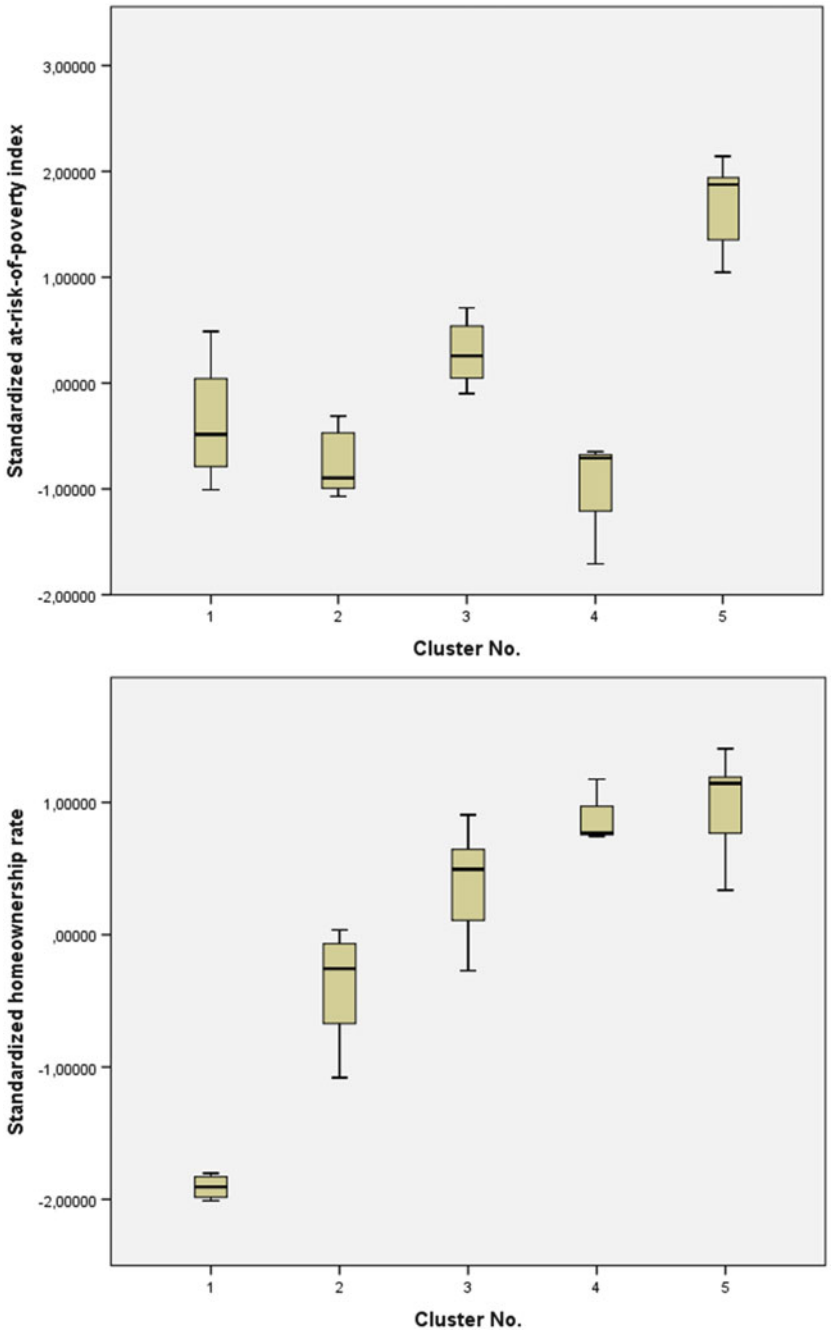


Fig. 10 Box plots of the variables of the cluster analysis. Source: SPSS output, own composition

On the other hand, the analysis has identified groups of EU countries with a relatively high share of elderly homeowners at risk of poverty. These countries can be considered target markets for ERS products.

Although Hennecke et al. (2016) rely on different indicators, methods, and data sources for the most part, they come to a similar conclusion for some of the countries. With regard to demand and realization potential, Hennecke et al. also rate Latvia, Lithuania (*cluster 5*), and Estonia (*cluster 3*) as worthwhile markets for ERS products. Croatia (*cluster 5*), Greece, Slovenia, Poland (*cluster 3*), and Spain (*cluster 4*) are ranked high in demand but low in practicability.

The quantitative results of this study have to be interpreted cautiously and should be understood as a first step of analysis, which should be continued on the basis of EU-SILC micro-data. The results of the cluster analysis could then be tested by means of an ordinal logistic regression.

Annex 1 EU Country Codes

Code	Country
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GB	Great Britain
GR	Greece
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxemburg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia

Annex 2 Definitions and datasets of the indicators of the at-risk-of-poverty index

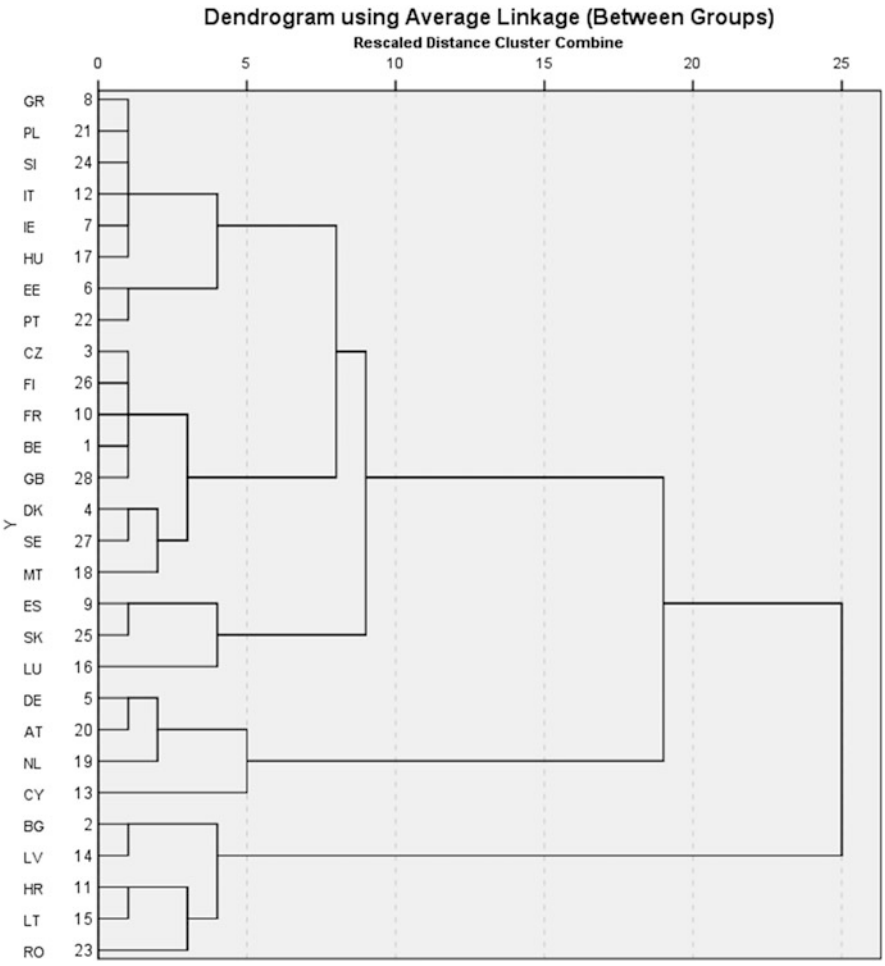
Indicators	Eurostat definition	EU-SILC dataset
Monetary indicators		
At-risk-of-poverty rate	"The at-risk-of-poverty rate is the share of people with an equivalized disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalized disposable income after social transfers" (Eurostat Glossary 2014a)	ilc_li02
Relative median at-risk-of-poverty gap	"The relative median at-risk-of-poverty gap is calculated as the difference between the median equivalized disposable income of people below the at-risk-of-poverty threshold and the at-risk-of-poverty threshold, expressed as a percentage of the at-risk-of-poverty threshold (cut-off point: 60% of national median equivalized disposable income)" (Eurostat Glossary 2014c)	ilc_pns5
Income in Euro	Average equivalized total net income (For equivalized income, see Eurostat 2014)	ilc_di03
Inequality of income distribution S80/S20 income quintile share ratio	"The income quintile share ratio or the S80/S20 ratio is a measure of the inequality of income distribution. It is calculated as the ratio of total income received by the 20% of the population with the highest income (the top quintile) to that received by the 20% of the population with the lowest income (the bottom quintile). All incomes are compiled as equivalized disposable incomes" (Eurostat Glossary 2014d)	ilc_pns4
Relative median income ratio of persons 65+ compared to persons under 65	"The relative median income ratio is defined as the ratio of the median equivalized disposable income of people aged above 65 to the median equivalized disposable income of those aged below 65" (Eurostat Glossary 2014e)	ilc_pnp2
Nonmonetary indicators of the housing situation		
Rate of severe material deprivation	"Severe material deprivation rate is defined as the enforced inability to pay for at least four of the (...) (following) items: to pay their rent, mortgage or utility bills; to keep their home adequately warm; to face unexpected expenses; to eat meat or proteins regularly; to go on holiday; a television set; a washing machine; a car; a telephone" (Eurostat Glossary 2014b)	ilc_mddd11

(continued)

Annex 2 (continued)

Indicators	Eurostat definition	EU-SILC dataset
Material deprivation for the "housing" dimension (number of items = min 1 signifying material deprivation)	"Severe housing deprivation rate is defined as the percentage of population living in the dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures. Housing deprivation is a measure of poor amenities and is calculated by referring to those households with a leaking roof, no bath/shower and no indoor toilet, or a dwelling considered too dark" (Eurostat Glossary 2014f)	ilc_mddd04b
Rate of severe housing deprivation	"(P)ercentage of population living in the dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures" (Eurostat Glossary 2014f) material deprivation for the "housing" dimension, see above	ilc_mdho06a
Overcrowding rate	"The overcrowding rate is defined as the percentage of the population living in an overcrowded household. A person is considered as living in an overcrowded household if the household does not have at its disposal a minimum number of rooms equal to: one room for the household; one room per couple in the household; one room for each single person aged 18 or more; one room per pair of single people of the same gender between 12 and 17 years of age; one room for each single person between 12 and 17 years of age and not included in the previous category; one room per pair of children under 12 years of age" (Eurostat Glossary 2014g)	ilc_lvho05a

Source: Eurostat, own compilation



Annex 3 Dendrogram of the cluster analysis. Source: SPSS output, own composition

References

Antczak, R., & Zaidi, A. (2016). Risk of poverty among older people in EU countries. *DICE Report, 14*(1), 37.

Brosius, F. (2013). *SPSS 21*. Frechen: MITP-Verlags GmbH & Co. KG.

Bühl, A. (2014). *SPSS 22. Einführung in die moderne Datenanalyse* (14th ed.). München.

European Commission. (2010). *EUROPA 2020. A strategy for smart, sustainable and inclusive growth*. Retrieved June 10, 2016, from http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC2020&rid=1

European Commission. (2015). *The 2015 Pension Adequacy Report. Current and future income adequacy in old age in the EU*, Vol. I, Luxembourg.

European Council. (1985). Council Decision of 19 December 1984 on Specific Community Action to Combat Poverty, 85/8/EEC, Official Journal of the European Union, No. L 2/24, Vol. 28, 1.1985, pp. 24–25.
Eurostat Glossary. (2014a). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty_rate
Eurostat Glossary. (2014b). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Material_deprivation
Eurostat Glossary. (2014c). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Relative_median_at-risk-of-poverty_gap
Eurostat Glossary. (2014d). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Income_quintile_share_ratio
Eurostat Glossary. (2014e). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Relative_median_income_ratio
Eurostat Glossary. (2014f). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Severe_housing_deprivation_rate
Eurostat Glossary. (2014g). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Overcrowding_rate
Eurostat List of Variables. (2016). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/web/income-and-living-conditions/methodology/list-variables
Eurostat tessi120. (2016). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tessi120&language=de
Eurostat-Unit F4. (2014). Working paper with the description of the 'Income and living conditions dataset', EU-Silc: Methodological studies and publications. Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/documents/1012329/1012398/D5.1.3-Working_paper_final_20141204.pdf/c4ed99f5-7cc3-4bf9-a6eb-b1f730299e0e
EU-Statistik über Einkommen und Lebensbedingungen (EU-SILC). Retrieved June 29, 2016, from http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database
Hauser, R. (2008). Altersarmut in der Europäischen Union. In *WSI Mitteilungen*, Vol. 3, pp. 125–132.
Hennecke, P., Murro, P., Neuberger, D., & Palmisano, F. (2016). *Pensions and housing wealth. Quantitative data on market conditions for equity release schemes in the EU, Thünen-Series of Applied Economic Theory*, No. 146.
Lelkes, O., & Gasior, K. (2012). *Income poverty and social exclusion in the EU*, Policy Brief. Retrieved June 29, 2016, from http://www.euro.centre.org/data/1327061559_78123.pdf
Lobato, I. R., & Kaup, S. (2014). *The territorial dimension of poverty and social exclusion in Europe*. Retrieved June 29, 2016, from https://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TIPSE/DFR/Annex_7_TypologyOfCountries_Working_Paper_9.pdf
OECD. (2013). *Pensions at a Glance 2013. OECD and G20 indicators*. Paris: OECD Publishing. Retrieved June 29, 2016, from https://doi.org/10.1787/pension_glance-2013-en
OECD. (2015). *Pensions at a Glance 2015. OECD and G20 indicators*. Paris: OECD Publishing. Retrieved June 29, 2016, from https://doi.org/10.1787/pension_glance-2015-en

Part II
Well-Developed Markets for Private Pensions and Homeownership

Holding on and Letting Go in Ireland: Examining the Policy and Fiscal Environment for Supplementing Retirement Income from Residential Property

Yogesh Jaiyawala, John Maher, Richard Burke, and Sean Byrne

1 Retirement Demographics and Housing/Pension Wealth

Ireland has a relatively small population compared to the EU median. However, the population in Ireland is expected to grow at a significantly higher rate (18.9%) than that of EU median (−0.1%) by 2050 (see Table 1). The old-age dependency ratio was at 19.2% (2014) which is lower than the EU median of 27.3%. The percentage of the Irish population above the traditional retiring age of 65 is also lower than the EU median by a considerable amount. Nonetheless, due to sizable expected growth in the population of Ireland, both the percentage of elderly (65+) and old-age dependency ratio are expected to rise at a faster rate in the future (OECD 2015). This can be partially validated from the recent (2016) census of Ireland, where the mean age of the population in mid-2016 increased to 37.4 years, up from 36.1 years in mid-2011. The number of elderly (65+) males grew by 22% to 296,837, while elderly females (65+) increased by 16.7% to 340,730. It should be noted that Irish demographic projections are subject to a significant amount of migration volatility, therefore such projections may not correspond closely with the actual outcome, unlike some EU countries where migration dynamics are not as critical.

OECD (2014) in its review of pension systems finds that Ireland's public expenditure on pensions was just over 5% of gross domestic product (GDP), while it was as high as 13.8% and 15.8% in both France and Italy (highest in the EU), respectively. This partly explains the lower net pension replacement rate[1] (approximately 42%) in Ireland compared to the EU median (about 64%), while these rates were as high as 89.6%

[1]The **net replacement rate** is defined as the percentage of individual net pension entitlement as compared to the net (after tax) preretirement earnings. The rate is thus net pension income divided by the net preretirement income expressed as a percentage.

Y. Jaiyawala · J. Maher (✉) · R. Burke · S. Byrne
Waterford Institute of Technology, Waterford, Ireland
e-mail: jmaher@wit.ie

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Table 1 Demographics and household information

Category	Ireland	EU median
Population (in million, 2014)	4.6	7.9
Expected population growth (%, 2014–2050)	18.9	−0.1
Old-age dependency ratio (%, 2014)	19.2	27.3
65+ (% of total population, 2014)	12.7	18.6
Owner-occupied (% of households, 2014[a])	67.6	74.5
Total outstanding residential loans (Mio. EUR, 2014)	91,617.0	75,981.5
Growth in mortgage debt (%, 2004–2014)	18.0	118.4
Residential mortgage debt (% of GDP, 2014)	49.4	40.6
Per capita mortgage debt (EUR, 2014)	26,830	11,106
Net replacement rates for mandatory pension programmes (%, 2014)	42.2	63.7
Replacement rate of public pension in relation to wages (%, 2014)	34.7	55.8
Per capita private pension fund assets (EUR)	30,148	2426

Source: OECD (2015), population data, replacement rates, private pension fund assets; Eurostat (2015), dependency ratio, owner occupation; European Mortgage Federation (2015), residential loans/mortgage debt

[a]The owner-occupied figure for Ireland is that of 2016, the most recent census available

and 95.7% in Hungary and the Netherlands (highest in EU), respectively. This expresses the less favourable financial conditions of Irish retirees when compared to the average European retiree. However, elderly Irish do enjoy several other entitlements such as free public transport, medical cards (which fulfill health care entitlements), electricity and heating allowances.

Unlike many other Western European countries, Ireland has seen high rates of home ownership. In Ireland, these rates grew significantly between 1971 and 1991 (Norris and Winston 2003) and reached to 81.8% in 2004. However, the 2016 census reports a substantial reduction in the home ownership rate to 67.6% (CSO 2016), a figure lower than the EU median at about the same time. Significant economic growth from 2000 to 2008 resulted in higher disposable income for households. The elevated income levels and relaxed lending criteria from credit institutions escalated the home ownership rate in 2004. This further pushed property prices to record highs in the years that followed and created a bubble which burst as part of the 2008 financial crisis. Figure 1 shows that the national residential property price index moved to a peak of about 135 (base January 2005 = 100) in January 2007. House prices have been volatile in the past 10 years and more so in Dublin, the capital. Furthermore, there is a substantial difference between house prices in Dublin compared to the rest of Ireland. This is due to higher incomes and housing supply challenges in the greater Dublin area.

Healy and Kelly (2017) report that Ireland had a price-to-income ratio of about 6 times in 2017 as compared to less than 4 times between 1990 and 1998, and quite close to 7.5 times seen in 2006–2007. This shows that housing affordability has been severely restricted in the last two decades. On the other hand, average monthly rents now represents about 40% of average monthly earnings (Healy and Kelly 2017). This is reflected in the lower price-to-rent ratio (14 times) in Ireland as compared to other EU countries (Global Property Guide 2017). For example,

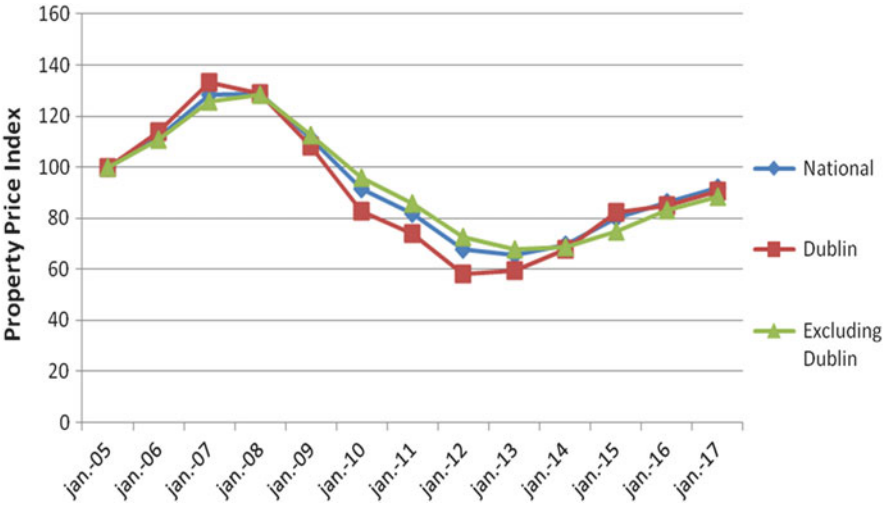

Fig. 1 Residential property price index. Source: CSO (2017)

such ratios are as high as 51 times and 42 times in Austria and Italy, respectively. The lower price-to-rent ratio corresponds with relatively higher rents as opposed to the cost of buying a dwelling. Affordability has been further constrained by the Irish Central Bank macro-prudential rules applying to residential property loans which were implemented from early 2015 (CBI 2016).

The Irish household savings rate (as a % of disposable income) turned into negative at −0.4% in 2014 from its peak of 9.37% in 2009. Germany and Sweden have had the highest saving rates in the EU of 9.5% and 15.3%, respectively, in 2014; surprisingly, they have not changed extensively since the 2008 global financial crisis. Ireland had private pension fund assets of approximately 30,000 € per capita in 2014 and, on the liability side, an indebtedness rate (household debt as % of net annual disposable income) of 207%. While per capita private pension fund assets are several times higher than the EU median, the indebtedness rate is also one of the highest in the EU. The median loan-to-value (LTV) ratio,[2] for households with a mortgage on primary residential dwellings, of such property was 73.5%. The post-crisis fall in house prices pushed the LTV ratio up to such a high level.

[2]The **loan-to-value (LTV) ratio** is calculated as the amount of the mortgage lien divided by the appraised value of the property and is expressed as a percentage.

2 Private Pension Schemes

2.1 Old-Age Security Provision

Ireland has a well-developed old-age pension system comprising of three pillars: the first pillar covers a flat-rate state pension, the second pillar covers occupational pensions, and a third pillar comprises of private pensions, attracting substantial tax expenditures by the Exchequer.

2.1.1 The State Pension

The old-age pension was renamed as the state pension under the Social Welfare Law Reform and Pensions Act 2006. The contributory state pension now is a pay-related social insurance contribution-based payment made to those above 66 years of age. It is not a means-tested benefit as the pension is financed by the contributions made by a person during a working life (a pay-as-you-go system) rather than a designated investment fund. One can receive the contributory state pension and continue to engage in a job or business or have other income sources such as an occupational pension. In 2015, expenditure on the state pension system totalled nearly 6,878 million € (see Table 2) with 576,682 recipients, and more than 60% of these expenditures were related to the contributory state pension.

The OECD (2014) in its review of the Irish pension system (on behalf of the Minister for Social Protection) suggests that the state pension should move to a flat-rate universal basic pension or to a means-tested basic pension. Larragy (2013) explicitly states in relation to the tax expenditure schemes that *"there is a need to correct the misalignment between the existing tax deferral structure in Ireland that provides higher incentives to high-income earners and the policy goal of increasing coverage, especially for lower-wage earners"* (p. 26). In other words, pension reforms that are driven by tax relief are disproportionately beneficial to those with

Table 2 Expenditure on the state pension (2015)

	No. of Recipients	Expenditure (million €)
State pension (contributory)	361,725	4475
State pension (non-contributory)	95,179	972
State pension (transition)[a]	66	1
Widow's, widower's or surviving civil partner's pension (contributory)	119,712	1422
Death benefit	Not available	8
Total pensions	576,682	6878

Source: DSP (2016)

[a]The **state pension (transition)** was abolished in the beginning of 2014. It is no longer paid to those who reach 65 years of age

higher incomes, and those with lower levels of income do not gain from such fiscal reliefs to a large extent.

2.1.2 Occupational and Private Pensions

Ireland also has an occupational pension framework and personal pension plans (PPP) as well as Personal Retirement Savings Accounts (PRSAs). Occupational schemes could be defined benefit (DB) or defined contribution (DC) or of a hybrid nature. The PPP and PRSAs are DC contracts. There has been a considerable shift from DB schemes to DC schemes since the 2008 global financial crisis. Most DB schemes are either closed or are not in offer to new entrants.

The 2016 census (CSO 2016) reveals that the number of workers who had a pension in the fourth quarter of 2015 fell to 47% compared to 51% in the fourth quarter of 2009. Supplementary pension coverage is greater for those at the higher end of the earnings decile. Those on low incomes tend to have significantly lower pension coverage.

Pensions Data

In October 2007, the Irish government published the Green Paper on pensions which highlighted the challenges facing the Irish pensions system. The 2007 Green Paper explicitly observes that "as pressure builds on the cost of Social Welfare pension provision, the need for greater private pension saving will grow if income adequacy in retirement is to be maintained for all" (Government of Ireland 2007, p. 210). Some of the key issues that were highlighted in the Green Paper for preparing a sustainable pension policy included:

- The population aged 65 and above could increase by 59% from 2007 until 2021 and by a further 142% by 2061. Hence, there may be a relatively sharp decline in the pensioner support ratio[3]—from about 6 to 1 in 2008 to less than 2 to 1 in 2061.
- The pension coverage rate for people at work was around 55%, at the time of the publication of The Green Paper, despite vastly improved awareness of pension issues and the need to provide for their retirement. Nonetheless, the coverage rate has since fallen to about 47% in 2015 and this is considered below an acceptable level by many commentators.
- The adequacy of the contributions made by people may not be enough to meet their retirement expectations. Further, the old-age-related expenditure in Ireland could reach 13% of GDP by 2050 (on the basis of current patterns).

Fiscal Incentives and Tax benefits

Larragy (2013) acknowledges that Ireland operates an exempt/exempt/taxed (EET) model whereby both pension contributions into pension funds and investment

[3]**Pensioner support ratio** is the number of people aged 15–64 per one older (65+) person.

income within pension funds are exempt from tax. While income tax is charged upon premature withdrawal of the funds, the lump sum payment allowable upon retirement is again tax-free. Thus, the OECD recognised that the EET model in Ireland has proved to be more like an "exempt-exempt-exempt (EEE)" system where income channelled through private pensions is unlikely to be taxed anytime during an individual's life cycle (Larragy 2013). From the late 1980s, the Irish government implemented policies to provide more fiscal incentives to encourage investment in private pensions which resulted in a rapid increase in tax outflow for the State. The OECD also acknowledged that if the rate of tax subsidy on private pensions is not changed, it would result in a fiscal outlay of over 2.5% of GDP by 2040. However, up to 2005, there had been a cumulative increase in tax subsidies and from 2008 some reductions in eligibility for tax reliefs on private pensions has been witnessed.

Revenue (2016a) list the latest tax reliefs available for contributions to approved personal pension arrangements which have been outlined in Table 3. This relief is more generous as an individual contributor gets older.

The maximum amount of 40% also applies to the individuals in specific occupations (such as professional athletes) and professions, irrespective of age, where earnings lifespan is limited. There is a limit on the earnings that may be considered. The current limit is 115,000 € (Revenue 2016a).

Since 1 January 2011, there has been a limit of 200,000 € imposed on the amount of the tax-free retirement lump sum. Lump sum payments above that limit were taxed as follows in 2016 (see Table 4).

Relevant Stakeholder and Legal Framework

There are three key government authorities to look after the state pension, occupational pensions, and private pensions in Ireland. These are the Department of Social Protection (DSP), the Pensions Authority (PA), and the Central Bank of Ireland

Table 3 Tax relief for different age groups

Age	An amount qualifying for tax relief
Under 30 years	15% of net applicable earnings
30–39 years	20%
40–49 years	25%
50–54 years	30%
55–59 years	35%
60 and over	40%

Source: Revenue (2016a)

Table 4 Tax relief for lump sum payments from pension schemes

Amount of lump sum	An amount which qualifies for tax relief
Up to 200,000 €	0%
200,000 €–500,000 €	20%
Over 500,000 €	Taxpayer's marginal rate

Source: Revenue (2016b)

(CBI), respectively. The first one is a department of the Irish government, and determines overall pension policy as well as disbursing the state pension. The PA advises the DSP regarding pension policy and regulates occupational pension schemes and PRSAs. The CBI regulates the private pension suppliers. In addition, the Department of Jobs, Enterprise and Innovation has an interest in maintaining the competitiveness of the Irish economy, while the Department of Public Expenditure and Reform seeks to manage the public sector cost base which includes state employees' pensions.

2.2 Existing Private Pension Regulations

Private/personal pensions in Ireland refer to the pensions that are arranged on an independent basis by either self-employed individuals or employees without occupational pension arrangements. Rules governing personal pensions have changed very considerably in recent years. The CBI regulates the companies (such as banks, life assurance companies and investment firms) that offer personal pension plans as well as Personal Retirement Savings Accounts (PRSAs). Such regulations include a prudential dimension as well as a conduct of business dimension. Before 1999, on reaching the retirement age, it was obligatory to use the accumulated funds to buy an annuity. Since 1999, it is no longer an obligation to buy an annuity on retirement, and there is a considerable amount of flexibility in switching between different funds and different insurance companies, bearing in mind the costs involved in doing so (Citizens Information Board 2016b).

The Revenue Commissioners applied a levy of 0.6% until the end of 2014 on the market value of assets which are managed in pension funds and on pension plans approved under Irish tax legislation. The total pension levy in 2015 was raised to 0.75%, though it was announced in Budget 2016 that this levy would be abolished. This levy mitigated to some degree the regressive nature of tax relief during a period of relative austerity following the financial crisis, insofar as high-income earners had most to lose from this levy.

2.3 Individual Private Pension Products

There are mainly five types of private pension products in Ireland (Pensions Authority 2016).

2.3.1 Private Sector Occupational Pension Schemes

These are also known as company pension plans that are set up by employers and can provide benefits including a tax-free lump sum (within certain limits) and pension income in retirement.

These benefits will generally be based on:

- Final remuneration (final salary defined benefit schemes)
- Average salary throughout an employee's career (career average defined benefit schemes)
- The value of the pension fund at retirement (defined contribution schemes)

Apart from retirement benefits, these pension schemes can also provide benefits to dependants in the case of a death of an employee. Pension benefits are also portable which means that they can be transferred when an employee changes an employment or employment status (Pensions Authority 2016).

2.3.2 Defined Contribution (DC) Schemes

These are occupational pension schemes where an employer's contribution and an employee's personal contributions are both invested in buying a pension and/or other benefits at retirement. The value of the ultimate benefits will vary with the DC scheme depending on the amount invested; the return realised less any fees, taxes, levies and charges; and the cost of buying the benefits. A DC scheme has a set contribution for both the employer and the employee. Contributions are invested on behalf of each scheme member, and the retirement benefits depend on the fund performance up until a member's retirement date (Pensions Authority 2016).

2.3.3 Hybrid Pension Schemes

A hybrid pension scheme is the one which has characteristics of both DB and DC schemes. In a DC scheme, the member generally bears the full risk (of receiving reduced benefits) if funds do not perform as expected. In a DB scheme, the employer usually takes that risk and makes higher contributions to provide the agreed level of benefits. Conversely, in hybrid pension schemes, these risks are shared between the employer and employees (Pensions Authority 2016).

In a combination scheme, a member can accumulate two types of benefits simultaneously. This may be a defined benefit element for a part of income and a defined contribution element on the remaining amount.

There are many possible types of hybrid schemes which are defined below (Pensions Authority 2016):

1. Self-annuitizing DC schemes are similar to DC schemes until the retirement of a member. Post-retirement, the accumulated fund is automatically converted to pension income in the form of an annuity in accordance with a process which is set out in the rules of the scheme. The pension is then paid from the scheme.
2. Final salary lump sum schemes are those in which the retirement benefits are expressed as a lump sum for retirement and not as a pension. For example, the scheme may provide a lump sum at retirement at a rate of 20% of the final salary

for each year of service. If a member retires with 30 years' service, a lump sum of 20% times 30, i.e. 600% (or 6 times) of final earnings, would be used to buy a pension for that member at the market cost.

3. In an underpin scheme, both a defined benefit and defined contribution basis are used to calculate benefits. After retirement, the member receives a benefit based on whichever calculation provides the best result. For instance, a scheme may have an employer and employee contribution rate of 10% each, with a guarantee that at retirement, a pension of at least 1% of earnings per year of service would be paid as a minimum.
4. Fixed benefit/benefit unit schemes are defined benefit schemes not linked to earnings—a member usually accumulates a fixed monetary amount of annual pension every year.

2.3.4 Retirement Annuity Contract

Retirement annuity contract (RAC) is the formal generic name for a personal pension product. An RAC is a type of insurance contract approved by the Revenue Commissioners. It is similar to an individual defined contribution plan in which the value of the ultimate benefits depends on the amount of contributions paid, the investment return achieved less any fees taxes, levies and charges; and the cost of buying the benefits. RACs can be purchased directly from life assurance companies and through financial advisers. It is a contract between an individual and a life assurance company. However, the one exception is a scheme for a group of individuals established under a trust and approved by the Revenue Commissioners. There are no standard terms or maximum charges for RACs (Pensions Authority 2016).

2.3.5 Personal Retirement Savings Accounts

These are pension savings accounts funded by personal contributions, although employers could also pay contributions to these plans but are not obliged to do so. Personal Retirement Savings Account (PRSA) arrangements provide a tax-free lump sum, within certain limits, and a pension or other benefits on retirement. A PRSA is again like an individual defined contribution plan. Every employer must make a PRSA plan available through the workplace to individuals employed there (Pensions Authority 2016). As of 2016, there were 13 PRSA providers in the Irish marketplace.

There are two types of PRSAs contracts:

- A standard PRSA is a contract with a maximum charge of 5% on the contributions paid and 1% levy per annum on the PRSA funds under management. Investments are only allowed in certain pooled funds including unit trusts and life company unit funds.
- A non-standard PRSA is a contract with no maximum limits on charges and/or allows investments in funds other than pooled funds.

2.4 Conclusion

Retirement income provided in an Irish context involves a complex mosaic of public and private elements, with individual and collective dimensions, sometimes combining employer and employee contributions. There are always significant tax dimensions from inception through to retirement, then up to death, and even beyond that, when dependents or beneficiaries exist. The Irish private pension system is known as being favourable to those on higher incomes. In a narrow sense, the private pension regime remains highly unequal as high-income earners continue to benefit proportionately and absolutely more from the provision of tax reliefs by the government. Still, the state pension system is progressive insofar as individuals paying social insurance qualify for a contributory state pension, but it is limited to a ceiling of 233.30 € for a single person, irrespective of how much greater the employee and employer's contribution might have yielded for those on higher incomes. Thus, the degree of regressiveness with respect to the pensions system needs to be interpreted in the context of the set of overall transfers to and from the State and to and from different income cohorts on a longitudinal basis.

With the net replacement rates for mandatory pension programmes for Ireland (41%) far below the EU median (71%), there lies a material risk of pension poverty in Ireland. With life expectancy forecast to increase over time and an existing lower pensioners' support ratio, the case for change appears self-evident. On the other side, the appetite for change is moderated by the implications for stakeholders, individuals, employers, providers, intermediaries and the State from changes in the absolute burden of pensions and the relative proportions of that burden borne or contributed to by each of the parties over time. For individuals and households, as life expectancy increases and care needs of the elderly become more widely shared within social and family structures that themselves are evolving, the satisfaction of those needs should be viewed more holistically in devising policy responses. These needs include a mix of income, housing, community participation and interaction, medical care, personal care and sustenance. Integrated good urban and rural design of physical infrastructure and social systems will also offer value to individuals and to the community to which they belong.

3 Housing Market

3.1 Housing Development

Since the 1950s, house building in Ireland gained momentum leading to a considerable increase in the number of dwellings. With growth of housing units, the number of occupied houses also started mounting, albeit at a slower rate. Table 5 shows the current scenario of residential housing in Ireland.

Table 5 Critical features of the housing scenario

Country's population (2016)	4.76 million
Number of households (2016)	1.71 million
Housing stock (2016) (number of housing units)	2.00 million
Share of vacant dwellings as a % of total dwelling stock (2016)	12.3%

Source: CSO (2016)

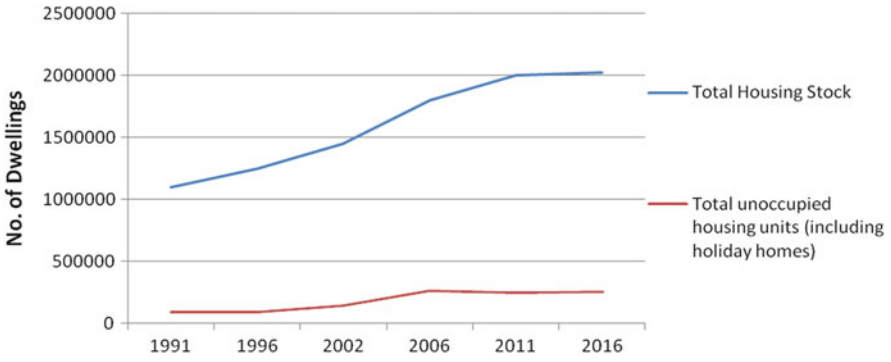

Fig. 2 Irish housing stock and vacancy rates 1991–2016. Source: CSO (various years)

Figure 2 exhibits the sharp increases in total housing stock during the late 1990s and 2000s, though this was accompanied by a significant increase in the number of unoccupied or vacant properties. In 2016, more than 36,000 units, including holiday homes, were vacant in Dublin alone.

Ireland's economic position in 2007 was, unfortunately, not as strong as it appeared to the Irish government or other stakeholders such as lending firms and financial regulators (Whelan 2014). Despite high levels of labour productivity, the latter years of the Irish boom (2000–2007) saw the build-up of unsustainable imbalances of income and credit, giving rise to a housing boom. However, the per capita number of dwellings was still not at par with the EU average. This was a reflection of family size and fertility patterns in Ireland. In fact, Somerville (2007) estimated that Ireland had the smallest per capita housing stock in the European Union, which is also acknowledged by Whelan (2011). With the population growing and incomes expanding rapidly, there was a strong rise in housing demand thus inflating house prices. In addition, the European Monetary Union (EMU) allowed Irish financial institutions to provide mortgage credit at historically low rates (Whelan 2014). As a result, mortgage rates fell to below 5% from the 10% in 1980s. This contributed to house prices being quadrupled between 1996 and 2007. This further accelerated the construction boom. The total stock of dwellings which was about 1.2 million in 1991 and had steadily increased to 1.4 million in 2000,

further increased to 1.9 million homes in 2008 (Whelan 2011). The number of housing units currently stands at just above two million (CSO 2016).

Furthermore, Whelan (2014) concedes that Irish house prices had become increasingly overvalued in the years leading up to 2007 and seemed unsustainable. However, neither the government nor the CBI managed to stabilise property prices over this period; and there was a strong domestic consensus that there would be a soft landing. Exogenous shocks such as those experienced from the backwash of the US banking and financial crash were neither anticipated nor were they sufficiently represented on the fiscal, monetary or policy radars, domestically or at European level. By late 2007, Irish house prices began to fall from peak levels. The fall in house prices accelerated due to lack of demand for new houses underpinned by a dramatic reduction in the availability of credit. In addition, the number of mortgage holders falling into arrears or calling upon the State Social Welfare Support Scheme for indebted homeowners, i.e. mortgage interest supplement, increased dramatically. Subsequently, house prices fell by 50% from their peak in 2007 until they reached a low plateau in 2011. Since then, house prices have risen again, but are not yet close to the level seen in 2007.

3.1.1 Current Housing Situation

The Revenue Commissioners defines an owner-occupier as a "person who purchases a home which is to be occupied by the purchaser, or a person on his behalf, as his only or principal place of residence and no rent, other than rent under the rent-a-room scheme, is derived from the property for a period of 5 years from the date of the current purchase" (Revenue 2016d). A person purchasing a second home (including a holiday home) is not regarded as an owner-occupier even though no rent is obtained from the property. The owner-occupier sector is split into those who own the property without a mortgage and those who still have an outstanding mortgage. Residential renting is divided into two broad sectors. The private rented sector is generally associated with for-profit renting. The social or public rented sector consists of mainly Local Authority housing with a small voluntary and co-operative housing sector, and these suppliers fulfil a not-for-profit social housing function.

Table 6 shows the latest situation with respect to the residential dwellings.

Table 6 Residential dwellings (2016)

	Units (million)	%
Owner-occupied	1.15	67.6
Private rental	0.33	19.4
Public rental (from local authority)	0.14	8.24
Other	0.08	4.71
Total	1.70	100

Source: CSO (2016)

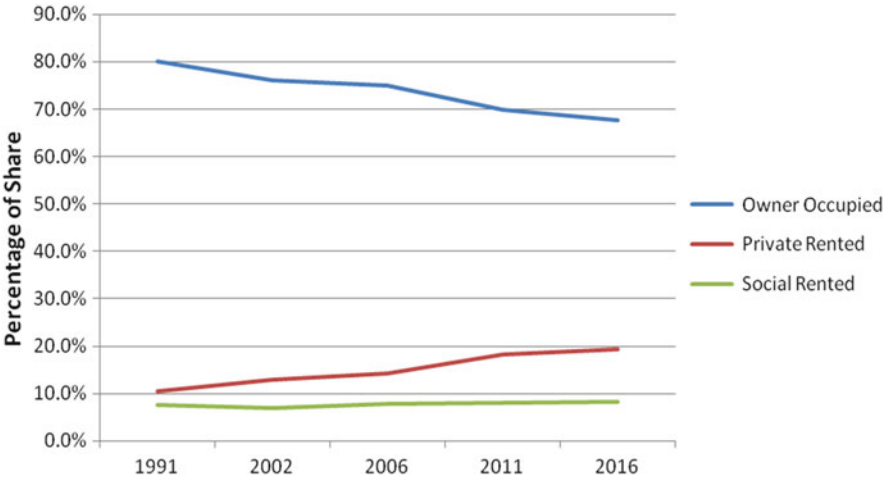

Fig. 3 Tenure trends 1991–2011. Source: CSO (various years)

The CSO (2016) reports the fall in (national) home ownership rate to 67.6% in the previous 5 years; and home ownership levels in urban areas touched a new low of 59.2%. Not only that, the overall housing stock increased only by 8800 units, while the total population grew by approximately 170,000 between 2011 and 2016.

Figure 3 shows that the number of private rentals has increased nationwide and even more rapidly in Dublin. In recent years, the private rented sector has grown considerably as households found the purchase of residential property unaffordable and mortgage credit was less accessible from lenders. The size of this sector has increased sharply. According to the CSO (various years), in 1991 fewer than 8% of Irish households had accommodation rented from private landlords, whereas by 2016 this figure had risen to approximately 20% of total residential dwellings. As noted above, housing law and policy were transformed during this period. This arose as state housing policy was oriented towards increased private sector supply rather than Local Authority (the state agencies for local government) developed units.

Social Justice Ireland (2016), an advocacy group, observed that Ireland is in the middle of both a social housing and a homelessness crisis. As noted in the report by the Department of Environment, Community and Local Government (2014), the numbers of families living in hotels in the Dublin region doubled in 2015, and the numbers of new families considered as homeless increased by a third last year in Dublin alone. At the same time, there were almost 90,000 households on the waiting list for social housing. This demonstrates an issue on the supply side which requires significant investment. Yet, it is a major challenge to secure sufficient finance to provide the scale of social housing required. It is not easy for the Exchequer to provide the funding necessary to deal with the current demand, and thus more sustainable solutions are required. The Department of Environment, Community

and Local Government (2014) has recommended that that the Government should access sufficient finance to provide social housing using off-balance sheet mechanisms. This would help considerably to reduce housing waiting lists. Given the fact that there are about 107,000 social housing units owned by Local Authorities and generating rental income regularly, it may be possible to put together a proposal that meets the Eurostat conditions for an acceptable off-balance sheet initiative. This proposal would allow Ireland to continue to fulfil the commitments given to European partners in terms of the EU Fiscal Compact (Department of Environment, Community and Local Government 2014).

3.1.2 Other Housing Characteristics

Ireland's housing stock is well-known internationally for its high number of detached houses, which are often one-off housing units located in rural areas, and a low number of flats or apartments. Census 2016 revealed that 88% of occupied residential properties were houses while 12% (Dublin-35%) were flats or apartments. This is in sharp contrast to broad housing stock trends across the EU where flats or apartments are more prevalent. This may be explained by dispersed settlement patterns coupled with low population density. The popularity of detached housing was a consistent feature of the Irish housing landscape during the last century. The growth in apartments is only seen during the last 15 years. From 2002 apartment developments did increase from a low base, with much of this construction taking place in urban areas, as some households were content to live in modest apartment blocks.

3.2 Economic and Urban Factors

Table 7 summarises key flows in the Irish housing market. The Banking and Payments Federation of Ireland (BPFI 2016) in its Housing Market Monitor Report (Q1-2016 to Q4-2016) explicitly indicates the shortage of supply of newly built homes during 2015. It further notes the medium to long-term requirement to build approximately 25,000 housing units per annum nationally, including 7000 units in Dublin alone. Despite this, only 4234 units were constructed in Dublin in 2016.

Figure 4 indicates that 14,932 housing units were constructed in 2016, an increase of around 18% compared to 2015 completions. Nearly 42% of housing units built in

Table 7 Latest situation of the housing market (2015)

New housing constructions	12,666 units
House prices (average annual change)	6.6%
Housing market transactions	52,000
New housing loans	29,000

Source: BPFI (2017)

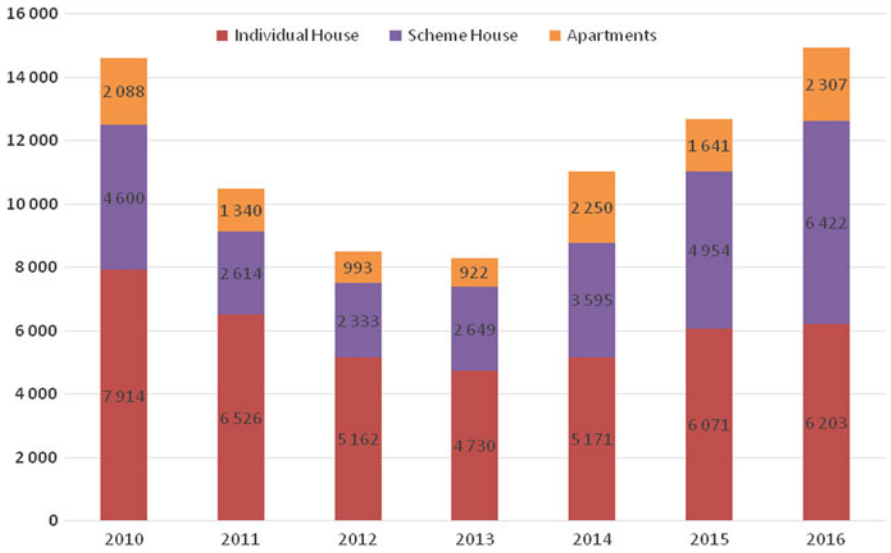

Fig. 4 Housing unit completions by type. Source: Department of Housing, Planning and Local Government (various years)

2016 were self-builds, whereas only 2673 units were built in greater Dublin area during the same period. The completion rate is nowhere near the pre-crisis level (e.g. above 75,000 in 2007), and this shortage in housing supply is likely to further exacerbate the availability of housing units, both for buyers and renters.

Figure 5 shows that, in 2014, 35% of the national housing need was in the greater Dublin area alone vs. the rest of Ireland. Thus, housing supply shortages are expected to continue in the short run and likely to maintain pressure on the availability of housing and the associated rental costs, especially in Dublin.

Figure 6 indicates that the number of mortgage approvals during 2016 were about 34,000 showing an upsurge of about 12% from that of 2015. It is interesting to note that most of these approvals relate to outright purchases, rather than refinancing or equity release. In the first quarter of 2017, more than 9500 mortgages were approved with a value of about 2.0 billion €. This shows an increase of about 100% in both number and value of mortgage approvals (BPFI 2017).

Given the nature of the housing market, the volume of mortgage drawdowns usually reflects transaction levels and again offers an indicator of credit conditions. Figure 6 exhibits the number of mortgage drawdowns in 2016, which were about 30,000. 90% of such drawdowns are accounted for by residential property purchases which depict the same trend as shown in mortgage approvals. Both the approvals and drawdowns increased by about 10% in 2016 compared to the previous year (BPFI 2017).

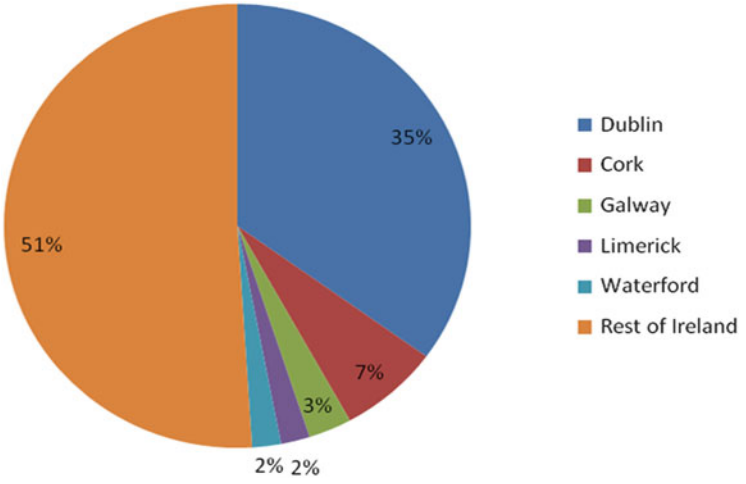

Fig. 5 Housing need—main cities and the rest of Ireland (% of total). Source: Department of Environment, Community and Local Government (2014)

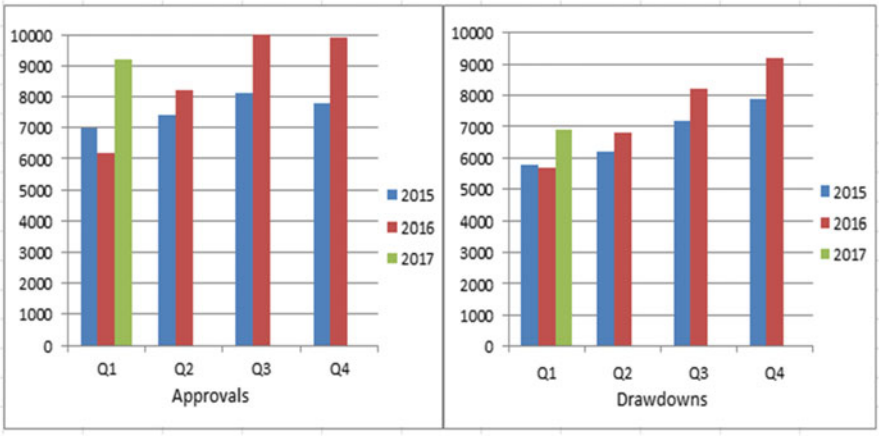

Fig. 6 Mortgage approvals and drawdowns. Source: BPFI Housing Market Monitor, Q1 (2017)

3.2.1 Price and Affordability

Lyons (2017a) notes an increase of 8% in residential property prices in 2016 like the 8.5% seen in 2015. The growth in property prices in the last 2 years has been much higher than that seen in the previous few years. Yet, house and apartment prices in Dublin are, respectively, 34% and 42% below their 2007 peak price levels. The residential property prices in the rest of Ireland are 35.4% lower than their highest level seen in late 2007. Overall, the national housing index is still 33.3% lower than its peak in 2007 (CSO 2016).

Lyons (2017b) in his report claims that new property listings show a nationwide increase in rents by an average of 13.5% (the highest increase since 2002) in Q4 2016, compared to 9% in Q4 2015 and 10.4% in Q4 2014. Average rents have now risen by about 65% since their nadir in 2010 and 14% higher than their previous pinnacle in 2008. The same report shows that nationally there were just under 4000 homes available to rent on 1st February 2017, the lowest total since Daft.ie first reported rent listings in 2006. The higher growth in rent levels compared to house prices is reflected in the higher rental yields as mentioned previously.

3.2.2 Effects of the Fiscal and Economic Crisis

Whelan (2014) argues that the acceleration in housing activity after 2002 was largely financed by the Irish banks. Most of these loans could have been paid off, if the global financial crisis of 2008 did not affect the financial means of the borrowers. However, with concerns about property-related losses at the Irish banks reducing international bond investors' and foreign depositors' confidence in the financial system, Ireland's banks became reliant on borrowings from the Euro system for liquidity purpose. As solvency then became an issue for these institutions, the Irish Government decided to inject capital and liquidity into the Irish banking system. A National Asset Management Agency (NAMA) was set up in late 2009 to issue government-backed bonds to the banks in exchange for purchasing distressed property loan portfolios at a discount. NAMA began to acquire loans from the banks gradually over 2010 and as further tranches of loans were acquired, the scale of the required capital injection emerged and loan transfers in isolation would not be sufficient: share capital would also be required.

Ireland was in an escalating mortgage crisis with levels of arrears far outstripping every other jurisdiction in Europe. Banks' liquidity problems and borrowers' diminishing credit worthiness triggered severe reductions in mortgage lending—from 111,253 loans in 2006 to 11,227 in 2011 (Norris 2015). As unemployment rose and disposable incomes contracted, due to falling pay rates and higher taxes and other charges, the credit contraction was particularly acute in the homeowner sector. Between December 2006 and September 2010, outstanding

homeowner mortgages contracted by 3.4%, while buy-to-let mortgages contracted by 0.5% (Norris 2015). As occurred in 1980s, the need to control the spiralling public borrowing and difficulties in borrowing effectively prohibited government from providing mortgages and homeowner grants. This time, the sector saw aspirant home owners facing severe credit and down payment barriers, with home ownership contracting from 77.2% of households in 2006 to 70.1% in 2011 (Norris 2015).

Yet, it is likely that home ownership would have declined further had the government not taken action to support borrowers in arrears, by paying the interest on their mortgages and imposing a moratorium on the repossession of their dwellings for 2 years after the initial missed mortgage payment (Department of Finance 2010). Due to this intervention, repossessions of owner-occupied dwellings by credit institutions have remained very low to date. Nevertheless, this is likely to change soon because the government has recently reformed personal insolvency arrangements to make it easier to declare bankruptcy. CBI (2017) states that more than 82,000 accounts were in arrears at the end of June 2016 which represents 11% of all mortgages on principal homes. Most of these mortgages in arrears are also in negative equity, many significantly so. The overall value of mortgages in Q4 2016 fell to 16.6 billion € from 18.7 billion € in Q4 2015. The value of mortgages in arrears stands at approximately 13.4% of total outstanding mortgages in Q4 2016.

Compared to an urban area, the rural areas' rate of owner occupation remained consistent over the last 40 years. Urban areas, on the contrary, have experienced considerable variations in the home ownership rate, growing from 38% in 1961 to a peak of 73% in 1991, with a continuous decline since then to 59.2% in the 2016 census. An outcome was the remarkable growth in the number of urban households in rented accommodation.

3.3 Housing Policies, Subsidies and Taxation

3.3.1 Housing Policy

The Department of Environment (1995), in its report, Social Housing: The Way Ahead, stated that the overall aim of the Irish housing policy is to enable every household to have access to a suitable and good-quality residence at an affordable price in a good environment with the tenure of its choice. This is an important statement as it places the emphasis on the basic right of the people to have adequate housing. In pursuing this policy, government strategy is that those who can afford to should provide housing for themselves with the available fiscal incentives; and those unable to do so should be given support in the form of either social housing or rent subsidies.

The overall aim of Irish housing policy may be further analysed under seven specific objectives as indicated by Focus Ireland (2016):

1. To encourage home ownership,
2. To promote a flourishing, diverse and well-managed public and private rented sector,
3. To ensure that those households, who are not fortunate enough to provide housing for themselves, have suitable accommodation available to them at an affordable price,
4. To promote the maintenance and improvement of public and private housing,
5. To reduce the extent and effects of social isolation in housing,
6. To enable a swift and satisfactory response to the accommodation needs of homeless people,
7. To enable the provision of suitable housing and halting sites for travellers, an indigenous historic transient community.

Housing policy also seeks to ensure that there is no overcrowding in occupied homes. A legal definition of overcrowding was introduced in the Housing Act 1966. This is based on the number of bedrooms in a dwelling and the people sharing a bedroom in the house. This standard sets out that certain individuals or groups require a separate bedroom. Overcrowding occurs where any two persons, being persons older than 10 years of age and of opposite sexes and not being a husband and wife, must sleep in the same room or where the free air space in any room used as a sleeping apartment for any person is less than 11.33 cubic metres (400 cubic feet). The Local Authority is responsible for enforcement of maintaining such standards and is empowered to serve a notice requiring owners to desist from allowing overcrowding to take place.

3.3.2 Subsidisation

There are many forms of subsidies or grants available for those in housing need. These are all aimed at improving the living conditions of those who are deprived and to provide them with a suitable shelter. Before June 2011, the Local Authorities had three schemes providing affordable housing to help lower-income households to buy their own home at a significantly lower price than the market value (Citizens Information Board 2016a) as follows:

- Affordable housing scheme
- Part V of the Development Acts 2000–2002
- Affordable Housing Initiative (AHI) under the Social Partnership Agreement 2003–2005 Sustaining Progress

These schemes have ceased to exist now. Nonetheless, there are other different forms of housing grants available as of 2016 which are discussed below.

Housing for Older People

Local Authorities are responsible for providing housing for older people similar to the rest of the population. There are many housing-related grants that are provided to

older people or people with disabilities. Some Local Authorities provide community accommodation for older people. Each Local Authority allocates housing in accordance with its own housing allocation scheme. There are some voluntary housing organisations (housing associations) providing housing similar to Local Authorities. They have some discretion regarding the criteria used in deciding to whom they provide a house, but most of these decisions are taken in consultation with the Local Authority.

Apart from this, there are a few housing grant schemes available to the elderly which have been designed to provide tailored interventions for the elderly in support of assisting them in remaining in their own homes and providing some infrastructural support in pursuit of this objective.

- Housing Aid for Older Persons Scheme
- Housing Adaptation Grant for People with a Disability
- Mobility Aids Grant Scheme
- Better Energy Warmer Homes Scheme

Improvement Works In Lieu of Local Authority Housing
This scheme enables Local Authorities to improve or extend privately owned houses instead of providing Local Authority housing. It is aimed at those owner-occupiers whose homes are substandard or overcrowded and who cannot afford to perform improvements. An individual may qualify if he/she is registered on a Local Authority housing waiting list or a Local Authority tenant who wants to buy a private house and return the present house to the Local Authority.

Mortgage Interest Supplement
The mortgage interest supplement scheme is no longer available to new applicants from 1 January 2014. It provided a means-tested subsidy for home loans.

Rent Supplement and Housing Assistance Payments
Both rent supplement and housing assistance payments are provided to those households who are living in private rented accommodation are means tested, and one must meet certain eligibility criteria in order to receive it. The Housing Assistance Payment largely replaces the rent supplement scheme and routes the assistance through the Local Authorities.

3.3.3 Type and Scope of Taxation

Home ownership and transacting gives rise to a range of tax implications. Table 8 summarises all the taxes from beginning to end of housing occupation.

Table 8 Taxation issues

Tax type	Rates and burdens	
Taxation at point of acquisition		
Stamp duty	The amount of stamp duty payable depends on the price paid (or the market value where the price paid is less than market value) for the property. The rates of duty applicable to instruments executed on or after 8 December 2010 are:	
	First 1,000,000 €	1%
	Excess over 1,000,000 €	2%
VAT	Tax at 13.5% applies to the purchase of new houses and apartments. Second-hand houses generally are not subject to this liability	
Taxation during ownership		
Local Property Tax (LPT)	LPT which is charged on all residential properties in the state came into effect in 2013. The LPT is collected by the revenue commissioners. All owners of residential property, including rental properties, are liable to pay the LPT. The LPT is based on the market value bands. The first band covers all properties worth up to 100,000 €. Bands then go up in multiples of 50,000 €. If a property is valued at 1 million € or lower, the tax is based on the midpoint of the relevant band. For properties valued over 1 million €, the tax is charged on the balance over 1 million €, with no banding applied. The basic LPT rate was set at 0.18% for properties valued below 1 million € and 0.25% on the amount of the value over 1 million €. From 2015 onwards, local authorities can increase or decrease this basic LPT rate by up to 15% on residential properties in their administrative area. This is referred to as the local adjustment factor	
Taxation at the end of occupancy		
Capital Gains Tax (CGT)	All forms of land and property, including sites with or without planning permission, houses, apartments and commercial property, are liable to CGT. However, gains on the disposal of property which was self-occupied or by a dependent relative as a sole or main residence is exempt from CGT. Restrictions may apply where the property was not fully occupied as a main residence throughout the period of ownership. CGT is a self-assessment tax. Unused capital losses arising in the current or earlier years may be offset against the gain. The first 1270 € of an individual's annual gain is exempt. The balance is chargeable at 33%	
Inheritance tax	Inheritance tax is charged on the taxable value of a taxable inheritance taken by a successor where the date of the inheritance is on or after 1 April 1975. However, a surviving spouse or a surviving civil partner taking an inheritance is completely exempt irrespective of the value of an inheritance. Inheritance tax is nil up to the "tax-free" threshold amount (based on certain relationships between disponer and receiver), and the remainder is charged at 33%	

Source: Revenue (2016d)

3.4 Conclusion

Ireland has been distinguished internationally by high rates of owner occupation with the corollary of lower rates of both private and social renting. However, as

stated previously, this trend seems to be reversing according to the most recent census (CSO 2016). The National Economic and Social Council (NESC 2014) observed that trends in Ireland's tenure mix, demography, affordability, and economy suggest that around one quarter to one third of the population might find it gradually more difficult to achieve home ownership.

A report on Social Housing Strategy 2020 produced by the Department of Environment, Community and Local Government (2014) notes that a precondition for a progressive society is an adequate supply of the right kind of housing at a reasonable cost. It further emphasises that there are immediate obstacles being faced by the construction industry in supplying adequate houses. Such obstacles are subject of integrated government action under Construction 2020 (Department of Housing, Planning and Local Government 2014) and have been the subject of further policy enunciation in the recently launched government plan for housing and homelessness entitled Rebuilding Ireland (Government of Ireland 2016). This document explicitly advocates the utilisation of existing housing as part of the response to rental bottlenecks and supply shortages.

The new social housing strategy states the goals of housing policy as follows:

- Affordability
- Sustainability—economic, social and environmental
- Inclusion

There are short- to medium-term challenges in planning, land management, construction and finance, which require urgent attention by the Government. The rhetoric regarding provision and support being provided for housing has yet to be converted into substantive action and responsibility for this rests with both the public and the private sector.

4 Mortgage Market

4.1 General Overview of Mortgage Market

4.1.1 Synopsis of Mortgage Market

According to the amended Central Bank Act, 1997 (Attorney General, 2016), a mortgage lender is "a credit institution or other person whose business includes the making of housing loans where "housing loan" means an agreement for credit on the security of a mortgage of a freehold or leasehold estate or interest in a house".

The 2008 global financial crisis highlighted the challenges and role of the housing market in driving economic cycles. To address these challenges, in 2015, the Irish

regulatory authorities placed a greater focus on the use of macro-prudential policy (MPP) instruments which are aimed at breaking the link between credit growth, house prices and banking sector instability. This could help increase a bank's and a borrower's ability to overcome financial shocks (Kelly et al. 2015). Macro-prudential policy tools explicitly addressed the mortgage market through restrictions such as the LTV ratio, loan-to-income (LTI) ratio or debt service coverage (DSCR)[4] ratio from early 2015.

4.1.2 Mortgage Criteria and Data

The measure of credit availability varies at a borrower level subject to LTV ratios, LTI ratios and monthly DSCR. In Ireland, between 2003 and 2010, most borrowers had their credit availability assessed by the LTI ratio. In this period 100% LTV mortgages were also provided. In early 2015, limits were imposed on LTV and LTI ratios under CBI Macro-Prudential rules. These were reviewed and revised in 2016. Table 9 exhibits modified rules which are in effect from January 2017.

Table 9 Macro-prudential residential property lending rules

	LTV for principal dwelling houses (PDH)		LTV for non-PDH	LTI for all PDH mortgages
Buyer type	First-time buyer (FTB)	Subsequent buyer	Non-PDH	All PDH
Limit	90% LTV	80% LTV	70% LTV	3.5 LTI
Buffers	The total value of new lending for PDH mortgages above these limits should be no more than 5% during an annual period	The total value of new lending for PDH mortgages above these limits should be no more than 20% during an annual period	The total value of new lending for non-PDH mortgages above these limits should be no more than 10% during an annual period	The total value of new lending for PDH mortgages above these limits should be no more than 20% during an annual period
Exception	Negative equity mortgage loans, refinancing/switcher mortgages and housing loans for the restructuring of mortgage arrears or pre-arrears are not in the scope of the regulations and are not within the scope of LTV limits			Switcher mortgages and housing loans for the restructuring of mortgage arrears or pre-arrears are not in the scope of the regulations

Source: CBI (2017)

[4]The **debt service coverage ratio (DSCR)** is defined as monthly net disposable income divided by mortgage instalment.

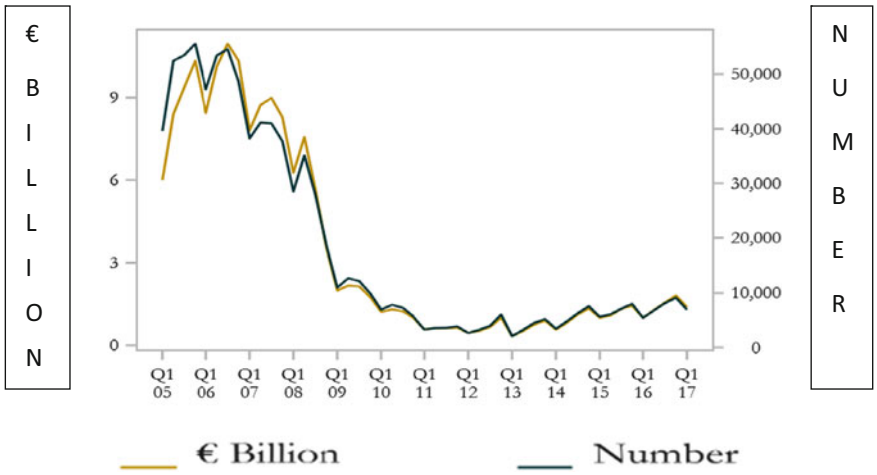

Fig. 7 New mortgages lending by loan count and balance, Q1 2005–Q1 2017. Source: CBI (2017)

The LTV ratio for principal dwelling houses (PDH) is 90% for first-time buyers and 80% for subsequent buyers. These limits can be exceeded by no more than 5% and 20%, respectively, of the euro value of all loans during an annual period. On the other side, LTV for non-PDH mortgages are subject to a limit of 70%, and this limit can only be exceeded by no more than 10% of the euro value of such loans. The LTI ratio for PDH mortgage loans is subject to a limit of 3.5 times. This limit should not be exceeded by more than 20% of the euro value of all housing loans for PDH purposes during an annual period. There is no restriction of LTI criteria for non-PDH buyers.

Figure 7 presents the data on recent lending data published by the CBI (2017). The increase in the value of new lending between Q1 2016 and Q1 2017 was from 1.0 billion € to 1.39 billion €. The number of new loans increased from 5447 to 6939 during the same period. Despite a substantial increase in the new lending, volumes were still well below the pre-crisis peak.

Tables 10 and 11 present the share of loans in default and in negative equity for both PDH and BTL loans as of June 2016.

From Tables 10 and 11, it can be inferred that the percentage of loans (both performing and default) in negative equity are higher for BTL loans than that of PDH loans. The share of loans in default (arrears) is also distinctively higher for BTL mortgages than that of PDH mortgages. This indicates the need to consider carefully the balance of fiscal incentives between first-time and later buyers, as well as between owner-occupiers and buy-to-let owners.

Table 10 Split of loans (PDH) by negative equity and default status, June 2016

	Positive equity (%)	Negative equity (%)
Performing	85	10
Arrears	3	2
Total	88	12

Source: CBI (2017)

Table 11 Split of loans (BTL) by negative equity and default status, June 2016

	Positive equity (%)	Negative equity (%)
Performing	70	16
Arrears	7	7
Total	77	23

Source: CBI (2017)

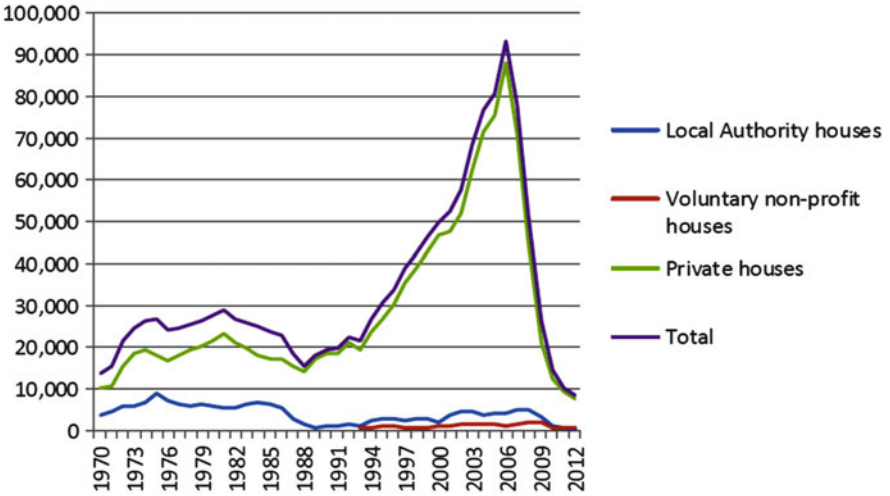

Fig. 8 New house building. Source: CSO (various years)

4.1.3 Fiscal Incentives

Since the 1920s, Irish government housing policy has largely centred upon increasing the supply of housing (see Fig. 8) by means of subsidies available to Local Authorities and private builders. Increased urbanisation (see Fig. 9) took place in Ireland during the late twentieth century as a result of its rapid economic growth. Subsidisation and taxation policy has been consistently directed towards promoting home ownership, which resulted in the high and growing owner-occupier sector and declining rented sector over many years. Since the genesis of the 2008 economic crisis, Irish housing policy has been significantly reconstituted with the Housing

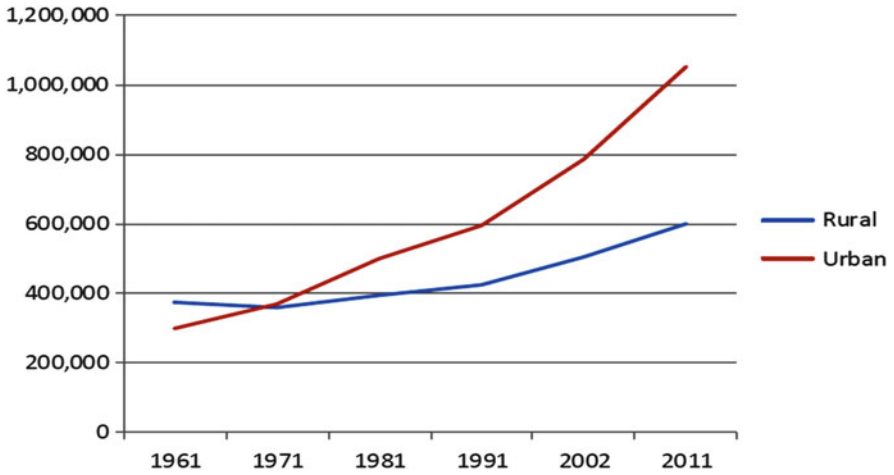

Fig. 9 Households living in rural/urban areas. Source: CSO (various years)

Policy Statement (Department of Environment, Community and Local Government 2011) placing partial blame for the economic crisis on the long-standing support for home ownership and signalling the policy shift to a more neutral approach. It remains to be seen whether such an approach will be electorally sustainable, given the tradition and inclination towards home ownership. Changing demographics and economic circumstances could well bring about a step change in social attitudes and behaviours. In turn this could lay a platform for obtaining sustainability in this secular change in the policy trajectory.

4.1.4 Tax Treatment

Irish law has provided for tax relief on mortgage interest on a home loan as a part of fiscal incentives to encourage home ownership. The tax relief has been available for interest paid on a new mortgage for buying a home, a top-up loan for development or improvement in the home, a re-mortgage, or a consolidation of existing qualifying loans, secured on a home (Revenue 2016c). Since 1 January 2002, the relief is paid at source (called TRS) by mortgage providers. It is given in the form of a reduced monthly mortgage payment by the lender. No taxable income is required to qualify for mortgage interest relief. Tax relief is available up to the maximum allowance of 10,000 € for a first-time buyer (single) and 3000 € for a non-first-time buyer (single).

Mortgages taken out before 1st January 2004 are no longer eligible for mortgage interest relief. Still, top-up loans/equity release loans taken out after 1 January 2004 on these pre-2004 loans may be eligible for mortgage interest relief, provided they are used to purchase, repair, develop or improve a sole or main residence, situated in an EEA State. A mortgage taken out from 1 January 2004 to 31 December 2012 used to purchase, repair, develop or improve a residence, situated in an EEA State, is

eligible for mortgage interest relief until 31 December 2017 only. This is an evolving scenario with each annual government budget having the potential to vary this incentive (Revenue 2016c).

4.2 Summary of Mortgage Products

CBI is the competent authority for the regulation of banks or other financial firms providing mortgage products. The Consumer Protection and Competition Commission (CCPC 2016), identifies five types of mortgage products currently available in the Irish market. While an annuity mortgage is the most common form of mortgage, the other four are not so prevalent and hence not described in detail here.

1. Annuity mortgage
2. Endowment mortgage
3. Current account mortgage
4. Pension mortgage
5. Remortgages

An annuity mortgage is by far the most common type of mortgage in the market. These products involve the borrower repaying both interest and a proportion of the loan amount (EMI) every month. The balance of the mortgage decreases over time until the loan is fully paid at the end of the mortgage term (CCPC 2016).

4.3 Recent Developments

Norris and Coates (2010) observed that Ireland's underdeveloped residential mortgage market was transformed into a highly developed, flexible sector during the last decade (2000–2010). After 2000, the numbers of lenders (mortgage providers) increased substantially, repayment terms became more flexible, and commercial banking agencies came to dominate mortgage provision. These developments were in line with the mortgage markets of several other European Union member states, but they were more pronounced in Ireland than that of EU norm/standard. The transformation of the mortgage market resulted in the Irish government, banking system and households being over-exposed to external macroeconomic shocks (Norris and Coates 2011). Thus, in Ireland, these shocks had a more severe impact on the government fiscal profile, the banking sector and the aggregate household balance sheet than in most western countries during the 2008 global meltdown. Significant numbers of households moved into negative equity in this period.

CBI (2017) in its Household Credit Market Report of 2017-H1 reports that Irish households, since the beginning of 2011, have continued to reduce outstanding credit balances with falls across both mortgage and non-mortgage debt. Similarly, the total household debt stood at 143.8 billion € in Q4 2016 compared to its peak of 203.7 billion € in Q3 2008. The report further mentions that both the value and

number of new mortgage loans have been increasing for the previous 3 years including 2016. Most of current lending has gone to first-time buyers in the past 3 years. Total outstanding PDH house purchase credit amounted to 86.2 billion €, BTL loans to 19.6 billion € and holiday or second home loans to approximately 0.9 billion € in Q4 2016. There is also an increase in the percentage of borrowers meeting the terms of their loan arrangements. The volume of lending for BTL investments increased considerably during the credit boom period as households increased their investment exposure to residential property (CBI 2017).

Irish variable mortgage rates are more than twice the average being charged across the eurozone area despite European Central Bank's main rate being zero. More recently, the Irish rates have been reduced. As noted in the Household Credit Market Report of 2017-H1 (CBI 2017), the standard variable interest rate on new lending stood at 3.38% in Q1 2017 down from 3.63% in Q1 2016. The variable interest rate on outstanding PDH and BTL mortgages was down marginally to 3.75% and 4.20%, respectively, in Q1 2017. Fixed rates on new lending for PDH and BTL varied between 3.27% and 4.89%, depending on the duration.

4.4 Conclusion

The Irish economy has experienced a vibrant mortgage market over the last few decades, though growth in the years preceding the 2008 global crisis proved to be unsustainable. The Irish government has from time to time given fiscal incentives to boost home ownership and the rental property sector. These incentives also helped to grow the mortgage market. As a by-product, they are also considered to be one of the reasons behind the 2008 housing bubble and its subsequent collapse. Although the CBI (2016) has lately implemented macro-prudential policy tools in order to reduce vulnerabilities in the financial system, the results of these measures are unfolding gradually, and their implementation represents a contested space, occupied by lenders, housing developers, financial intermediaries, borrowers, state agencies and social policy advocates. With an economy returning to growth and borrowers reducing their outstanding mortgage debt, capital is again available for mortgage lending, though within tighter solvency constraints and a macro-prudential lending framework. Government policy continues to evolve. There remains a reluctance to engage in direct social housing provision, although this would take pressure off the rental market and the buy-to-let market. The latter would reduce overall demand for housing and leave more supply available for the first-time buyers. The deficit and government debt constraints that exist in Ireland mean that current and future capital spending capacity is limited. Thus, the resolution of the shortage in the supply of housing is likely to be complex, spread over several years, depending on continued favourable fiscal results, and involve creative interventions to balance tackling the hoarding of development land and stimulating aspects of supply. All of these changes will feed into the mix, flows, and aggregates of mortgage volumes in the coming years.

5 Concluding Remarks

Even as a small island with complex migration dynamics, Ireland has a positive demographic profile compared to rest of the EU. The nation has come a long way in developing a multifaceted old-age security provision through a blended public and private pension system. A vibrant mortgage market along with a traditional stance towards household security helped the State in achieving a high level of home ownership, despite much urbanisation taking place after mid-twentieth century. With one of the lowest net replacement rates in the EU, significant nonfinancial support is in place for elderly Irish. Not only has government made notable efforts to increase pension coverage; it has historically encouraged home ownership through fiscal outlays. Nonetheless, with the passage of time, the tide has turned.

The years that followed the 2008 global financial crisis saw a drop in both private pension coverage and home ownership. With a recovering economy, house price inflation proceeds at a pace above wage inflation and the consumer price index, leading to above EU average rental yields. This scenario sparks intergenerational equity issues. Recently imposed macro-prudential rules, while soundly based, do crystallise distinct hurdles in the residential mortgage market.

The Exchequer is constrained by a tight budget and a heavy burden of debt. These factors feed into the challenges for younger age cohorts in a pursuit of suitable accommodation, especially in the greater Dublin area. Policymakers seek to balance the provision of satisfactory accommodation and pension security for younger cohorts while at the same time increasing the net replacement rate of income and providing suitable fit for purpose accommodation for older cohorts.

References

Attorney General. (2016). *Electronic Irish Statute Book* [online]. Retrieved March 20, 2016, from http://www.irishstatutebook.ie/eli/1997/act/8/enacted/en/index.html

Banking and Payment Federation of Ireland. (2016). *BPFI Housing-Market-Monitor Report Q1 to Q4* [online]. Retrieved June 5, 2017, from https://www.bpfi.ie/publications/bpfi-housing-market-monitor

Banking and Payment Federation of Ireland. (2017). *BPFI Housing-Market-Monitor Q1* [online]. Retrieved June 5, 2017, from https://www.bpfi.ie/wp-content/uploads/2017/06/BPFI-Housing-Market-Monitor-Q1-2017-Final.pdf

Central Bank of Ireland. (2016, January). *Restrictions on residential mortgage lending* [online]. Retrieved March 12, 2016, from http://www.centralbank.ie

Central Bank of Ireland. (2017). *Household Credit Market Report 2017-H1* [online]. Retrieved July 12, 2017, from https://www.centralbank.ie/docs/default-source/financial-system/financial-stability/macroprudential-policy/household-credit-market-report-h1-2017.pdf?sfvrsn=4

Competition and Consumer Protection Commission. (2016). *Types of mortgages* [online]. Retrieved March 10, 2016, from https://www.ccpc.ie/consumers/money/mortgages/types-of-mortgage

Citizens Information Board. (2016a). *Housing grants and schemes* [online]. Retrieved March 12, 2016, from http://www.citizensinformation.ie/en/housing/housing_grants_and_schemes

Citizens Information Board. (2016b). *Personal pensions* [online]. Retrieved March 12, 2016, from http://www.citizensinformation.ie/en/money_and_tax/personal_finance/pensions/personal_pensions.html

Central Statistics Office. (2016). *2016 census results* [online]. Retrieved July 11, 2017, from http://www.cso.ie/en/census

Central Statistics Office. (2017). *Residential property price index* [online]. Retrieved March 10, 2017, from http://www.cso.ie/en/releasesandpublications/ep/p-rppi/rppifeb2017/

Central Statistics Office. (various years). *Census results from various years* [online]. Retrieved March 10, 2017b, from http://www.cso.ie/en/census

Department of Environment. (1995). *Social housing – The way ahead*. Dublin: Stationery Office.

Department of Environment, Community and Local Government. (2011). *Housing policy statement* [online]. Retrieved March 8, 2016, from https://www.housingagency.ie/Regulation/Housing-Policy-Statement-2011.pdf

Department of Environment, Community and Local Government. (2014). *Social Housing Strategy 2020* [online]. Retrieved March 18, 2016, from http://www.housing.gov.ie/sites/default/files/publications/files/social_strategy_document_20141126.pdf

Department of Finance. (2010). *Mortgage arrears and personal debt expert group interim report* [online]. Retrieved May 5, 2016, from http://www.finance.gov.ie/sites/default/files/mortgagearrearsjul.pdf

Department of Housing, Planning and Local Government. (2014). *Construction 2020 – A strategy for a renewed construction sector*. Dublin: Stationery Office.

Department of Housing, Planning and Local Government. (various years). *ECB connections by type annually* [online]. Retrieved March 18, 2017, from http://www.housing.gov.ie/housing/statistics/house-building-and-private-rented/construction-activity-esb-connections

Department of Social Protection. (2016). *Pensions* [online]. Retrieved March 10, 2016, from http://www.welfare.ie/en/Pages/Annual-SWS-Statistical-Information-Report-2015.aspx

European Mortgage Federation. (2015). *HYPOSTATS, A review of European mortgage and housing markets* [online] Retrieved March 12, 2016, from http://www.hypo.org/PortalDev/Objects/6/Files/Hypostat_2015.pdf

Eurostat. (2015). *Distribution of population by tenure status, type of household and income group-EU-SILC survey* [online]. Retrieved March 12, 2016, from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en

Focus Ireland. (2016). *Official Website of organisation for homeless* [online]. Retrieved March 20, 2016, from http://www.focusireland.ie

Global Property Guide. (2017). *Price/rent ratio – Ireland compared to continent* [online]. Retrieved March 29, 2018, from http://www.globalpropertyguide.com/Europe/ireland/price-rent-ratio

Government of Ireland. (2007). *Green paper on pensions* [online]. Dublin: The Stationery Office. Retrieved March 4, 2016, from http://www.welfare.ie/en/downloads/greenpaper.pdf

Government of Ireland. (2016) *Rebuilding Ireland – Action plan for Housing and Homelessness* [online]. Retrieved April 18, 2017, from http://rebuildingireland.ie/Rebuilding%20Ireland_Action%20Plan.pdf

Healy, T., & Kelly P. (2017). *Ireland's housing emergency-time for a game changer*. Working Paper Series, Navin Economic Research Institute, No. 17/41.

Kelly, R., McCann, F., & O'Toole, C. (2015). *Credit conditions, macroprudential policy and house prices*. Research Technical Paper, 2015(6).

Larragy, A. (2013). *A universal pension for Ireland*. Social Justice Ireland Policy Research Series, Dublin.

Lyons, R. (2017a). *The daft.Ie house price report* [online]. Retrieved June 10, 2017, from https://www.daft.ie/report/q4-2016-daft-house-price-report-2016.pdf

Lyons, R. (2017b). *The daft.Ie rental price report* [online]. Retrieved June 10, 2017, from https://www.daft.ie/report/2016-q4-rental-daft-report.pdf

National Economic and Social Council. (2014). *Homeownership and rental: What road is Ireland on?* [online]. Retrieved March 15, 2016, from http://files.nesc.ie/nesc_reports/en/140_Homeownership_and_Rental.pdf

Norris, M. (2015). Varieties of home ownership: Ireland's transition from a socialised to a marketised policy regime. *Housing Studies, 31*(1), 81–101.

Norris, M., & Coates, D. (2010). *How housing killed the Celtic Tiger: Anatomy, consequences and lessons of Ireland's housing boom and bust, 2000–2009*. Dublin: UCD Stationery Office.

Norris, M., & Coates, D. (2011). Mortgage availability, qualifications and risks in Ireland, 2000–2009. *Journal of Current Issues in Finance, Business and Economics, 4*(3), 191.

Norris, M., & Winston, N. (2003). *Housing policy review, 1990–2002*. Dublin: UCD Stationery Office.

OECD. (2014). *OECD reviews of pension systems: Ireland*. Paris: OECD Publishing [online]. Retrieved March 1, 2016, from https://www.welfare.ie/en/downloads/OECD-Review-of-the-Irish-Pensions-System.pdf

OECD. (2015). *Various indicators* [online]. Retrieved March 1, 2016, from https://data.oecd.org

Pensions Authority. (2016). *Private pensions* [online]. Retrieved March 28, 2016, from http://www.pensionsauthority.ie/en/LifeCycle/Private_pensions

Revenue. (2016a). *Pensions and tax* [online]. Retrieved March 10, 2016, from http://www.revenue.ie/en/jobs-and-pensions/pensions/tax-relief-for-pension-contributions.aspx

Revenue. (2016b). *Taxation of retirement Lump sums* [online]. Available at: Revenue.ie, (2016) Pensions and tax [online]. Retrieved March 10, 2016, from http://www.revenue.ie/en/jobs-and-pensions/pensions/tax-relief-for-pension-contributions.aspx

Revenue. (2016c). *Mortgage interest relief* [online]. Retrieved March 12, 2016, from http://www.revenue.ie/en/tax/it/leaflets/tax-relief-source-mortgage-interest-relief.html

Revenue. (2016d). *Tax and duty manuals* [online]. Retrieved February 20, 2016, from http://www.revenue.ie/en/about/foi/s16/pensions

Social Justice Ireland. (2016). *Social housing proposals* [online]. Retrieved June 20, 2016, from https://www.socialjustice.ie/sites/default/files/attach/publication/4483/2016-07-19-socialhousingproposals1page.pdf

Somerville, R. A. (2007). Housing tenure in Ireland. *The Economic and Social Review, 37*, 107–134.

Whelan, K. (2011). Ireland's sovereign debt crisis. Working Paper Series, UCD Centre for Economic Research, No. 11/09.

Whelan, K. (2014). Ireland's economic crisis: The good, the bad and the ugly. *Journal of Macroeconomics, 39*, 424–440.

Dutch Pensions and Housing: Towards a Social Divide

Marietta E. A. Haffner

1 General Country Information

The pension and housing markets of the Netherlands have developed exceptionally in the European Union (EU; Table 1). Its pension system with high replacement rates can be designated as providing an adequate income in old age. While the Netherlands can be considered a 'champion' for its social rental housing provision in the EU (Dol and Haffner 2010), in the owner-occupied market, the 'cochampion' position held together with Denmark has become associated with extensive mortgage lending. When measured as share of gross domestic product (GDP), 90% and more have been registered since 2004 (European Mortgage Federation 2015).

This characterization of pension, housing and mortgage markets is mirrored in the data on household assets and liabilities for 2011 (De Nederlandsche Bank 2012) with pension wealth (189% of GDP) and housing wealth (214% of GDP) composing the largest asset types. On the liabilities side of the household balance, net wealth amounted to 411% of GDP, while mortgage borrowing as main type of household borrowing reached 111% of GDP. Other loans amounted to 16% of GDP.

This chapter elaborates on the markets of pensions, housing and mortgage loans, respectively, and reflects on outcomes for citizens in old age.

M. E. A. Haffner (✉)
Delft University of Technology, Delft, Netherlands

RMIT University, Melbourne, Australia

University of Cambridge, Cambridge, UK
e-mail: m.e.a.haffner@tudelft.nl

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Table 1 The Netherlands: general country information, 2014

Category	The Netherlands	European Union median
Population (million) (1)	16.9	7.9
Population growth (%, 2014–2050) (1)	2.5	−0.1
Old-age dependency ratio (%) (2)	26.4	27.3
65+ (% of total population) (1)	17.5	18.6
Owner occupation (% of population, 2014) (2)	67.0	74.5
Total outstanding residential loans (million EUR) (3)	634,391.0	75,981.5
Growth in mortgage debt (%, 2004–2014) (3)	46.4	118.4
Residential mortgage debt (% of GDP) (3)	95.7	40.6
Per capita mortgage debt (EUR) (3)	47,390	11,106.0
Net replacement rates on mandatory pension programmes (%) (4)[a]	95.7	63.7
Replacement rate of public pension in relation to wages (%) (1)	90.5	55.8
Per capita private pension fund assets (EUR) (1)	72,210	2426.0

Source: (1) OECD data, (2) Eurostat data, (3) European Mortgage Federation (2015), (4) OECD (2015)

[a]The net replacement rate is defined as the individual net pension entitlement divided by net preretirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners

2 Private Pension Schemes

2.1 General Information on Old-Age Security System

Encompassing three pillars, the pension system produces a relatively high net replacement rate of 95.7% (see Table 1; OECD 2015, p. 312). The first pillar is designed as the public pay-as-you-go system. It comprises a monthly lump sum income in old age and is dependent on household size. The second pillar consists of an occupational pension. The third pillar comprises the voluntarily funded private pillar.

Either pillar allows for income which is received in the payout period during retirement to be combined with work income. Furthermore, income in old age in the payout period from either pillar will be taxed as personal income (see also Haffner and Elsinga 2009).

As private pension systems are the topic of this section (Sect. 2) and the next two subsections focus on the second and third pillars of the pension system, the remainder of this section has the task to position the first pillar state pension. The *Algemene Ouderdomswet* (AOW) was introduced in 1957, based on the 1956 general law on old age. As part of the Dutch social security system, AOW is financed via the payroll taxes of those working, so the tax rate for the retirees is lower than for the non-retirees (Belastingdienst 2017a; OECD 2015, p. 310).

AOW old-age income is linked to the statutory minimum wage and is adapted every 2 years (OECD 2015; Overheid.nl 2016a; Rijksoverheid 2016a). A resident is entitled to it based on a 2% accrual rate per year for 50 years of residence. A means-tested social assistance scheme is available for those that have not resided in the Netherlands for 50 years to upgrade it to the net basic pension level (OECD 2015).

Since 1990, AOW purchasing power had increased up until 2010 because of tax changes (Soede 2012, pp. 117f.) resulting in a higher on-average income increase for the elderly than for those younger than 65 years of age. The elderly therefore ended up with a 'better' income than in 1995: the difference with those in work (corrected for household composition) had declined up to 2010. Moreover, only 2.6% of the elderly lived below the poverty line in 2010.

In 2014, the universal benefit AOW took up 5.5% of GDP and was rapidly increasing. To increase the financial sustainability of the state pension system, the statutory pension age is gradually being increased from 65 in 2015 to 66 in 2018 and 67 in 2021. In 2022 it will be 67 years and 3 months. Thereafter, it is to follow the increase in life expectancy. Future recipients of the state pension will therefore have been forced to spend more time in work than present recipients. Furthermore, the greying of society will stretch the financial basis of the state pension, as the numbers of those paying for AOW will decrease, while the numbers of recipients are increasing (Asbeek Brusse and Van Montfort 2012). Will private pension products—second and third pillars of the pension system—be able to fill this gap? The next subsections sketch an answer to this question.

2.2 Overview on Private Pension Product Types

The OECD (2015, p. 310) calls the Dutch occupational funded pension schemes in the second pillar 'quasi-mandatory', as they are not a statutory obligation, but covering 91% of employees via industrial relation agreements in the Netherlands in 2014. The statutory retirement age set for the state pension is also applicable to these schemes, which provide earnings-related benefits that have to be financed by funding. These pension savings are transferable when changing employer.

Representatives of the employers' organizations and trade unions negotiate occupational pensions. Once there is agreement, these pensions are compulsory for all companies of the sector in question. This was put into law in 1947 in order to prevent pension system funding costs from distorting competition among firms. The latest version of the pension law (Pensioenwet) is from 2006 (Overheid.nl 2016b) and regulates supervision as a task of the Dutch Central Bank and the Netherlands Authority of the Financial Markets (Autoriteit Financiële Markten (AFM) 2016a).

It is usual for employers to pay about two thirds of the pension premiums, while employees are responsible for the remainder (Rijksoverheid 2016b). Normally, gross earnings are paid into the pension scheme (Autoriteit Financiële Markten (AFM) 2016b); therefore, retirement income is subjected to income tax (see previous section).

Pension funds, which themselves are not subject to corporate income tax, have come to depend more on stock markets. This has therefore forced them to react whenever stocks were performing worse than needed for their coverage rate: increasing contributions and replacing final salary with average lifetime salary (Haffner and Elsinga 2009). This trend has been reinforced in the aftermath of the global financial crisis (GFC) that started in 2007 in the USA. As a result, pension funds' return on investment has come under severe pressure since interest rates have plummeted. Pension funds were forced to take measures such as not (fully) indexing pension incomes with inflation and decreasing per annum tax-free accrual rates in the savings period (Asbeek Brusse and Van Montfort 2012; Kortleve and Hendriks 2013; OECD 2015; Soede 2012). Coverage rates have become too low to be able to pay out all future pensions. About EUR 400 billion (70% of GDP) were estimated to be needed in 2012 (Asbeek Brusse and Van Montfort 2012, p. 14). The financial sustainability of future pension incomes has become insecure.

Furthermore, increasing labour mobility and flexibility in terms of increasing numbers of freelancers are difficult to cope with for the Dutch pension system. Forecasted lower retirement incomes will be confronted with forecasted higher age care costs (see also Kortleve and Hendriks 2013). With almost 13% of GDP in 2013, age care expenditures were the highest of all public sector expenditures and were also growing the quickest. Age care has increasingly been stimulated to be organized at home (deinstitutionalization; Haffner and Elsinga 2009). Furthermore, care support has been subjected to austerity measures implemented following the GFC (Vermeulen 2015), moving more of the financial responsibility to the recipients of care.

The third pillar of the pension system may (partly) fill this potential gap between income and expenditure in the retirement phase. The types of product available in the third, but also the second pillar, are the topics of the next section.

2.3 Individual Private Pension Products

2.3.1 Second Pillar

At the beginning of 2012, 544 second-pillar pension schemes existed and 414 at the end of that year (OECD 2015). Industry wide, 74 were operating, as it is possible for employers to opt out to offer their own scheme. Single-employer plans numbered 327, while almost 41,000 mainly smaller employers' schemes existed at the end of 2011. These latter schemes are operated by insurance companies rather than pension funds.

Most employees are covered by a defined benefit (DB; *toegezegde pensioenrechten*) scheme: about 94% of employees at the end of 2012 (OECD 2015). For the remainder, a defined contribution (DC; *beschikbare premieregeling*) scheme is applicable. Most DB schemes (98%) are based on average lifetime earnings.

The tax-exempt accrual rates differ between different schemes and also between final salary and average salary schemes. They have also been lowered slowly since 2014, as pension age is being increased (OECD 2015). The aim was to achieve a replacement rate of 70% after 40 years, taking AOW into account. From 2015 on, tax-free accruals were limited to a maximum annual salary of EUR 100,000.

The second-pillar pension schemes come with some flexibility. It is possible to retrieve the occupational pension earlier or defer it with a maximum of 5 years, compared to the age that the right to AOW starts. A part-time pension is possible, as well as low-high or high-low payout periods (Willemsen and Kortleve 2016). It is also possible to trade in retirement pension income for partner pension income. It is not possible, however, to get (part of) the second-pillar pension as a lump sum on the date of retirement. As this is listed to be a 'normal' option in other European countries, except for the Netherlands, Norway and Sweden (Willemsen and Kortleve 2016, p. 347), the Dutch government has been working on a proposal for a law on variable pension payment (Wetsvoorstel Variabele Pensioenuitkering; Rijksoverheid 2016c, d, e; see also Eerste Kamer der Staten-Generaal 2017).

Since 2011, 'premium pension institutes' have been allowed to operate on the pension market as third actors in the provision of retirement income. They play a role in the income build-up phase as they are not allowed to run any insurance risks: they offer DC schemes. Their legal form is based on the 2003–2004 European Institutions for Occupational Retirement Provision (IORP) guideline that makes it possible to run a scheme in a country other than the home country. In 2011, they came into being in the Netherlands as the frontrunner for a new type of general pension fund called *Algemene Pensioeninstelling*, which has not yet been introduced (De Nederlandsche Bank 2013). The frontrunners achieved a market share of 0.1% of the total amount of equity invested via Dutch pension funds in 2015 (Kok and Geboers 2016).

2.3.2 Third Pillar

The European Occupational Insurance and Pensions Authority (2017) distinguished two pension products available in the third pillar of the pension system: a special purpose bank savings account (*banksparen*; 13 providers; see also Banksparen.com 2016; Nibud 2016) and an endowment insurance (*kapitaalverzekering*; run by 40 premium pension institutes). The Dutch tax authorities speak of an annuity savings (*lijfrente*) product (as *banksparen* or *lijfrentebeleggingsrecht*), as well as an annuity insurance (endowment insurance)—be it with a bank, an insurance company or an investment institution that aims to complement retirement income in old age (Belastingdienst 2017b).

In all cases, the amounts saved for retirement income will be deductible in personal income tax if the taxpayer demonstrates a deficit in future pension income (based on the rules of the tax authorities). Such a requirement did not exist in the past (see e.g., Nibud 2016). As with any type of Dutch pension 'scheme', where savings for retirement are income tax exempted, once the payout period of annuity payments starts (monthly or annually), personal income tax is to be paid.

2.4 Conclusion

The Dutch pension system has been considered strong, as most households with an employee with a permanent contract quasi-mandatorily save via occupational industry pension schemes (second pillar), which complements the AOW public pension. The AOW is not means-tested but dependent on 50 years of residence in the Netherlands (first pillar). The net replacement rate amounted to 95.7% in 2014.

Achieving adequate retirement income for future generations of elderly may be endangered in the first two pillars of the pension system. The AOW is considered a minimum linked to statutory minimum wage. Retirement age is slowly being increased from 65 to above 67 years of age.

In the second pillar, structurally lower pension incomes are expected, as a result of lower tax-favoured pension savings than in the past. The coverage rate of pension funds (second pillar) has become a problem, also because of the very low interest rate following the GFC. Retirement incomes are then not being indexed with inflation. Asbeek Brusse and Van Montfort (2012, p. 14) estimated that to be able to pay all future pensions, about EUR 400 billion were needed in 2012. The share of 70% of GDP (still) compares favourably to the balance estimate of net wealth of households of 411% of GDP in 2011 (De Nederlandsche Bank 2012).

Options in the third pillar of the pension system have become limited. The tax-friendly products have been restricted through the years and can now be used in the situation where tax authorities identify a deficit in the taxpayer's future (expected) pension income.

Taken together, these measures aimed at creating a financially sustainable pension system will make access to adequate income in retirement more difficult, the lower the financial means for households to make extra reservations (without any tax advantages) to supplement their income in old age. Next to these pressures on the income of retirees, pressure is also building up on the expenditures, e.g. the age care support that has become less favourable because of austerity measures. Taken together, these developments are building up pressure for households to increasingly consider using their (tax-exempted owner-occupied) equity for an additional income in retirement, possibly to spend on rising costs for age care.

3 Housing Market

3.1 Housing Situation

3.1.1 Tenure Forms

On 1 January 2015, the dwelling stock of almost 7.6 million residences was dominated by the owner-occupied sector with a market share of 56% (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties 2016). Renting encompassed 30%

of social rental and 14% of private rental dwellings. That renting dominated the housing market until 2000 can mostly be explained by the large social rental sector, which still is the largest in the EU (Haffner et al. 2014b; Elsinga and Van Bortel 2011). Historically, social renting was not targeted to low-income households until far into this century, as no formal income limit existed.

The market share of homeownership of 56% in 2015 implies a stabilization of the market share in the slipstream of the GFC (Blijie et al. 2016). For all age groups, the rate was larger in 2015 than in 1994,[1] except for those younger than 25 years of age. The share in the age group 55–64 years amounted to 67% in 2015 (and it was 65% in 2009 and 2012, respectively); in the age group 65–74 years, it reached 62% in 2015 (and amounted to 55% in 2009 and 58% in 2012); in the age group 75+, the share of homeowners amounted to 44% in 2015 (increasing from 38% in 2009 and 40% in 2012). The distribution across higher age groups (the lower the rate, the older the occupant) indicates that the increase in market share in the Netherlands has taken place relatively late.

3.1.2 Tenants' and Homeowners' Financial Divide

A divide in income and wealth can be observed between owner-occupiers and tenants, as Table 2 presents. In 2012, homeowners on average had a higher income and owned more taxable wealth (over and above the income tax exemption) next to the wealth embodied in the owner-occupied dwelling than tenants. Wealth holdings increased with age, while the age group 50–64 on average earned the highest income.

The homeowners of the age group 50–64 owned EUR 223 billion of equity in the owner-occupied dwelling, which amounted to 40% in 2012 (Taskforce Verzilveren 2013, p. 12). The equity for those aged under 50 amounted to 22% of total equity or EUR 122 billion. With 38% of the total equity amounting to EUR 214 billion, the 65 + group owned a little less equity than the age group 50–64. This total averaged to an equity amount of about EUR 257,600 per owner-occupier (Table 2; Taskforce Verzilveren 2013, pp. 5, 13).

About 437,000 elderly owner-occupiers (more than 43%) own less wealth than the amount of wealth that is exempted from personal income tax, and 332,000 earn less than a modal gross income of EUR 33,000 in 2012 (Taskforce Verzilveren 2013, pp. 5, 16). About 223,000 of these elderly households both live on a low income and have little housing equity but still have EUR 46 billion of equity to withdraw in order to complement their retirement income, the Taskforce Verzilveren concludes.

[1] As the databases are cross-sectional, different groups of households are included in different years.

Table 2 The Netherlands: households, disposable income, housing equity and taxable wealth according to age and tenure 2012

	Age	Homeowners	Tenants
Percentage of total households	<50	28.0	22.0
	50–64	18.0	9.0
	65+	11.0	12.0
	Total	57.0	43.0
Disposable income (in EUR 1000)	<50	42.7	21.9
	50–64	45.2	25.8
	65+	35.1	21.9
	Total	41.5	22.7
Median housing equity (in EUR 1000) (owner-occupied dwelling)	<50	57.2	
	50–64	168.9	
	65+	257.6	
	Total	130.6	
Median taxable wealth (in EUR 1000) (excluding owner-occupied dwelling)	<50	88.8	64.6
	50–64	107.4	75.9
	65+	128.4	84.1
	Total	103.3	74.5

Source: Taskforce Verzilveren (2013, p. 13), >65 was changed to 65+

3.2 Economic and Urban Factors

3.2.1 Economic Factors

Since the Netherlands had 'triple dipped' into recessions in 2009, 2012 and 2013 (Hers and Van der Horst 2016; Van der Heijden et al. 2011), indicators of new construction, house prices and transactions dipped as well. Viewed from a longer-term perspective, real house prices in the Netherlands have risen by 72% between 1995 and 2008. Up to and including 2012, they have declined by 24% (Francke et al. 2015). According to their statistical analysis, Francke et al. (2015) conclude that a large part of this development can be attributed to the changes in mortgage credit requirements, in combination with the supply of dwellings and construction costs (see also Haffner and De Vries 2010).

The owner-occupied market has slowly been picking up, after the lowest average price for the dwellings sold and the lowest number of transactions were reached in 2013 (Table 3). The price index of all existing dwellings in stock turned up in 2015 for the first time since the start of the crisis, while house prices of dwellings sold on average are (still) lower than before the GFC. Figure 1 shows that new construction has not reached the precrisis level either.

After the GFC, the question has become whether the homeownership market will return to business as usual. 'Business as usual' describes a period that lasted almost

Table 3 The Netherlands: house prices and number of dwellings sold in stock, 2005–2015

Years	Price index of existing dwellings (2010 = 100)	Number of existing dwellings sold	Average of nominal price of dwellings sold (in EUR)
2005	94.4	206,629	222,706
2006	98.7	209,767	235,843
2007	102.8	202,401	248,325
2008	105.9	182,392	254,918
2009	102.3	127,532	238,259
2010	100.0	126,127	239,530
2011	97.6	120,739	240,059
2012	91.3	117,261	226,661
2013	85.3	110,094	213,353
2014	86.1	153,511	222,218
2015	88.5	178,293	230,194
2016	93.0	214,793	243,837

Source: CBS (n.d.)

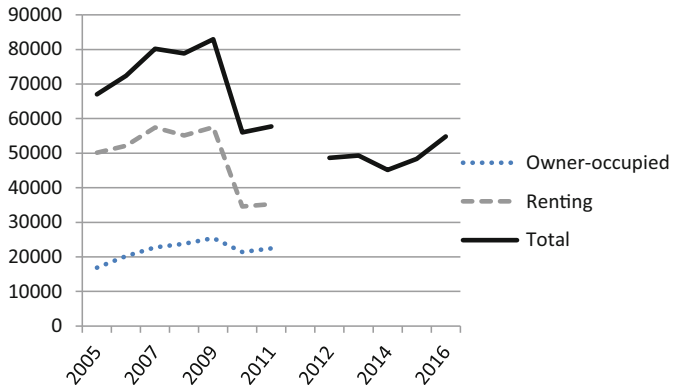

Fig. 1 The Netherlands: new construction of dwellings, 2005–2016. Source: CBS (n.d.). New measurement method from 2012 on that no longer distinguishes between tenure forms

30 years in which house price rises were supported by a prosperous economic development with rising incomes and falling interest rates. Furthermore, the 'improved' credit facilities allowed for including second incomes in the income assessment for the mortgage loan and also allowed for taking 'better' advantage of the mortgage interest deduction in income tax by introducing new mortgage types (Haffner and De Vries 2010; Francke et al. 2015). How demography is to be expected to impact an increasingly differentiated housing market across the country is the topic of the next section.

3.2.2 Urban Factors and Demography

Table 4 shows renting and homeownership according to income and extent of urbanization. Almost seven in ten households were living in a medium to strong urban context in 2012, almost eight in ten tenants and a little over six in ten owner-occupiers. Furthermore, the relationship between tenure and disposable household income is positive for owner-occupiers and negative for tenants in each of the three urban contexts.

Population growth perspectives differ between regions; especially in the four big cities of the Netherlands, the so-called Rim City (Randstad), growth is expected to be more than average until 2040, while population in the more peripheral regions is expected to decline (Planbureau voor de Leefomgeving/Centraal Bureau voor de Statistiek 2011, see also Hekwolter of Hekhuis et al. 2017). One third of these peripheral municipalities is expected to be confronted with a population decline of more than 2.5%. Between 2015 and 2040, household growth in the Netherlands is forecasted to develop from almost 7.7 to almost 8.5 million (CBS n.d.).

One of the signs of regionally diverging housing markets may be observed in the differences in the development in house price between the country as a whole and Amsterdam, the capital city (NUL20 2016). Nationally, the rising house price index amounted to 90 on average in the first quarter of 2016, while in Amsterdam it reached 110 (2010 = 100). In contrast, from 2008 to the first quarter of 2013, the house price decline developed in parallel. Therefore, the gap has widened between both indices since 2013. In line with this observation, Hekwolter of Hekhuis et al. (2017) conclude that the recovery of the housing market is taking place at three speeds: the speed of the big cities, the lesser speed of the surrounding agglomerations and the one of the lagging locations.

Table 4 The Netherlands: housing tenure by extent of urbanization and household income, 1 January 2012

	Quintiles of equivalent disposable income					
	Total	1	2	3	4	5
Biggest four cities: Amsterdam, Rotterdam, the Hague and Utrecht—Very urban (13%)						
Owner-occupier (9%)	100	7	12	17	25	39
Tenant (21%)	100	39	20	16	13	12
Medium to high urban (56%)						
Owner-occupier (55%)	100	8	16	20	26	29
Tenant (57%)	100	37	25	20	12	6
Low urban (31%)						
Owner-occupier (36%)	100	12	20	22	22	24
Tenant (23%)	100	36	28	20	12	4
Total	100	20	20	20	20	20

Source: Haffner and Heylen (2016, p. 23) and WoON (2012) database; both TUDelft/OTB calculations

3.3 Housing Policies, Subsidies and Taxation

3.3.1 Housing Policies

Even before the GFC impacted the Dutch housing market, the new coalition government which began its rule in 2010 aimed for rental housing policy to be 'more market oriented' providing 'better' yields for investors. This would come about by marginalizing the social rental sector 'more' (Donner 2011; Haffner 2014).

The next government, which started in the autumn of 2012 after the previous had fallen, had austerity high on its agenda in the aftermath of the GFC. It implemented a EUR 16 billion package of spending cuts and increases in the burden of taxation and social security contributions. The aim was to achieve a budget equilibrium and a stable currency union in Europe (Rijksoverheid 2016f). Austerity measures impacted homeownership as is elaborated on in the remainder of this chapter, for example, by gradually reducing the mortgage interest reduction in personal income tax.

3.3.2 Subsidies and Taxation

There are no general subsidies available for homeowners. Contract saving schemes do not exist, and there are no housing construction subsidies available (Haffner and Heylen 2016). The taxation relevant for owner-occupiers is summarized in Table 5: value added tax (VAT) for new construction, transaction tax for existing dwellings, income tax, municipal property tax and inheritance tax. In the case of income tax, the owner-occupied dwelling is considered to be subsidized in comparison with income from other wealth (see also Haffner and Winters 2016; Haffner et al. 2014a). Transaction tax has been lowered to 2% for dwellings in the aftermath of the GFC but remained 6% for the acquisition of other real estate (see also Belastingdienst 2017c).

Labelling subsidization in the tax system requires the determination of a standard for the 'normal' tax treatment, allowing for the application of different benchmarks. Subsidization of homeownership then consists of the different tax treatment for owner-occupied dwellings than for other dwellings and/or other wealth. The Dutch government benchmark is a tax expenditure approach.

The first subsidy in income tax is labelled the part of taxable imputed rent attributed to the owner-occupied dwelling that is no longer taxed once the amount of mortgage interest deducted from taxable income is lower than the amount of imputed rent. This subsidy was introduced in 2005 with the aim to stimulate the repayment of the mortgage loan. Once the mortgage loan is repaid, the imputed rent of the owner-occupied dwelling is exempted from income tax, in contrast to income from other wealth.

The tax expenditure norm that the Dutch government adheres to, therefore, does not consider the mortgage interest deduction a subsidy. The norm behind the tax

Table 5 The Netherlands: taxes that apply to homeownership, 2016

Tax	Explanation
Taxation at the point of acquisition	
VAT	21% value added tax (VAT) on the new construction value of any building including land
Transfer tax	2% of transfer tax on the acquisition value of an existing dwelling (6% for other real estate)
Taxation during ownership	
Income tax	The Dutch government starts from an investment point of view. Net imputed rent (consisting of gross imputed rent minus some imputed costs) is taxed, while actual mortgage interest paid is deductible, allowing for negative gearing. The deduction is maximized to a period of 30 years. Once the mortgage loan is repaid, income tax is no longer levied on net imputed rent In the aftermath of the global financial crisis, austerity measures led to restricting the mortgage interest deduction to a conventional amortized repayment schedule, no longer qualifying new endowment mortgages (mortgage type where no repayment takes place during the loan term, but savings are paid into a special insurance (savings) account) for a mortgage interest deduction (2013) The amounts saved for an endowment insurance coupled with an endowment loan are exempted (under certain conditions, e.g. a minimum contract term)
Municipal property tax	Levied annually on owners of real estate property
Taxation at the end of occupancy	
Capital gains tax	No
Inheritance tax	Inheritance tax is levied on total inherited wealth (including the owner-occupied dwelling) above the exempted amount. This amount will be highest for the partner (e.g. over EUR 636,180) and lowest for another heir (over EUR 2122; outside (grand)children and parents). The six tax rates depend on two amounts (lower and higher) and the relation of the recipient with the deceased (10% or 20% for the partner and 30% or 40% for another heir)

Source: Own elaboration based on Haffner et al. (2014a, 2015), Haffner and Heylen (2016); inheritance tax, see Belastingdienst (2017d)

expenditure approach is the (incomplete) investment approach in which an investment—the house—is regarded as producing taxable income (imputed income), which is lowered by relevant costs, such as the mortgage interest paid. In spite of this tax discourse, austerity measures led to curtailing the mortgage interest deduction in the aftermath of the GFC (Haffner et al. 2014a, 2015; Haffner and Heylen 2016). From 2014 onwards, the maximum tax rate at which mortgage interest can be deducted is reduced by 0.5% points per year from 52% to 38%, while for other taxation purposes, the income tax rates remain unchanged.

The second subsidy in income tax is considered to be the tax exemption for savings for an endowment mortgage (Belastingdienst 2017e, f; Rijksoverheid 2016g). In the case of an endowment loan, endowment insurance is required. The endowment mortgage is not repaid during the loan term, but savings are paid into a

special and separate insurance (savings) account (*kapitaalverzekering eigen woning*). Since 2001, those savings for repayment of the mortgage loan—and no longer those from insurances for other purposes—have been exempted from income tax (under certain conditions). Income tax is also not levied once the insurance pays up in the form of a lump sum for the instant repayment of the mortgage loan.

The income tax treatment of the owner-occupied dwelling as an investment good combines taxation (income from wealth) and tax deduction (costs of debt). Section 4 provides information on the debt options households are offered.

3.4 Conclusion

After the GFC, the question has become whether the homeownership market, which finally seems to be recovering (as is the economy), will return to business as usual. 'Business as usual' describes a period that lasted almost 30 years in which house price rises and increases in the homeownership rate were supported by favourable economic development and 'improved' credit facilities, which also allowed taking 'better' advantage of the mortgage interest deduction in income tax. In that period, the private rental sector almost disappeared, while social renting was targeted to large parts of the population, as no income limit existed.

The homeownership market does not appear to be returning to business as usual. Its growth rate has seemed to come to a halt in the past decade at a share below 60%, including a lower share for younger households. At the same time, the social rental sector is being increasingly focused on low-income households. Homeowners and tenants already differ in their financial characteristics (income, wealth).

Homeownership has become less accessible in growing urban areas, where prices are rising more steeply than in other areas of the Netherlands. Geographic differences are expected to increase. Households with a lower to medium income may not be able to access homeownership, while the share of homeowners among the younger age group is smaller than in the past. Furthermore, households in shrinking areas may not be able to access their equity in retirement.

4 Mortgage Market

4.1 General Overview of Mortgage Market

4.1.1 Outstanding Loans

The Dutch mortgage market is relatively large, as mortgage lending is reaching a share of close to 100% of GDP (European Mortgage Federation 2015, pp. 85, 90). The share had been declining in 2013 and 2014 since its share was largest in the EU

Table 6 The Netherlands: distribution of owner-occupier households (in EUR 1000) by loan-to-value (LTV) and loan-to-income (LTI) ratios[a], 2006–2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
No debt	532	544	552	671	686	727	716	719	745	815
LTV										
0–0.25	712	712	698	636	552	512	486	401	383	385
0.25–0.75	1421	1460	1462	1424	1330	1280	1272	1145	1122	1141
0.75–1.00	599	697	758	734	667	643	675	565	578	625
1 or higher	537	493	505	662	939	1052	1103	1455	1476	1379
LTI (gross income)										
0–2	1531	1496	1467	1430	1398	1368	1355	1369	1367	1384
2–4	1167	1256	1312	1371	1399	1413	1485	1521	1543	1542
4 or higher	569	610	643	654	690	706	696	677	650	604
LTI (disposable income)										
0–3.5	1524	1499	1507	1462	1428	1374	1344	1341	1334	1366
3.5–7	1147	1246	1296	1337	1388	1407	1476	1524	1571	1595
7 or higher	597	617	619	656	671	706	716	702	654	569
Total	3800	3905	3975	4126	4174	4214	4251	4286	4305	4345

Source: CBS (n.d.)

[a]Difference between mortgage loan as registered by the tax authorities and taxable value of the dwelling value, which is close to market value in unoccupied state as it is assessed annually

reaching 101.2% of GDP in 2012.[2] In the same delayed-response vein, the total of outstanding mortgage loans increased from EUR 400.2 billion in 2003 to 652.7 billion in 2012 before it declined to almost 632.2 billion in 2013. In line with this development, mortgage debt per capita rose to EUR 49,286 in 2012 and declined in 2013 and 2014 to a little over 47,000 (Table 1; European Mortgage Federation 2015, p. 92). The other side of the coin of these high levels of indebtedness amounts to about 15% of owner-occupied dwellings owned outright in 2015 (Blijie et al. 2016, p. 63).

In 2014, banks had a share of 62% in the total of outstanding loans (European Mortgage Federation 2015, p. 66). Special purpose vehicles (securitization) are listed with a market share of 29% in the total of outstanding mortgage loans. Insurance companies and others (state, municipalities and private persons) followed with a market share of 7 and 2%, respectively.

Table 6 presents the distribution of owner-occupiers (with or without mortgage debt) according to loan-to-value (LTV) and loan-to-income (LTI) ratios. The general development for the three indicators shown is a decline of the number of households in the lowest (or lower) categories since 2006 for the whole period or for most of the period. The number of households in the highest or higher categories started to

[2]In these figures, the amount of savings in an endowment insurance associated with an endowment loan is not taken into account.

increase after 2008 as a result of the GFC, implying higher loan amounts than either house value or income.

Since the dive in house prices as a result of the GFC from the end of 2008, negative equity[3] has become a common phenomenon. From 2014 to the beginning to 2015, the number of owner-occupiers with negative equity (a LTV of 1 or higher) has decreased for the first time by 97,000 to less than 1.4 million households, which amounts to a little less than one in three owner-occupiers (32%). Younger households are more likely to have negative equity than older households: 3% of those aged 65 and over (CBS 2016).

Less than one in five owner-occupier households are without debt (Table 6). Toussaint and Elsinga (2012) conclude that Dutch homeowners built up their equity because of house price increases, not debt repayment. The GFC has reversed this behaviour: homeowners are repaying their mortgage debt to a larger extent than previously (Blijie et al. 2016).

The fall in house prices after the GFC pushed up the average LTV between 2006 and 2015 from 49% to 62% (CBS n.d.). In this period, the LTIs remained stable around 2.1 per year for the ratio based on gross income and around 3.6 per year (fluctuating between 3.5 and 3.8) for the ratio based on disposable income. When mortgagors are the focus, the LTV declined from 58% in 2006 to 56% in 2007 and then rose from 56% to 78% in the period 2007–2015 reaching a peak of 80% in 2014. The LTI based on gross income remained stable for mortgagors around 2.4, and the LTI based on disposable income varied between 4.2 and 4.5.

Generally, household incomes and house prices rise with urbanization; the ratios also increase with urbanization; e.g. the LTV ranges from 0.69 to 0.88. That the LTV is highest for lower-priced dwellings is an explanation provided in an annual report from the ministry responsible for housing (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties 2014).

In the slipstream of the GFC, the financial problems of homeowners have risen some, but not dramatically. Mortgage arrears of 3 months and more are reported to have increased from 36,000 in 2007 to 100,000 in 2013, amounting to 2% of the owner-occupied stock (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties 2014, p. 39). Foreclosures based on the National Mortgage Guarantee (next section) increased by a factor of five to about 15,000 dwellings between 2006 and 2013. Last but not least, the number of foreclosure auctions[4] increased from almost 1000 in

[3]The amount of savings associated with an endowment loan and other loan types is not taken into account (CBS 2016). Different estimates about negative equity circulate depending on the estimates for these savings. Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2014, p. 37) reports that the Dutch Central Bank estimated 30% of owner-occupiers to have had negative equity in their home by the end of 2013 (De Nederlandsche Bank 2014, p. 21), and that others have estimated a share of between 14% and 16% of homeowners in 2011 and 2012. In the latter study, the savings amounts were estimated to be higher than in the former study, which explains the difference in outcomes.

[4]The automatic right of the provider of the mortgage loan to sell the dwelling via an auction. These sales would exclude foreclosures that are not effected via an auction or via the National Mortgage Guarantee (next section).

2005 to about 2800 in 2011. In 2013, they declined to below 2000 because of policies of the banks and other involved organizations to search for other options as auctions generally deliver below-market sales prices.

4.1.2 Mortgage Issuances and Offers

In 2014, the banks' proportion of mortgage issuances amounted to 63% (European Mortgage Federation 2015, p. 66). Insurance companies followed with a market share of 25%, and others (state, municipalities and private persons) provided 12% of the mortgage issuances.

The recovery of the homeownership market which had started in 2013 also is reflected in the number of mortgage issuances which commenced from a low of below 40,000 in the first quarter of 2013 to above 60,000 in the first quarter of 2016 (Boumeester 2016, p. 5). In comparison with the first quarter of 2015, this amounts to an increase of 23%. Low interest rates, increasing consumer confidence and improving perspectives for the housing market can be considered to be explanations.

In the longer term, the number of 60,000 mortgage issuances for a quarter cannot be considered rising as it is about equal to the mortgage loan issuances in the first quarter of 2009, when the GFC started impacting the Dutch housing and mortgage markets. In 2009, it resulted in a big decline from a level of more than 100,000 mortgage loans per quarter about halfway through to 2008.

The LTV for new offers of mortgage loans by financial institutions (an estimated 75% of all mortgage offers) has averaged around 89% per quarter since 2013, while the LTI for these offers as prescribed by the Dutch government (see below) has averaged at around 3.5 per quarter since 2014 (Boumeester 2016, p. 1). The longer-term trend for both ratios is declining in the aftermath of the GFC. Policy contributes to an explanation for this trend, as is elaborated next.

4.1.3 Mortgage Credit Regulation

In the case of a financial product as a mortgage loan, the Law on Financial Supervision (*Wet op het financieel toezicht*) regulates the supervision of financial institutions and the financial system (Autoriteit Financiële Markten (AFM) 2016a; Overheid.nl 2016c; Rijksoverheid 2016h, see also Reifner et al. 2009). Final responsibility rests with the Ministry of Finance, while the Dutch Central Bank (DNB) and the Netherlands Authority for the Financial Markets (AFM) supervise. The former is responsible for prudential supervision, the latter for the conduct of the entire financial market sector, including the protection of the consumer: savings, investment, insurance and loans. This implies that each sector requires its actors to have a sector licence.

To conform to the Mortgage Credit Directive (Directive no. 2017/17/EU of the EU-Parliament), the Dutch Law on Financial Supervision only had to be adapted slightly (Nederlandse Vereniging van Banken 2016; Overheid.nl 2016c;

Rijksoverheid 2016i). The proposals included for suppliers to adhere to a European standardized information sheet for providing pre-contractual information and for a uniform calculation of the share of costs. The law was implemented on 14 July 2016 (Autoriteit Financiële Markten (AFM) 2016c; Blok 2015; Overheid.nl 2017).

4.1.4 Recent Policies: Restriction of Mortgage Lending

As a reaction to the impact of the 2008 GFC on the Dutch housing market, the Minister of Finance introduced the Temporary Regulation for Mortgage Credit (*Tijdelijke regeling hypothecair krediet*) on 12 December 2012. It regulates the income criteria for mortgage credit (LTI), as well as the maximum LTVs (Boelhouwer and Schiffer 2015). The former aims to prevent affordability problems, the latter excessive lending and related risk of negative equity. Both were set more strictly than before.[5]

Since 1 August 2011, the norms for the LTI which up to then were only obligatory for mortgage loans backed by the National Mortgage Guarantee (see next section) were prescribed by central government for any mortgage loan. These were obligatory from 1 August 2011, via the code that mortgage lenders adhered to. Since 1 January 2013, they have been being based on the Temporary Regulation for Mortgage Credit.

Until 2012, the LTV was determined voluntarily by the mortgage lenders in their sector code of conduct, just as the LTI, and could be much higher than 100%, as it was possible for the mortgage loan to cover the acquisition price of the dwelling plus transaction costs (Francke et al. 2015; Haffner et al. 2014b). Changes in the LTV ratio commenced by 1 January 2011, when the banks in their sector code determined that interest-only loans would be maximized to 50%. From 2012, government has been reducing the LTV by one percentage point per year with the aim of setting a maximum of 100% in 2018 (see also Boelhouwer and Schiffer 2015).

Two other measures which were part of the austerity package following the GFC and aimed to limit mortgage borrowing in due course were the income tax measures explained before: the gradual reduction of the tax rate for the mortgage interest deduction (2014) and the limitation of the mortgage interest deduction to mortgage loans with a conventional amortized repayment schedule (2013). The former affects all homeowners; the latter affects new borrowers solely, as they are limited in their mortgage credit take-up. However, this effect was largely countered by the lower house prices after the GFC and the historically low levels of interest rates.

[5]Next to the more strictly set ratios, loan characteristics embody a standard length of mortgage contract of 30 years. The most common interest rate period is fixed for 5–10 years (Van der Heijden et al. 2011). The average term for the interest rate shortened as a result of the decrease in interest rates.

4.2 *Overview of Product Types*

4.2.1 Nonsubsidized Loans

Table 7 presents the types of mortgage loans that have been popular in the Netherlands in different periods (Haffner and De Vries 2010; Haffner et al. 2014b). The linear and the annuity loans are repayment loans. Such a loan is repaid either in a linear rhythm or in an annuity rhythm. These are the traditional mortgage loan types but also the ones prescribed for the future if one values a mortgage interest deduction in income tax (Table 5).

The other loan types listed in Table 7 were designed to take advantage of the full mortgage interest deduction for the loan term of 30 years. These increased the liquidity of households, which drove up house prices from the 1990s on. The endowment loan was the first such loan to become popular. It is connected to an endowment insurance. It is not repaid during the loan term, but savings are paid into this insurance (savings) account (*kapitaalverzekering eigen woning*; see before).

Other loan types followed the endowment mortgage, such as the investment mortgage. It can be described as an endowment mortgage, but without a 'savings account'. Instead, the monthly 'savings' are invested in an 'investment account'. This loan type therefore is more risky than the endowment loan because of the uncertainty whether the investment return will cover the loan amount at the end of the loan term. This uncertainty also applies to a life insurance mortgage.

In this century, the types of 'savings' loans were increasingly traded in for interest-only loans. Combination mortgages became popular and increased their market share again in 2012 after the 50% maximum was set for the interest-only loan in 2011 (previous subsection). In 2012, the interest-only loan, as a single loan, had the largest market share with 35%. In 2006, before the GFC hit the Dutch housing market, it had reached a market share of 44% (Table 7).

Table 7 The Netherlands: types of mortgage loan (%), 2006, 2009, 2012 and 2015

	2006 (1)	2009 (2)	2012 (2)	2015 (3)
Combination mortgage	37	28	34	28
Single mortgage				
Interest-only mortgage	28	37	35	53
Endowment mortgage	14	17	17	11
Annuity mortgage	5	4	4	5
Investment mortgage	6	6	4	2
Life insurance mortgage	7	6	4	1
Linear mortgage	2	1	1	1
Other	1	1	2	2

Source: (1) Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (2007, p. 136), (2) Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2013, p. 111), (3) Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2016, p. 88); because of change in questionnaire, 2015 data cannot be compared with previous years

As of 1 January 2013, it has no longer been possible to take out a new endowment loan if one would like to deduct mortgage interest in income tax (Belastingdienst, 2017f). This also applies to newly taken out interest-only mortgage loans. With the deduction remaining available only for newly taken out loans with a conventional amortized repayment schedule (Table 5), the landscapes of mortgage loans will therefore change significantly in due course (Boumeester 2016).

The era in which households would have extracted equity via loan refinancing in the 1990s has definitely come to an end. The elderly would increasingly have been advised to keep some cash as a buffer instead of repaying their mortgage loan. Between 1994 and 2002, their LTV on average more than doubled (Haffner 2008; Haffner et al. 2015; Consumentenbond 2016). That the mortgage interest deduction at that time was not limited to 30 years and not limited to a linear or annuity repayment rhythm will have stimulated such behaviour (in a period of abundant price increases). Equity release mortgage loans for the elderly are not popular (Ong et al. 2013; Haffner et al. 2015).

4.2.2 Subsidized Loans

If income taxation is ignored, homeowners can take out a subsidized loan in two types of schemes: (1) a loan for starters or for stayers and (2) a loan via the National Mortgage Guarantee. Both schemes are restricted to certain households. The former has been used on a relatively small scale, while the latter has been relatively popular.

Starter's or Stayer's Loan

SVn Stimuleringsfonds Volkshuisvesting (Stimulation Fund for Housing; 2016a) is a fund which manages 'cheap' loans to first-time buyers called the starter's loan (*starterslening*) and the stayer's loan (*blijverslening*). Municipalities finance these schemes themselves for their municipality. The *starterslening* was introduced in the 1990s; the present form has been in existence since 2007. The stayer's loan was introduced in 2016, most likely as a reaction to the austerity measures in age care that were effected (SVn Stimuleringsfonds Volkshuisvesting 2016b; Vermeulen 2015).

The starter's loan aims to bridge the difference between the LTV and the first mortgage for first-time buyers. It has been used by about 14,000 first-time buyers since its introduction (Elsinga et al. 2015). Boumeester (2016, p.10–11) reports that it reached about 1000 provided loans in the first quarter of 2016. That number about halved from the last quarter of 2014 because the subsidy of EUR50 million the central government (*stimuleringsbijdrage*) had introduced as a reaction to the GFC in November of 2012 to support homeownership was used up by the end of 2014 (see also Hypotheekmaker 2016). Of the more than 300 municipalities that offered a starter's loan, about 260 continued after the subsidy stopped.

Social landlords can also offer a type of starter's loan (different name) to first-time buyers (SVn Stimuleringsfonds Volkshuisvesting 2016c). The social landlord determines the loan conditions (SVn Stimuleringsfonds Volkshuisvesting 2016a; Elsinga et al. 2015). Usually, the amount or repayment is means-tested. Generally,

the same conditions apply for both types of starter's loan, except for the income limit that applies to household income. As with the starter's loan by the municipality, a social landlord is free to offer such loans. The social landlord may offer such loans in combination with an intermediate tenure product between renting and owning. It will have to be backed by the National Mortgage Guarantee (see below).

In the case of a stayer's loan, SVn will also manage the loan for the municipality that finances the loan and determines the loan conditions. The municipality will be able to offer the loan as a mortgage loan or as a consumption loan. In the former case, it could be designed as a reverse mortgage. SVn will pay the builder. The senior will therefore not receive the money. The senior should use the loan for 'small' adaptations of the dwelling in order to be able to remain in the home.

National Mortgage Guarantee

The National Mortgage Guarantee (*Nationale Hypotheekgarantie*; NHG) guarantees the repayment of mortgage loan to the financial institution if an owner-occupier goes bankrupt (NHG Nationale Hypotheekgarantie 2016; Elsinga et al. 2009). The loans are guaranteed by the Homeownership Guarantee Fund (*Stichting Waarborgfonds Eigen Woningen*, WEW), which in second instance is backed by the central government. The guarantee lowers the risk for the mortgagee; therefore, the interest rate will be lower than otherwise would be the case.

In the aftermath of the GFC, the price limit for eligible dwellings was increased as of 1 July 2009 (Mocking et al. 2016). Since 1 July 2012, the limit has been decreased gradually. In the longer term, the price limit will be linked to the average house price development. Between 2008 and 2014, the number of mortgage loans guaranteed by the NHG more than doubled to over 930,000. Mocking et al. (2016) conclude that based on their statistical analyses, the effect of the increase of the price limit on numbers of guaranteed loans was insignificant, however. House prices have declined after the crisis (see above).

4.3 Conclusion

The mortgage credit market in the Netherlands has increasingly allowed homeowners to take advantage of credit facilities since the 1990s. These facilities also allowed them to take 'better' advantage of the mortgage interest deduction in income tax. 'Exotic' mortgage types like the endowment loan and later the interest-only loan were introduced resulting in a growth of homeownership but also causing rises in house prices. Signs in this period were clearly not set to repay mortgage loans and to build housing equity other than via house value increases.

After the GFC impacted the housing and mortgage markets in the Netherlands, mortgage requirements have been made stricter (lowering LTVs and LTIs). In first instance, the new requirements were countered by lower house prices and interest rates. However, average house prices have been increasing since 2013, more so in

growing cities than in other locations in the Netherlands. Adding in the more restricted access to mortgage loans will make access to homeownership more selective.

Furthermore, increasing employment insecurity on the labour market and increasing student borrowing (caused by the abolition of the student grants by 1 September 2015 for new cases; ISO Interstedelijk Studenten Overleg 2016) are factors that will contribute to make access to the mortgage market more difficult for those with debt, flexible income and lower income. The social divide on the homeownership market is set to increase.

References

Asbeek Brusse, W., & Van Montfort, C. (2012). Wonen, zorg en pensioenen: hervormen en verbinden. In: W. Asbeek Brusse & C. Van Montfort (red.) *Wonen, zorg en pensioenen. Hervormen en verbinden* (pp. 13–33). Den Haag: WRR.

Autoriteit Financiële Markten (AFM). (2016a). About AFM. Retrieved March 8, 2016, from https://www.afm.nl/en/over-afm

Autoriteit Financiële Markten (AFM). (2016b). *Welke soorten pensioenregeling zijn er?* Retrieved March 11, 2016, from https://www.afm.nl/nl-nl/consumenten/themas/producten/pensioen/werknemerspensioen/soorten

Autoriteit Financiële Markten (AFM). (2016c). *Veranderingen door de nieuwe hypothekenrichtlijn MCD*. Retrieved March 11, 2016, from https://www.afm.nl/nl-nl/professionals/onderwerpen/hypothekenrichtlijn

Banksparen.com. (2016) *Banksparen. Informatie over banksparen*. Retrieved March 14, 2016, from http://www.banksparen.com/algemeen/informatie/wat-is-banksparen.aspx

Belastingdienst. (2017a). *Belastingtarieven*. Retrieved May 15, 2016, from http://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/werk_en_inkomen/pensioen_en_andere_uitkeringen/u_hebt_de_aow_leeftijd_bereikt/belastingtarieven

Belastingdienst. (2017b). *Sparen of verzekeren naast uw pensioen*. Retrieved May 15, 2017, from https://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/aangifte_doen/fiscale_informatie/fiscale_informatie_2016/inkomsten_aangifte_2015/lijfrente/lijfrente_banksparen_en_arbeidsongeschiktheidsverzekering

Belastingdienst. (2017c). *Alles over overdrachtsbelasting*. Retrieved May 15, 2017, from https://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/woning/overdrachtsbelasting/

Belastingdienst. (2017d). *Erven*. Retrieved May 15, 2017, from http://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/relatie_familie_en_gezondheid/erven/

Belastingdienst. (2017e). *Wat is een kapitaalverzekering eigen woning?* Retrieved May 15, 2017, from http://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/woning/uw_hypotheek_of_lening/sparen_voor_de_aflossing_van_uw_hypotheek/kapitaalverzekering_eigen_woning/

Belastingdienst. (2017f). *U hebt een spaarhypotheek*. Retrieved May 15, 2017, from https://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/woning/uw_hypotheek_of_lening/verplicht_aflossen_voor_renteaftrek_vanaf_2013/u_hebt_een_spaarhypotheek

Blijie, B., Gopal, K., Steijvers, R., & Faessen, W. (2016). *Wonen in beweging. De resultaten van het WoonOnderzoek Nederland 2015*. Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.

Blok, S. (2015, September 15). *Antwoorden op vragen van het CDA over verzilverd wonen. Brief van de minister aan de Voorzitter van de Tweede Kamer der Staten-Generaal*. Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.

Boelhouwer, P., & Schiffer, K. (2015). *Kopers verdienen meer! Naar een evenwichtige toepassing van de NIBUD-normen*. Delft: Technische Universiteit Delft.

Boumeester, H. (2016). *Monitor Koopwoningmarkt. 1e kwartaal 2016. (Hoofdrapport)*. Delft: Technische Universiteit Delft.

CBS. (2016). *Minder huizen onder water*. Retrieved May 30, 2015, from https://www.cbs.nl/nl-nl/nieuws/2015/44/minder-huizen-onder-water

CBS. (n.d.). *CBS Statline*. Retrieved June 24, 2017, from https://opendata.cbs.nl/#/CBS/nl/

Consumentenbond. (2016). *Huis opeten*. Retrieved March 6, 2016, from http://www.consumentenbond.nl/hypotheek/huis-opeten

De Nederlandsche Bank. (2012). De vermogens van jong en oud. DNB Bulletin. Published on 25 October. Retrieved May 24, 2016, from http://www.dnb.nl/nieuws/nieuwsoverzicht-en-archief/dnbulletin-2012/dnb280015.jsp

De Nederlandsche Bank. (2013). *Wat is een premiepensioeninstelling?* Retrieved April 19, 2017, from http://www.toezicht.dnb.nl/2/50-228850.jsp

De Nederlandsche Bank. (2014). *Overzicht Financiele Stabiliteit Voorjaar 2014*. Amsterdam: De Nederlandsche Bank NV.

Dol, K., & Haffner, M. (2010). *Housing statistics in the European Union 2010*. The Hague: Ministry of the Interior and kingdom Relations.

Donner, P. (2011). Woonvisie. Brief van de Minister van Binnenlandse Zaken en Koninkrijksrelaties. Tweede Kamer, Den Haag, vergaderjaar 2010–2011, 32847, nr. 1.

Eerste Kamer der Staten-Generaal. (2017). *Wet variabele pensioenuitkering*. Retrieved April 17, 2016, from https://www.eerstekamer.nl/wetsvoorstel/34344_wet_variabele

Elsinga, M., & Van Bortel, G. (2011). The future of social housing in the Netherlands. In N. Houard (Ed.), *Social housing across Europe* (pp. 98–115). Paris: La Documentation française.

Elsinga, M., Priemus, H., & Cao, L. (2009). The government mortgage guarantee as an instrument in housing policy: Self-supporting instrument or subsidy? *Housing Studies, 24*(1), 67–80.

Elsinga, M., Hoekstra, J., & Dol, C. (2015). Financial implications of affordable home ownership products: Four Dutch products in international perspectives. *Journal of Housing and the Built Environment, 30*(2), 237–255.

European Mortgage Federation. (2015). *Hypostat 2015*. Brussels: European Mortgage Federation.

European Occupational Insurance and Pensions Authority. (2017). *Database of pension plans and products in the EEA*. Retrieved April 19, 2017, from https://eiopa.europa.eu/regulation-supervision/pensions/database-of-pension-plans-and-products-in-the-eea

Francke, M., Van de Minne, A., & Verbruggen, J. (2015). De sterke gevoeligheid van woningprijzen voor kredietvoorwaarden. *Economisch Statistische Berichten, 100* (4713&4714), 426–429.

Haffner, M. (2008). Savings for old age? Housing wealth of the Dutch elderly. *Housing, Theory and Society, 25*(2), 110–131. https://doi.org/10.1080/14036090701547564.

Haffner, M. (2014). The Netherlands. In T. Crook & P. A. Kemp (Eds.), *Private rental housing. Comparative perspectives* (pp. 48–70). Cheltenham: Edward Elgar.

Haffner, M., & De Vries, P. (2010). Dutch house prices and tax reform. In: M. Stewart (Ed.), *Housing and tax policy. Australian tax research foundation* (pp. 151–173), Sydney (republished in De Vries, P. (2010). *Measuring and explaining house price developments*. Dissertation, IOS Press, Delft).

Haffner, M., & Elsinga, M. (2009). Past and future development in public policies towards homeownership and the use of housing wealth. The case of the Netherlands. Delft University of Technology, Delft, DEMHOW Demographic Change and Housing Wealth, Socio-Economic and Humanities theme of Framework 7 programme, Workpackage 3, Deliverable No. 10, January, pp. 18–20.

Haffner, M., & Heylen, K. (2016). *De verdeling van de woonsubsidies naar inkomen en stedelijkheidsgraad*. Leuven: Steunpunt Wonen.

Haffner, M., & Winters, S. (2016). Homeownership taxation in Flanders: Moving towards 'optimal taxation'? *International Journal of Housing Policy, 16*(7), 473–490. https://doi.org/10.1080/14616718.2015.1085214.

Haffner, M., Van den Broeck, K., & Winters, S. (2014a). *Onderzoek naar de woonfiscaliteit in Vlaanderen. Deel I Literatuur en Instrumenten*. Leuven: CES-KU Leuven.
Haffner, M., Van der Veen, M., & Bounjouh, H. (2014b). National Report for the Netherlands. Deliverable No. 3.2 for FP7 project TENLAW: Tenancy law and housing policy in multi-level Europe (grant agreement no. 290694). Delft University of Technology, Delft.
Haffner, M., Ong, R., & Wood, G. (2015). Mortgage equity withdrawal and institutional settings: An exploratory analysis of six countries. *International Journal of Housing Policy, 15*(3), 235–259. https://doi.org/10.1080/14616718.2015.1048091
Hekwolter of Hekhuis, M., Nijskens, R., & Heeringa, W. (2017). *De woningmarkt in de grote steden, Occasional Studies* (Vol. 15–1). Amsterdam: De Nederlandsche Bank.
Hers, J., & Van der Horst, A. (2016). Raming CEP 2016. CPB Policy Brief 2016/03. Bijlage 2. Centraal Planbureau, Den Haag.
Hypotheekmaker. (2016). *Einde Rijksbijdrage Starterslening in zicht*. Retrieved March 6, 2016, from http://www.hypotheekmaker.nl/nieuwsbericht/items/einde-rijksbijdrage-starterslening-in-zicht.html
ISO Interstedelijk Studentenoverleg. (2016). *Alles over het leenstelsel*. Retrieved May 31, 2016, from http://www.iso.nl/leenstelsel/
Kok, L., & Geboers, H. (2016). *Grensoverschrijdende pensioenuitvoering*. Amsterdam: SEO Economisch Onderzoek.
Kortleve, N., & Hendriks, I. (2013). Vermogen in huis verzilveren voor de oude dag. *Pensioen Magazine, 2*, 31–35.
Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2013). *Cijfers over Bouwen en Wonen*. Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.
Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2014). *Staat van de Woningmarkt. Jaarrapportage 2014*. Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.
Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2016). *Cijfers over Wonen en Bouwen 2016*. Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.
Ministerie van Vokshuisvesting Ruimtelijke Ordening en Milieubeheer. (2007). *Cijfers over Wonen 2006*. Den Haag: Ministerie van Ministerie van Vokshuisvesting Ruimtelijke Ordening en Milieubeheer.
Mocking, R., Van Ommen, W., & Overvest, B. (2016). Geen extra transacties door verhoging van de NHG-grens. *Economisch Statistische Berichten, 101*(4728), 138–140.
Nederlandse Vereniging van Banken. (2016). *Wonen. Europese hypothekenrichtlijn (Mortgage Credit Directive)*. Retrieved March 10, 2016, from https://www.nvb.nl/thema-s/wonen/4741/europese-hypothekenrichtlijn-mortgage-credit-directive.html
NHG Nationale Hypotheekgarantie. (2016). *What is National Mortgage Guarantee?* Retrieved May 31, 2016, from https://www.nhg.nl/english-summary/What-is-nhg
Nibud. (2016). *Banksparen*. Retrieved March 14, 2016, from http://www.nibud.nl/consumenten/banksparen/
NUL20. (2016). Woningen duurder dan voor de crisis. NUL20. Tijdschrift voor woonbeleid in de regio Amsterdam 86, p. 4.
OECD. (2015). *Pensions at a glance 2015: OECD and G20 indicators*. Paris: OECD.
Ong, R., Haffner, M., Wood, G., Jefferson, T., & Austen, S. (2013). Assets, debt and the drawdown of housing equity by an ageing population. *AHURI Positioning Paper, 153*, 1–92.
Overheid.nl. (2016a). *Algemene Ouderdomswet*. Retrieved March 11, 2016, from http://wetten.overheid.nl/BWBR0002221/2016-01-01
Overheid.nl. (2016b). *Pensioenwet*. Retrieved March 11, 2016, from http://wetten.overheid.nl/BWBR0020809/2016-04-01
Overheid.nl. (2016c). *Wet op het financieel toezicht*. Retrieved March 8, 2016, from http://wetten.overheid.nl/BWBR0020368/2016-04-01
Overheid.nl. (2017). *Staatsblad van het Koninkrijk der Nederlanden*. Retrieved June 24, 2017, from https://zoek.officielebekendmakingen.nl/dossier/34292/stb-2016-265?resultIndex=2&sorttype=1&sortorder=4

Planbureau voor de Leefomgeving/Centraal Bureau voor de Statistiek. (2011). Forse bevolkingsgroei in de Randstad tot 2025. Centraal Bureau voor de Statistiek, Heerlen, persbericht d.d. 12 Oktober.

Reifner, U., Clerc-Renaud, S., Pérez-Carillo, E., Tiffe, A., & Knobloch, M. (2009). *Study on equity release schemes in the EU—Part II: Country reports*. Hamburg: Institut für Finanzdienstleistungen e.V..

Rijksoverheid. (2016a). *AOW betaalbaar houden*. Retrieved March 11, 2016, from https://www.rijksoverheid.nl/onderwerpen/algemene-ouderdomswet-aow/inhoud/aow-betaalbaar-houden

Rijksoverheid. (2016b). *Opbouw pensioenstelsel*. Retrieved March 11, 2016, from https://www.rijksoverheid.nl/onderwerpen/pensioen/inhoud/opbouw-pensioenstelsel

Rijksoverheid. (2016c). *Klijnsma geeft mensen met premieovereenkomst meer keuze*. Retrieved March 13, 2016, from https://www.rijksoverheid.nl/actueel/nieuws/2015/11/23/klijnsma-geeft-mensen-met-premieovereenkomst-meer-keuze

Rijksoverheid. (2016d). *Toekomst pensioenstelsel*. Retrieved March 13, 2016, from https://www.rijksoverheid.nl/onderwerpen/pensioen/inhoud/toekomst-pensioenstelsel

Rijksoverheid. (2016e). *Wetsvoorstel variabele pensioenuitkering (incl. Memorie van Toelichting)*. Retrieved March 13, 2016, from https://www.rijksoverheid.nl/onderwerpen/pensioen/documenten/kamerstukken/2015/11/23/wetsvoorstel-variabele-pensioenuitkering-incl-memorie-van-toelichting

Rijksoverheid. (2016f). *Regeringsverklaring*. Retrieved May 30, 2016, from https://www.rijksoverheid.nl/regering/inhoud/wat-heeft-het-kabinet-bereikt/regeringsverklaring

Rijksoverheid. (2016g). *Rijksbegroting. Toelichting op belastinguitgaven*. Retrieved May 24, 2016, from http://www.rijksbegroting.nl/2011/kamerstukken,2010/9/14/kst147870_4.html

Rijksoverheid. (2016h). *Financiële sector. Wet op het financieel toezicht*. Retrieved March 8, 2016, from https://www.rijksoverheid.nl/onderwerpen/financiele-sector/inhoud/toezicht-op-de-financiele-sector/wet-op-het-financieel-toezicht-wft

Rijksoverheid. (2016i). *Start publieke consultatie wetsvoorstel ter implementatie van de Europese hypothekenrichtlijn*. Retrieved March 10, 2016, from https://www.rijksoverheid.nl/actueel/nieuws/2015/05/21/start-publieke-consultatie-wetsvoorstel-ter-implementatie-van-de-europese-hypothekenrichtlijn

Soede, A. J. (2012). Genoeg Pensioen? In W. Asbeek Brusse & C. J. Van Montfort (red) *Wonen, zorg en pensioenen. Hervormen en verbinden* (pp. 117–127). Den Haag: WRR.

SVn Stimuleringsfonds Volkshuisvesting. (2016a). *Starterslening*. Retrieved May 31, 2016, from https://www.svn.nl/particulieren/lening/blijverslening

SVn Stimuleringsfonds Volkshuisvesting. (2016b). *Blijverslening*. Retrieved March 6, 2016, from https://www.svn.nl/particulieren/lening/blijverslening

SVn Stimuleringsfonds Volkshuisvesting. (2016c). *Corporatie Starterslening*. Retrieved May 31, 2016, from https://www.svn.nl/particulieren/lening/corporatie-starterslening

Taskforce Verzilveren. (2013). Eigen haard is zilver waard. Taskforce Verzilveren. Taskforce Verzilveren, No city of publication given. http://www.paultang.nl/cms/wp-content/uploads/2013/06/taskforce_verzilveren_finaal.pdf

Toussaint, J., & Elsinga, M. (2012). Mortgage-equity release: The potential of housing wealth for future Dutch retirees. *Journal of Housing and the Built Environment, 28*(2), 205–220. https://doi.org/10.1007/s10901-012-9301-x

Van der Heijden, H., Dol, K., & Oxley, M. (2011). Western European housing systems and the impact of the international financial crisis. *Journal of Housing and the Built Environment, 26*(3), 295–313. https://doi.org/10.1007/s10901-011-9230-0

Vermeulen, W. (2015). *Decentralization of social policy in the Netherlands, CPB background document*. Den Haag: CPB Netherlands Bureau for Economic Policy Analysis.

Willemsen, M., & Kortleve, N. (2016). Eenmalige pensioenuitkering voorziet in behoefte. *Economisch Statistische Berichten, 101*(4734), 347–349.

WoON. (2012). *Database*. Retrieved April 3, 2018, from https://data.overheid.nl/dataverzoeken/woononderzoek-2012

Pensions, Housing and Mortgage Markets in the UK

Tripti Sharma, Donal McKillop, and Declan French

1 Introduction

This chapter presents an analysis of pensions, housing and mortgage markets in the UK. The financial crisis affected each of these sectors, and ongoing demographic change is also having profound effects necessitating policy action. There have been a number of recent policy reforms in these areas. Those associated with pensions have been driven by a perception that current levels of retirement savings are insufficient due to increased life expectancy and public expectations of standards of living in retirement. Recent developments in UK's housing and mortgage markets have taken place mainly to support rising house prices and to eliminate the risk of insolvency both at household and national levels. As these sectors are important determinants of economic well-being, policy interventions and structural modifications concerning them are of widespread interest. The purpose of this chapter is to recount and explain those recent developments.

We begin by providing general information on population demographics, mortgage debts and key pension statistics in the UK and comparing them with other European countries. In the second section of this chapter, we discuss existing pension schemes in the UK. The next section is on the housing market, which is followed by a discussion of the mortgage market.

T. Sharma · D. McKillop · D. French (✉)
Queen's Management School, Queens University Belfast, Belfast, UK
e-mail: declan.french@qub.ac.uk

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1.1 General Information on Population Demographics, Mortgage Debts and Pensions

The UK is the second most populated country in the European Union (EU). There are approximately 65.4 million people living in the country. The population has increased significantly in the last decade (by 8.5% between 2005 and 2015), and it is expected to grow further at an average annual rate of 0.53% until the year 2020. The growth rate as compared to the EU median in Table 1 shows that the UK population is relatively young but is ageing rapidly. Figure 1 displays the changing demographics of the UK population. As seen from this graph, the composition of older people in the population is increasing. The median age is close to 40 years, and it would continue to rise over the next two decades. The rate of natural growth of the population, which is the difference between births and deaths, increased during 2005 and 2015, but the future projections show a downward trend. The old-age dependency ratio in the UK is lower than the EU median, which indicates that the number of people dependent on taxpayers is lower relative to other European countries.

Table 1 General data

Category	UK	EU median
Population (million)[a]	65.4	9.2
Population growth (average annual rate of population changes with no variations in fertility and mortality, 2015–2020, %)[a]	0.53	−0.1
Old-age dependency ratio (%)[a]	28.2	28.1
65+ (% of total population)[a]	18.1	18.6
Owner occupation (% of population, 2014)	64.8	74.5
Total outstanding residential loans (million, EUR)[a]	1,741,369	77,857
Growth in mortgage debt (%, 2004–2015)	43	125.1
Residential mortgage debt (% of GDP)[a]	67.6	40
Per capita mortgage debt (EUR)[a]	34,043	11,274
Net replacement rates on mandatory pension programmes (%)[b]	28.5	63.7
Replacement rate of public pension in relation to wages (%)[b]	21.6	55.8
Per capita private pension fund assets (EUR)[c]	31,518.3	2426

Source: United Nations (2017): Population, population growth rate, old-age dependency ratio and the percentage of people aged above 65 years; Eurostat (2017): Owner occupation rate; EMF (2016): Outstanding (O/s) residential loan/mortgage debt, growth in mortgage debt, mortgage debt vs. GDP and per capita mortgage debts; OECD (2015): replacement rates and private pension fund asset

[a]Latest data available as on 2015

[b]The net replacement rate is defined as the individual net pension entitlement divided by net preretirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners. Due to lack of availability of data on replacement rates for Bulgaria, Croatia, Cyprus, Latvia, Lithuania, Malta and Romania, the EU median for variables 'net replacement rates on mandatory pension programmes' and 'replacement rate of public pension in relation to wages' is calculated by excluding those countries. These rates are as on 2014

[c]The per capita private pension is converted from US dollar to euro by using the exchange rate on 30 April 2014

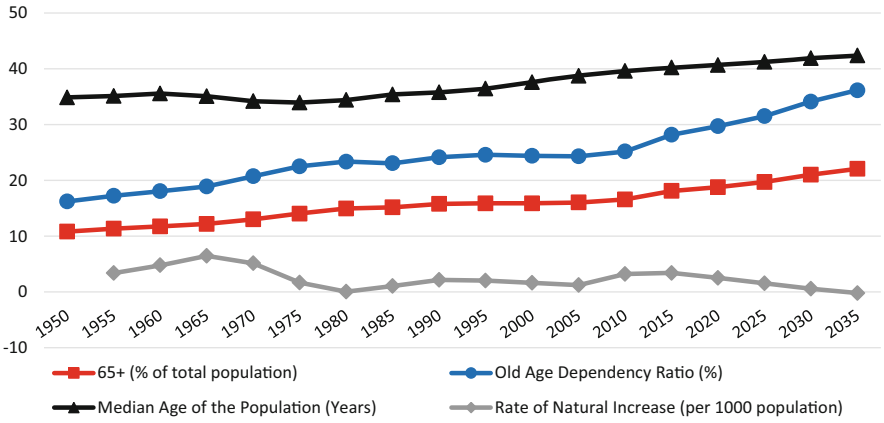

Fig. 1 Changing population demographics (UK). Data source: United Nations (2017)

Given the future projections of the percentage of older people in the population and the increasing life expectancy, the ratio will be close to 40% by the end of 2035.

In the UK, 64.8% of the population own their own homes. Despite home ownership being a central focus of political discourse and a large number of policy initiatives to encourage home buying, the percentage of the UK population that are homeowners is one of the lowest among the EU nations, as seen in Table 1. Since the financial crisis, the ownership rate has declined by 9.2% (Fig. 2), and it is predicted to decline further going forward (ONS 2015, 2016a). The anticipated fall in home owning is partly because of the declining number of first-time buyers taking out a mortgage. The demand for housing has been growing in the country, but high and increasing house prices along with limited supply growth have made it difficult for young people to get on the property ladder (ONS 2016a). Moreover, with increasing life expectancy, older people are living longer in their homes, and the elderly dominates the composition of homeowners in the UK.

While the homeownership rate is not as high as other EU countries, the UK has the highest level of outstanding residential loans. It represents two-thirds of the country's GDP, and the per capita debt is significantly above the EU median. This is perhaps because of the existence of an extremely developed banking system, competitive mortgage markets and low interest rates. Until now, the risks associated with a high level of indebtedness have been mitigated by a declining debt to disposable income ratio (see Fig. 2). However, the economic uncertainties mounting since the UK's referendum on the EU have raised concerns over the level of mortgage debts. Since the referendum, the Bank of England has lowered their expectations of the growth in house prices and is currently considering raising interest rates. Falling house prices followed by low mortgage approval rates would slow down the development of mortgage debts. However, an economic slowdown because of the referendum could make it difficult for households to pay their debts in the future (ESRB 2016).

The last three rows of Table 1 also show aggregate data on pensions in the UK. UK replacement rates, a measure of the ratio of pensions to earnings, are seen to be far below the EU median. In fact, the country has the lowest replacement rates in

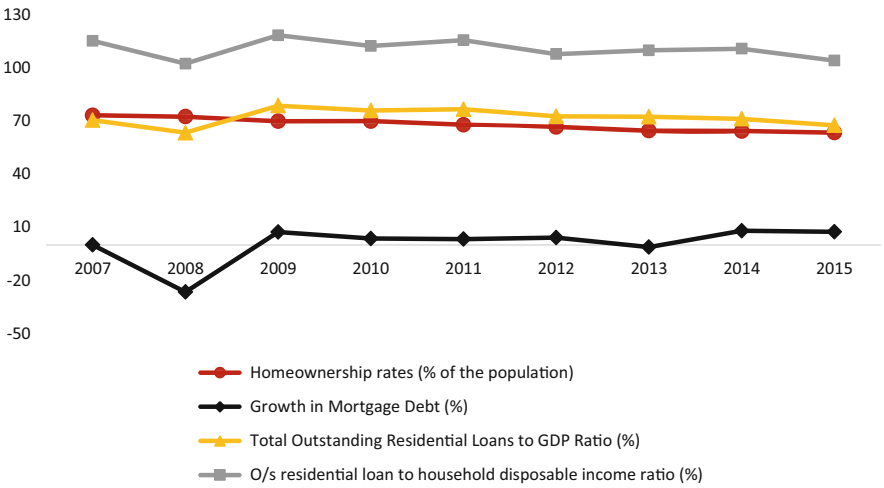

Fig. 2 Development of homeownership rates and O/s residential mortgage loan (UK). Data Source: Homeownership Rates (Eurostat 2017), O/S Residential Loan (EMF 2016)

the European Union. In almost all other European countries, net replacement rates on mandatory pension schemes are above 50%. However, unlike their European counterparts, UK pensioners receive pension entitlements which are less than a quarter of their preretirement earnings. Per capita private pension fund assets are relatively high in the UK. However, since the financial crisis, the sustainability of many existing pension schemes is increasingly under question.

2 Pension Schemes

2.1 General Information on Old-Age Security System

In this subsection, a summary of the Pensions Acts of recent years is presented. The discussion then considers the manner in which government incentivises retirement saving through offering various pensions tax reliefs. The annual cost of this tax relief is analysed. Information is then provided about the State Pension. The subsection concludes by outlining other methods to save for retirement.

2.1.1 Pensions Acts 2004–2017

In the period 1900–2000, there were five Pensions Acts in the UK. Post 2000, there were further seven Acts 2004, 2007, 2008, 2011, 2013, 2014 and 2017[1]. This rapid

[1]See, The National Archives (2004; 2007; 2008; 2011; 2013; 2014; 2017).

increase in pension legislation is in part indicative of a growing concern with regard to the adequacy of pension provision in the UK. The 2004 Act established two regulatory bodies. The Pensions Regulator which was given powers to ensure that companies with occupational pension schemes could be required to make contributions to maintain scheme funding objectives. The Act also established the Pension Protection Fund, which was introduced as a safeguard to take on pension liabilities of a scheme should the sponsoring company become insolvent. The Pensions Act 2007 provided reform of the basic State Pension. This Act provided for a staggered increase in the State Pension age and restored the link between the basic State Pension and earnings. The Pensions Act 2008 focused on occupational pensions and contained reforms geared towards increasing saving for retirement. A key element was being that employees would have to opt out of an occupational scheme as opposed to opt in. The Public Service Pensions Act 2013 had a number of objectives. One was the replacement of the larger final salary schemes with career average public service pension schemes. Other objectives included linking Normal Pension age to State Pension age and the introduction of an employer cap to offer protection to tax payers. The Pensions Act 2014 contained provisions to implement a single-tier State Pension to replace the basic State Pension and the additional State Pension. It also introduced a framework for future changes to the State Pension age. Additionally, it provided a framework whereby there would be automatic transfers of an individual's pension pots when they changed employment. The Pension Schemes Act 2017 concentrates on occupational schemes and in particular their authorisation and withdrawal of authorisation, ongoing supervision and administration charges.

2.1.2 Taxation and Incentives to Save for Retirement

The government incentivises retirement saving by offering various pensions tax reliefs. Traditionally, saving into a pension scheme has been viewed as a highly tax-efficient way to save for retirement. For example, if an individual pays tax at the UK basic rate of 20% and then if that individual puts £800 towards their pension pot then with tax relief at the basic rate, this is topped up by £200 to £1000. Tax incentives are also provided to employers to contribute into pension schemes for their employees. Investment returns on pension fund assets are also not liable for taxation.

Due to the rising cost of these tax incentives, the government has made a number of significant changes to the tax treatment of private pensions. This has included reducing the lifetime allowance and the annual allowance (see later). The net effect has been to make pensions saving somewhat less attractive, particularly for high earners. At the same time, government has introduced a number of exchequer funded top-ups on specific savings products. This has resulted in aspects of non-pension savings becoming more attractive.

HM Revenue and Customs (2016) describes the taxation of pensions and the incentives available to encourage saving in terms of the manner in which (1) pension contributions are liable for taxation, (2) investment returns generated in a pension scheme are taxed and (3) pension savings withdrawals are taxed.

Tax relief is available on pension contributions paid by or on behalf of an individual if the person concerned is a 'relevant UK individual'. Those contributions made by the person's employer on behalf of the individual are not subject to National Insurance Contributions. In the tax year 2017–2018, an individual can obtain tax relief on pension contributions of up to 100% of earnings or a £40,000 annual allowance (whichever is lower).[2] Any contributions made in excess of this are subject to tax at the person's highest rate. Additionally, from April 2016 the £40,000 annual allowance is reduced if income earned is in excess of £150,000. If the person is a non-taxpayer, they still qualify for tax relief, with a total of £3600 paid into the individual's pension scheme. A lifetime allowance puts a top limit on the value of pension benefits available without being subject to a tax charge. For the tax year 2017–2018, the lifetime allowance is £1 million.[3]

Investment returns which are generated from a pension scheme which is registered with HM Revenue and Customs are not subject to taxation.

The manner in which pension savings withdrawals are taxed is dependent on the circumstances of the individual concerned and the size of their pension savings. Individuals are usually able to take part of their pension pot out as a tax-free lump sum when they start taking their pension. Those with pension savings of less than £30,000 may withdraw the full amount as a lump sum. Individuals with funds above £30,000 but below the lifetime allowance can withdraw up to 25% of their pension savings tax-free after they reach 55. Individuals with funds above the lifetime allowance are subject to different tax rates with this dependent on how the funds are withdrawn. Funds above the lifetime allowance taken out as a lump sum are taxed at 55%. Funds used to provide a pension income are taxed at 25%. The pension income is then taxed at that person's marginal tax rate.

2.1.3 Cost of Pension Tax Relief

The total annual cost of pension tax reliefs is substantial and has been increasing over time. The distribution of tax relief has tended to favour higher rate tax payers. Johal et al. (2016), drawing information from the UK Wealth and Assets Survey, provide a breakdown of aggregate household wealth by category.[4] They note that for 2006–2008 aggregate household wealth was £8426 billion of which private pension

[2]The annual allowance is how much can be contributed annually by an individual to their pension pot before contributions cannot be made from pre-tax income. It increased up to the tax year 2010–2011 reaching £225,000. At that stage, it was reduced to £50,000 falling further to £40,000 in the tax year 2014–2015.

[3]The lifetime allowance was first introduced in 2006. The objective was to restrict the amount of tax relief that pension pots could accumulate. It was set at £1.5 million in 2006, increasing to £1.8 million in 2010, and then it has subsequently been reduced, and from 2017 to 2018, it is set at £1 million.

[4]The latest Wealth and Assets Survey published in 2016 related to the survey period July 2012 to June 2014.

Table 2 Cost of registered pension scheme tax relief

	2003–2004	2007–2008	2010–2011	2015–2016
Income tax relief on:	£ million	£ million	£ million	£ million
Occupational scheme contributions (employees)	3400	4200	4000	4500
Occupational scheme contributions (employers)	10,400	14,100	19,000	18,500
Personal pension scheme contributions (employees)	1300	2000	2000	2400
Personal pension scheme contributions (employers)	800	2400	3000	4300
Contribution personal pensions by self-employed	800	1300	800	700
Investment income of pension funds	3800	5600	6600	7900
Total tax reliefs	20,400	30,800	35,300	38,200
Less tax liable on pension payments	8200	9300	11,300	13,400
Total cost	12,200	21,500	24,000	24,800

Data source: HM Revenue and Customs (2016)

wealth contributed 34% (£2886 billion) and financial wealth 12% (£1043). By 2012–2014, aggregate household wealth was £11,134 billion of which private pension wealth contributed 40% (£4459 billion) and financial wealth 14% (£1596). These figures highlight the predominance of private pension wealth in aggregate wealth.

HM Revenue and Customs (2016) details in PEN 6 income tax relief and tax liable on registered pension schemes. In Table 2 a snapshot of this information is presented for the tax years 2003–2004, 2007–2008, 2010–2011 and 2015–2016. This table highlights three points of significant note:

First that there was a massive increase in the total cost of pension tax relief between 2003–2004 and 2007–2008 (from £12.2 billion to £21.5 billion).

Second that the total net cost of the tax relief appears to have stabilised in recent times (£24 billion in 2010–2011, £24.8 billion in 2015–2016).

Third, employers, in terms of their contribution to pension funds of their employees, enjoyed a significant share of the total income tax relief, approximately 60% for the tax year 2015–2016.

2.1.4 State Pension

A State Pension was first introduced in the UK in 1909. It has been subject to significant change over time. Most recently, the Pensions Act 2014 contained provisions to implement a single-tier State Pension to replace the basic State Pension and the additional State Pension. This new State Pension commenced in April 2016. It currently provides a payment of £159.55 per week. To achieve the full State

Pension, you require 35 years of National Insurance contributions. A proportionately smaller pension is provided for those with less than 35 years of National Insurance contributions. The State Pension currently increases each year by the higher of the annual growth in average earnings, inflation or a minimum of 2.5%. This is known as the triple lock and was introduced in 2010 by the then Liberal Conservative Coalition Government.[5] For men, the State Pension age is at present 65, while for women it is 63 but increases to 65 by November 2018. From December 2018, the State Pension age will rise for both men and women to 66 and will then rise to 67 between 2026 and 2028.

2.1.5 Other Methods to Save for Retirement

Other methods to save for retirement are also available, for example, through Individual Savings Accounts (ISAs). In the tax year 2017–2018 up to £20,000 can be protected from tax either in an ISA in either cash or stocks and bonds. In 2017 a Lifetime ISA (LISA) was introduced. It is for those between 18 and 40. Savings made receive a 25% contribution from government on annual amounts saved up to £4000 (a total yearly investment of £5000). This can continue up to the age of 50. Withdrawals are penalty-free to buy a first property, at age 60, or because of terminal illness. Withdrawal for other purposes is subject to a 25% penalty.

2.2 Overview of Private Pension Product Types

The structure of private pension provision is set out in this subsection. The subsection commences by providing a tabular profile of the characteristics of private pension provision. The majority of the ensuing analysis then considers each of the characteristics in turn. This subsection concludes by considering 'automatic enrolment' into workplace pension schemes, which commenced in October 2012 for larger firms.

2.2.1 Profile of Private Pension Product Types

In Table 3 a summary profile is presented of the main characteristics of private pensions. This table has been adapted from Fig. 1, Personal Pensions statistics, HM Revenue and Customs, February 2017.

[5]The triple lock is viewed by some politicians as a particularly expensive guarantee and consequently is unlikely to be maintained in the long term.

Table 3 Types of private pension provision

Occupational (defined benefit)	Occupational (defined contribution)	Group	Individual
Occupational		Personal	
Workplace/employer sponsored			Individual
Defined benefit			Defined contribution
Unfunded	Funded		

Data source: HM Revenue and Customs (2017)

2.2.2 Occupational Pension Schemes

Occupational pension schemes are sponsored by an employer for the benefit of their employees. In the public sector, such schemes are facilitated by central or local government, while in the private sector they are organised by an employer on behalf of their employees. Occupational pension schemes can be set up as a trust and run by trustees or facilitated by a life insurance company. These schemes can be classified as defined contribution where the employee effectively has their own pension pot with future pension income dependent on how well the pension fund has grown or defined benefit where future pension income is based on a formula related to the number of years worked and salary on retirement.

Defined benefit occupational pension schemes are particularly expensive, and very few firms now offer such schemes to new employees, and some have cancelled schemes for current employees. Since July 2007 the Pension Protection Fund (PPF) has published the funding position for defined benefit schemes. As of 2015 there were 5794 defined benefit schemes covered by the PPF of which only 1522 (26%) were in surplus. Assets under management of these schemes totaled £1.4 trillion. The membership of the schemes included pensioners 4.4 million (40%), deferred members 5.2 million (47%) and active members 1.4 million (13%).

The Office for National Statistics (ONS) undertakes an annual survey of occupational pension schemes. ONS (2016b) is the most recent survey and refers to survey data collated for 2015. For 2015, it was found that total membership of occupational pension schemes was 33.5 million; this represents an increase of 10% on the 2014 figure of 30.4 million. The 33.5 million members in 2015 is categorised in terms of 11.1 million active (employee) members, 10.6 million members receiving pension payments and 11.8 million members with preserved pension entitlements.[6] ONS (2016b) notes that active members have increased significantly in recent years [8.1 million (2013), 10.2 million (2014), 11.1 million (2015)]. This increase was almost entirely in the private sector and was primarily a consequence of the introduction of

[6]Total membership includes (1) active members (i.e. current employees who are contributing), (2) pensioner members (presently receiving pension payments) and (3) members with preserved pension entitlements (i.e. those no longer contributing into the scheme but have accrued rights that will come into payment at some future time).

automatic enrolment, (see later in this subsection). In terms of active members, there was an almost equal split in 2015 between membership of private occupational schemes (5.5 million) and public sector occupational schemes (5.6 million). In previous years public sector occupational scheme membership tended to be higher, for example, 5.2 million compared to 2.9 million in 2013.

2.2.3 Personal Pensions

From Table 3 it can be seen that Personal Pensions can either be arranged by an individual directly with a provider or arranged by an employer on behalf of employees. In the former case, this is an Individual Personal Pension, while in the latter it is termed a Group Personal Pension. The pension provider is a financial organisation such as a bank or insurance company. The Group Personal Pension does not necessarily need to be exclusive to a particular employer and may also be open to the general public. An employer may contribute to an individually arranged Personal Pension, while the employer normally contributes to the Group Personal Pension. It should be noted that Group Personal Pensions are not run by employers in contrast to occupational pensions. Personal Pensions, whether they are Group or Individual, are structured as defined contribution.

Personal Pensions may also be categorised as stakeholder pensions or Self-Invested Personal Pensions (SIPPs). Stakeholder pensions must meet minimum standards set by the government, and these include limits on charges, flexible contributions and a default investment fund in which money is invested if no choice is made. SIPPs are a form of Personal Pension that offer the freedom to choose and manage your own investments unlike other Personal Pensions where monies are invested in a fund. They are designed for those who have experience in investment. Most SIPPs allow selection from a range of assets, such as investment trusts, government securities, individual stocks and shares, commercial property and traded endowment policies.

2.2.4 Funded and Unfunded Pension Schemes

Table 3 also highlights a distinction between funded and unfunded pension schemes. An unfunded scheme is one which pays retirement income from an employer's current income as opposed to a funded scheme where the income stream to fund pension payments tends to be based on a portfolio of assets established for the specific purpose of pension provision.

2.2.5 Automatic Enrolment

Under the 2008 Pensions Act, employers in the UK must put staff, aged 22 or over and below the State Pension age, into a workplace pension scheme and contribute

towards it. This has been termed 'automatic enrolment', and it was commenced in October 2012 for larger firms. The workplace pension scheme must meet certain minimum requirements before an employer can enrol employees. Both defined benefit and defined contribution schemes can be offered as qualifying pension schemes. Employers and employees contribute with the government also adding tax relief. The total contribution is 2% of qualifying earnings until April 2018, increasing to 5% until April 2019 and then rising to 8%.[7]

For employees without access to an existing workplace pension scheme, there is a defined contribution 'automatic enrolment' occupational scheme open to any employer irrespective of the value of its business or the sector it operates within. This is the National Employment Savings Trust (NEST). It is trust based and operates on a not-for-profit basis. NEST offers a choice of investment funds. From April 2017, all members have the option to transfer retirement pots into or out of NEST which enables consolidation of pension pots when moving jobs. The self-employed are also able to join NEST.

2.3 Individual Private Pension Products

In this subsection, the focus is specifically on Personal Pensions, and information is presented on the make-up of contributions (employer/employee), the gender mix and age profile of contributors. Information is also presented on average annual contributions per individual.

2.3.1 Personal Pension Contributions by Source

Table 4 is adapted from PEN1 published by HM Revenue and Customs (2016). It profiles Personal Pension contributions by source for the period 2006–2007 to 2015–2016. From Table 4 we can see that share of contributions from employers has steadily increased over the period from 32% in 2006–2007 to 59% in 2015–2016. The sharp rise in employer contributions particularly from 2012 to 2013 onwards was in part due to automatic enrolment into workplace pensions (see Sect. 2.2). Table 4 also highlights that there was a sharp rise in total contributions for 2015–2016. This in all probability reflects automatic enrolment coupled with the general improvement in economic conditions in the UK.

[7]From April 2019, the total contribution rate of 8% includes an employer contribution of 3% and employee contribution of 4% and 1% in the form of tax relief.

Table 4 Personal Pension's contribution by source

	Individual contributions		Employer contributions		Minimum contributions[a]	Retirement annuity contracts[b]	Total contributions
	£m	%	£m	%	£m	£m	%
2006/2007	9290	50	5890	32	2900	550	18,630
2007/2008	10,180	49	7420	36	2670	610	20,880
2008/2009	8970	45	7710	39	2580	610	19,870
2009/2010	7840	43	7560	42	2370	410	18,180
2010/2011	7710	41	8440	45	2170	360	18,690
2011/2012	8710	44	9020	45	1850	340	19,910
2012/2013	7680	39	9910	51	1590	320	19,500
2013/2014	7720	42	10,340	56	20	290	18,380
2014/2015	9030	44	11,000	54	0	280	20,310
2015/2016	9740	40	14,320	59	0	260	24,320

Data source: HM Revenue and Customs (2016)

[a]Minimum contributions refer to the tax rebate paid as a result of contracting out of the state second pension. Contracting out was ended by the government in 2012; thus, this figure is zero from 2013 to 2014 onwards

[b]Retirement annuity contracts could not be taken out after 1988, although those with such contracts at that date could still continue to contribute

2.3.2 Personal Pension Contributors by Gender

Figure 3 is adapted from PEN4 published by HM Revenue and Customs (2016). It profiles the gender of those making contributions to Personal Pensions for the period 2006–2007 to 2014–2015. Figure 3 highlights the impact upon Personal Pensions of the economic and financial crisis for the period 2008–2009 onwards. It is only in the last two time periods that private Personal Pension contributors have increased with the number of contributors in 2014–2015 similar in magnitude to that in 2007–2008. Figure 3 also highlights a marginal narrowing in the gap between the proportion of men and women contributing to Personal Pensions. In 2006–2007, 35% of contributors were female by 2014–2015; this had risen to 39%.

2.3.3 Personal Pension Contributors by Age Group

Figure 4 profiles the age characteristics of those making contributions to Personal Pensions for the period 2006–2007 to 2014–2015. Figure 4 highlights that in the post auto-enrolment period, there is a much greater uniformity in the numbers contributing to Personal Pensions in the age groups, 25–34, 35–44 and 45–54. There is also evidence of a pronounced increase in the number contributing in the age group, 16–24.

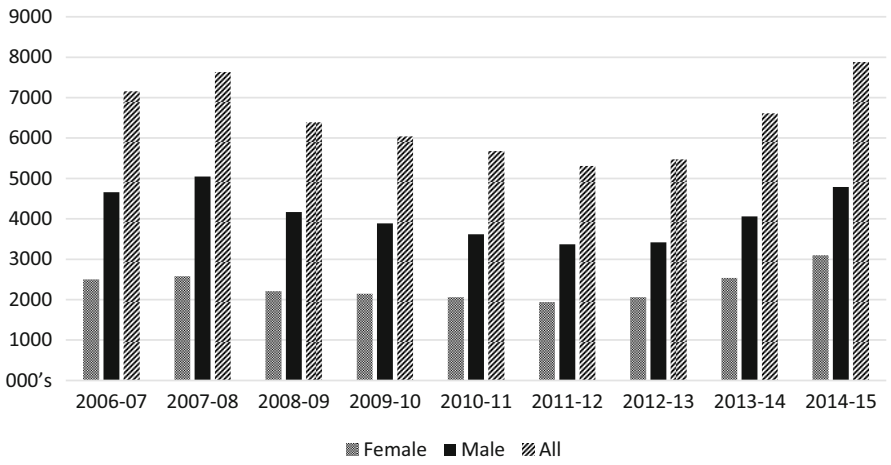

Fig. 3 Personal pensions (gender mix of contributors). Data Source: HM Revenue and Customs (2016)

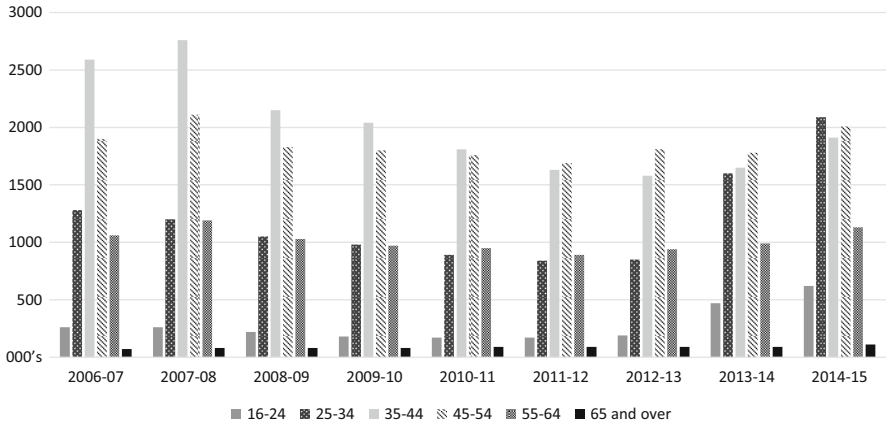

Fig. 4 Personal pensions (by age group). Data source: HM Revenue and Customs (2016)

2.3.4 Personal Pension Contributions per Individual

Figure 5 is adapted from PEN3 published by HM Revenue and Customs (2016). It profiles average annual contributions per individual. It should be noted however that the average contributions refer only to saving into Personal Pensions (which can be employer sponsored). These figures have not been deflated. Annual average contributions per individual grew consistently up to 2011–2012 (£3690 per individual), before falling in each of the next 3 years. In 2014–2015 the average annual contribution per individual was £2540, similar in nominal terms to that in 2016–2017 (£2530).

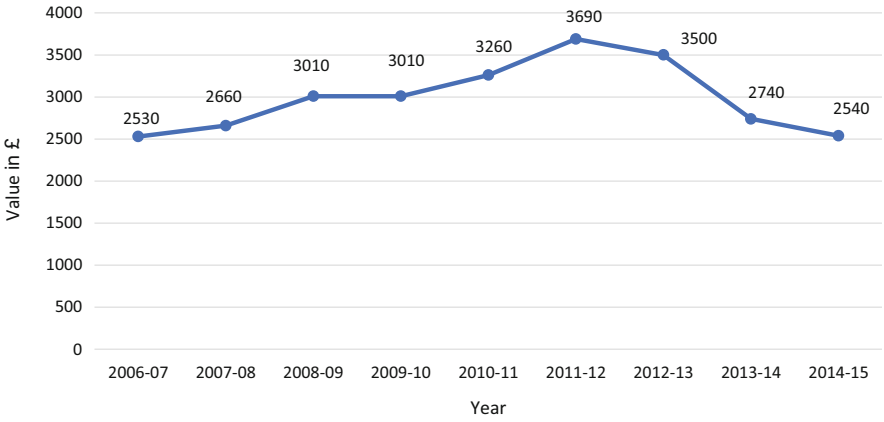

Fig. 5 Annual contribution per individual. Data source: HM Revenue and Customs (2016)

2.4 Conclusion

Recent reforms to pensions have been motivated by a perception that current levels of pension saving are inadequate due to increased longevity and public expectations about living standards in retirement. This has motivated the introduction of auto-enrolment of employees into occupational schemes or Group Personal Pensions, thereby increasing the numbers of those saving for retirement. An additional motivation is the government's desire to reduce budget deficits. The government is seeking to reduce tax relief on pensions through measures such as reductions in the lifetime allowance and the annual allowance. At the same time, the government is introducing top-ups on specific savings products, which will have the effect of making non-pension savings more attractive. Johal et al. (2016) estimate the gains from the reforms would reach a maximum of £2.3 billion in the tax year 2018–2019 before turning negative from the tax year 2021–2022 and then reaching a loss of £5 billion by 2034–2035.

A further complicating factor is Brexit. Jefferies (2017) argues that if Brexit negotiations do not go well, the sizeable tax relief pension pot may prove to be too tempting for future governments. Options that have been considered by previous governments but not introduced so far include a new flat rate of tax relief on contributions of between 25% and 33%. This would mean all taxpayers received the same level of tax relief regardless of how much they earned. A second option mooted by a former Chancellor of the Exchequer (George Osborne) is that of a pension system designed along the lines of the ISA where contributions are taxed, but returns and withdrawals are exempt from taxation (Financial Times 3 October 2016).

3 Housing Market

3.1 Housing Situation

As the housing market is linked to income, wealth and availability of lending, it is very sensitive to the overall economic climate. The financial crisis in 2008 had a significant effect on the housing market, with house prices falling in the UK as a whole around 15% from January 2008 to March 2009. In addition to this, the number of property sales in the UK almost halved from a peak of 1.67 million in 2006 to 0.86 million in 2009. Since then, the number of sales has recovered somewhat and reached 1.07 million in 2013.

In recent years, the UK government has pursued a number of high-profile housing policies including the Local Infrastructure Fund and the Get Britain Building investment fund, which both aim to boost the house-building rate. The 'Help-to-Buy' scheme has also proved popular and aids first-time buyers onto the property ladder while allowing some who already own homes to buy a more expensive property (ONS 2014).

Help to Buy The 'Help to Buy' is a government scheme, which was first announced in the March 2013 budget. It is intended for those unable to afford a sufficiently large deposit as well as those hoping to move to a more expensive home but with limited assets. There are two components of this scheme, as explained below.

1. Equity loan: The equity loan scheme is limited to newly built homes up to a value of £600,000. The homebuyer only needs a deposit of 5% of the value of the home, and the government funds another 20% through the Home and Communities Agency (HCA). The government loan is provided interest-free for the first 5 years. In the sixth year, the loan is subject to a 1.75% interest rate, which climbs thereafter by 1% plus inflation annually. This loan can be fully repaid at any stage. If it is not repaid then the HCA is entitled to 20% of the house value when the house is sold. This part of the 'Help-to-Buy' scheme was launched April 2013 and will run until 2020 (Moneysupermarket 2016).
2. Mortgage guarantee: The second part of the 'Help-to-Buy' scheme is applied to both newly built and existing homes. Under this scheme, first-time buyers and home movers need to raise a deposit of only 5% of the house value, and the government guarantees 15% of the loan. This part of the scheme was launched in October 2013 and ended December 2016 (Moneysupermarket 2016).

Get Britain Building is a £500 million investment fund for developers to complete development sites that have stalled, haven't started or are classified as being on hold. The Homes and Communities Agency ran a national competition over two rounds inviting bids to support sites comprising at least 15 units, through three finance options, made up of commercial loans and equity stakes that will be provided on a recoverable basis. The first round closed in January 2012 and the second in July 2012. So far, the scheme has enabled construction to begin on nearly 12,000 new homes.

Table 5 Dwelling stock: by tenure (UK 2014)

Tenure	Units (in 000's)	In %
Owner-occupied	17,713	63.1
Private rental	5343	19.0
Public rental	4954	17.6
Other	64	0.2
Total	28,074	100.0

Data source: DCLG (2017a)

Local Infrastructure Fund This fund was also set up to encourage large-scale development (>1500 units) by providing funds to invest in infrastructure, planning support and site preparation work. The fund was established in 2013. It provided £474 million to commercial, land and property projects. Administration of the investment was locally led with some additional funds been made available where local administrative capacity was inadequate.

In 2014, there were 28 million housing units in the UK, of which 63% were 'owner-occupied' in nature. The percentage of private and public rental dwellings is low (Table 5). Most homes in the UK are purchased with a mortgage although purchases with cash are becoming more common. Research based on data from the Council of Mortgage Lenders, HM Revenue and Customs and Land Registry, including figures on buy-to-let purchases, found that in 2015 almost 40% of properties were sold to cash buyers. Although relative to 2007, sales were down by one-third, the number of properties sold for cash was up by 12%. This was due to tighter lending criteria, and owners capitalising on regional house price rises (esp. London). It is suggested that older homeowners in particular are creating this trend. The trend in cash purchases is particularly marked at the higher end of the market where more than 50% of homes over £1 million were bought without debt (*Financial Times* 09 October 2015a). Mortgage lenders generally do not accept the use of personal loans for paying a deposit.

In the UK, the term *intermediate market* covers rent schemes subsidised to levels below the private sector but not as low as social rent (*intermediate rent*) as well as financial products and forms of tenure designed to ease access to home ownership for those on low incomes especially first-time buyers (*share-ownership/shared equity*). Most of these schemes are run by housing associations who receive their funding through grants administered by the HCA.

The **affordable home ownership** covers shared ownership/shared equity schemes where the resident has some ownership stake in the property. In **shared ownership**, the resident is permitted to buy a stake of between 25% and 75% in the home and continues to pay rent on the remainder usually with a long leasehold agreement. This arrangement is often referred to as 'part-rent/part-buy'. In a **shared equity** arrangement, the purchaser is provided with an equity loan interest-free or at low interest rates. In return, the provider shares in any rise in house value when the property is sold. The remaining purchase cost is covered by a conventional mortgage (Shelter 2010).

Table 6 breaks down the intermediate market in 2014–2015 by each type.

Table 6 Additional affordable homes provided by type of scheme, England 2014–2015

Number of intermediate affordable homes of which	16,340
Intermediate rent	270
Affordable home ownership	16,080

Data source: DCLG (2015)

3.2 Economic and Urban Factors

The demand for housing has outstripped supply and has led to rising prices particularly in London and the South East. Low interest rates and real wage growth have sustained demand despite rising prices. The National Housing Federation estimated 974,000 homes were needed between 2011 and 2014, but during that time only half of this number were built (457,490) (BBC 21 September 2015). The need for new additional housing in England is estimated to be around 300,000, which is about two to three times the current supply. There is a shortage of supply particularly in London, South East and the East of England which is a legacy of the lack of house-building after the recent economic crisis (*Financial Times* 12 November 2015b). The lack of supply is blamed on planning restrictions designed to protect the Green Belt (CIH 2015).

The increased level of housing demand is being generated by rising life expectancy, immigration and the growing number of one-person households (Commons Library 2015). New demand has exceeded the supply of new homes in every year since 2008. Figure 6 shows supply of new private sector, housing association and local authority housing (bar) versus the number of new households (line) over the last decade with projections to 2039. The rising gap between demand and supply has led to rapid house price inflation in some areas with large numbers of prospective buyers being priced out of the market (Fig. 7).

Buyers at all levels of income are being affected by rising house prices. As a result, many cannot purchase their first home, and the number of private renters has swollen to levels above those in social housing.

Most housing experts attribute the problem to the UK planning system especially in London and the south-east of England. The rate of new builds has been steadily decreasing since the 1970s (Fig. 6) despite rising demographic pressures (CEP 2015).

The recent financial crisis also impacted heavily on the housing market in terms of the number of transactions, the house prices, the levels of mortgage lending, the terms and conditions available and the housing supply (Whitehead and Williams 2011).

- Housing transactions in England and Wales fell from 130,000 per month in 2006/2007 to 30,000 per month postcrisis.
- House prices fell by approximately 13% from their precrisis high to their lowest postcrisis level.
- Gross mortgage advances fell by 40% from 2007 to 2009.

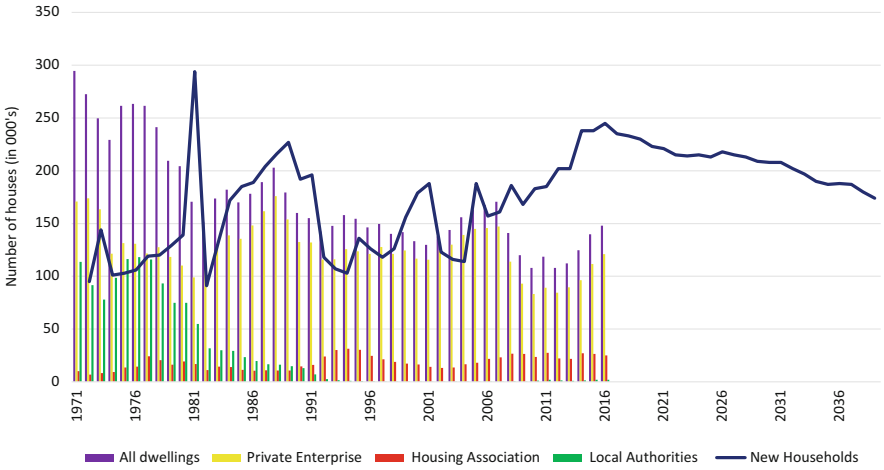

Fig. 6 Gap between new households [Live table on house building, Table 209 (DCLG 2017b)] and house building (2014-based household projections to 2039 for England [DCLG 2016a]) (England)

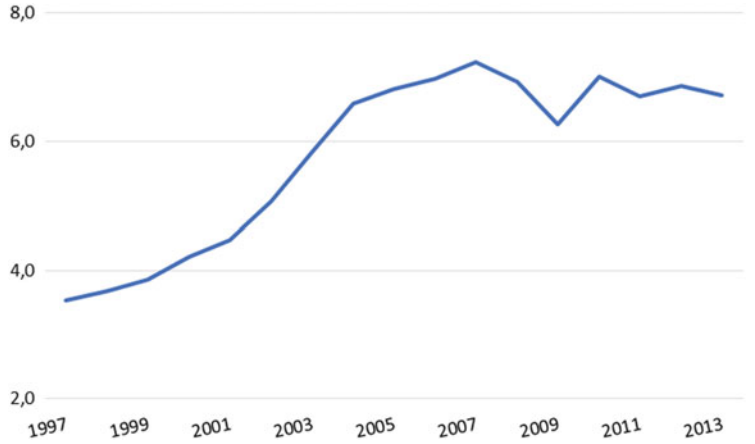

Fig. 7 Ratio of median house price to median earnings (England). Data source: Table 577 ratio of median house price to median earnings by district, from 1997 (DCLG 2016b)

- LTV ratios of 90%+ were discontinued. The range of mortgage products was restricted; more demanding credit standards were imposed and higher deposits demanded. These measures particularly affected first-time buyers. Similarly, potential mortgagors became more risk-averse.

The buy-to-let (BTL) market collapsed after the crisis but has recently recovered. Figure 8 shows that BTL lending represented 13% of total gross mortgage lending in 2014, which is above the low level after the financial crisis but is still well below the exceptionally high levels seen in 2007 (BoE 2015a).

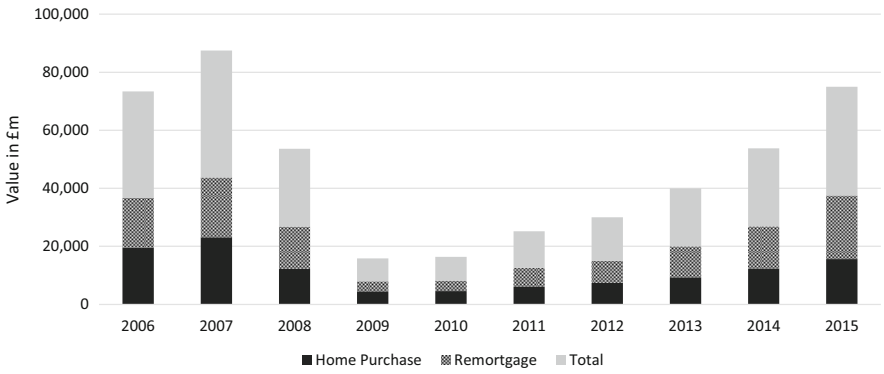

Fig. 8 New advances of buy-to-let lending, split by purpose (non-seasonally adjusted, UK). Data source: CML (2016a)

In 2015, mortgage lending had increased at its fastest rate since the financial crisis as homeowners feared the Bank of England may soon raise interest rates (Financial Times 24 September 2015c). Competition among banks had hitherto kept interest rates low. Homeowners borrowed £220.3 billion in mortgages in 2015, up to 8% on 2014 and the highest level of borrowing since the start of the financial crisis in 2008. However, lending is still well below precrisis levels. At the peak of the housing market in 2007, mortgage lending reached £356.8 billion (The Telegraph 21 January 2016).

Banks are currently expanding back into riskier areas of lending with interest-only mortgages staging a comeback. Royal Bank of Scotland re-entered the interest-only mortgage market in September 2015 after exiting in 2012. In March 2015, there were 95% LTV mortgages available from UK lenders, the highest seen since May 2008 (Halifax 2015).

The number of repossessions has been steadily decreasing in recent years. In 2014, 21,000 homes were repossessed which was a quarter lower than the previous year and was the lowest number since 2006. Repossession rates now at 0.19% are also at their lowest level since 2006, observed in Fig. 9 (CML 2016b).

The government responded in a number of ways to the financial crisis (Commons Library 2011):

- Financial advice

  The government helped support greater provision of financial advice especially to those in arrears or at risk of repossession. From 2008, the government made available £9 million to fund third party sector advice. Specialist training on housing debt advice was provided for Citizens Advice Bureau staff, greater access to free legal aid was made available to those at risk of repossession, and the debt advice facility at the National Housing Advice service was expanded.
- Repossession

  In 2008, the treasury issued a protocol emphasising that repossession should be a last resort for lenders. In the same year, the government also announced a

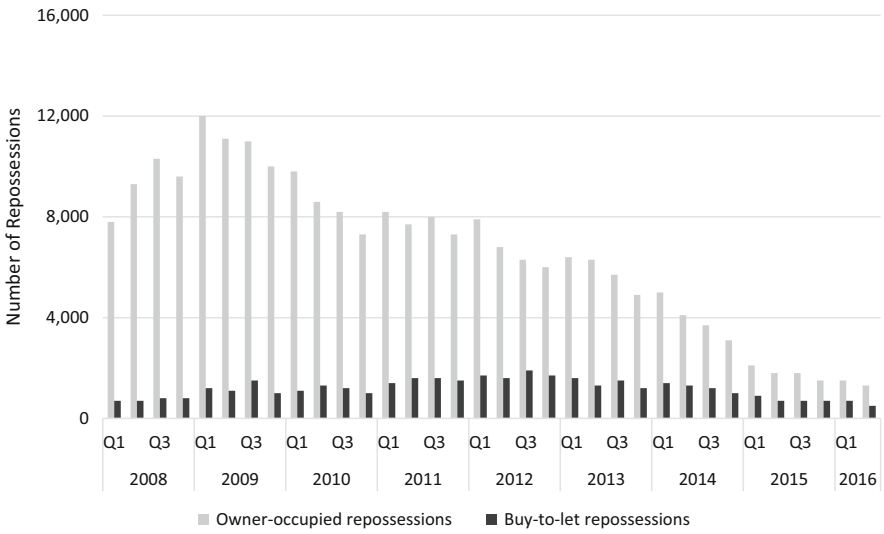

Fig. 9 Repossessions for buy-to-let and owner-occupied markets. Data source: CML (2016b)

scheme to allow those experiencing income shocks (losing a job or drop in income) to defer mortgage payments for up to 2 years.

- Financial assistance

  Existing schemes to support mortgage payments of those unemployed and on welfare benefits were expanded in 2008. The waiting time for Support for Mortgage Interest was reduced from 39 weeks to 13 weeks, and the size of loan eligible was increased from £100,000 to £200,000 for new claims.

- Mortgage rescue schemes

  In 2008, the UK government announced £200 million of extra resources for mortgage rescue schemes. These funds were made available in the form of shared equity, sale and leaseback or shared ownership depending on the circumstances of the individual. Households in negative equity were also now allowed to participate in the scheme.

- The homeowner mortgage support scheme

  In 2008, the government announced a scheme to support homeowners unable to meet their mortgage repayments. In the event of default, the scheme guarantees the lender 80% of the difference between interest and principal owed by the borrower and the amount recouped on sale of the property.

The affordability crisis in the UK referred to above is particularly an urban problem and is especially severe in London and the South-East (Fig. 10). In 2011, owner occupation was more common in rural areas (74.1%) than in urban areas (61.2%), while social renting was more common in urban areas. Social renting was most common in the North East of England (urban 24.2% and rural 17.7%) followed by London where 24.1% of households in urban areas were living in socially rented accommodation (ONS 2012, 2013). From 2001 to 2011, private

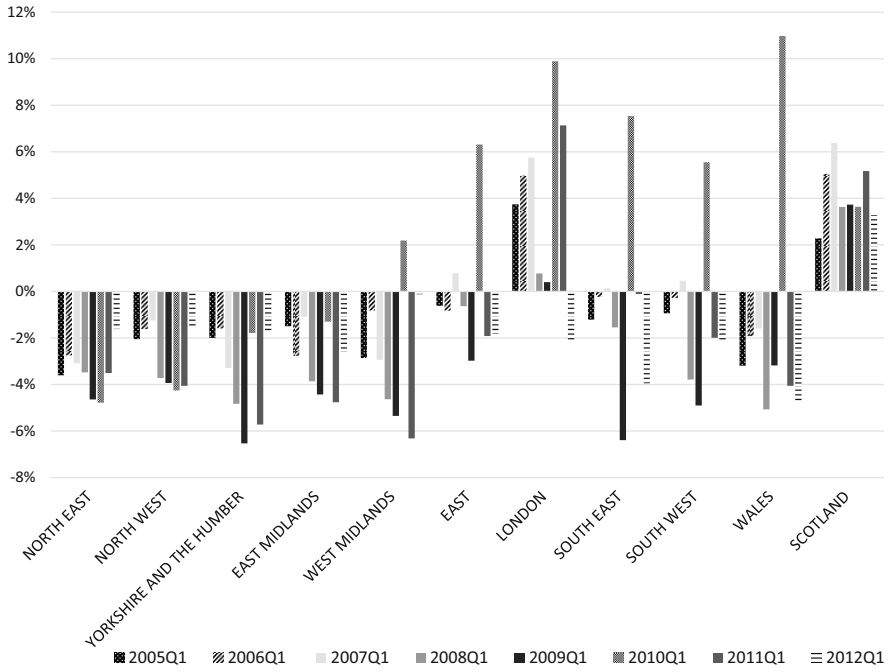

Fig. 10 % Change in mean house prices at local authority. Data source: England and Wales (DCLG 2016c), Scotland (Registers of Scotland 2017)

rentals in urban areas increased from 12% to 19%, while ownership (with a mortgage or shared) decreased by 6.1%. Rural areas also saw a decrease in ownership (5.3%), but during this time owning outright increased by 3.6%.

Despite rising house prices and difficulties in accessing mortgages, most people still aspire to owning their own home. Surveys indicate that 86% would buy their own home in preference to renting (2011 figures) although 19% of respondents say the main disadvantage of home ownership is the expense. High rents are the most common disadvantage cited among those renting from private landlords (32%), while anti-social behaviour on estates is the most common complaint among those renting from a local authority or housing association (39%) (NCSR 2012).

The Halifax, UK's largest mortgage lender, found that over the last 5 years, there has been no increase in the proportion of homeowners (2011 46% and 2015 45%) among the 20–45-year-old age group and a slight increase in the proportion of those who do not want to own (2011 13% and 2015 16%), with fewer likely first-time buyers (2011 20% and 2015 18%). This would suggest that homeownership levels in the UK will continue to decline without radical government intervention (Halifax 2015).

3.3 Housing Policies, Subsidies and Taxation

3.3.1 Overview of Housing Policies

UK house prices per square metre are the second highest in the world. The homeownership rate has been in decline since the turn of the millennium, falling from 69.6% in 2002 to 63.6% in 2013. The price-to-income multiple in the Greater London area in 2014 was 8.5; for the UK as a whole, it was 5.0. Despite population growth and rising real incomes, construction of new housing has been decreasing steadily since the 1970s, leading to a substantial housing shortfall. Set against this background, the emphasis within UK government and, in particular, the Conservative government since Thatcher in the 1970s is on people having the opportunity to own their own home. This manifests itself in the form of the government's 'Help-to-Buy' scheme (equity loan scheme) which applies to new builds and is targeted at young first-time buyers. The Conservatives also plan to extend the Right to Buy to tenants of housing associations (currently piloted with five housing associations ahead of the national rollout later in 2016).[8] In the UK, there is no legal obligation on the government to guarantee to everyone a right to shelter and a right of access to adequate housing. This contrasts, for example, to Ireland where the 2014 Constitutional Conventions voted for a right to housing—as an extra layer of protection from the courts if parliament fails to take action.

3.3.2 Governmental Actors

England

The Homes and Communities Agency (HCA) was established in 2008 as a nondepartmental government body to regulate housing associations and protect £43 billion of government funds invested in the sector. In addition, the HCA provides investment through the Affordable Homes Programme and encourages private investment in affordable housing.

Northern Ireland

The Northern Ireland Housing Executive (NIHE) was established in 1971 providing social housing as well as grants and support to homeowners and private tenants in privately rented accommodation.

[8]The Housing Act 1980 extended the ability of all social tenants with secure tenancies to buy their home by making this practice a tenant's legal right rather than it being at the landlord's discretion. The maximum discount on a house for social tenants under the Right to Buy increased from 60% to 70% of its value in 2014.

Scotland

In Scotland, all councils are 'housing authorities' providing advice to those in housing need, inspecting rental accommodation for health and safety purposes and assisting tenants in dispute with landlords. Some of Scotland's 32 councils additionally provide housing directly.

The Scottish Housing Regulator was created by the Housing (Scotland) Act 2010 ('the Act'). The Act makes the regulator accountable to the Scottish parliament and sets out statutory objectives, functions, powers and duties.

Housing Associations

Housing associations are one of the main providers of social housing in the UK. They bid for funds from the government's Affordable Home Programme and if successful into service delivery agreements with HCA. They vary in size from some with less than 50 properties to others with a stock of over 40,000. Those seeing affordable accommodation for rent or ownership apply either directly to the housing association or are referred from the local authority.

3.3.3 Main Functions and Objectives of Housing Policies

In the UK, housing policy appears to be a mix with a marginal shift in focus depending on the government in power. Conservative governments tend to promote increasing home ownership, while labour/liberal governments place marginally more emphasis on social/council housing. That said the UK housing strategy is a mix of private and social housing. The housing policy objectives may also differ within the UK regions. For example, in Scotland, the introduction of the Housing Act 2014 means social tenants no longer have the Right to Buy, and social landlords have greater flexibility in how they manage their housing stock. This Act also introduced new mechanisms to resolve disputes in the private rental sector.

3.3.4 Kind and Scope of Subsidisation

The latest UK initiative to stimulate the housing market is the **Starters Homes Initiative**. The government has a target of 200,000 by 2020. This will make homes available to first-time buyers at a discount of 20% to the market rate. These homes will be built by housebuilders as part of the tax they pay on profits of homes they sell at market rates. Additionally, houses are built for rent by social landlords, and the rent levied is 80% of the market rate.

As explained earlier, the government introduced **Help to Buy** in 2013 for first-time buyers and those moving up the property ladder in the form of equity loans. The

Table 7 Stamp duty

Purchase price of property	Rate of stamp duty as a % of purchase price
£0 to £125,000	0
£125,001 to £250,000	2
£250,001 to £925,000	5
£925,001 to £1,500,000	10
Over £1,500,000	12

Data source: GOV.UK (2017)

loan is worth up to 20% of the value of a newly built home and is repaid once the home is sold. The borrower can have a deposit as little as 5%, and there are no income constraints on eligibility to the scheme. The maximum home value is capped at £600,000.

Scotland aims to provide 50,000 new affordable homes by increasing subsidies for affordable homes for rent being delivered by councils and registered social landlords (RSLs) by up to £14,000 for each new home. Typically, the subsidy for RSLs in cities will go up from £58,000 to £70,000 and for council homes from £46,000 to £57,000. Higher subsides are available for 'greener' homes meeting higher environmental standards.

House-building subsidies tend to be small in the UK. For example, in 2011 the system funding new social rented housing was abolished and was replaced by a system at lower cost to the Exchequer, whereby landlords receive construction subsidies in return for renting to tenants at 'affordable' rates (80% of the market rate).

3.3.5 Taxation

Stamp Duty

From December 2014, stamp duty was changed to a graduated system, which eliminated big jumps in stamp duty at the threshold values (Table 7).

Capital Gains Tax

In the UK, capital gains tax is not paid when the home is sold if all of the following apply: when it is the main home for all the time it was owned; it has not been let; it has not been used for business; only the grounds, including all buildings, are less than 5000 m^2 in total; and it was not bought purely for gain.

Inheritance Tax

The standard inheritance tax rate in the UK is 40%, which is charged only on the part of the estate that is above the threshold of £325,000. There are no tax implications if the property is passed on to the spouse/civil partner or to a charity.[9]

3.3.6 Conclusion

UK house prices are high and continue to rise (particularly in the South East). First-time buyers are finding it more difficult to get on to the property ladder, but homeownership is still an aspiration for the majority of people. Government policy has focused on increasing demand but has done little to address planning restrictions on housing supply. Homeownership levels are thus expected to continue to decline. Any reduction in stamp duty, capital gains tax or inheritance tax would make saving for retirement by means of housing more attractive.

4 Mortgage Market

4.1 General Overview of Mortgage Market

After the financial crisis, UK's housing market experienced a downturn. There was a decline in the number of house transactions, and the demand for mortgages fell significantly (EMF 2015). However, the market has stabilised since then, and it is the largest in Europe in terms of the amount lent per year and the total value of outstanding loans (Table 1). The market is worth £1.3 trillion, and it consists of 11.1 million mortgages.[10] The total number of new mortgages advanced has been increasing since 2012. In particular, the number of new buy-to-let mortgage loans has increased rapidly since 2010 and it was up by 17% in 2015, compared to 2014 (Fig. 11). In fact, the buy-to-let sector has recovered the most since the financial crisis.

The percentage of people taking out a mortgage for the first time declined postcrisis but has gradually starting to pick up. First-time buyers in 2015 borrowed a total amount of £46.9 billion (Fig. 12), which was 5% higher than 2014. Similarly, remortgaging activities declined by 20% between 2009 and 2010, and the amount of loans advanced dropped to £43.2 billion.

Overall, the mortgage market continues to gather momentum in terms of the total loan amount advanced and the number of new mortgages. Until recently, the

[9]Inheritance tax guidelines available at https://www.gov.uk/inheritance-tax/overview

[10]Key UK mortgage facts available at https://www.cml.org.uk/industry-data/key-uk-mortgage-facts/

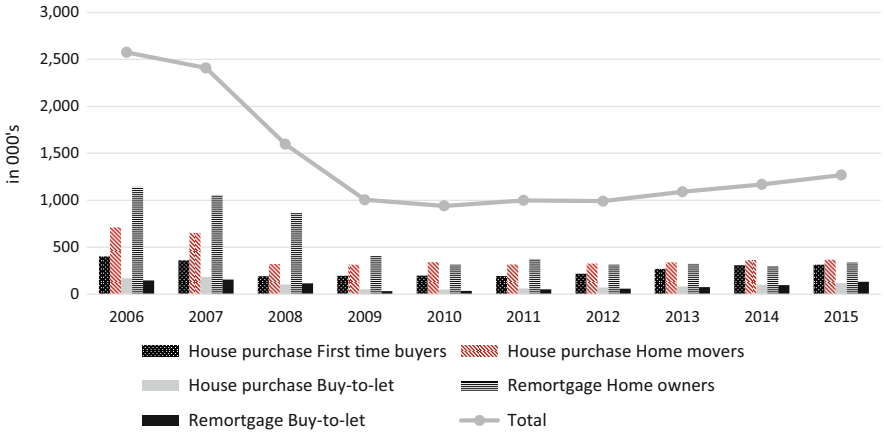

Fig. 11 Number of new mortgages, by purpose of loan. Data source: CML (2016a); Note: non-seasonally adjusted data

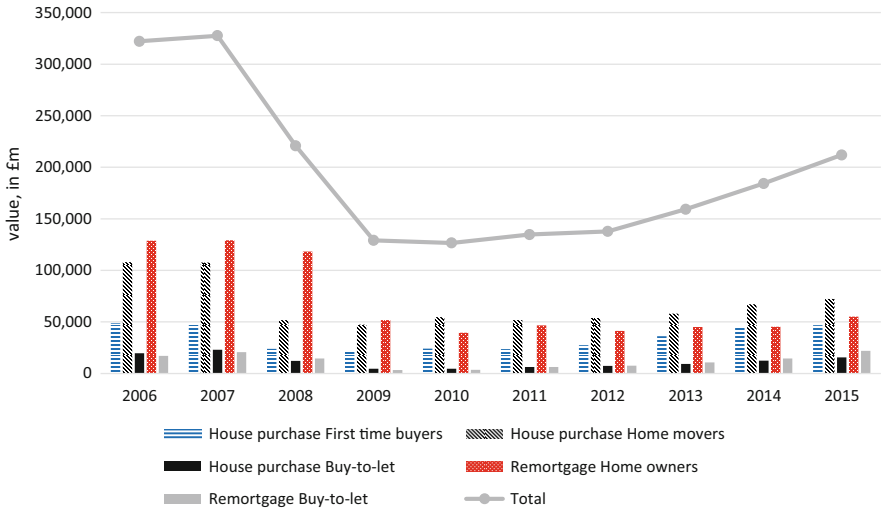

Fig. 12 New mortgage lending, by purpose of loan. Data source: CML (2016a); Note: non-seasonally adjusted data

momentum had been driven mainly by lending for remortgaging and advances made to the buy-to-let sector due to low interest rates and rapidly increasing house prices. However, the contributions of these sectors to the growth of lending have decreased since 2016 (Fig. 13).

After a record high of buy-to-let house purchases in March 2016, the numbers dropped significantly in April 2016 following a change in stamp duty rules. The new affordability regulations imposed by the Prudential Regulatory Authority (PRA) for

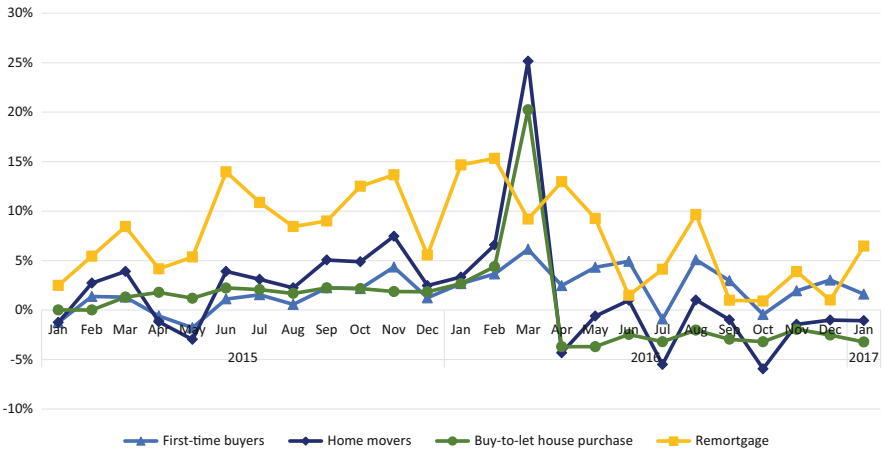

Fig. 13 Contribution to lending growth on an annual basis. Data source: CML (2017a)

the purposes of ensuring that property owners can repay their debts saw many lenders increase the amount of rent that buy-to-let borrowers must charge their customers (The Telegraph 9 January 2017). All these factors have led to a historically low contribution of buy-to-let mortgages to the overall amount of secured debt lending.

The number of first-time buyers has increased slightly in recent years. The primary factor contributing to this growth is that the state's housing schemes have predominantly focussed in this area (CML 2017a). Other contributing factors are rising house prices and low mortgage rates (Halifax 2017). A rise in the number of people buying homes for the first time should induce house-building activities and keep the overall momentum of the housing market going.

Conversely, the number of borrowers borrowing for the purposes of moving home decreased significantly in April 2016. In the latest market report, the Council for Mortgage Lenders (CML) commented that as most properties that come onto the market for sale are existing homes, a low number of home movers would imply few properties for sale thereby creating an imbalance in the demand and supply of housing (CML 2017a). There has been a mismatch in supply and demand since 2013 which has resulted in limited market activity especially in London (RICS 2017; CML 2017a).

Mortgage rates have remained low and stable over the last 5 years (Fig. 14). Improvements in funding conditions, a fall in swap rates and increased competition among lenders have had positive impacts on both fixed and variable mortgage rates in the last 2 years which are currently at historical lows (EMF 2016).

The official bank rate, which is at 0.25% now, is expected to rise in the near future (CML 2017b). This will not affect mortgage borrowers in the short run because over half of outstanding mortgage loans are on fixed interest loans. Those on variable

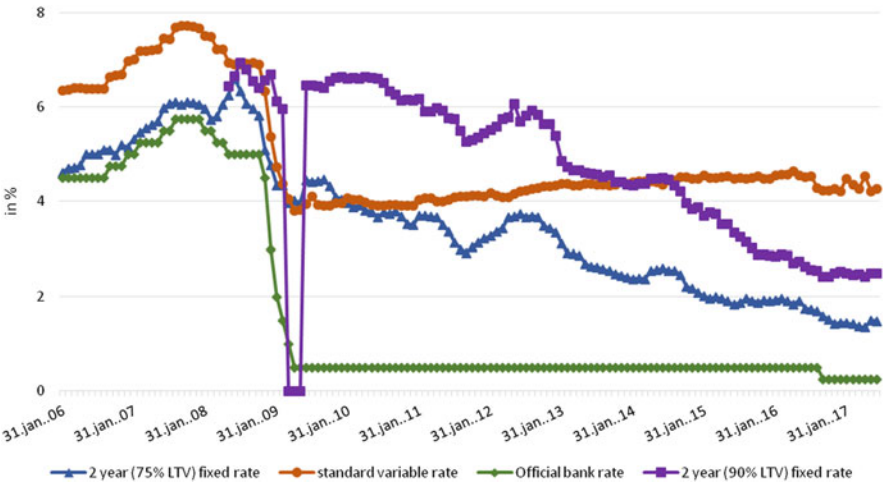

Fig. 14 Typical mortgage rates relative to official bank rate. Data source: BoE (2017); Note: non-seasonally adjusted data

interest rates will be affected, but their loan amounts tend to be lower as they have been repaying their mortgages beyond the fixed term (CML 2017b).

4.2 Product Types and Providers

4.2.1 Products

Mortgage products in the UK can be categorised by the different ways in which customers repay capital and pay interest on mortgage. Customers either pay fixed or variable interest rates on mortgage. In a fixed rate mortgage, the interest rate does not change throughout the length of the mortgage or for a specified number of years, depending on the terms of the contract. As the rate is fixed, it is higher than a variable interest rate contract. In the UK, most mortgages are advanced at fixed interest rates (Fig. 15). Providers generally charge a fixed rate of interest for a certain number of years after which repayments are made at variable rates. For instance, in a 2-year fixed rate mortgage contract, the customer repays at the fixed rate for the first 2 years before switching to variable interest rates.

With the second type of mortgage rate, the interest rate can change any time during the length of the contract. Variable interest rate mortgages come in various forms: standard variable rate (SVR), discounted rate, tracker mortgage, capped rate and offset mortgage (The Money Advice Service 2017). Standard variable rate is the nominal interest rate that mortgage lenders charge borrowers until they take out another mortgage deal. Changes in the interest rate may occur after a rise or fall in the base rates set by the Bank of England. A discounted rate mortgage includes a discount off the lender's standard variable rate which applies for a certain length

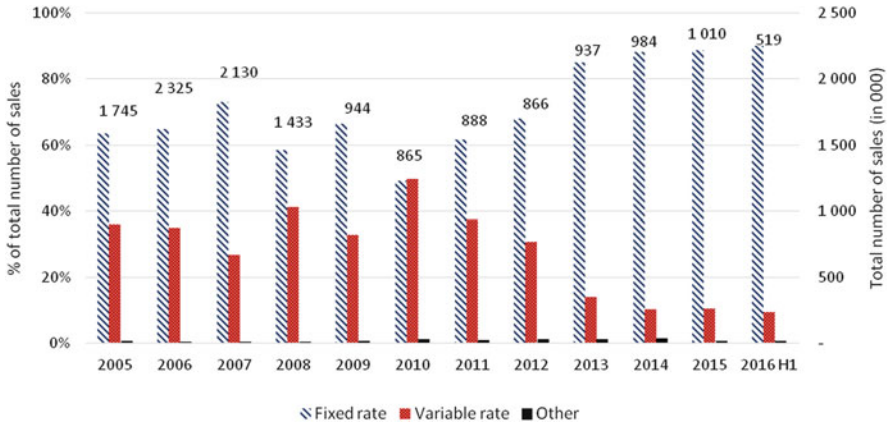

Fig. 15 Distribution of number of mortgage sales by interest rate type. Data source: FCA (2016)

of time. The interest paid fluctuates in line with the change in variable rate. Tracker mortgages move in accordance with the base rate set by the Bank of England. Capped interest rates imply that customers are charged interest at the lender's SVR, but the rate cannot exceed a specified level. Lastly, under the offset mortgage, customers link their savings and current accounts to their mortgage and pay interest on the difference. In doing so, customers offset their mortgage through savings (The Money Advice Service 2017).

The different categories of mortgage based on the modes of capital repayment are interest only, repayment and endowment mortgage. An interest-only mortgage is one where the customer pays the interest but not the underlying capital. The customer repays the capital at the end of the mortgage term. This form of mortgage is popular in the UK especially among buy-to-let investors and first-time buyers. Under a repayment mortgage, the customer pays the lender both capital and interest in equal instalments clearing the loan by the end of the term. The frequency of the instalments can be monthly, quarterly or semi-annual. In an endowment mortgage, the contract is linked to an endowment insurance policy. The funds accumulated at the end of the term of the insurance policy repay the mortgage. If the investment performs badly, the customer could end up with a shortage of funds to repay the debt. Therefore, endowment mortgages are not very popular in the UK.

The customers entering into mortgage contracts can be categorised as first-time buyers, remortgagors, customers that are moving homes and those who plan to buy-to-let.

Mortgage products with a maturity period of 25 years are common, and a typical loan to value ratio on residential mortgage loans is 75% (EMF 2016).

4.2.2 Providers

Table 8 presents statistics for the UK's top mortgage lenders by the value of gross lending, outstanding loan amount and market share. The mortgage lenders in the country are both banks and building societies. Lloyds Banking Group dominates the market followed by Nationwide Building Society. The market is quite concentrated with 72% of the market shared by the six biggest players. In the wake of the financial crisis, many building societies withdrew from the mortgage market as their net lending was negative and their stock of outstanding mortgages plunged (Casu and Gall 2016). From 2011, building societies started re-entering the mortgage market. Casu and Gall (2016) report that between 2011 and 2014, 90% of lending was from building societies. Currently, Nationwide, Coventry and Yorkshire building societies are among the top mortgage lenders in the UK, and have approximately 18% of the market.

4.3 Mortgage Funding

Supplying mortgage finance became a challenge for UK lenders post the financial crisis. The postcrisis UK mortgage market operated in a much more regulated framework and promoted safer investment options that generated low interest revenues for lenders. In the absence of sources that created new funding, mortgage lenders in the UK were far more dependent on retail savings and repayments from existing mortgages. In addition to that, the supply of mortgages was limited by the capital reserve requirements set by Basel III. Supply trends started to improve in

Table 8 Top ten UK mortgage lenders by gross lending, outstanding mortgage and market share

Mortgage lending company	Value of gross lending (£bn)	Value of mortgage outstanding (£m)	Market share (%)
Lloyds Banking Group	38	293	22.2
Nationwide Building Society	35	171	13.0
Royal Bank of Scotland	32	129	9.8
Santander UK	26	154	11.6
Barclays	21	128	9.7
HSBC Bank	16	78	5.9
Coventry Building Society	9	33	2.5
Virgin Money	8	30	2.2
Yorkshire Building Society	7	33	2.5
TSB Bank	7	27	2.0

Data source: CML (2017c); Note: the data is as on 2016

2012 along with house price growth in 2013 and 2014 causing an expansion in gross mortgage lending (PwC 2015). The latest review of credit conditions by the Bank of England shows that the proportion of approved household loan applications has increased slightly in 2015 from 2014. The bank reported that secured lending to UK households grew at an annual rate of 2.5%, which is the highest since the financial crisis (BoE 2015b).

Funding conditions for UK lenders have improved since the crisis (EMF 2016). Particularly, retail deposit flows in the individual savings account market remain healthy given the low interest rates environment in the country (EMF 2016). Lenders can access the wholesale funding market, and the European Mortgage Federation (EMF) reported that in 2015 mortgage providers used a diverse range of wholesale funding, e.g. senior unsecured, covered bonds and residential mortgage-backed securities (EMF 2016). The securitisation market, another source of funding, has also recovered since the crisis but is still small. It is an expensive source of funding compared to wholesale funding alternatives, and many investors have left the market following the application of Solvency II rules (EMF 2016).

On the demand side of mortgage funding, there was a significant increase in demand for secured lending for house purchase compared to re-mortgaging in 2015. There were around 74,000 mortgage approvals for house purchases in 2015 (BoE 2015b).

4.4 Regulations

Established in 2000–2001, the Financial Services Authority (FSA) was the regulator for banks, building societies and various other financial service providers in the UK. The FSA was responsible for banking supervision from the Bank of England, listing from the London Stock Exchange, investment services regulation and mortgage and general insurance business regulation, and had the authority to prevent market abuse. The events of 2007–2009 revealed the weaknesses of the existing regulatory systems in the UK and created the need for regulatory reforms. The 2012 Financial Services Act abolished the FSA and created three new regulatory bodies—the Financial Policy Committee (FPC), the PRA and the Financial Conduct Authority (FCA). FPC and PRA are subsidiaries of the Bank of England and are responsible for ensuring the soundness of individual firms. The FCA on the other hand is a separate independent body that is responsible for regulating businesses, maintaining market conduct and protecting consumers.

Building societies and banks have always been regulated in the UK, while mortgages became subject to statutory regulations as a financial product only after 2004. There have been many changes in the regulatory framework and guidelines of the mortgage industry in the periods before and after the financial crisis. Currently, there are two parts of mortgage regulations—conduct regulation and prudential regulation. FCA's Mortgage Conduct of Business (MCOB) administers the conduct regulations and oversees the relationship between the mortgage lenders and

borrowers in the UK. The prudential regulator oversees the level of capital that lenders need to hold to mitigate any financial risk caused by unforeseen events. The PRA oversees the prudential regulations for deposit-taking firms, whereas firms that do not take deposits are regulated by the FCA. In addition to the regulatory guidelines set by the PRA and the FCA, mortgage lenders must adhere to additional macro-prudential regulations in the form of directions and recommendations made by the Financial Policy Committee (FPC) (CML 2016c). Regulations regarding conduct vary depending on the purpose of a mortgage. All mortgages secured on borrowers' homes are regulated by the FCA, whereas buy-to-let mortgages for commercial purposes do not come under the jurisdiction of the FCA. Similarly, lifetime mortgages have their own FCA rules (CML 2016c).

Among recent regulatory changes are the introduction of the mortgage market review (MMR) in April 2014. The MMR rules ensure that borrowers borrow what they can afford to service. The regulation requires more responsible lending on behalf of lenders (EMF 2016). Another significant development was that the FPC was given powers to limit high loan-to-value and loan-to-income mortgages if they believed the housing market posed a risk to financial stability (EMF 2016). In 2014, the FPC announced that lenders should assess affordability in the event of mortgage rates rising by 3% and should limit the number of loans above 4.5 times a borrower's income to 15% of each firm's new lending (EMF 2016).

4.5 Conclusion

The mortgage market has recovered following the financial crisis although the demand and supply of mortgage products have not reached precrisis levels. Nevertheless, it is expected to face challenges imposed by a changing political and social environment.

The UK mortgage market operates in a relatively strict regulatory environment which will face significant challenges post-Brexit. Currently, outstanding residential loans are almost 67% of GDP, and an economic slowdown following Brexit would leave households struggling to service their mortgage debt.

The other major challenge for the mortgage market is the maturity of interest-only mortgages. It is estimated that almost a million people with an outstanding and maturing interest-only mortgage are not able to repay their debt. The problem has been looming over the mortgage industry for some time now and has now become a concern for the regulator and lenders. The mortgage industry has produced no clear solution to this problem for these households.

The anticipated rise in the base rate could be another impediment to the growth of the mortgage industry. The Bank of England has estimated that about 280,000 households would struggle to services their debts following a rise in the base rate (FCA 11/11/2015).

Finally, with population ageing and uncertain pensions, more people are looking to use their house as a retirement asset. There is a substantial rise in the demand for a

mortgage in the 65+ population, and an increasing number of consumers are taking out mortgages that will extend into their retirement (FCA 11/11/2015). This calls for a modification in the existing market as it is not equipped to support the changing pattern in consumer needs (FCA 11/11/2015).

The mortgage market in the UK has reached a turning point, and the changing political and social environment will require significant responses from the industry and policymakers.

References

BBC. (2015). *Scale of UK housing shortage revealed*. British Broadcast Corporation, September 21. http://www.bbc.co.uk/news/uk-34311522

BoE. (2015a). *Trends in lending April 2015*. Bank of England Publications. http://www.bankofengland.co.uk/

BoE. (2015b). *Credit conditions review 2015 Q4*. Bank of England Publications. http://www.bankofengland.co.uk/publications/Documents/creditconditionsreview/2016/ccrq415.pdf

BoE. (2017). *Interest and exchange rates*. Bank of England Interactive Database. http://www.bankofengland.co.uk/boeapps/iadb/NewInterMed.asp?Travel=NIxSTxTIx

Casu, B., & Gall, A. (2016). *Building societies in the financial services industry* (1st ed.). London: Macmillan.

CEP. (2015). *UK housing and planning policies: The evidence from economic research*. Centre for Economic Performance, London School of Economics & Political Science. http://cep.lse.ac.uk/pubs/download/ea033.pdf

CIH. (2015). *UK housing review 2015 briefing paper*. Chartered Institute of Housing. http://www.cih.org/resources/PDF/Policy%20free%20download%20pdfs/UKHR%20Briefing%202015.pdf

CML. (2016a). *Table 1 New mortgages by purpose of loan, non-seasonally adjusted, UK*. Council for Mortgage Lenders. July 13. https://www.cml.org.uk/

CML. (2016b). *Arrears and possessions continue to fall, reports CML*. Council of Mortgage Lenders, August 11. https://www.cml.org.uk/news/press-releases/arrears-and-possessions-continuing-to-fall-reports-cml/

CML. (2016c). *The evolution of mortgage regulation*. Council for Mortgage Lenders, November 28. https://www.cml.org.uk/

CML. (2017a). *Market commentary March 2017*. Council of Mortgage Lenders, March 23. https://www.cml.org.uk/news/news-and-views/market-commentary-march-2017/

CML. (2017b). *Are mortgage borrowers prepared for rising interest rates?*. Council for Mortgage Lenders. https://www.cml.org.uk/news/news-and-views/are-mortgage-borrowers-prepared-for-rising-interest-rates/

CML. (2017c). *Latest mortgage lenders 2016 – Smaller firms show the strongest growth!*. Council for Mortgage Lenders. https://www.cml.org.uk/news/news-and-views/largest-mortgage-lenders-2016/

Commons Library. (2011). *The economic crisis: Policy responses Standard Note: SN/BT/4968*. House of Commons Library. http://www.parliament.uk

Commons Library. (2015). *Briefing paper: Housing supply in 2015-2020: Key issues for the 2015 Parliament*. House of Commons Library. http://www.parliament.uk

DCLG. (2015). Housing statistical release: Affordable housing supply: April 2004 to March 2015, England, Department for Communities and Local Government. https://www.gov.uk/government/

DCLG. (2016a). *Live tables on household projections*. Department for Communities and Local Government. https://www.gov.uk/government/statistical-data-sets/live-tables-on-household-projections

DCLG. (2016b). *Table 577 ratio of median house price to median earnings by district, from 19971-6*. Department for Communities and Local Government. https://data.gov.uk/dataset/ratio-of-median-house-price-to-median-earnings/resource/3a73de15-73df-487c-9144-111f09f5912f

DCLG. (2016c). *Live tables on housing market and house prices: Live Table 581*. Department for Communities and Local Government. https://www.gov.uk/government/statistical-data-sets/live-tables-on-housing-market-and-house-prices

DCLG. (2017a). *Live tables on dwelling stock (including vacants), Table 101: By tenure, United Kingdom (historical series)*. Department for Communities and Local Government. https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-including-vacants

DCLG. (2017b). *Live tables on house building: New build dwellings*. Department for Communities and Local Government. https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building

EMF. (2015). *A review of Europe's mortgage and housing markets*. Brussels: European Mortgage Federation.

EMF. (2016). *Hypostat 2016: A review of Europe's mortgage and housing markets*. Brussels: European Mortgage Federation.

ESRB. (2016). *Warning of the European systemic risk board*. European Systemic Risk Board, September 22. https://www.esrb.europa.eu/pub/pdf/warnings/2016/161128_ESRB_UK_warning.en.pdf?62da3406e05239bb957357388c9b4ac8

Eurostat. (2017). Distribution of population by tenure status, type of household and income group – EU-SILC survey, Eurostat. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en

FCA. (2015). *Changes in mortgage regulation*, November 11. London: Financial Conduct Authority.

FCA. (2016). *Interpreting the data*. Financial Conduct of Authority, October 28. https://www.fca.org.uk/firms/product-sales-data/interpreting-data

Financial Times. (2015a). Cash buyers account for four in ten London property transactions. *Financial Times*, October 9. www.ft.com

Financial Times. (2015b). Housing shortage drives UP UK prices. *Financial Times*, November 12. www.ft.com

Financial Times. (2015c). Mortgage lending rises at fastest rate since crisis. *Financial Times*, September 24. www.ft.com

Financial Times. (2016). Advisers warn pensions could still be budget target. *Financial Times*, March 10. http://www.ft.com/cms/s/0/54a088fa-e51f-11e5-a09b-1f8b0d268c39.html#axzz42UctcyXR

GOV.UK. (2017). *Stamp duty land tax*. GOV.UK. https://www.gov.uk/stamp-duty-land-tax/residential-property-rates

Halifax. (2015). *Five years of generation rent: Perceptions of the first-time buyer housing market 2015*. Halifax. http://www.lloydsbankinggroup.com/

Halifax. (2017). *Number of first-time buyers reaches 10-year high*. Halifax Press Release, January 13. https://static.halifax.co.uk/assets/pdf/mortgages/pdf/halifax-first-time%20buyer%20review-13-january-2017-housing-release.pdf

HM Revenue and Customs. (2016). *Personal pension statistics*. Accessed March 10, 2016 from https://www.gov.uk/government/collections/personal-pensions-statistics

HM Revenue & Customs. (2017). *Personal pension statistics*. Accessed July 14, 2017 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/593926/February_2017_Pensions_publication.pdf

Jefferies, T. (2017). *What you need to know about pensions in 2017: How Brexit, a threat to tax relief, and state pension age changes may affect you*. This Money. http://www.thisismoney.co.uk/money/pensions/article-4073714/What-need-know-pensions-2017.html

Johal, S., Mathews, P. & Taylor, D. (2016). *Fiscal sustainability analytical paper: Private pensions and savings: The long-term effect of recent policy measures*. Office for Budget Responsibility. http://budgetresponsibility.org.uk/docs/dlm_uploads/FSAP-pensions-and-savings-1.pdf

Moneysupermarket. (2016). Help to buy scheme explained. http://www.moneysupermarket.com/mortgages/hubs/first-time-buyers/help-to-buy-scheme/

NCSR. (2012). *British social attitudes 28*. National Centre for Social Research. Sage. http://www.bsa.natcen.ac.uk/media/38952/bsa28_8housing.pdf

OECD. (2015). *Pensions at a glance 2015: OECD and G20 indicators*. Paris: OECD. https://doi.org/10.1787/pension_glance-2015-en.

ONS. (2012). *2011 census analysis – Comparing rural and urban areas of England and Wales, March 2011*. Office for National Statistics. http://www.ons.gov.uk/

ONS. (2013). *2011 census analysis – Comparing rural and urban areas of England and Wales*. Office for National Statistics. http://www.ons.gov.uk/

ONS. (2014). *Trends in the United Kingdom housing market*. Office for National Statistics. http://www.ons.gov.uk

ONS. (2015). *Housing and home ownership in the UK*. Office for National Statistics, January 22. http://visual.ons.gov.uk/uk-perspectives-housing-and-home-ownership-in-the-uk/

ONS. (2016a). *UK perspectives 2016: Housing and home ownership in the UK*. Office for National Statistics, May 25. http://visual.ons.gov.uk/uk-perspectives-2016-housing-and-home-ownership-in-the-uk/

ONS. (2016b). *Statistical bulletin: House price index, December 2015*. Office for National Statistics. http://www.ons.gov.uk/

PwC. (2015). *UK housing market outlook: The continuing rise of generation rent*. UK Economic Outlook, July. Pricewaterhouse Coopers. https://www.pwc.co.uk/assets/pdf/ukeo-section3-housing-market-july-2015.pdf

Registers of Scotland. (2017). *Quarterly house price statistics*. Registers of Scotland. https://www.ros.gov.uk/property-data/property-statistics/quarterly-house-price-statistics

RICS. (2017). *UK residential market survey: Landlords expected to scale-back portfolios*. Royal Institution of Chartered Surveyors, January. http://www.rics.org/Global/1._WEB_%20January_2017_RICS_UK_Residential_Market_Survey_rte.pdf

Shelter. (2010). The forgotten households – Is the intermediate sector meeting affordable housing needs? https://england.shelter.org.uk

The Money Advice Service. (2017). *Understanding different types of mortgages*. Accessed July 25, 2017 from https://www.moneyadviceservice.org.uk/en/articles/mortgage-interest-rate-options#the-two-main-types

The National Archives. (2004). *Pensions Act 2004*. Accessed March 3, 2016 from http://www.legislation.gov.uk/ukpga/2004/35/pdfs/ukpga_20040035_en.pdf

The National Archives. (2007). *Pensions Act 2007*. Accessed March 3, 2016 from https://www.legislation.gov.uk/ukpga/2007/22/pdfs/ukpga_20070022_en.pdf

The National Archive. (2008). *Pensions Act 2008*. Accessed March 3, 2016 from http://www.legislation.gov.uk/ukpga/2008/30/pdfs/ukpga_20080030_en.pdf

The National Archive. (2011). *Pensions Act 2011*. Accessed March 3, 2016 from http://www.legislation.gov.uk/ukpga/2011/19/pdfs/ukpga_20110019_en.pdf

The National Archives. (2013). *Public Service Pensions Act 2013*. Accessed March 2016 from http://www.legislation.gov.uk/ukpga/2013/25/pdfs/ukpga_20130025_en.pdf

The National Archives. (2014). *Pensions Act 2014*. Accessed March 3, 2016 from http://www.legislation.gov.uk/ukpga/2014/19/pdfs/ukpga_20140019_en.pdf

The National Archives. (2017). *Pension Schemes Act 2017*. Accessed July 14, 2017 from http://www.legislation.gov.uk/ukpga/2017/17/pdfs/ukpga_20170017_en.pdf

The Telegraph. (2016). Mortgage lending hits highest level since 2008. *Daily Telegraph*, London, 21 January. http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/12112575/Mortgage-lending-hits-highest-level-since-2008.html

The Telegraph. (2017). Buy-to-let mortgage deals dry up as lenders pull back. *Money Investing*, 9 January. http://www.telegraph.co.uk/investing/buy-to-let/buy-to-let-mortgage-deals-dry-lenders-pull-back/

United Nations. (2017). *World population prospects 2017*. Department of Economic and Social Affairs, Population Division. https://esa.un.org/unpd/wpp/Download/Standard/Population/

Whitehead, C. M., & Williams, P. (2011). Causes and consequences? Exploring the shape and direction of the housing system in the UK post the financial crisis. *Housing Studies, 26*, 7–8.

Part III
Countries with a High Degree of Homeownership, but a Rather Low Degree of Private Pensions

Italy: An Ageing Country with Low Level of Private Pension Schemes but High Homeownership Rate

Pierluigi Murro and Flaviana Palmisano

1 General Country Information

The current Italian population amounts to about 60.7 million and is expected to increase by 3.5% in 2050. This is the joint result of a negative natural dynamic (fewer births than deaths) and a positive migration dynamic (more emigrants than immigrants). This trend diverges from the European, which is instead expected to decrease by 0.1% in 2050. Table 1 also confirms the specific feature of the age structure of the Italian population, which is well known as one of the oldest among EU members. Italy has, in fact, the highest old-age dependency ratio among all members of the EU-28, about 32.9, much higher than the median (about 27.3). Given the projections of the population for the next three decades, it is also reasonable to expect this indicator will grow in the near future. Indeed, according to Istat (2011), the population is destined to become gradually older, with the average age increasing from 43.2 to 49.8 in 2050. Particularly, the number of old people will rise consistently: the group of individuals aged 65 and older will increase from the current 21.2% to about 33% in the next three decades. This age structure transformation clearly implies an additional pressure of the old age over the working age population; the dependency ratio should reach 32.9% in 2050.

As far as homeownership rates are concerned, Italy ranks in the middle of the EU-28 distribution. A slightly lower share than the EU median of about 74.5%, 73.2% of the Italian households own the house in which they live. However, Italy shows the highest ownership rate if compared to the other EU countries with the highest GDP. It is important to notice here that the share of owner-occupation

P. Murro (✉)
LUMSA University, Rome, Italy
e-mail: p.murro@lumsa.it

F. Palmisano
University of Rome La Sapienza, Rome, Italy

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Table 1 General information, 2013 and 2014

Category	Italy	EU median (EU-28)
Population (million, 2014) (1)	60.7	7.9
Population growth (%, 2014–2050) (3)	3.5	−0.1%
Old-age dependency ratio (%, 2014) (1)	32.9	27.3
65+ (% of total population, 2014) (1)	21.2	18.6 (1)
Owner occupation (% of households, 2014) (1)	73.2	74.5
Total outstanding residential loans (million euros, 2014) (2)	359,137	75,981
Growth in mortgage debt (%, from 2004 to 2014) (2)	94.2	118.4
Residential mortgage debt (% of GDP, 2014) (2)	22.2	40.6
Per capita mortgage debt (EUR, 2014) (2)	7094	11,106
Net replacement rates on mandatory pension programmes (%, 2014) (3)	79.7	63.7
Replacement rate of public pension in relation to wages (%, 2014) (3)	69.5	55.8
Per capita private pension fund assets (EUR, 2014) (3)	2426	2426

Sources: Eurostat (1), European Mortgage Federation (2), OECD (3)
Note: Because of the lack of data, the EU median for net replacement rate on mandatory pension programmes is computed excluding Bulgaria, Cyprus, Latvia, Lithuania and Romania. The EU median for replacement rate of public pension in relation to wage is computed excluding them. The EU median for per capita private pension fund assets is computed excluding Cyprus. For some countries, data on 2013 were used

households in Italy is significantly lower than it was in 2009, when it amounted to 80%. This decrease is in part due to the difficulties encountered by young couples in obtaining a first-time buyer mortgage. This decrease signals an inversion of the 2001–2011 trend. During this period the number of households living in their own home increased by 13%.

The actual reduction in the homeownership rate is reflected in the negative turn in total outstanding residential loans between 2012 and 2014 and in the reduction of residential mortgage debts. In this stagnant scenario, however, the mortgage market seems to improve. According to ABI (Italian Banking Association), the supply of new residential mortgages increased by 31.4% in 2014 compared to 2013. Among the determinants of this increase are the fiscal incentives for first home purchases introduced in 2014 (lower indirect taxes), the decline in mortgage interest rates and the reduction of house prices.

2 Private Pension Schemes

2.1 General Information on Old-Age Security System

The Italian old-age social security system operates through both the public and the private channels and consists of three main pillars. The first coincides with state

intervention and is represented by public social security, which is mandatory. The public system is based on a pay-as-you-go mechanism, with pensions determined using the contributive method. The amount of the pension supplied also depends on the inflation rate, and its replacement rate decreases with the average growth rate of wages.[1] In addition to the public pension provision, private sector employees and those hired in the public sector are entitled to a severance-payment benefit (TFR) when they retire or change their employer.[2]

The second and third pillars coincide with private intervention, which is voluntary and represents the supplementary pension system. In particular, the second is represented by occupational pension funds that can be 'closed' or contractual funds, which are typical occupational funds for specific groups of employees, set up by collective agreements, 'open' pension funds with collective-based subscriptions and 'old' pension funds that existed before the introduction of the supplementary sector. The third is represented by open pension funds with individual-based subscriptions and 'Personal Investment Plans' (PIP) that take the form of insurance (see more below). The private channel (second and third pillar) is generally based on a fully funded mechanism with the amount of pensions determined on the base of the defined-contribution scheme.

The first regulative framework for the development of the supplementary pillars of the social security system was provided through Legislative Decree No. 124/1993, introducing fully funded complementary pension schemes, with defined-contribution mechanisms. The law defined two kinds of funds: contractual pension funds, to be created through collective bargaining and managed by stakeholder representatives, and open pension funds, established and managed directly by financial institutions (banks, insurance companies, investment management companies). To incentivise investments in private pension funds, the law also allowed for the possibility of financing complementary funds through the TFR. Importantly, a 'silent-consent' mechanism for (quasi-automatic) transfer of TFR contributions to funded occupational pension schemes has been operating for private sector employees since 2007.

[1]The contributive capital is calculated re-evaluating the contributions of each worker (33% of the yearly salary, of which about one third is paid by the employee and two-thirds by the employer) at a rate equal to the moving average on a 5-year horizon of the nominal GDP growth rate. A transformation coefficient is then applied in order to account for life expectancy at the moment of retirement, the probabilities of leaving a widow or widower behind and the expected duration of years that a survivor's benefit will be withdrawn. Lastly, an indexation to inflation rule is applied, which decreases with the amount of the pension. The net replacement rate results to be increasing with the retirement age, lower for those with wage patterns growing faster than the GDP (OECD 2015).

[2]The TFR is a benefit supplied in form of a lump sum equal to the severance pay provision of 1-month salary each year and with an annual return of 1.5%, which is increased by 75% of the inflation rate. The TFR remains in the employer company up to the retirement moment. Starting from 2007, however, there have been introduced incentives to shift the new TFR to the supplementary sector.

The actual structure of the Italian social security system, together with the specificities of the Italian labour market, will have a differential impact on different categories of workers. The first category is represented by individuals working in the private sector, in large- or medium-sized companies and/or in unionized sectors and those working in the public sector with a long and continuous career. These workers will most likely adhere to supplementary pension schemes and will enjoy comfortable pension prospects. The second category is represented by individuals working in small-sized companies or in low-unionized sectors. While workers in the first and second category will be affected equally by the first pillar, those belonging to the latter will be characterized by a low adhesion to supplementary schemes and a lower level of the TFR because of discontinuities of their careers. The last group is represented by *parasubordinati*, i.e. project workers and all those with atypical contracts, which are practically, although not formally, excluded from supplementary pension schemes.

In a comparative perspective, the system performs quite well. As seen in the introduction, the gross pension replacement rate is much higher than the EU-28 median, and it has grown by 11 percentage points between 2008 and 2014 against the 6 percentage points of growth for the EU-28. The average monthly retirement income is 1323 €; 42.5% of retirees get less than 1000 € (12.1% lower than 500 €); 23.5% receive a pension between 1000 and 1499 €; and 34% receive more than 1500 € (INPS 2015). However, from a pure distributive point of view, the system does not seem to be effective. Italians older than 65 experience a risk of poverty considerably higher than the EU-28 average (22.6% versus 18.3%). Moreover, inequality in old age income is quite high: in 2013 the S80/S20 index was 4.4 in Italy, while 3.9 was the EU-28 average. Gender differences also affect the current pension system in Italy (Tinios et al. 2015). The replacement rate for women is 14 percentage points lower than that of men. Moreover, while for men this rate is higher than the average EU-28, the opposite holds for women. This makes women experience a higher risk of poverty in old age (25.2% of women versus 19.2% of men, see Conti 2015).

If we consider a larger time horizon, the actual contributory system is designed such that the old-age benefit will increase in the pensionable age, which is expected to increase. Therefore, the pensions provided by the public sector are expected to remain high. For instance, the net replacement rate of a worker that retires at 66 years and 2 months in 2040, after 38 years of service as employee, is expected to be around 71%; for a worker retiring at 69 years and 2 months with 39 years and 2 months of service, it will be 80% (ASISP 2014; MEF 2013). The latter might reach 107% of the replacement rate adhering to a supplementary pension scheme. However, there are other groups of workers, namely, those with atypical contracts (fixed-term and temporary workers as well as project workers) and the self-employed that face the risk of inadequacy of old age pensions (Raitano 2007). The main reason for this inadequacy is the combination of public and supplementary systems. According to both systems, those workers experiencing career fragmentation will receive lower pensions than those with more stable and continuous careers. Moreover, although workers with atypical contracts can subscribe to supplementary pension schemes, this will be very unlikely practically because of their lack of the necessary financial

resources. It can thus be argued that, if the transition to a multi-pillar system solves efficiency related problems, it might also result in a transition to a more unequal society. Those who would really need a supplementary pension (atypical workers) will not be covered by one. Whereas workers with standard contracts and thus with more stable careers would not only enjoy a public pension sufficient to guarantee an adequate living standard in retirement, they would also subscribe supplementary pensions, enjoying in turn an overprotection.

At the end of 2014, 6.5 million workers had joined the supplementary system (from 3.2 million in 2006), 29.4% of the employed (with the exception of *Casse previdenziali*); accordingly, it doubled compared to the 13% employees registered in 2006. Most of this increase took place in 2007 (Law no. 296/2006), when a new law reforming the framework of the supplementary social security system entered into force (Legislative Decree No. 252/2015). It increased fiscal benefits, strengthened the regulatory framework and introduced the principle of tacit consent for the conferment of the TFR to the supplementary pension system. However, the average age of pension funds' members is high (about 44 years), and only about 20% are younger than 35. The overall net worth was about 131 billion €, about 8.1% of GDP and 3.3% of the financial assets of Italian households (COVIP 2015; Momigliano 2014).

Despite these high figures, the supplementary pension sector in Italy is less developed than in the English-speaking countries and in countries that are much more similar to Italy in terms of institutional features and financial structure. Pension funds' assets in 2014 have been about 96% of GDP in the UK, 83% in the USA and about 21% of GDP in the Eurozone (excluding Cyprus).[3] The contributions paid during 2014 amounted to 13 billion €, 5.3 billion € of which coming from the TFR, mostly transferred to contractual or pre-existing funds. Differently from countries where the supplementary social security system is more developed, the portfolio of pension funds in Italy is characterized by a greater exposure to public bonds and a very low propensity to invest in stocks. For instance, in 2014 62% of the resources of the pension funds were invested in bonds, of which 80% in government bonds, 13% in OICR (Organismi di Investimento Collettivo del Risparmio) and 17% in stocks.

The supplementary pension system benefits from three main fiscal incentives that are the same for all kinds of pension schemes in the second and third pillars. The first concerns the contributions and consists of a tax deduction from the imposable income of those paid up to 5165 € each year. This amount encompasses the possible contributions paid by the employer and those paid by the workers but excludes those to the TFR. The second incentive concerns the performance. A tax rate of 20% of the return during the accumulation period is applied, which is lower than the 26% generally applied to the return of other forms of assets. The last incentive concerns the supply of the supplementary pension. In this case, a personal income tax rate between 9% and 15% of the benefits is imposed at the moment of the annuity

[3]These data do not include the sector of private pension institutions which are in charge of supplying mandatory pensions to self-employed workers.

collection. It is 15% for the first 15 years; from the 16th year on, it decreases by 0.3 percentage points for each year of subscription, up to a maximum of 6 percentage points. With at least 35 years of participation, the tax rate is then 9%. The tax is imposed only on the part of the annuity that derives from the contributions paid; it is not applied on the part from the returns of the investment. In contrast, public pensions are entirely encompassed in the tax base of the personal income tax, with a no tax area up to 7500 € per year. It must be noted here that the tax rate on the annual return over the accumulation period has increased to 20% only recently with the 2015 Stability Law (Act No. 190/2014); before it was 11.5%. The possibility for the workers of obtaining the annual flow of the TFR in the form of liquid assets (PCdM No. 29/2015) has also been introduced. That is, from 2014 and up to 2018, employees may ask the liquidation of their 'maturing' TFR. Hence, the political-economic measures of the last years might appear to be not fully coherent with the need of favouring the expansion of supplementary pension schemes. As far as the TFR is concerned, if this is transferred to the supplementary pension system, then the same fiscal benefits as described above apply. If it is left in the company, a tax of 17% is applied on the annual re-evaluation, and a separate taxation is applied on the amounts that are paid off on the base of the average tax rate that is imposed on the worker.

In such a context, there remain some difficulties in the integration of the public and private systems in particular in terms of substitutability of a downsized public sector with a private sector, which is more risky for the individuals, at least in the Italian context. Although increasing, enrolments to the private systems remain limited, and most of them concern the transfer of the TFR to supplementary pension funds. This is the result of a compatibility problem between risky assets, such as those related to the investment in the financial market, and the guarantee of a real income, adequately indexed, for all workers whose public pension barely allows a decent standard of living. Equity problems also arise since fiscal benefits have a proportional impact on the income distribution and tend to be more effective on higher incomes.

A successful transition to a multi-pillar system is also hampered by the double burden to be borne by the younger generations who have to finance both the current pensions and their future pensions and, as a consequence, become less attracted by the supplementary system. These obstacles become even worse in periods of high unemployment and stagnant and precarious incomes. In fact, the aggregate figures on the number of subscriptions hide some critical aspects. The first is that the degree of participation in the supplementary system is very low for the categories of workers for whom the first pillar is not sufficient to reach an adequate pension. Furthermore, about 20% of subscribers have temporarily interrupted their contributions, mostly because of the impact of the economic crisis. The high contribution to the public system and the difficulty to save money because of budget constraints slow down subscriptions. Hence, the development of a social security system able to evolve with the changing labour market features, characterized by an increase in the number of individuals with atypical contracts and precarious careers, will become a necessity.

An additional problem is represented by the lack of knowledge about the operation of the social security system. In particular, individuals are not always able to

make long-term investment choices. Therefore, the expansion of financial and social security literacy to increase the knowledge and trust in the system would also be beneficial.

As seen before, the strong propensity of pension funds towards the bond market might also hamper a successful transition, since the investment returns will remain limited for the next years. The propensity to invest in the bond rather than in the stock market is mostly due to the high fluctuations of stock returns, especially in periods of crisis that are most likely to generate unexpected and significant drops in the quotations. Moreover, the demand for alternative financial instruments is discouraged by the lack of transparency or by the high complexity of the operation. However, it will become necessary to look at more risky but more profitable securities in order to guarantee a supplementary pension that allows for a decent standard of living. Hence, the investment strategies should be more coherent with the evolution of the market. They should also foster the completion between the different pension schemes by offering wider investment options that are more coherent with the social security targets of the individuals.

2.2 Overview on Private Pension Product Types

Six main types of pension plans compose the private social security system in Italy. The *Fondi pensione negoziali* (Marinelli 2011) represents the first. These are closed or contractual occupational funds established by the representatives of workers and employers in the framework of the collective bargaining that can be specific to a sector or a company. This type also encompasses local pension funds, established on the base of an agreement between representatives of employers and workers that belong to a specific geographic area. As the name may suggest, these funds target specific categories of workers: employees in the private sector that belong to the same contractual category, company or group of companies or geographic area; employees in the public sector that belong to specific agreement divisions; and self-employed and professionals organized on the basis of professional or geographic areas. Contractual funds are legally independent entities, different from their promoters (employers and workers), and most instituted following a collective bargaining between employers and employees, an agreement between workers who are members of cooperatives or agreements between the self-employed and professionals promoted by their trade unions or professional associations. Public entities such as regions can also establish contractual pension funds through regional law.

Such contractual pension funds have a definite-contribution scheme; the amount supplied at retirement is not known a priori. It will be determined on the base of the extent of the contribution that each worker has to pay periodically. At retirement, the worker will obtain an amount proportional to the contributions paid over time and compounded on the basis of net return obtained by the fund manager. Thus, the worker bears the risk of losses, and inadequate returns are borne completely.

The subscription to these funds is voluntary. Each fund targets specific categories of workers. Temporary workers, workers in the training period, and workers with

atypical contracts can also subscribe if provided for by the agreements and the statute. There can be also a tacit subscription (not applied to the workers in the public sector). If the worker does not express any choice concerning its TFR, this is automatically transferred to the collective pension scheme adopted by the collective contract or the company agreement. Portability is also allowed but only after 2 years of subscription.

Collective bargaining determines the contribution to be paid periodically. Through the employer, the worker will transfer to the fund the part of TFR matured after the subscription, his own contribution and the contribution of his employer (only for employees). At the moment of subscription, the worker can choose one or more investment options which encompass different securities. The possible options are stock-related (only share investments), balanced (the same percentage of investment in stocks and bonds), bond-related (only bond investments) and guaranteed (have a guarantee of a minimum return or the repayment of the capital at the given defined moment, at retirement for instance). This choice is not permanent and can be modified after at least one year from the date of subscription.

The fund management is assigned to external specialized operators, such as banks, insurance companies, investment companies and savings management companies, with the financial resources being deposited in a bank. The administrative and management costs are variable. They can be verified only at the end of each year, but they are usually very low when compared to the other pension plans, given that these are non-profit entities.

The contributions invested through the funds can be transformed into an annuity after at least 5 years of subscription and if the worker has reached the age requirement for retirement that holds for the provision of the public pension. It is also possible to opt for a one-time payment for up to 50% of the assets. In some specific cases, and if provided for by the law, the subscriber can ask for an anticipation of his individual position or for a partial or total release. A total of 36 contractual funds existed in Italy in 2015. The total assets under management were about 42,546 million € and the number of active members 2,419,103 (see COVIP 2016).

The *Fondi pensione aperti* (Marinelli 2011) represent the second type of private pension products, which are open occupational or personal pension funds. In fact, two kinds of subscription characterize these funds: collective-based and individual-based. In the case of a collective-based subscription, the fund can be considered an occupational fund and thus part of the second pillar. In the case of individual-based subscription, these funds are considered an individual private pension scheme and, hence, part of the third pillar. Open pension funds are thus hybrid institutions.[4] This implies the difference between occupational and personal schemes depends on the type of subscription to a fund and not on the type of pension fund.

Subscription is voluntary and, in the case of the individual-based subscription, open to all categories of workers, independent from their job situation (for instance, individuals in a nonworking situation could also subscribe). In the case of collective-based subscription, workers belonging to a given company can subscribe the fund

[4]For this reason, we describe the details of these funds here rather than in the next section.

according to their employment contract, the agreement or the company's rules. As for the contractual fund, a tacit subscription is also possible. Employees in the public sector, self-employed workers and professionals can only subscribe on an individual base. Portability is allowed but, again, only after 2 years of subscription.

Banks, insurance companies, investment managing companies and brokerage companies can establish open pension funds. These funds take the form of a set of assets which are separated and autonomous with respect to those of the company that administers them. Hence, open funds are not independent legal entities; they are established within an organization, but the fund resources are legally separated from the managing entity and cannot be executed by sponsor company creditors. The official *Regolamento* document regulates the activities of the fund and defines its legal identification, characteristics and relationship with subscribers.

Workers who subscribe on an individual basis (including self-employed and professionals) can freely choose the amount and the periodicity of the contributions, which can be changed at any time. They can also decide to contribute only with the annual flow of his TFR. The employer can pay part of the contributions but is not obliged to do so. In the case of workers who subscribe on a collective base, the minimum amount and periodicity of contributions are defined in the collective agreement; however, workers have the possibility of paying a higher contribution. Also the self-employed and professionals can freely choose the amount and the periodicity of the contributions; these can also be changed any time. Investment options, investment management and the modalities of pension supply are the same as those described for the contractual funds. The costs borne by the subscriber aim at paying the company for its selling activities as well as for the management and administration of the assets. In case of collective-based subscriptions or agreements with self-employed and professionals, the amount of the expenses is lower than the standard; hence the net return is higher. A total of 50 open funds exist Italy. In 2015, the total assets under management were equal to 15,430 million €, and the total number of members was 1,150,096 (COVIP 2016).

Open and contractual pension funds do not guarantee predetermined revenues and act as institutional investors within the international and domestic capital market (see Capuano 2015).

The third and fourth types of private pension products are composed of *Fondi pensione preesistenti autonomi* (Marinelli 2011), 'old autonomous contractual pensions', and *Fondi pensione preesistenti non-autonomi* (Marinelli 2011), 'old nonautonomous contractual pension funds', respectively. These already existed before the Legislative Decree No. 124/1993 which introduced the first regulative framework for the supplementary pension system. Both provide a subscription on a collective base for workers belonging to specific sectors. The difference between the two lies in the fact that the former have legal personality, while the latter are established within a company in the form of separate assets or as a passive voice of the balance sheet for those workers of the same companies.

Subscription is voluntary and is collective-based, thus only workers of given categories can enrol. Temporary workers, workers in their training periods and workers with atypical contracts can also subscribe if provided for by the agreements and the statute. There can be also a tacit subscription (not applied to workers of the

public sector). Workers not expressing any choice concerning the TFR are automatically registered to the collective pension scheme adopted by the collective contract or the company agreement. It is also possible to transfer the accumulated contributions to another pension scheme but only after 2 years of subscription.

Employees have to contribute on the basis of what is established in the collective agreement. Through the employer, they have to pay the parts of TFR matured after subscription, their own contribution on the base of what is prescribed in the agreement with the possibility of contributing a higher amount and the contribution of the employer, whose amount is defined in the contract agreement.

'Old autonomous contractual pension funds' can manage the financial resources in three different ways (Marinelli 2011). They can choose a direct form, but in this case the COVIP (*Commissione di Vigilanza sui Fondi Pensione*/Board of Supervisors on Pension Funds) may limit the categories of activities in which the fund can directly invest its resources, depending on the suitability of the organizational structure in charge of managing and evaluating the investment risks. They can manage them through agreements; it is not directly the fund to manage the resources but external specialized operators (banks, insurance companies, investment management companies, savings management companies) that have to follow the investment policy defined by the administrative board of the fund. They can also manage the financial resources through insurance contracts but only in the form of life insurance, like unit-linked or index-linked contracts, or equity swap operations. These funds can also directly own property.

These funds can have a definite-contribution or a definite-benefit scheme (the amount of the annuity is pre-fixed, and it is equal to a percentage of the income or of the mandatory pension).[5] They can also be mixed, when the two schemes coexist within the same fund. These funds exist only for those workers who enrolled before 1993; new enrolment is not possible any more. Hence, most of their members are retired (COVIP 2016).

Investment in the funds can be transformed into an annuity after at least 5 years of subscription and only if the worker has met the age requirement provided for by the public pension. It is also possible to opt for a one-time payment for at most of 50% of the assets. In some specific cases, and if provided for by the law, the subscriber can ask for an anticipation of his individual position or for its partial or total release.

In Italy there exist 196 autonomous and 108 nonautonomous old funds. In 2015, the total assets of together autonomous and nonautonomous funds amounted to 52,299 million €. The total number of active members was 644,797 (COVIP 2016).

The *Casse di previdenza* (Marinelli 2011) represents the fifth type of private pension product, funds that target specific categories of professionals and are managed by the *Enti previdenziali privati di base*. These are public entities but with private legal personality that also provide supplementary pension schemes in addition to providing the mandatory pension, according to the first pillar, and hence

[5] 'Old autonomous contractual pension funds' are the only private pension plans that can be characterized by definite-benefit schemes.

substituting the state. Hence, in order to establish a fund, these entities have to activate a fund management separated from the resources that concern the mandatory pension. There are a total of 24 *Casse*, the total assets amounted to 73,229 million € in 2015, and the number of active members was 1,488,979 (ADEPP 2016). The activities of the *Casse* are regulated by the statute, defining its characteristics and the relationship with the subscribers.

The Individual Pension Plans (PIPs), which are individual private pension schemes and will be discussed in the next section, represent the sixth and last pension product.

In sum, private pension products have a fully funded mechanism and may have defined-contribution or defined-benefit schemes, although the latter only exists in the case of old pension funds. Subscription is voluntary and, depending on the fund, can be collective-based or individual-based. Stakeholders are quite heterogeneous; in fact, social parties with collective agreement, public entities (regions), banking and financial and insurance operators can establish and provide pension funds. All funds must respect the principle of prudence in their management of complementary pension funds (Legislative Decree No. 252/2005). They must be authorized by COVIP to operate and are subjected to its supervisory power. From a distributional point of view, contractual funds established by employers and unions do not have a traditional sales network. Open funds, mostly promoted by investment management companies, are mainly sold by banks; PIPs are supplied by insurance companies and are sold mainly through agencies and other forms of direct sale, and only a small part is distributed through banks.

Of the total number of individuals who have subscribed to a private pension plan (7.2 million), 35% have enrolled to contractual funds, 17% to open funds and 38% to PIP. Of the total assets managed in 2015, 31% belong to contractual funds, 40% to old contractual pension funds, 15% to PIP and 11% to open funds (COVIP 2016). Recently, the growth rate of the amounts invested in PIPs has been higher than those of contractual and open funds (see Momigliano 2014). As for investments, pension funds and PIPs' net worth (excluding old pension funds) were composed of 49% of government bonds (of which 28.2 are Italian government bonds), 13.5% of private bond, 16.7% of shares (almost all listed shares) and 12.8% of OICR in 2015. The investment in infrastructure projects or in hedge funds is almost nil, different to other countries. Whereas almost one third of the net worth of the *Casse professionali* was invested in real estate, the remaining part was invested in securities and other financial assets. Government bond investment was about 15%, with 18% of the financial assets being invested in mutual funds (*fondi comuni non immobiliari*), 9% in private bonds and 3% in shares (COVIP 2016).

In the last 5 years, contractual funds generated an average net return of 4.8% per year, while open funds showed an average net return of 5.2%; over the same period, the TFR has been re-evaluated at 2.4%. In 2014, the average return of contractual funds was 7.3%, while it was 7.5% for open funds; over the same period, the TFR has been re-evaluated at 1.3%. Returns can vary on the base of the specificity of the fund and its investment strategy. The differences in returns also reflect the differences in the average costs of the different schemes, which are particularly higher for

individual private pension schemes and lower for contractual funds. The cost index, measuring the reduction of the percentage yearly return relative to the total costs borne by the subscriber, is 0.2 for contractual funds and 1.1 for open funds, for which costs dispersion is also quite high (COVIP 2016).

2.3 Individual Private Pension Products

The third pillar coincides with the individual private pension system, mainly represented by two products: open pension funds with individual-based subscription and PIPs.

Open pension funds were discussed in detail in the previous section. Here it is important to recall that the introduction of the individual-based subscription in open pension funds was introduced with Legislative Decree No. 47/2000. The actual regulation is contained in Article 12 of Legislative Decree No. 252/2005 identifying the institutions that can establish such funds; these are brokerage companies, savings investment companies, banks and insurance companies. The economic and demographic risk is entirely borne by the subscribers.

PIPs are individual pension schemes open to all those willing to build a supplementary pension, independent of their situation. These are not independent legal entities. They take the form of separated and autonomous assets within the insurance company that manages them. Their only aim is the repayment of the pension to their subscribers, so like with open funds, they cannot be executed by sponsor company creditors.

Only insurance companies can establish PIPs and make them operational through three kinds of contracts. Insurance contracts of type I (*ramo I*) are life insurance contracts in which the re-evaluation of the individual position is related to one or more different compositions of investment with separate internal management. Insurance contracts of type III (*ramo III*) are unit-linked insurance policies, in which the re-evaluation of the individual position is related to the value of the shares of one or more internal funds that are owned by the company or of the shares of OICR (collective investment undertakings). Lastly, according to mixed-type contracts, the re-evaluation of the individual position is related to both type I and type III contracts (Legislative Decree No. 252/2005).

PIPs' guidelines are contained in the official *Regolamento document*, which together with the general conditions of the contract defines the registered name, institution, aim of the PIP, its characteristics (amount of the contributions, method used to calculate the payment based on the defined-contribution scheme, investment policy, inscription costs to be paid by its members), the organizational profiles (the manager of the PIP and the administrative structure) and the relationship with the subscribers.

Subscription is individual and voluntary, independent of the occupational situation (employee or self-employed). Individuals not currently working can also apply. The tacit consent to transfer the TFR does not hold for the PIPs. Employees in the

public sector can also adhere to PIPs but only on an individual basis. Portability is allowed after 2 years of subscription.

The subscriber freely chooses the amount and periodicity of the contribution and allowed to modify this decision in the future. Just paying the periodic flow of the TFR is also possible but does not grant the automatic right to the employer's contribution. Nevertheless, the employer may decide to contribute to the workers' PIP. Employees in the public sector can pay the individual contribution but cannot contribute with the flow of their TFR. The self-employed and professionals also freely decide the amount and periodicity of their contribution, which can always be modified. Lastly, the payment of contributions can also be temporarily interrupted.

On the base of the PIPs' characteristics, the worker can choose to relate its position to a separate management (*gestione separata*), a particular financial management, specifically established by the company and in which the contributions of the subscriber are invested; to one or more internal funds or to the OICR; or to a combination of the two. The same insurance company is in charge of managing the investments. The separate management is characterized by a prudential composition of the investments and in most cases also provides for a guarantee of a minimum return or of the capital repayment. Internal funds and OICR instead are structured according to different branches characterized by a different combination of the financial instruments and hence different combinations of risks and returns. The branches can be stock-based, bond-based and balanced. Investment activities are regulated by Italy's Private Insurance Code (Legislative Decree No. 209/2005). The insurance company may delegate the investment activities to a third party. In any case, the insurer has to handle all phases of the process.

The investment in the funds can be transformed into an annuity after at least 5 years of subscription and if the subscriber has reached the age requirements needed to receive the mandatory pension. It is also possible to opt for a one-time payment for up to 50% of the assets. In some specific cases, and if provided for by the law, the subscriber can ask for an anticipation of its individual position or for the partial or total release of its individual position. In particular, it is possible to benefit in part and under some condition from the pension supply before reaching the pension age requirements for health expenditures, first home purchase or renovation, other personal needs, release in case of work interruption, permanent disability or predecession of the subscriber.

During the accumulation phases, the costs borne by the subscriber are aimed at paying the company for the selling activity as well as for the management and administration of the assets. In case of an agreement with the self-employed and professionals, the amount of the expenses is lower than the standard; hence the net return is higher.

They are subjected to the same fiscal treatment and incentives awarded to other pension plans as described in the first section above.

Legislative Decree No. 47/2000 introduced PIPs to Italy. They are different from the open funds in that these are life insurance contracts (Article 1882 c.c.), where the insurer is obliged to guarantee to the insured the same service provided by the funds

(Article 11, Legislative Decree No. 252/2005), after payment of a premium. The demographic risk, related to the life duration, rests with the insurer.

There are 78 PIPs in Italy. In 2015, the total assets amounted to 20,056 million € and numbered 2,595,804 members. They appear to be the pension schemes increasing the most in terms of number of subscriptions, passing from 486,017 in 2007 to 2,595,804 in 2015, composed mostly by individuals aged between 35 and 54. Most adhere to the first type of insurance (73%). Their returns are calculated starting from 2008. In the first years, they performed worse than the other supplementary schemes; however, they soon started to improve. On a 5-year horizon, the return of the second type has been on average 4.9%, while the return of the first type has been 3.2% on average. In 2014, the return of the second type has been 6.8% and 2.9% for the first type. They remain the most expensive supplementary scheme, although the cost is decreasing over time. Their high costs mostly derive from the sales network used and the respective remuneration mechanisms. Cost dispersion is also quite high (COVIP 2016).

2.4 Conclusion

The Italian social security system experienced a period of radical reforms, mainly aimed at shifting the system from a benefit to a pay-as-you-go system and at introducing and promoting a supplementary private social security sector. The integration between the public and private sector is of prominent importance to ensure that the levels of pension coverage taken for granted in the past will also be reached in the future and to ensure a decent standard of living at retirement in a changed social and economic context. Looking at the current state of the supplementary sector, the PIPs represent the best practice in terms of coverage and returns, although this comes at higher costs for the subscribers and hence at lower replacement rates. In general, the number of subscriptions has been increasing for all the supplementary pension plans, and their performance has been also quite positive.

Nevertheless, the actual coverage of the supplementary sector is still limited and its expansion quite slow. Most importantly, the integration between the public and private systems is far from being effective. This is mostly due to the difficulties encountered in the implementation of the new framework in a very peculiar economic and financial context. Supplementary pension schemes were introduced in a period of budgetary crisis. The labour market structure has determined an unequal diffusion of these schemes. More employees appear to be covered by these new schemes than the self-employed. Those working in bigger companies are protected more than those working in smaller ones. The unequal diffusion also concerns workers with standard and atypical contracts and the young generations, categories more in need of these schemes, and among which, however, subscriptions are the lowest. As a result, people more in need of the supplementary scheme are those that will benefit less from them.

In order to make the supplementary system really effective, much progress needs to be made, not only to further enlarge the number of members of existing plans but also in terms of providing additional schemes. However, this needs to be realized in accordance with another priority that is the provision of old-age social security schemes that can favour young people and workers with atypical contracts and discontinuous careers. Subscriptions and adequacy of the supplementary pensions are also limited by the lack of sufficient knowledge in the population about the pension system. It would then be desirable to develop strategies to expand financial and social security literacy.

3 Housing Market

3.1 Housing Situation

Table 2 shows some general features of the housing market in Italy, where the current population amounts to about 60.7 million, living in 25.8 million households (Istat 2011). There are 31.21 million housing units of which 2.7% are represented by vacant dwellings. Lombardy has the highest share of occupied dwellings (84.5%), followed by Campania (83%) and Lazio (82.2%), whereas Valle d'Aosta (50.1%) has the highest share of unoccupied dwellings (50.1%), followed by Calabria (38.8%) and Molise. The number of rooms averages 1.4 per person. Overall, the current housing stock (31.2 million) is considered substantially coherent with the number of households (25.8 million) (Istat 2011). However, demand and supply do not perfectly match; there are 2.5 million households that experience housing needs. Different factors may explain this mismatch. Among these, the economic crisis has amplified the economic difficulties of families making house purchase unaffordable. As a consequence, the number of individuals looking for houses to rent has increased. However, the level of rents has gone up, making it difficult for these families to pay the high market rents, too.

The percentage of households living in owner-occupied dwellings is quite high, 73.2%, about 18.6 million households (Table 3). It increased by 13.8% with respect to the previous census in 2001 (Istat 2011).

The rental sector represents the second most widespread form of tenure. According to Istat (2011), about 18.7% of households live in rented houses,

Table 2 Housing situation in Italy

Country's population	60,782,700
Number of households	25,816,311
Housing stock (number of housing units) Average number of bedrooms	31,208,161 1.4
Share of vacant dwellings as % of total dwelling stock	8.56% (2)

Source: OECD (2015) and ISTAT (2011)

Table 3 Housing situation in Italy, owner-occupied dwellings versus rented dwelling

	Units	%
Owner-occupied (% of households)	18,587,744	73.2
Rental (% of households)	4,646,935	18
Private rental		n.a.
Public rental		n.a.
Other		10.0

Source: Istat (2011)

corresponding to about 4.6 million households. The latest data about private/public rent is provided by the Bank of Italy (2013a), estimating that 16.3% of households renting a dwelling live in private tenancies and 5.5% public. The remaining percentage of households is estimated to be at about 10%, encompassing households that fall into the black rental market and households that resort to intermediate forms of tenure, among them the *commodatum*, the *usufruct* tenancy, the right of housing, the rent with the faculty of redemption and the co-operative.

The *commodatum* is a cost-free contract through which an individual has the right to use a dwelling for a certain purpose and for a certain period of time. At the end of the period or after the accomplishment of a given purpose, the tenant is obliged to give the dwelling back to the owner. According to the usufruct tenancy, instead, the tenant has the right to make free use of the dwelling and exploit it in other forms (renting it to third parties, for instance), but not the right to use it for other purposes. The tenant may also transfer their rights to another person. The original owner only benefits from the 'naked ownership'. *Usufructus* are limited in time: they cannot exceed the life of the tenant or 30 years if the tenant is a legal entity. The right of housing again attributes to an individual the right to live in a dwelling with their family, but differently from usufruct, the tenant cannot exploit the dwelling nor assign those rights to others. This form of tenure is often used by old people who face economic difficulties arising at the end of their working life because of their inability to meet their needs. It can then be interpreted as a form of private pension scheme. The rent with the faculty of redemption allows occupants to become owners of the dwelling after a certain period of time and after payment of a given amount. Last, co-operatives aim at providing their associates with housing to be bought or rented at cost prices. These are non-profit entities and realize such houses through the personal contribution of the associates and through tax privileges granted by the state for such initiatives.

The data presented in Table 3 show that the most widespread tenure structure is ownership. The credit mark is the main financial channel used to become a homeowner, in particular in the form of bank credit (Istat 2011). An alternative channel is represented by the sale of dwellings owned by public entities at a lower price than the market price. The last housing plan, adopted in March 2014, introduced a significant innovation in this context: a general right for grantees to redeem the public dwelling where they live after 7 years of tenancy. A final, but less developed, alternative as a financial channel for building or purchasing a house consists of the use of equities provided by the owner or the buyer.

Table 4 Housing market (2016)

House prices (IV quarter 2016)	0.2% (1)
Housing market transactions (residential market)	528,865 (+18.9%) (3)
New housing loans	35 billion € (1)
Non-performing mortgage loan ratio (house purchase)	6.3 (2)

Source: (1) Istat (2017), (2) Bank of Italy (2015), (3) OMI (2017)

3.2 Economic, Urban and Social Factors

In Table 4 we report some figures about the housing market. About 529,000 housing transactions were realized in 2016, 18.9% more compared to 2015, mostly concentrated in the north (especially in Lombardy, Veneto, Toscana, Emilia-Romagna). Several factors led to this positive result after almost 10 years of contraction following the 2008 financial crisis, a period during which the number of transactions decreased by about 50%. One factor is represented by the improvement of the consumer confidence index, a measure of the willingness to make long-term investments. The decision to buy a home was also favoured by the further reduction of the interest rates on mortgage and some fiscal advantages for the first home purchase. The last and probably most important factor is however represented by the continuous decrease in the House Price Index. Between 2013 and 2014, it decreased by 2.9%. Besides, the prices of new dwellings decreased by 2.2% compared to 2013, while the prices of existing dwellings declined by 5.2%. When compared to 2010, house prices decreased by 15%; they decreased by 1.2% for the newly built dwellings and by 18.9% for existing ones (see EMF 2015 and OMI 2016).[6]

These aggregate data hide some geographical differences, as house prices are very variable across regions. The highest values are registered for Liguria and Lazio (30% higher than the national average); the lowest values are registered in Molise and Calabria (50% lower than the national average). Campania has the highest prices in the south, while this holds for Toscana in the centre and for Liguria in the north. All the regions in the south have lower values than the national average. Housing quotations at regional level strongly reflect the presence of bigger urban areas (Lazio, Campania and Lombardy, for instance), its touristic attractiveness (Liguria, Toscana and Valle d'Aosta) and the value of the building heritage (Lazio and Toscana).

Big cities are, of course, the most problematic in terms of higher demand for houses and higher prices. Therefore, a high number of middle- to low-income individuals tend to move to suburbs, while high-income groups tend to be concentrated in valuable areas of the centre. The central parts of the cities are also used to supply offices and commercial activities. However, it is also possible to find areas

[6]Improvements in housing transactions continued according to the most recent data in 2015. According to OMI (2016) housing transactions increased by 6.5% between 2014 and 2015. Also house prices continued to decrease, although to a lower extent, by 2.4% between 2014 and 2015.

close to the centres where specific communities are concentrated living in rented flats. Examples are students near universities and immigrants near railway stations and other transport hubs. By contrast, rented houses are mainly concentrated in the poorest areas of the cities, because they mainly concern the most disadvantaged segments of the population. There are other areas of the country experiencing depopulation, such as rural or mountainous areas. Some have overcome this problem by developing profitable farming or tourism. Last, an aspect to be taken into consideration is the depopulation of the south of Italy in favour of the north, mostly due to working reasons.

As far as the house price dynamic is concerned, Sardinia, Puglia and Calabria have experienced the highest growth in the last decade (2004–2015), mainly due to the development of the tourism industry. Only Lombardy, Molise and Umbria have instead experienced a reduction. Restricting the time horizon to the last year, we observe a quite different picture. Calabria is the only region to experience price increases, although very slightly, while Lombardy stays stable. For six regions (Friuli V.G., Umbria, Basilicata, Puglia, Molise, Liguria), the reduction is lower than 1%; for six others (Sicilia, Sardegna, Veneto, Abruzzo, Marche, Valle D'Aosta), it is between 1 and 2%; for the remaining three (Toscana, Piemonte, Lazio), the reduction is higher than 3% (OMI 2016).

Information about the relationship between house prices and the household disposable income is provided by the Housing Affordability Index (HAI) that can be interpreted as the ability of a household to buy a house. According to the data provided by OMI (2016), the HAI shows a positive dynamic between 2013 and 2014, after the negative trend which started in 2004 and lasted until 2012. At the end of 2014 the index was about 9%, 2 percentage points higher than in 2013.

It is also important to observe that the transactions concerning naked properties have started to increase by about 1.5% between 2013 and 2014, after many years of contraction. Most of these transactions take place in the north and in the centre, while they are very limited in the south. It can be inferred that to face the economic difficulties provoked by the crisis, an increasing number of old people sell the ownership of the house and keep a life usufruct tenancy (OMI 2016).

It is then clear that the economic and financial crisis had lasting effects on the housing market. The increase in unemployment and poverty was immediately reflected in a restriction of access to the credit market and, as a consequence, in the reduction of the number of house transactions. This also led to a reduction in house prices—together with the fiscal advantages for the first-time home buyers which entered into force in 2014 through Act No. 124/2013 (discussed below); this led to reverting the negative trend.

However, as for the number of transactions, the mortgage credit market also appears to show a better performance between 2013 and 2014. In 2014, new loans to families for house purchase reached about 35 billion € in cumulative terms, 6 billion € more than in 2013 (EMF 2015). Moreover, according to a survey of the Italian Banking Association (ABI 2016) focused on 80 banks representing about 80% of the Italian market, in December 2014, residential loans increased on an annual basis by more than 30% (and by more than 50% in the first quarter of 2015). Housing

transactions with a mortgage amounted to 161,842 units, with a rate of increase of 12.7% with respect to the previous year. However, the average mortgage amount continued to decrease to around 119,000 € (from 122,000 in 2013 and 126,000 in 2012); mortgages up to 100,000 € showed a slight increase.

Uncertainty about the labour market and the weakness of household disposable income continue to hold the market back. The negative impact of the crisis on the economic and financial conditions of households has caused many impediments to payback mortgages. As a consequence, the number of house seizures of homes bought with mortgage credit is increasing. Between 2008 and 2011, repossessions by banks increased by about 75% (38,000 houses in 2011 and about 100,000 over the last 4 years), and between 2012 and 2013, it increased by 11.6%, 20 each working day, almost 5500 in 1 year. Overall, they increased by 108% between 2008 and 2013 (Adusbef 2014).

The increasing number of evictions for non-payment of rent gives further evidence of the difficult situation connected with the tenancy market. From 2013 to 2014, the number of evictions carried out rose by 5%; over the last 10 years, it has increased by 69% (Ministero dell'Interno 2016). Other categories of the population experiencing problems in relation to the housing market are those families for whom housing costs exceed one third of their income (about 900,000) and those who pay more than 30% of their income (about 1.2 million) on rent. A last but very important category is represented by individuals aged between 18 and 34 still living with their parents. These are about 66% of the total (7.4 million of people), 5% more in 2014 compared to 2005. One of the principal reasons for such a high number of over-18s still living with their parents, in comparison with the European average, is the difficulty in finding accommodation at affordable prices.

Several political measures have been taken since the crisis to protect the housing market. The first refers to the Special Program of Public Housing introduced in 2007, followed by the National Housing Plan (Adusbef 2014). Their aim is to expand social housing, which is halfway between public dwelling and private property. Social housing should provide accommodation with high-quality standards but low rent. It is also characterized by social projects with the aim of developing integration, such as the use of common spaces and services between the inhabitants to be managed by the same inhabitants through ad hoc associations (membership in these associations is a requirement for getting such accommodations).

Policies concerning the credit market have also been introduced to indirectly affect the housing market. This is the case with Act No. 124/2013 introducing the possibility that *Cassa Depositi e Prestiti* (CDP) be able to give loans to the banks so that the latter can offer mortgage loans for residential dwellings at favourable conditions. These loans will be mainly assigned to the purchase of primary houses or to restoration in order to improve house energy classification. Primarily, recipients will be young couples, families with a disabled member or families with three or more children. The law also prescribes the possibility that CDP purchases from banks cover bonds or other instruments linked to mortgage loans on residential dwellings so that banks can offer new home loans. Hence, CDP has the main goal of helping banks by providing them with new funds and offering them the possibility to

securitize credits. The same law also introduces funds helping families to sustain or to obtain home loans. The first is called *Fondo di solidarietà per i mutui per l'acquisto della prima casa*, created in 2010 to finance payment suspensions for families in particular situations. The second is the *Fondo per l'accesso al credito per l'acquisto della prima casa*, created in 2008 and used to guarantee banks half of home loans for some families in particular conditions. To date, these measures have not been successful. For this reason, the latter provision in part extended its field of application to young couples, single parents with children under 18 and workers aged under 35 with atypical contracts.

The ABI has also introduced a measure establishing that the debtor has the possibility to suspend mortgage loan repayments for up to 12 months. Another measure concerns the suspension of evictions. The latest suspension expired at the end of 2013, but it has been already extended until the end of 2014 (Adusbef 2014). It targets only specific categories of tenants with particular difficulties and provided that they live in provincial capitals, in towns around them or in towns with major housing problems. As partial compensation, some fiscal reductions are granted to the owners; however, in 2015, after almost 30 years of extension, only a temporary interruption of 4 months has been established but only for the following categories: households with income lower than 27,000 € per year, with a household head aged over 65 and with a person in poor health (OMI 2016).

Homeownership is considered a protection against unexpected economic difficulties that may occur in a family. More in particular, it is considered a protection after retirement, leading many families to make significant financial investments in residential property. Indeed, properties represent the highest share of the Italian households' wealth, on average 85% (Bank of Italy 2015). However, this implies that although they are wealthy, many households experience increasing difficulties, especially in moments of crisis, because of the difficulties to transform a property in liquidity. For this reason, the number of usufruct contracts has been increasing in the recent years; they are often used by old people in order to sell the mere property (or naked property) of their dwellings, keeping a lifelong right to live there and obtaining an immediate income to use for everyday necessities.

Although the homeownership rate is quite high, it is very concentrated: only the 35.5% of households in the first quintile are homeowners against 91.7% of households in the fifth quintile. The rate is not uniform among the population groups. It results to be increasing in the age of the head of the household: 75% of households with a head aged 55 or more is homeowner, while 56% of households with a head aged between 35 and 44 is homeowner. This rate is also increasing in the level of education of the household head: about 75.5% of households whose head has a university degree are homeowners compared to 57.7% of households with a non-educated head (Bank of Italy 2015). Other differences concern the residence area. The rate is higher in the centre (71.3%) than in the north (66.8%) and south (66.9%). Last, the rate is decreasing with the size of municipalities (71% in districts with less than 20,000 inhabitants and 62% in districts with more than 500,000 inhabitants).

3.3 Housing Policies, Subsidies and Taxation

Competence for housing policies in Italy is mainly conferred to the regions. They are in charge of defining the targets, carrying out the undertakings, deciding the aims of the housing funds and managing public buildings for housing policy purposes. At the same time, housing policies are considered part of the welfare state system. For this reason, the state is in charge of determining the minimum level of offer (quantity and quality) of dwellings for the weakest part of the population. It is also in charge of coordinating the activities of the regions on national relevant programmes and, together with them, supporting the national housing funds.

Municipalities are the principal owners of public dwellings offered for rent for social purposes, and, in accordance with the regional rules, they regulate the management of these structures. Municipalities are also entitled to provide different solutions for local problems concerning housing situations. They are also competent for the adoption of special urbanistic plans. The last level of government involved in the housing policy is represented by specific local agencies, established by regions and municipalities, in charge of managing and maintaining public-owned dwellings for residential purposes.

Housing policies encompass different fields of intervention; they are the *Edilizia Residenziale Pubblica* and *Edilizia Residenziale Sociale* (Bianchi 2014).

The *Edilizia Residenziale Pubblica,* or public housing, deals with the management of publicly owned houses and is conferred to specific public agencies mainly established by regions and municipalities. Publicly owned dwellings are rented out at a low rate, with the aim of restoring them or assigning them to specific categories of citizens.

The *Edilizia Residenziale Sociale,* or social housing, aims at establishing various forms of partnership between public authorities and private investors in order to offer dwellings for sale or rent for social purposes. These programmes are generally classified as follows:

- *Edilizia agevolata* or assisted housing can be promoted by private investors, cooperatives or public agencies and is partially based on public funds of different nature (e.g. sums of money but also fiscal discounts and easier access to credit), which cannot exceed 50% of the whole investment. The aim is to offer dwellings for rent or sale at lower rates than at the market price.
- *Edilizia convenzionata*, or contracted-out housing, is realized by private investors with their own funds. Public authorities such as municipalities participate in granting the land to build for free or at discounted prices for 99 years, or they may give discounts on the sums required to grant authorizations to build. Prices to buy or rent these houses are decided in accordance with the municipalities.

These two programmes differ from public housing with respect to their target. They deal with families that are not wealthy enough to afford the rent or the price of a house on the market but have not such a low income to have access to public housing.

Table 5 Housing subsidies

Subsidization	Explanation
Contract saving schemes	Found of solidarity; 'fondo garanzia prima casa'; soft loans
Interest rate subsidy	Deductions of the mortgage interests on the first house

Source: Own compilation

The *Fondo Sociale per l'Affitto* concerns contributions for helping people in need of paying the rent; it is financed by the state and by each region.

Social housing represents the most recent innovation in the context of housing policy through the establishment of the Integrated System of Real Estate Funds (*Sistema Integrato di Fondi Immobiliari per l'Edilizia Privata Sociale*), formally introduced with the Housing Plan 2008/2009. Partially financed by public authorities, these funds should attract private investors interested in making real estate investments. This public-private partnership should generate economic advantages in terms of unburdening public finances; it should also produce structural advantages in terms of the realization of more balanced neighbourhoods. To this end, they aim at reaching a wide number of people, among them families with low income, young couples, old people, students who do not live in their families' town, people subject to eviction and regular immigrants resident in Italy. These projects are adopted through 'integrated programmes', directly managed by the Ministry of Infrastructure and Transport in collaboration with the interested regions and municipalities and by means of 'project financing'.

Another indirect form of housing policy is represented by Legislative Decree No. 155/2005 establishing a specific regulation for the purchase of houses still to be built. It provides further protection to buyers against the risk of bankruptcy of construction firms, such as guarantees of the sums paid as deposits and insurance on the building.

There also exist subsidies available for owner occupation (Table 5). The first is a fund of solidarity that allows households in situations of temporary difficulty asking the bank to suspend the first house mortgage payment up to 18 months. The level of government competent to assign such subsidies is the state. In order to benefit from this fund, it is necessary to have subscribed a mortgage for the purchase of the first house at least one year before the demand for suspension and of an amount not higher than 250,000 € and with an income level not higher than 30,000 € per year.

An additional form of subsidy is the *Fondo Garanzia Prima Casa*. It acts as a state guarantee of the 50% of the outstanding debt for mortgages subscribed for first house purchase, renovation and improvement of energy efficiency of the residential home. Young couples represent a priority target, as well as single-parent households with children and young people with members aged less than 35 and with atypical jobs.

Soft loans (*plafond casa*) for the purchase and improvement of energy efficiency of the first house are also a form of subsidy. All individuals can benefit, but young couples, households with a disabled member and household with numerous members have a priority. Each bank can decide how to use this fund; the only rule they

Table 6 Fiscal housing policy instruments

Taxes	Explanation
Taxation at point of acquisition	
Stamp duty land tax	Registration duty; fixed legal transmission tax (*imposta ipotecaria*); fixed land (*imposta catastale*) tax
Taxation during ownership	
Council tax	IMU, TASI, TARI

Source: Own compilation

have to observe is the use of the fund to improve the financial conditions of the mortgage with respect to the standard. These mortgages can be for 10, 20 or 30 years with a maximum amount of 100,000 € for house renovation and improvement of energy efficiency, 250,000 € for the purchase of the first house without renovation or 350,000 € for the purchase of the first house needing renovation work.

Homeowners also enjoy fiscal benefits (Table 6). The first takes place at the moment of the first house purchase, since for the buyer taxes will be lower. In particular, there is a registration duty of 2%, a fixed legal transmission (*imposta ipotecaria*) fee of 50 € and a fixed land (*imposta catastale*) tax of 50 €. These benefits do not hold for luxury houses. A second fiscal benefit is represented by the deductions of the mortgage interests on the first house, up to 19%. The maximum amount of the deduction is 4,000 € per year. These benefits hold from the date of purchase and within 2 years if the dwelling is subject to renovation work. It is possible to benefit from them also if the mortgage is subscribed before or after the purchase, but within a limit of 12 months, and if it becomes the principal dwelling within 1 year from the purchase. The interest that can be deducted only concern the purchase of the dwelling; hence if the mortgage is greater than the cost of the house, it is necessary to identify the share of interests on which deductions are calculated (Agenzia delle Entrate 2015).

Homeownership is subject to the payment of the IMU tax, calculated on the base of the house value, as it is fixed by the cadastral rents. Rates differ depending on the use and classification of the house and can be increased by municipalities. The ordinary rate is 0.76%, but it can vary from 0.46% to 1.06%. It is used for secondary houses, houses for rent and houses given in gratuitous loan for the use of relatives. For the primary houses, the rate was originally 0.4%, but in 2013 that IMU was abolished. Only buildings where exclusively non-commercial activities are carried out are exempted from the IMU payment. In case of both uses, the tax is reduced in proportion to the non-commercial activity.

Homeownership is also subject to the payment of the TASI to municipalities for indivisible services such as lighting, road repairs, maintenance of public gardens, security services and so on. It is paid both by the owner and by the tenant and calculated on the house area and varies in accordance with the house classification. Lastly, TARI is the tax for waste collection and exclusively bears on the occupant of the dwelling.

The dwelling produces an income that constitutes a form of tax base for the personal income tax. The re-evaluated cadastral rent represents this income. It is, however, possible to apply a deduction from the total income composing the tax base of an amount equal to the cadastral rent of the house that represents the principal dwelling of the household. So the effect of the imputed rent on the personal income tax is neutralized by this deduction. This deduction is valid only for one dwelling. If the tax payer owns two dwellings, the deduction is only applied on the cadastral rent of the house used as his principal dwelling. In case of a dwelling rented out, the owner may decide to pay a *cedolare secca* or consider the rent as acting to form the total income representing the tax base.

The profit derived from the sale of a residential home is taxable in the case in which the revenue obtained from the selling is greater than the price to which the home was purchased or the costs of construction. This gain is taxable if the sale takes place within 5 years from the construction or purchase of the house. Exceptions are dwellings obtained by inheritance or usucaption or by gift if it is realized at least 5 years after their purchase or construction or urban dwellings that for the majority of time between the purchase or the construction and the transfer represent the principal dwelling of the assignor or of its relatives.

3.4 Additional Information (Cultural Aspects)

Some of the features of the housing market in Italy have cultural roots. In particular, the house has always been the main way of investing savings, and property is traditionally handed down to heirs.

Moreover, from the data reported in Sect. 1, it is also possible to observe that the mortgage debt level of Italian families is rather low in comparison with other European countries. In 2014, the residential debt to GDP ratio was 22.2%, while the EU-28 median was over 40.6%. These data reveal another peculiarity of the Italian housing situation, the important role played by the family in the purchase of housing—savings and money borrowed from or donated by parents or grandparents. However, the role of the family has also been affected by the financial crisis. In fact, according to a survey carried out in 2012, almost all the families interviewed and interested in buying a house declared they would have needed, at least in part, an alternative financial support, such as a bank loan (Cecodhas 2012).

3.5 Conclusion

The Italian housing market is characterized by a high homeownership rate. Several aspects contribute to make this a peculiarity of this country. Among them are some political factors, mainly represented by the introduction of the right of redemption, by fiscal incentives for buying flats and by the provision of bank loans more

favourable to buyers of their first dwelling. Finally, several statutes allowed urban buildings belonging to the state and other public entities properties—especially, properties used as offices or employees' dwellings of several public entities—to be put on the market for financial reasons.

Despite the high rate of home ownership, the current housing situation in Italy is quite critical because of the high percentage of low-income families who cannot afford to pay the price of accommodation and, on the other hand, because of the replacement of public investment in housing with fiscal incentives to private investment during the recent decades. The recent economic crisis has significantly impacted housing affordability for medium- and low-income groups and calls for further public interventions in the housing market. The main effort exerted by the government to give a renewed strength to the sector is mainly represented by the establishment of social housing, which, however, is far from being developed.

Nevertheless, ownership is still the widest home occupation form among the Italian population; homeownership is still considered a fundamental goal in life. For this reason, it represents the main target of housing policies that especially take the forms of fiscal benefits and direct and indirect subsidization. In fact, notwithstanding the consequences of the financial crisis, the housing market improved its performances in 2014 after 7 years of contraction. The house is still the largest investment that Italian families undertake as soon as it becomes economically possible.

4 Mortgage Market

4.1 General Overview of Mortgage Market

4.1.1 Preconditions and Households Characteristics

Historically, Italy has shown a high saving rate similar to other industrialized nations.[7] Table 7 shows household saving rates for the main European countries, Japan and the USA. These figures indicate that the saving rate remained high until 1990, when Italy was ranked first in international comparisons. During the 1990s, the gap between Italy and other OECD countries narrowed considerably. In 2010, the gap almost vanished. In fact, in 2014, Italy was ranked third in international comparison, after France and Sweden, with a rate almost in line with the European average (10% vs. 8.6%), although still considerably higher than in the USA and Japan.

Despite the small size of Italian mortgage and consumer credit markets, the European financial integration and the related fall in interest rates have considerably increased households' incentives to borrow. Moreover, financial integration has spurred increasing competitive pressure, reducing the cost of debt and increasing

[7]This section largely draws on Jappelli et al. (2014).

Table 7 The household saving rate: an international comparison

	1980	1990	2000	2010	2014
Austria	13.3	12.4	9.3	8.9	8.5
Belgium	14.7	12.5	12.5	9.9	9.6
Denmark	–	1.2	−4.0	0	−1.4
Finland	2.3	1.7	0.5	3.6	1.2
France	18.3	12.7	14.3	16.0	15.4
Germany	–	–	9.4	10.9	9.8
Italy	25.0	25.5	12.4	9.4	10.0
Netherlands	11.3	18.1	6.9	3.3	4.7
Norway	3.1	2.7	4.3	5.6	8.7
Spain	12.3	13.5	11.1	13.9	8.9
Sweden	9.7	1.3	3.1	8.3	11.7
UK	13.5	8.6	4.6	7.3	5.5
Japan	16.1	14.2	7.3	2.0	0.6
USA	10.6	7.8	4.0	5.6	4.4

Source: Jappelli et al. (2014) and Cesifo-Dice, OECD Economic Outlook and ISTAT

Note: The household saving rate is the net saving rate of households and non-profit institutions as a percentage of household disposable income. Saving definitions reflect also differences in the individual country definitions

the supply of loans. Jappelli and Pistaferri (2011) report that the household debt to GDP ratio more than tripled from the early 1980s to 2006. They argue that national regulatory changes played an important role with the removal of regulations on entry, limits on the geographical span of lending and separation of long- and short-term lending. Specific mortgage regulation has also eased considerably, while loan maturities and loan-to-value ratios have gradually increased. Thus, although the Italian household debt market still lags behind other industrialized nations, it has increased at double-digit rates, especially around the introduction of the euro, and might have played a relevant role in explaining the reduction in the propensity to save.

Figure 1 plots the propensity to save, the proportion of households with negative savings, the proportion of households with debt and the proportion lacking access to credit for every disposable income quartile from 1984 to 2012. It suggests that the households at the bottom of the income distribution are those that save the least. The saving rate of households below the first quartile is less than 10%, while the rate is almost 40% above the fourth quartile. When we consider the relation between income and the proportion of households with negative savings, we obtain similar results. In fact, such households are concentrated in the left tail of the income distribution (the proportion in the first quartile is almost three times greater than that in the top quartile). The relation between income and the proportion of households with debt is positive and thus is inversely correlated with the two previous indicators. The relation between income and the credit constraint indicator is weaker,

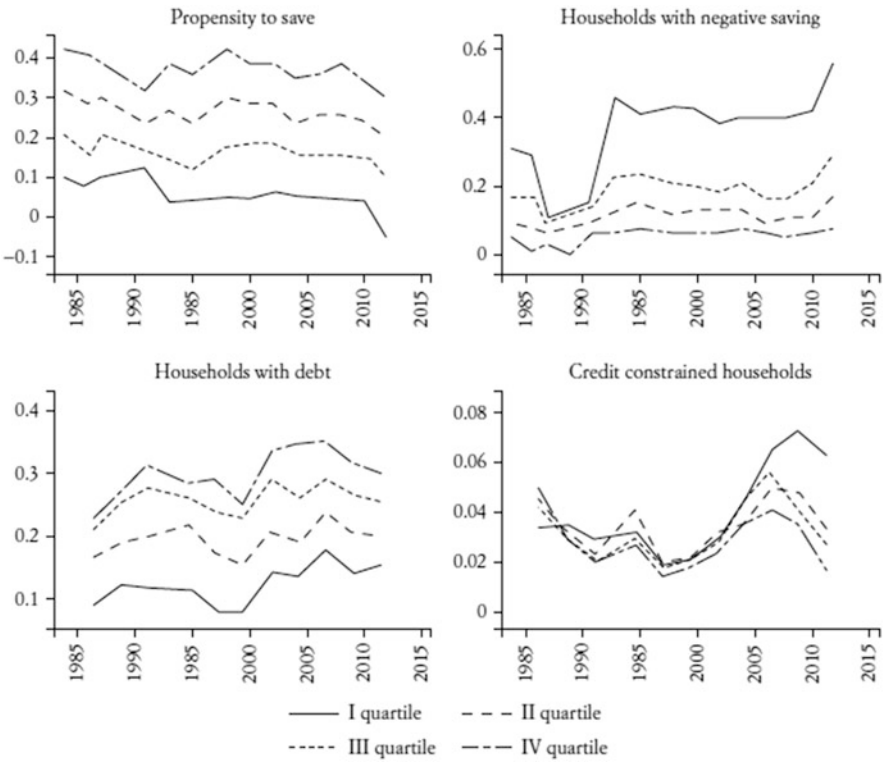

Fig. 1 Saving and debt, by income quartiles. Source: Jappelli et al. (2014)

suggesting credit constraint is mostly concentrated in the low end of the income distribution. Figure 1 also suggests that low-income households are also less well-off economically and financially since they may not save enough for retirement.

Moreover, households headed by younger adults have the lowest propensity to save in Italy. In particular, the proportion of households with negative saving is 10 percentage points higher among households whose head is aged below 45 years compared to those aged between 46 and 55 years. Credit-constrained households tend to be younger, and those headed by younger adults appear to be the most indebted (40% of households with heads younger than 45 are indebted). Their financial situations vary also by region of residence. Saving is higher in northern and central Italy, while the proportion of households with negative saving is higher in the south and increased during the Great Recession. The proportion of households with debt is larger in the centre and north of Italy. In most years, the proportion of credit-constrained households is higher in the south and centre, but recently the gap has closed, and the fraction of households denied credit is similar across the regions.

4.1.2 Mortgage Market Overview

According to an ABI survey focused on 80 banks representing about 80% of the Italian market, residential loans increased on an annual basis by approximately 97%.[8] After 3 years of slight reductions, outstanding residential loans increased by 0.7%, reaching 361.8 billion €. Housing transactions with a mortgage amounted to 193,000 units (rate of increase of 19.5% with respect to 2014). The northeast had the highest increase (23.2%); however, in absolute terms, the northwest had the highest number of transactions with a mortgage, equal to 36.4% of the total, followed by the centre with 22%. In 2015, the amount of mortgages was, on average, equal to 119,000 €: the majority of mortgages fall within the 101,000–200,000 € category (50% of new loans). Mortgages up to 100,000 € (from 27% to 28% of new loans) registered a slight increase. Concerning maturity, in 2015, 30% of mortgages fell within the maturity class of >26 years.

The average interest rate on loans with a maturity less than 1 year fell to 2%, from 2.6% (December 2014), while the 10-year fixed rate declined to 2.8% (with respect to 3.7% of 2014). The average interest rate on new residential mortgage loans decreased to 2.5% from 2.8%. This is related to the improvement of the index of demand for new loans for house purchase, which started to increase after years of decline. This turnaround was driven by consumer confidence, which has been accompanied by a slight recovery in housing sales.

With reference to risk analysis, banks' strategies and more cautious consumer demand have mitigated the risk of this market over time. Also the drop in interest rates contributed to the positive performance; in particular, a close-to-zero Euribor also for 2015 reduced the instalments of variable-rate loans, making them more sustainable. In December 2015, the default rate to 180 days fell to 1.6%, while the default rate to 90 days shows a similar trend, although at higher levels (2.3% in December 2015, compared to 2.7% in 2014).

In 2015, the funding activity of banks and institutional investors was affected by the large amount of liquidity and low interest rates. Deposits in euros of all Italian banks (comprised of residents' deposits and bonds) were equal to 1697.4 billion €, decreased year on year by 0.6%. Considering the various components: resident customer deposits grew by 3.7%, while bank bonds decreased by 13% with respect to the previous year. The Italian covered bond market displayed a decrease in the level of issuance in 2015. In 2015, covered bond issues amounted to about 29.35 billion € (−27.5% compared to 2014), while the volume of outstanding bonds did not significantly change, stabilizing at approximately 130 billion €. Regarding the securitization market, in 2015, the volume of ABS issuances amounted to around 32.2 billion €.

[8]This section largely draws on EMF (2016).

4.1.3 Legal Situation

Mortgage loans are on full recourse under Italian law and offer considerable protection to creditors.[9] As in many countries of continental Europe, borrowers in Italy must repay their debt in full, regardless of any change in the value of the property, and a creditor can in some cases attach other (present and future) assets of the debtor. The recent law on personal bankruptcy provides support for households that are unable to pay their debt. In particular, with the new law, over-indebted households can chose between two new insolvency procedures: restructuring and liquidation. Restructuring is done with the intervention of an ad hoc body and, if feasible, approved by a judge. The debtor can propose an agreement that can postpone payment deadlines or discount the total debt; however, if the procedure encompasses secured debts, creditors should be repaid no less than the collateral market value. The liquidation process is managed by an agent appointed by a judge and, once started, prohibits new legal action against the debtor. If the liquidation of all the debtor's assets is closed but the debt is not yet fully paid off, the debtor can ask the court for a discharge, which can be granted if strict conditions are satisfied. The lengthy process to recover collateral affect banks' expected recovery values. The legal process to repossess collateral can be initiated after single or multiple delays in the payment of rates. The average length of the legal procedures leading to repossession was about 3 years in 2011, having improved from 6 years in 2001. In addition, the lender can activate a foreclosure procedure on other assets of the debtor, consistent with the full recourse legislation.

Regarding tax benefits, homeowners can benefit from some fiscal advantages for the 'first home' purchase, which consist of smaller indirect taxes than the ordinary value. With reference to public guarantees on residential loans for house purchase, in 2014 the 'First home mortgage guarantee fund' entered into force. The public fund has a budget of about 650 million € and will offer guarantees on mortgage financing for an estimated amount of 14 billion €.

4.1.4 Quantitative Data Regarding Mortgage Credits

Loan-to-value (LTV) ratios for mortgages are prudent and have decreased for new mortgages.[10] The low LTV ratios are, in part, a result of strict housing credit regulations and prudent bank practices. According to the Housing Market Survey (Bank of Italy 2013b), LTV ratios on new mortgages have declined from 69% at the end of 2008 to 56% at the beginning of 2013. The average length of new mortgage loans has remained broadly constant at 22 years over this period. For outstanding mortgages, about two thirds had LTV ratios of between 50 and 80%, and only 8% had LTV ratios above 80% in September 2012. The LTV ratios for first-time home buyers in Italy are at the lower range of those in Euro area countries (see Fig. 2). The

[9]This section draws on IMF (2013).

[10]See IMF (2013).

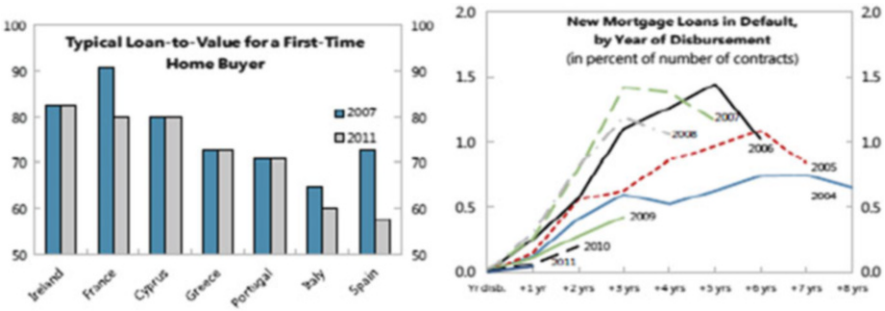

Fig. 2 Loan-to-value and new mortgage loans in default. Source: IMF (2013)

Bank of Italy (2013b) estimates that the share of mortgages in negative equity is near zero.

Default rates on mortgages are low, more so for younger vintages. Stricter selection criteria and lower LTV ratios for mortgage loans have translated into a pronounced decline in default rates on mortgage loans concluded during 2009–2011, compared to those granted in the 3 previous years (Fig. 2).

A low share of mortgages and variable interest rates limit further the balance sheet risk for banks. Outstanding mortgage lending amounted to 365 billion € at the end of 2012, accounting for some 15% of total bank credit. About 70% of mortgages have variable rates typically linked to the 3-month Euribor, even though 10% of these have a cap on the interest rate. The reduction in those rates following the 2008 financial crisis reduced the debt burden of indebted households. However, as part of the tightened credit conditions, lenders have increased the spread over Euribor on new mortgages, to about 3.5 percentage points, against an average of 1% in the precrisis years.

The purchase and sale of housing made in 2015 by individuals by means of a mortgage with a guarantee over the house acquired (NTN IP) are showing a growth rate of + 19.5% compared to 2014 (Table 8) with an increase close to 20% compared to what was observed in 2014. The average capital disbursed for single houses remained essentially unchanged compared to 2014 (approximately 119,000 €). With 22.5 years, the average maturity of loans issued during 2015 remains in line with the previous year. The share of homes purchased by individuals with the use of mortgage loans rises to 45.5%, gaining nearly 5 percentage points compared to 2014. The recovery of the residential market in 2015 has been supported significantly by a sizeable recovery of the supply of credit and the reduction of its cost. In fact, the national average interest rate, reported at the first monthly rate payment of the mortgage, has declined in 2015 by more than 0.5 percentage points, falling to 2.75%.

Table 8 Mortgage market for new houses 2014 and 2015

	Italy			North		
	2014	2015	2014–2015	2014	2015	2014–2015
NTN IP	161,842	193,350	19.5%	91,990	110,479	20.1%
Total loans (million euro)	19,306	23,050	19.4%	10,830	13,063	20.6%
Average loan per house (1000 €)	119.3	119.2	−0.1%	117.7	118.2	0.4%
Average interest rate (I rate)	3.4%	2.7%	−0.65	3.2%	2.59%	−0.61
Average length (years)	22.6	22.5	−0.1	22.5	22.4	−0.1
Average first rate (€)	631	592	−6.1%	612	579	−5.3%
% Incidence over NTN PF	40.6%	45.5%	4.9	45.4%	50.2%	4.8
	Centre			South		
	2014	2015	2014–2015	2014	2015	2014–2015
NTN IP	36,464	42,622	16.9%	33,389	40,250	20.5%
Total loans (million euro)	4932	5744	16.5%	3544	4242	19.7%
Average loan per house (1000 €)	135.3	134.8	−0.4%	106.2	105.4	−0.7%
Average interest rate (I rate)	3.65%	2.93%	−0.72	3.67%	2.98%	−0.69
Average length (years)	23.3	23.3	0	22.1	21.9	−0.2
Average first rate (€)	719	666	−7.4%	584	546	−6.6%
% Incidence over NTN PF	42.5%	47.2%	4.7	30.4%	35.0%	4.6

Source: IMF (2013)

4.2 Overview of Product Types

While the mortgage market in Italy has evolved and become more flexible as compared to a decade ago, the level of competition between the lenders is nowhere close to European standards.

There are five main types of mortgages in Italy:

- **Fixed rate mortgage** offers a fixed interest rate for a fixed period. Once the fixed rate period has ended, the mortgage will revert to the lender's standard variable rate.
- **Variable rate mortgage** offers an interest rate that changes over time, usually when changes are made to the European Central Bank base rate. One can usually get an initially lower rate on a variable rate Italian mortgage than a fixed rate Italian mortgage.

- **Mixed rate mortgage**. The interest rate can move from fixed to variable (or vice versa) at a fixed time and/or under certain conditions indicated in the contract. Advantages and disadvantages are alternately ones fixed or floating rate.
- **Two-rate types mortgage**. The loan is divided into two parts: one with a fixed rate, the other with a variable rate. The double rate is recommended for those who prefer an intermediate solution between the fixed rate and the floating rate, balancing advantages and disadvantages of each.
- **Loan at subsidized rate**. In some cases, public bodies can contribute to the payment of the interests of a mortgage.

There are also two main ways to repay a mortgage:

- With a **repayment mortgage**, the borrower will make monthly repayments that comprise the capital one borrowed and the interest on it. At the end of the mortgage term, the client would have paid off the mortgage amount completely. This is by far the most common mortgage type in Italy.
- The **interest-only mortgage** consists in monthly payments that only cover the interest on the amount one borrowed. At the end of the mortgage term, the client will have to repay the amount borrowed in a lump sum. To get an interest-only mortgage, the borrower should be able to prove to the lender there is an alternative repayment vehicle in place—such as an insurance or investment policy—that will cover the outstanding loan at the end of the mortgage term.

4.3 Conclusion

The credit market for housing in Italy is still suffering from the effect of the recent crisis. However, there are certainly positive and encouraging signals of recovery. On the one hand, the demand for loans by households has been growing since 2013. During 2015, new loans for housing purchase continued to register excellent growth. Residential loans increased on an annual basis by approximately 97%, and outstanding residential loans, after 3 years of slight reductions, increased by 0.7% (EMF 2016). Moreover, the European Central Bank will continue to support loans to households and businesses. On the other hand, the supply of mortgages is also improving, and the main reference indices are at very low levels, thus reducing the cost of funding and creating new opportunities for the market.

Another positive signal of recovery is witnessed by the increase in the index of household confidence, although any evaluation on the economy and the labour market needs to be prudent. The credit sector will remain conditioned by the economic situation of Italy and the Eurozone. Thus, the supply will be prudent in the near future, and the quality of the portfolio of institutions will be a crucial factor that will affect the delivery choices.

5 Overall Conclusions

The integration between the public and private sector in Italy is of prominent importance to ensure a decent standard of living at retirement for the whole population. In this respect, PIPs seem to be very promising given their performances in terms of coverage and returns. In general, the number of subscriptions has been increasing for all the supplementary pension plans and their performance has also been quite positive. Nevertheless, the actual coverage of the supplementary sector is still limited and its expansion quite slow, mostly because they were introduced in a period of crisis. The labour market structure has also determined an unequal diffusion of these schemes. As a result, people more in need of the supplementary scheme are those who will benefit less from them. In order to make the supplementary system really effective, much progress needs to be made, not only to further enlarge the number of members of existing plans but also in terms of providing additional schemes. The Italian housing market could be very helpful in this respect as it is characterized by a high homeownership rate. Although the recent economic crisis has impacted housing affordability significantly for medium- and low-income groups and calls for further public interventions in the housing market, homeownership is still the widest home occupation form among the Italian population.

The credit market plays a fundamental role in the linkage between the pension system and the housing market in Italy. It is encouraging to notice that, despite the negative consequences of the recent economic and financial crisis, there are signals of recovery. The demand for loans by households has been growing since 2013. Moreover, the European Central Bank will continue to support loans to households and businesses. On the other hand, the supply of mortgages is also improving. However, the credit sector will remain conditioned by the economic situation of Italy and the Eurozone.

References

ABI. (2016). *ABI monthly outlook*. Economia e Mercati Finanziari-Creditizi. Roma.

ADEPP. (2016). *Sesto rapporto ADEPP sulla previdenza privata*. https://www.enpam.it/wp-content/uploads/VI-Rapporto-Adepp_integrale.pdf

Adusbef. (2014). *VIII rapporto Adusbef su pignoramenti ed esecuzioni immobiliari in Italia*.

Agenzia delle Entrate. (2015). *Fisco e Casa: Acquisto e Vendita*. Roma.

ASISP. (2014). *Pension, health and long term care*. Italy Country Document. European Commission DG Employment, Social Affairs, and Inclusion. http://ec.europa.eu/social/keyDocuments.jsp?advSearchKey=asisp&mode=advancedSubmit&langId=en&policyArea=&type=0&country=23&year=0

Bank of Italy. (2013a). *I bilanci delle famiglie italiane nell'anno 2012*. Anno XXIV, N. 5. https://www.bancaditalia.it/pubblicazioni/indagine-famiglie/bil-fam2012/suppl_05_14n.pdf

Bank of Italy. (2013b) *Italian housing market survey*. Short-term outlook, October 2013, No. 59.

Bank of Italy (2015) *I bilanci delle famiglie italiane nell'anno 2014*. Anno XXV, N. 64. https://www.bancaditalia.it/pubblicazioni/indagine-famiglie/bil-fam2014/suppl_64_15.pdf

Bianchi, R. (2014). *TENLAW: Tenancy law and housing policy in multi-level Europe*. National Report for Italy. Project of the European Union. http://www.tenlaw.uni-bremen.de/reports/ItalyReport_09052014.pdf

Capuano, R. (2015). Italy's supplementary pension system. In D. Siclari (ed.) *Italian banking and financial Law*. Regulating activities, Palgrave MacMillan studies in banking and financial institutions.

Cecodhas. (2012). *Housing Europe review 2012*. The Nuts and Bolts of European Social Housing Systems, Cecodhas Housing Europe, Brussels.

Conti, R. (2015). *L'adeguatezza delle prestazioni: l'Italia, il metodo contributivo e il contesto europeo*. In Politiche Sociali/Social policies, n. 3/2015, pp. 513–522, Il Mulino.

COVIP. (2015) *Relazione per l'anno 2014*. Considerazioni del presidente, Roma. http://www.covip.it/wp-content/files_mf/1434012965RelazioneAnnuale2014.pdf

COVIP. (2016) *Relazione per l'anno 2015*. Considerazioni del presidente, Roma. http://www.covip.it/wp-content/files_mf/1465467659RelazioneAnnuale2015.pdf

EMF. (2015). *Hypostat: A review of Europe's mortgage and housing markets*. http://www.hypo.org/PortalDev/Objects/6/Files/Hypostat_2015.pdf

EMF. (2016). *Hypostat: A review of Europe's mortgage and housing markets*. https://hypo.org/app/uploads/sites/3/2017/01/Hypostat-2016-FINAL-lighter-web-version.pdf

IMF. (2013). *Technical note on the financial situation of Italian households and non-financial corporations and risks to the banking system*. IMF Country Report 13/348.

Inps. (2015). *Rapporto annuale 2014*, Roma.

Istat. (2011). *15° censimento della popolazione e delle abitazioni 2011*. http://www.istat.it/it/censimento-popolazione/censimento-popolazione-2011

Istat. (2017). *La spesa per consumi delle famiglie*. Anno 2016. https://www.istat.it/it/archivio/202093

Jappelli, T., & Pistaferri, L. (2011). Financial integration and consumption smoothing. *Economic Journal, 121*, 678–706.

Jappelli, T., Marino, I., & Padula, M. (2014). Households' saving and debt in Italy. *Politica Economica, 2–3*, 75–202. https://doi.org/10.1429/80192

Marinelli, N. (2011). *I fondi pensione in Italia, aspetti peculiari e confronti internazionali*. Milano: Franco Angeli editore.

MEF. (2013). *Medium-long term trend of the Italian pension and health care systems*. Official Government Report, Rome. http://www.rgs.mef.gov.it/VERSIONE-I/Attivit--i/Spesa-soci/Attivit--d/2013/index.html

Ministero dell'Interno. (2016). *Gli sfratti in Italia: Andamento delle procedure di rilascio di immobili ad uso abitativo*. Ufficio Centrale di Statistica del Ministero dell'Interno.

Momigliano, S. (2014). *Audizione nell'ambito dell'indagine conoscitiva sulla funzionalità del sistema previdenziale pubblico e privato*. Camera dei Deputati Roma, 11 giugno 2014. https://www.bancaditalia.it/pubblicazioni/interventi-vari/int-var-2014/momigliano_110614.pdf

OECD. (2015). *Pensions at a Glance 2015: OECD and G20 indicators*. Italy country report. OECD Publishing, Paris. http://www.oecd.org/italy/PAG2015_Italy.pdf

OMI. (2016). *Rapporto Immobiliare 2016*. Il settore residenziale.

OMI. (2017). *Nota Trimestrale. Andamento del mercato immobiliare nel IV trimestre 2016 e sintesi annua*. http://www.agenziaentrate.gov.it

Raitano, M. (2007) *Sistema contributivo e adeguatezza delle prestazioni*. In ISAE Rapporto Trimestrale Politiche Pubbliche e Redistribuzione, Roma.

Tinios, P., Bettio, F., & Betti, G. (2015) *Men, women and pensions*. European Commission, Directorate-General for Justice, European Union.

My Home Is My Castle? Sustainability of Private Pensions and Private Homeownership in Hungary

Jörg Dötsch, Martina Eckardt, and Eszter Megyeri

1 Introduction

Hungary's situation in regard to private pensions and private homeownership can only be understood by considering the double legacy of the transition process and the global financial crisis (GFC). While the specific privatization schemes during the transition period in the 1990s resulted in a high rate of owner occupation there, the financial crisis in 2007 severely hit its credit and mortgage markets. Together with a public debt crisis, it also provoked massive political reforms toward private pensions, leading to the quasi-abolition of the former compulsory private pension pillar.

Apart from these political interventions in the aftermath of the GFC, the demographic development will further weaken the current pension system. As Table 1 shows, the size of the population is relatively close to the EU median, whereas it is shrinking much more rapidly (−7.5%). At 25.8% the old-age dependency ratio is slightly lower than the EU median. While wages are exceptionally low (see OECD 2016), the replacement rate of public pensions in relation to wages (58.7%) is close to the EU median. Since Hungarians have to expect comparatively low pensions, residential equity will continue to play an important role as a means of private old-age security. Despite the intermediate price shock on the housing market and support by current policy measures, the recent structure of a high ratio of residential property (88.2%), at the top among the observed EU countries, will probably persist.

The remainder of this chapter is organized as follows. Section 2 analyzes the structure and relevance of private pension schemes within the old-age security system and traces back the relevant public policy measures. Section 3 contains an in-depth analysis of the housing market with a special emphasis on the political

J. Dötsch (✉) · M. Eckardt · E. Megyeri
Andrássy University Budapest, Budapest, Hungary
e-mail: joerg.doetsch@andrassyuni.hu

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Table 1 General country information (2014)

Category	Hungary	EU median
Population (million) (1)	9.8	9.1
Population growth (%, 2015–2060) (2)	−7.5	−1.32
Old-age dependency ratio (%) (3)	25.8	27.3
65+ (% of total population) (4)	17.6	18.6
Owner occupation (% of households) (5)	88.2	74.5
Total outstanding residential loans (EUR) (6)	17,146.0	75,981.5
Growth in mortgage debt (%, 2004–2014) (6)	120.8	118.4
Residential mortgage debt (% of GDP) (6)	16.6	40.6
Per capita mortgage debt (EUR) (6)	2106	11,106
Net replacement rates on mandatory pension programs (%)[a] (4)	89.6	63.7
Replacement rate of public pension in relation to wages (%)[a] (4)	58.7	55.8
Per capita private pension fund assets (EUR) (4)	467	2426

Source: Own compilation based on (1) Eurostat (2015), (2) Eurostat (2017), (3) Eurostat (2016a), (4) OECD (2015), (5) Eurostat (2016b), and (6) Hypostat (2015)

[a]The net replacement rate is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners. Due to lack of availability of data on replacement rates for Bulgaria, Croatia, Cyprus, Latvia, Lithuania, Malta, and Romania, the EU median for variables "Net replacement rates on mandatory pension programs" and "Replacement Rate of Public Pension in relation to Wages" is calculated by excluding those countries. These rates are based on those of 2014

measures influencing its development. Section 4 focuses on the mortgage and credit market, which is at the heart of the current policy strategy in Hungary.

2 Private Pension Schemes

2.1 General Information on Old-Age Security System

The Hungarian pension system is built on the statutory pension scheme organized by the state and on voluntary self-provision. The first pillar is a "mandatory, uniform, defined benefit pay-as-you-go system with an earnings-related public pension combined with a minimum pension" (OECD 2015, 269). It covers all employees as well as the self-employed. People reaching the average retirement age without fulfilling eligibility criteria and no other income can apply for means-tested old-age allowance (ibid.).

In 1997 and 1998, Hungary introduced a funded pension element (CANPI 2016a, see Augusztinovics et al. 2002). Against the background of a high national debt, the government decided to enforce drastic reforms in 2011 and 2012 which led to the abolition of the funded element. Due to the new regulations, payments contributed to the mandatory scheme have been incorporated by the public scheme (OECD 2015, 270). According to the data provided by the OECD, 3.1 million members of the

pension system have been affected (ibid.). Since December 2011 social security contributions (i.e., both provided by employees and employers) are supplied to the central Pension Insurance Fund (ibid.).

The current legal retirement age is 63.5 years and is gradually increasing (legal source: Act LXXXI of 1997). It will reach 65 in 2022 (OECD 2015, 269). Pensions cannot be paid to people younger than the standard retirement age (ibid.). A condition for receiving pensions is a minimum of 20 years of service. To receive a partial pension, 15 years of service have to be proven. The minimum pension is 28,500 HUF per month (ibid.); the amount of other pension income is calculated on the respective net salary and is inflation indexed (CANPI 2016a).

2.2 Overview on Private Pension Product Types

A legal basis for voluntary pension funds in Hungary has existed since 1993. Savings to funds providing future pension supplements are often provided or supported by employers (CANPI 2016a). Members can obtain tax relief on payments. Employers can make payments to the personal accounts of the fund members. Overall, 1.245 million people (i.e., approximately a third of all insured persons) hold savings in voluntary funds (approximately 82 billion HUF) (CANPI 2016b).

Individual pension plans and products in Hungary are the following: (the formerly mandatory) voluntary privately managed pension funds (*magánnyugdíjpénztár*), voluntary pension funds (*önkéntes nyugdíjpénztár*), pension insurance products of life assurance companies (*nyugdíjbiztosítás*), occupational pension services (*foglalkoztatói nyugdíjszolgáltatás*), and retirement savings accounts (*nyugdíj-előtakarékossági számla*). The following subsections describe each product briefly and name the related tax allowances. At the end of the subsection, Table 2 provides key information for each product concerning total assets, number of members, relevant stakeholder groups, the legal framework, type of the insurer, objectives of the product, personal contribution and coverage, financing models, integration capability with other schemes, and treatment on divorce.

2.2.1 Voluntary Privately Managed Pension Funds

Act LXXXII of 1997 on Private Pension Funds introduced this kind of originally compulsory private pension product in 1997. Due to the reforms in 2010/2011, members of private pension funds had to declare their intention to maintain their membership; otherwise it has been terminated. Active members (who declared to stay in 2011) number 62,382 with total assets of 654.82 million euros (EIOPA 2014). Pension funds provide optional investment portfolios. The funds' members place whatever amount they choose from their individual retirement accounts—depending on the time until retirement age—and put it into one of the portfolios (Act LXXXII of 1997). Members of private pension funds returning to the compulsory social security

Table 2 Main characteristics of the individual private pension products

	Voluntary privately managed pension funds	Voluntary pension fund	Pension insurance product of life assurance companies	Occupational pension service	Retirement savings account
Legal framework	– Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems – Act LXXXII of 1997 on private pension funds	– Act XCVI of 1993 on voluntary mutual insurance funds	– Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking up and pursuit of the business of insurance and reinsurance (Solvency II) – Act CXVII of 1995 on personal income tax	– Directive 2003/41/EC on the activities and supervision of institutions for occupational retirement provision – Act CXVII of 2007 on occupational pension and its institutions	– Act CLVI of 2005 on retirement savings accounts
Type of provider	– Private pension fund	– Voluntary pension fund	– Insurer	– Employer (EIOPA 2014), occupational pension provider fund Ltd (Legal source: Act CXVII of 2007)	– Banks, brokerage firms (Pénz-Navigátor 2016)
Objectives of product	– Individual treatment of social risk (Lukács 2014) – Uniform regulation of the system of private pension funds based on membership contributions and individual accounts	– Complementing the statutory pension scheme – Individual management of individual risk – Nonprofit (Lukács 2014) – Increase stability of the social security system	– Savings for retirement – Life insurance (Aegon 2014)	– Management of individual risk besides the employer's payment obligation – Promotion of employers' engagement in the field of retirement savings	– Management of individual risk besides the individual payment obligation (Lukács 2014) – Expansion of voluntary retirement savings options (Lukács 2013) – Established with trading purpose (Verba 2014) – Encourage retirement savings

Total assets or total assets under management (latest available data) (million euros) (EIPOA 2014)	654.82 million euros at 30/06/2014	3405.27 million euros as of 30/06/2014	5.15 million euros as of 31/05/2014	No data	1703.3 million euros as of 30/06/2014
Number of active members (EIOPA 2014)	62,382 as of 31/03/2014	1,159,177 as of 31/03/2014	22,793 as of 31/05/2014	No data	154,306 as of 30/06/2014
Relevant stakeholder groups	– Private pension funds – Organizations conducting state supervision of funds – Fund members – Organizations establishing funds – Persons falling under the scope of international treaties	– Types of fund organizations[a] – All organizations established by the funds – All natural persons who are members of any fund	– Insurer – Insured person – Employer	– Occupational pension provider fund – Branch of another EEA State in Hungary – Supervisory body	– Activity of the investment service based in Hungary concerning pension savings securities accounts, securities deposit accounts, and financial account managements
Personal contribution	– Minimum amount of membership payment shall be determined by the fund's laws	– Monthly payment, minimum amount depending from the provider (Nyugdijbiztositas 2014)	– Minimum annual fee (usually at least 5000 HUF) (Nyugdijbiztositas 2014)	– Member can undertake the payment of the contribution paid by the employer	– Account management fee (annual 1%) – Administrative fee (annual 0, 1–3%) – Transaction fee (Verba 2014) – Simultaneously with opening an account with at least 5000 HUF payment to the pension funds account

(continued)

Table 2 (continued)

	Voluntary privately managed pension funds	Voluntary pension fund	Pension insurance product of life assurance companies	Occupational pension service	Retirement savings account
Personal coverage	– Voluntary membership	– Voluntary membership – Any person who is over the age of 16, agrees to abide by the provisions of the bylaws and agrees to pay membership dues shall be eligible for fund membership)	– Voluntary membership – Who at least 5 years from now reaches the retirement age – Who currently is not eligible for retirement benefits (Aegon 2014)	– Voluntary membership – Membership comes into being by the conclusion or modification of the employment contract with the employer	– Voluntary membership (EIOPA 2014)
Financing models	– Fund benefit, annuity	– Investment portfolios	– Life insurance (Verba 2014)	– Lump-sum pension service – Fixed-term annuity – Life annuity service – Combinations of the after mentioned	– Securities account (Verba 2014) – Securities escrow account, cash account
Money invested in (MABIASZ 2014)	No data	– Optional portfolio	– A fixed rate of return/ asset funds	No data	– Securities (mainly forint based)
Contract design	– Failure to pay membership contributions shall not result in termination of membership – Transfer fee	– In case of death the individual account is inheritable (Lukács 2014) – Cannot be accessed for 10 years	– Inheritable (HVG 2015) – Access before retirement: 120% of all the tax benefits claimed should transferred back to the state (Nyugdijbiztositas 2014)	– If the employee does not fulfill what the contract contains (e.g., quits sooner), he/she loses the entitlement to a pension (Lukács 2014) – Inheritable	– Inheritor can ask for the sale of securities, for the transfer of securities, in the case of retirement cash account for the a lump-sum payment in cash or transfer of the registered funds (legal source: Act

					CLVI of 2005) – In the case of early money withdrawal: 16% PIT + obligation of payment of 27 % health contributions + obligation to pay back the tax credit with 20% increase (HVG 2015)
Integration possibility with other schemes/ pension products	– Unless the law stipulates otherwise, a natural person may become a member of only one fund – Any person eligible for pension benefits may apply for disbursement of the pension plan benefit at the time of or after applying for a social security pension	If a private individual has provided for the transfer of a specific portion of his tax in a voluntary mutual fund statement, an individual retirement account statement and in a pension insurance statement alike, the sum transferred by the tax authority may not exceed (on the aggregate) 280,000 HUF (legal source: Act CXVII of 1995)			
Personal income tax allowance (MABIASZ 2014)	No data	20%	20%		20%
Tax deductibility of contributions	– Members of private pension funds returning to the compulsory social security pension system may apply for tax refund: up to 20% of the sum	– After 10 years of waiting period the return is available without paying PIT (Lukács 2014) – Tax return equal to the 20% of the paid	– Annually 20% (max. 130,000 HUF) tax return (Verba 2014) – Tax benefit only in the case of payments for pensions (Act		– Tax allowances: max. 100,000 HUF (130,000 HUF if the private individual reaches the retirement age before 1 January 2020

(continued)

Table 2 (continued)

	Voluntary privately managed pension funds	Voluntary pension fund	Pension insurance product of life assurance companies	Occupational pension service	Retirement savings account
	transferred by the private pension fund to a voluntary mutual pension fund, not exceeding 300,000 HUF (Act CXVII 1995 on personal income tax)	amount, annually max. 150,000 HUF (Act CXVII 1995 on personal income tax)	CXVII 1995 on personal income tax)		according to the relevant legal regulations) (Act CXVII 1995 on personal income tax)
Inheritable	– Inheritable (Act LXXXII of 1997 on private pension funds)	– Inheritable (Lukács 2014)	– Inheritable	– Inheritable	– Inheritable (Pénz-Navigátor 2016)

Source: Own compilation according to the references mentioned
All fund organizations are established on the basis of the decision of private individuals or by employees at the employer's initiative and organize and provide social and health protection services that supplement, supersede or, in accordance with the conditions defined in a separate act, replace social insurance and other social benefits for their members or, by the right of the fund members, the close relatives thereof (Act XCVI of 1993)

pension system may apply for tax refund: up to 20% of the sum transferred by the private pension fund to a voluntary mutual pension fund, not exceeding 300,000 HUF (Act CXVII of 1995 on Personal Income Tax).

2.2.2 Voluntary Pension Fund

Established in 1993 by the Act XCVI of 1993 on Voluntary Mutual Insurance Funds, the voluntary pension fund is the most popular private pension product in Hungary. Many employers offer it to their employees as a fringe benefit. This private pension product credits the highest tax return (150,000 HUF) annually. Active members number 1,159,177 with total assets of 3405.27 million euros (EIOPA 2014). Savings can be withdrawn after 10 years of membership at the earliest, as a lump sum or an annuity. They are tax-exempt after reaching retirement age. The minimum payment is 1000 HUF/month. Savings in the voluntary pension fund can serve as collateral for a bank loan. In case of death, the account of the fund is inheritable. Members may convey an instruction regarding the transfer of sums from the part of the tax payable on the consolidated tax base. This sum is 20% of the combined total of the sums the member has paid into the fund but not exceeding 150,000 HUF for the tax year (Act CXVII 1995 on Personal Income Tax).

2.2.3 Pension Insurance Products of Life Assurance Companies

Act CXVII 1995 on Personal Income Tax lays down the definition of a pension insurance. Pension insurance is generally a unit-linked life insurance which is inheritable as well. Active members number 22,793 with total assets of 5.15 million euros (EIOPA 2014).

The insured person is the sole beneficiary of the benefits—other than death benefits—for the entire term of the pension insurance contract. The payment of benefits is triggered by the insured person's death or upon the insured person acquiring eligibility for pension benefits or upon health impairment of a degree of at least 40% or upon reaching retirement age. In addition, in the case of reaching retirement state, a minimum of 10 years lapses from the date of conclusion of the pension insurance and the specific insured event (Act CXVII 1995 on Personal Income Tax).

An annual 20%, with a maximum 130,000 HUF tax return, can be claimed for pension insurance, which will be returned to the policyholder's account. To obtain the savings before reaching retirement age, the tax allowances must be paid back with an interest rate of 20%. This applies to the event of death and health impairment and when the holder does not pay the contracted amount of money, in which case the insurance company cancels the contract. In addition to the payback, the tax on the yield must also be paid in the case of breaking the investment in the first 10 years (Act CXVII 1995 on Personal Income Tax).

2.2.4 Occupational Pension Service

Act CXVII of 2007 defines the newest private pension product type, considered a supplementary pension product. A bank, insurance company, or employers can establish occupational pension service. A member can be a person employed by an employer eligible to occupational pension services and whose contract contains the employer's commitment for paying the contribution. Members can supplement the employer's contribution. The membership ceases with death, the termination of the member's employment, if the member changes the occupational pension service provider, or if the pension service is fulfilled. The occupational pension service can be a lump sum, fixed-term annuity, life annuity, or a combination.

2.2.5 Retirement Savings Account

Act CLVI of 2005 defines Retirement Savings Accounts. Active members number 154,306 with total assets of 1703 million euros (EIOPA 2014). Banks and brokerage firms operate them, investing payments in investment funds and government securities and shares. State support concerning them is independent from and will not be combined with other voluntary savings benefits. Exchange rate tax and interest tax do not apply to the return on investment. Savings are inheritable. Pension service can be provided from the account if the owner is entitled to a pension and if the account is terminated at least in the third tax year after the tax year of the account opening. An annual 20% with a maximum of 100,000 HUF tax return can be claimed for the account, which will be returned to the policyholder's account. However, the tax return is 130,000 HUF in the case of those who retire before 2020 (Act CXVII 1995 on Personal Income Tax).

2.3 Conclusion

The demographic development will weaken the current pension system. In the long term, this will be one of the driving forces to find alternatives for old-age provision. Since Hungarians have to expect comparatively low pensions, we expect that residential equity will continue to play an important role as a means of private old-age security. The following section thus gives an overview of the Hungarian housing market.

3 Housing Market

3.1 Recent Housing Situation

The current housing situation in Hungary is to a certain extent shaped by the transition processes from a centrally planned to a market economy (see, e.g., Hegedűs and Tosics 1991). While administered by local councils until 1990, the ownership of the building stock(s) had been then transferred to the municipalities. Under the Housing Law put into force in 1993 (Act LXXVIII of 1993 on Housing), municipalities had to sell the home to the tenant if they stated the intention to purchase the apartment or house. Between 1990 and 2011, 95% of the housing stock has been sold by the municipalities (Hegedűs et al. 2014, 6), most at prices much lower than their estimated market value (ibid., p. 42). One result of the privatization process is that Hungary has one of the highest homeownership rates in the EU with 89.1% (compared to the EU median of 74.5%).

The other important impact on the Hungarian housing market resulted from the GFC. Similar to other European countries, it took a hard hit during the GFC, from which it is only now recovering. House prices decreased dramatically (see Fig. 2), and large parts of the population struggled with indebtedness in foreign currency (see Kovács 2013; Gardos and Nagy 2013; Pitz 2012).

In 2015 there were 4,149,511 households in Hungary (KSH 2017b). Housing stock in 2017 was 4,427,805, from which 455,894 were dwellings with one room, 1.68 million with two, and 2.29 million with three or more (KSH 2017a). In 2016, more than 12% were vacant (KSH 2017c, 27). According to Eurostat (2016b), 70% were occupied, without outstanding mortgage or housing loan, 16.3% owner occupied, with mortgage or loan, 4.3% tenant at market price, and 9.3% tenant for reduced price or free in 2016.

3.2 Market Development

Regarding housing affordability, the FHB index depicts the price development in Hungary since 1998. Figure 1 shows a continuous increase until the GFC, followed by a continuing decrease in prices. Only since 2014 has an accelerating trend of recovery been experienced (see also GPG 2016).

Regarding new or existing homes, the price development has shown basically a similar trend since 2008, with a recovery since 2014, as demonstrated in Fig. 2.

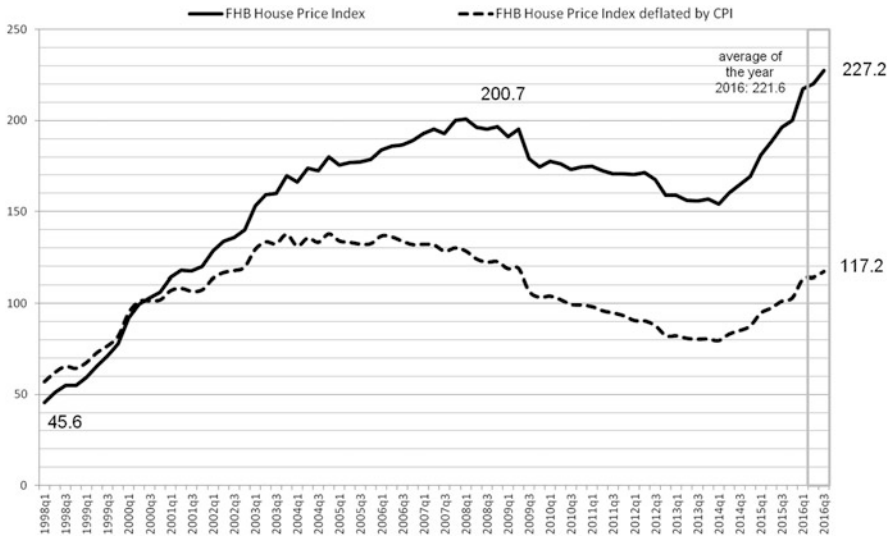

Fig. 1 FHB House Price Index from 1998 to Q3 2016 (2000 = 100). Source: Own composition based on FHB (2017)

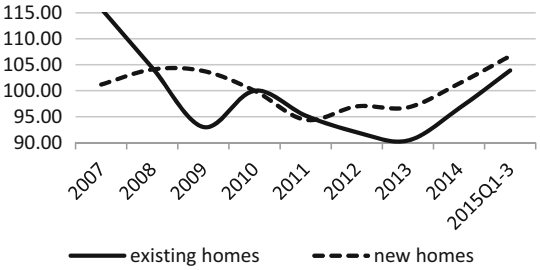

Fig. 2 Price development for new and existing homes, 2010 = 100%. Source: Own compilation based on KSH (2016b)

Average house prices increased more than the average income between 1992 and 2003; however, with the fall in house prices since the GFC, house prices increased less than the average income when looking at the period 1992 to 2012 as reference. After 2012 housing prices then increased faster than average income. The same holds for the house price/income ratio as Table 3 shows.

In 2011, over 20% of the total population living in households where the total cost of housing accounted for more than 40% of household disposable income (housing cost overburden rate) (Pittini 2012, p. 3). Although house prices increased faster than incomes, the affordability of housing improved until the GFC due to a better accessibility of mortgages and lower interest rates (Hegedűs et al. 2014, p. 25). In terms of the house price to income ratio and the housing affordability index, the

Table 3 Housing affordability

	1992	1999	2003	2012	2015
Average mortgage interest rate (%)	32	23	6	12	6
Average house price (million HUF)	1.8	3.7	9.3	6.7	11.9
Average household income (million HUF/year)	0.4	0.9	1.5	2.1	2.2
House price/income ratio	4.5	4.1	6.2	3.2	5.4
Housing affordability index	23	40	78	92	89

Source: Hegedűs et al. (2014, p. 25) and KSH (2016d)

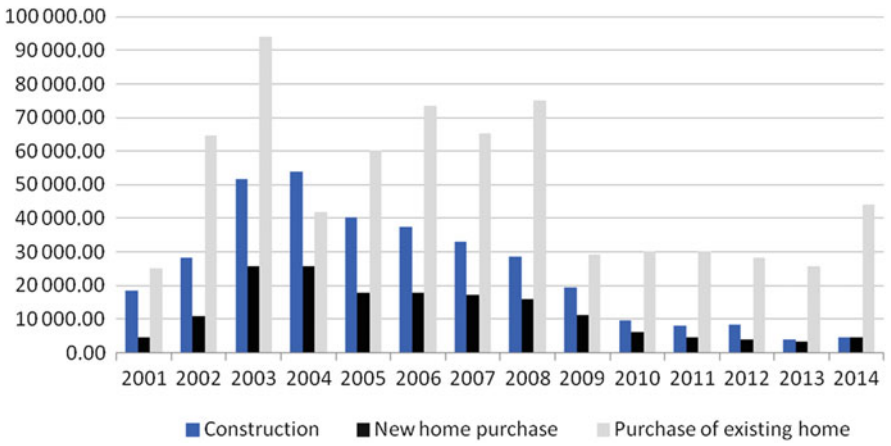

Fig. 3 Loans for construction, new home purchases, and purchases of existing home (2001–2014). Source: Own compilation based on KSH (2015)

situation improved even after the GFC. In fact, however, due to the development of the mortgage market, utility costs, and the social insecurity perceived, the everyday experience was that housing was not more affordable (Hegedűs et al. 2014, p. 25). The government's housing policy seems to have partly absorbed this development recently (see Sect. 4.3).

With the GFC, the activities in the housing market declined sharply in Hungary. Only since 2015 has the number of issued new construction permits increased again (KSH 2016c). However, this recovery is concentrated in the central region around the capital and still only at a very low level. In 2015, the number of construction permits in the central region was still less than half of those in 2007. For the whole country, it was 67% lower than in 2007 (see the overview regarding the development of dwelling and holiday house construction in KSH 2017d).

The number of construction loans also reflects this reduction in construction activities in the housing markets. Figure 3 depicts the decrease of construction loans from 33,000 issued in 2007 to 3935 in 2013.

Loans issued for new homes and existing home purchase decreased in the same period by 80% and 61%, respectively. The total number of loans issued (including

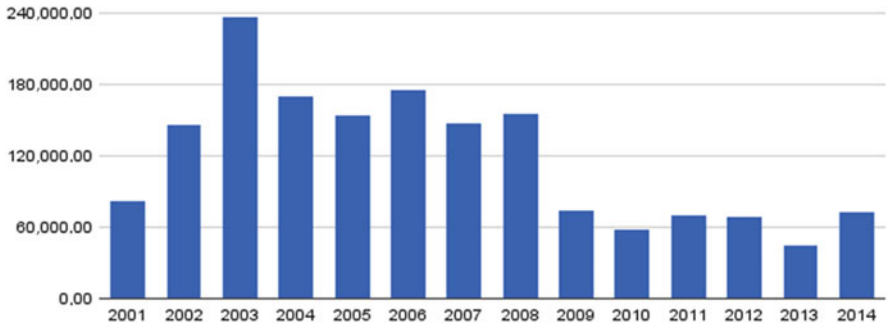

Fig. 4 Total number of loans (2001–2014). Source: Own compilation based on KSH (2017e)

loans for modernization, for loan conversion, and for other purposes) decreased by 69% as Fig. 4 shows.

3.3 Housing Policies, Subsidies, and Taxation

The current government is explicitly trying to create a new middle class—an approach which critics often focus on (see, e.g., Jenei 2012). Fostering family relations is a highly visible core activity of recent Hungarian public policy.

The most important actors regarding the relevant decision-making on the national level are the national government, specifically the Ministry of Interior, the Ministry of National Development, the Ministry of Human Capacities, and the Ministry of National Economy. Due to Act LXV of 1990 on Local Governments, a decentralized system was established. It gives local governments strong basic rights and responsibilities in social and public service delivery, e.g., the allocation of housing and local subsidies (Hegedűs et al. 2014, p. 41ff.).

Housing policy indicates four main pillars: (1) support of homeownership with loan subsidies (see Sect. 4.3.2), (2) housing programs and regional interventions to foster renovation and modernization (see Sect. 4.3.1), (3) housing allowances and arrears management programs (see Sect. 4.3.1), and (4) the increase of the rental stock (Hegedűs et al. 2014, 45). In the following, we focus on the measures mostly relevant for homeownership, especially on the *Family Housing Allowance Program*—which corresponds to (1) and (2)—and taxation. To give the appropriate background information regarding the specific consequences of the GFC in Hungary, we treat some aspects of (3) in Sect. 4.3.3.

3.3.1 Family Housing Allowance Program

In July 2015 the Hungarian government set up a new transfer program named *Családi Otthonteremtési Kedvezmény* (Family Housing Allowance Program) with

Table 4 Summary of the amount of the state aid based on the "CSOK program" and the living space requirements

	New property		Existing property (acquisition or enlargement)	
Number of children	Amount received (HUF)	Min. living space	Amount received (HUF)	Min. living space (m^2)
1 Child	600,000	Not determined	600,000	40
2 Children	2,600,000	Not determined	1,430,000	50
3 Children	10,000,000	Flat: 60 m^2 House: 90 m^2	2,200,000	60
4 or more children	10,000,000	Flat: 60 m^2 House: 90 m^2	2,750,000	70

Source: Own compilation based on Government Decree 16/2016 and Government Decree 17/2016

the acronym "CSOK" which should help families with children in enlarging or acquiring a new home (see Government Decree 16/2016 [II. 10.] and Government Decree 17/2016 [II. 10.]). Since its introduction, the program has undergone a couple of modifications in detail, though the main instruments have not changed (see the related Government Decrees 16/2016 and 17/2016). The subsidy is granted according to the number of children in the household and the kind of dwelling (new or existing property) the subsidy is planned to be used for. Depending on the earlier mentioned factors, the amount of the state aid will vary between 600,000 HUF and 10 million HUF. Additionally, the program prescribes a minimum living space that also can become a determining factor on the quantity of the support granted (see Table 4). The support paid on basis of the CSOK program is singular and does not need to be paid back.

Since the program is part of a family policy, it is tailored to young families or people declaring an intention to have children. That means that anybody can request the CSOK program, married or unmarried couples or even unpartnered singles in the case there is already a child or an embryo older than 12 weeks. Thus, the key issue of the program is the presence of legally integrated children in one household, i.e., own or adopted children or children under guardianship, the latter only if the child is living in the respective household for a minimum of 1 year. Additionally, a really remarkable aspect of the program is the entitlement for making use of the CSOK program independently of the actual headcount of the family, if a couple declares to have children (at most two) and either member of the couple is younger than 40 years old. Should this be the case, the couple has a set time limit to fulfill their commitments, i.e., they should have a child within the period of 4 years or two children within the period of 8 years after signing the contract. In the event this is not accomplished, the subsidy received has to be paid back with interest.

As another criterion, families benefitting from the program commit to live in the property for which the support has been granted for at least 10 years. Moreover, in case of the acquisition of new dwellings or houses, the planning permission or

permission of use must not be older than from June 2008, and the persons benefitting have to be the first owners.

With respect to ownership in other properties, the program does not exclude those already possessing any kind of properties. In the case of enlarging or acquiring existing properties, a maximum of 50% ownership in any other property is allowed, while no limitation at all exists in this with regard to the case of using the support for building or acquiring new properties.

As for a maximum price, in the case of the acquisition of existing property, support can only be provided for acquisitions not exceeding the price ceiling of 35 million HUF. While in the case of the acquisition or building of new properties, no such a price limit exists.

Besides the above-detailed nonrefundable support, families with at least three children can also apply for a loan subsidy. The subsidized loan can be of a maximum 10 million HUF; the subsidy means a 3% decrease of the applicable interest rates, and people can benefit from it over a maximum of 25 years.

Together with the fact that the construction industry can benefit from a VAT reduction (the owner can claim up to a maximum of 5 million HUF), this program is thought to cause a significant impact on the housing market, as economic magazine *index* (see Index 2015) and the Hungarian real estate agency "Otthon Centrum" (see Otthon Centrum 2016) have stated.

In the following, we describe other aspects of taxation relevant to housing.

3.3.2 Taxation

Taxation at Point of Acquisition: Duties On Quid Pro Quo Transfer of Property

On the purchase of a property, the buyer must pay duties on a quid pro quo transfer of property. Its general rate is 4% of the purchase price received, plus 2% if the market value is more than one billion HUF (Act XCIII of 1990 on Duties, Section 19, see also Officina 2016).

On the purchase of a newly built flat with a value of less than 15 million HUF, the quid pro quo transfer of property is duty-free. Young people under the age of 35 must pay only half of the duty if the market value of the residential property is not more than 15 million HUF, thus receiving a discount (Officina 2016).

Taxation During Ownership: Local Tax (Building Tax)

Taxation during ownership is defined in sections 15 and 16 of the Act C of 1990 on Local Taxes. The building tax is a source of income for the local governments. The homeowner, who is registered in the real estate records, is obliged to pay this tax. Consequently, this local tax is generated by ownership, not by using the property.

Two methods exist for calculating the building tax to be paid. The local government can decide on the rate of the building tax per square meters. The maximum is

Table 5 How time is reducing the capital gains tax

Time slot	% of the calculated amount
In the year of acquisition and in the following year	100
In the second year following the year of acquisition	90
In the third year following the year of acquisition	60
In the fourth year following the year of acquisition	30
In the fifth year following the year of acquisition and in the subsequent years	0

Source: Act CXVII of 1995 on Personal Income Tax

1100 HUF/m^2. The other calculation method is based on the adjusted market value of the building. Of this value, 3.6% is equal to the maximum amount of the building tax (Act C of 1990 on Local Taxes).

Taxation in Case of Sale

Basically, the gain from selling a residential home is subject to a capital gains tax of 15%. The exact amount to be paid depends on several factors. The difference between purchase price and selling price determines the tax base, which can be reduced with expenditure items connected to the property (e.g., renovation costs). In addition, time reduces the capital gains tax. Five years after the acquisition of the property, its sale becomes tax-exempt, as Table 5 shows.

Inheritance Tax

Inheritance of property by linear relatives and the spouse of the decedent is exempt from duties. If the heir is the decedent's stepchild, foster child, stepparent, or stepchild, 20 million HUF of the net value of the inherited share acquired is exempt from inheritance duty (NTCA 2016). In any other case, the inheritance and gift duty is 9% of the purchase price (legal source: Act XCIII of 1990).

3.3.3 Additional Information

A specific feature of the GFC in Hungary was the serious consequences of foreign indebtedness as described in the section regarding mortgage and credit market below. Besides other policy measures, the National Asset Management Agency (NAMA)—Nemzeti Eszközkezelő Zrt.—was founded in 2012 to help those borrowers unable to pay their instalments (legal source: Act CLXX of 2011; see also Government Decree 128/2012). It is equipped with a budget sufficient for the purchase of approximately 25,000 properties (Hypostat 2015, p. 49). In particular, NAMA buys properties of borrowers indebted in foreign currency in the name of the

Table 6 Properties bought by the NAMA until 31 December 2016

Year	2012	2013	2014	2015	2016	Total
Buildings bought	600	4208	9119	7553	6363	27,843

Source: Own compilation based on NAMA (2015, 2016)

state and lets the dwellings to the former owner for an unlimited period. The right fixed by the contract is inheritable. Tenants of the former owners are allowed to buy the property within a period of 5 years. According to NAMA, the majority of the families taking part in the program are able to pay their—discounted, i.e., subsidized—rents. For those who are not able to pay their rents for a period longer than 6 months, NAMA ensures interim solutions in cooperation with national charity organizations. NAMA extended its activities from January 2015 on, which means that not only pensioners but also people drawing a widow's pension or dependent parent pension can take part in the program as well. As Table 6 shows, NAMA received 24,263 offers for buying up private property up to 31 December 2014, which means that the legally fixed maximum of 25,000 properties had been practically reached in that year. And altogether 27,843 properties were bought by the end of December 2016 (see NAMA 2016; see also NAMA 2015).

3.4 Conclusion

In the EU context, Hungary has a comparatively high ratio of residential property. It suffered badly from the impact of the GFC. Housing prices caved. Large parts of the population have been affected by the weakening of the national currency because of mortgage loans denominated in foreign currency. Among other rescue actions, the National Asset Management Agency (NAMA) was founded. By the end of 2016, NAMA had bought almost 28,000 housing properties and let them to the former owners with subsidized rents.

Current policy measures focusing on families with children like the "Family Housing Allowance Program" or support for housing loans will probably strengthen the recent structure of a high ratio of residential property.

4 Mortgage and Credit Market

4.1 General Overview

In Hungary, "banks, specialized mortgage banks, savings cooperatives, home savings banks, (and) financial companies (mortgage houses)" are allowed to issue mortgage loans (Hypostat 2015, p. 51). The Hungarian Financial Supervisory Authority ("Pénzügyi Szervezetek Állami Felügyelete") existed until 1 October

2013, when financial supervision was transferred to the Hungarian National Bank (IMF 2014, p. 15f.).

Regarding new issuances, banks held the biggest market share with 42% in 2014, while mortgage banks and savings cooperatives each held approximately one third (Hypostat 2015, p. 51). Regarding the outstanding mortgage loans, market differentiation is more distinct: banks held 65%, while mortgage banks held 27% (Hypostat 2015, p. 51).

Hungarian borrowers can buy credit insurance ("*hitelfedezeti biztosítás*"), but this is not a compulsory part of loan contracts.

4.1.1 Country-Specific Characteristics of the Global Financial Crisis

After 2005, large parts of the Hungarian population had taken out foreign currency loans for housing because of the lower interest rates, most denominated in CHF. One impact of the GFC in Hungary was the weakening of the national currency. Hence, Hungary faced a foreign indebtedness crisis with severe consequences for numerous households. The government introduced several legislative acts to respond to the crisis, e.g., a moratorium for foreclosures beginning at 1 September 2009 lasting to 31 December 2010 (legal source: Act XVII of 2014). In 2009, households with payment difficulties caused by unemployment could make use of a reduction of their instalments on mortgage loans for a period of maximum 2 years. The government sets up a program which guaranteed the repayment of deferred instalments to the lenders if the borrowers fulfilled a defined set of criteria for restructuring (3000 of 24,000 loans have been approved in this program) (Hegedűs et al. 2014, p. 30). "Exchange rate cap scheme" programs have been established to protect borrowers against exchange rate risks. At the beginning of 2015, all foreign currency mortgage loans in Hungary had to be converted into the national currency, and exceptions could only be made if debtors specifically requested and complied with strict criteria (legal source: Act LXXVII of 2014, 12.§). Furthermore, lenders had to refund to borrowers "unjustified" raised interest rates and exchange rate fluctuations. Due to the conversion, a significant change occurred in the composition of the mortgage loan portfolio. As documented by Hypostat (2015, p. 50), at the end of 2014, the ratio of loans in HUF of the total outstanding portfolio was 47%, while it amounted to 98% at the end of the first quarter of 2015. If a debtor preferred to maintain the foreign currency loan, lenders had to provide a reconversion (Hypostat 2015, p. 49f.).

4.1.2 Level of Mortgage Debt

Residential mortgage debt in Hungary is 2106 € per capita and approximately 17% of GDP, less than the half of the EU median. In contrast, however, regarding growth in mortgage debt, Hungary shows a higher percentage than the EU median (see Table 1).

4.1.3 Loan-to-Value Ratio and Loan-to-Income Ratio

Due to a new regulation, from 2015 onward, the loan-to-value ratio has to be a maximum of 80% (mortgage in HUF) and 85% in the case of leasing (HUF based) (Hypostat 2015, p. 49); if EUR based, 50% (mortgage) and 55% (leasing); and other currencies, 35% (mortgage) and 40% (leasing). The Hungarian Central Bank declared in 2014 that "(t)he payment-to-income ratio for all new forint loans taken out after 1 January 2015 may not exceed 50% and, for high-income borrowers (i.e. for those with a HUF 400,000 net salary or above), it may not be higher than 60%. (. . .). PTI limits on euro and other foreign currency loans will be much stricter in order to offset the negative effects of potential exchange rate depreciation: 25% and 10% and, for higher-income customers, 30% and 15%, respectively" (Hungarian Central Bank 2014). For families with children, state aid for housing loans is provided (legal source: Government Decree 361/2009 [XII. 30.]).

4.1.4 Standard Length of Mortgage Contracts

According to the statistical authority, the average length of mortgage credits for acquiring dwellings was 13.3 years in 2014 (KSH 2016a, p. 3), and in 2015 it increased by more than half a year, approaching 14 years (ibid.). The average length of the mortgage credits for *construction* of new dwellings was the longest (16 years) and was followed by the mortgage credits for acquiring new flats (15.2 years) and the mortgage credits for acquiring existing dwellings (nearly 15 years) (ibid.).

4.1.5 Tax Treatment of Mortgage Credit Contributions

Until January 2007, there was tax relief on mortgage credit contributions. After its termination, there was a transition period for those who had concluded their contracts before 2007, which ended with the tax year 2015 (AVH 2012).

4.2 Overview of Product Types

In general, there are three major groups of mortgage credit in Hungary. The first type can be used for any purpose the borrower has (*szabad felhasználású)*. Borrowers do not need to allow inspection of their bank accounts. The most popular loan type is the mortgage credit for housing (*lakáscélú)* (Hypostat 2015, p. 40), for which lenders request an inspection of the bank account. The third option is the replacement of a

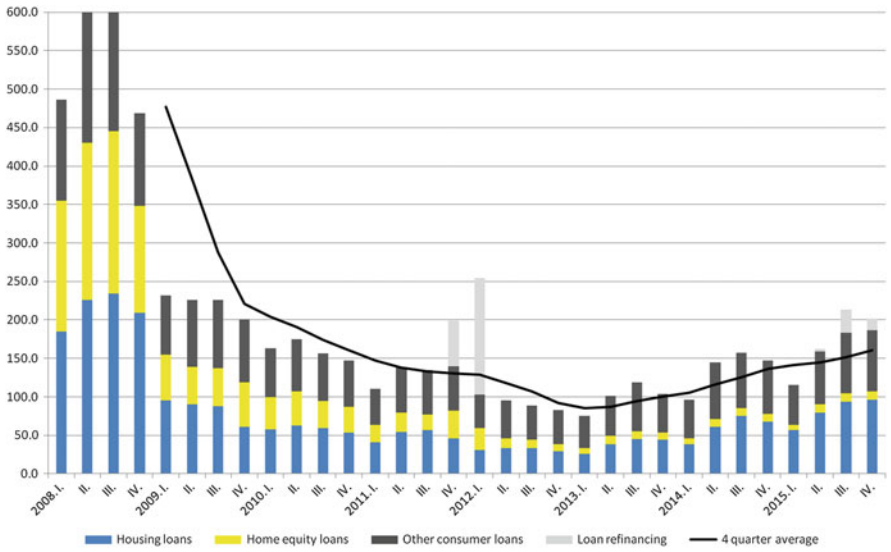

Fig. 5 New household loans in the entire credit institution sector 2008–2015. Source: Hungarian Central Bank (2016, p. 14, Chart 4).

credit construction for a new, more favorable mortgage construction ("adósságrendező jelzálog alapú hitel") (legal source: Act XXX of 1997).

According to the Hungarian Central Statistical Authority, the volume of housing credits was 3324 billion HUF at the end of 2014, 10.4% of GDP (KSH 2016a). Until the end of 2015, the volume decreased to 2997 billion HUF, while the ratio to GDP decreased to 8.9% (ibid.). Figure 5 depicts the composition of new loans taken out by households between 2008 and 2015.

The Hungarian Central Statistical Authority provides an overview of the social characteristics of households with credit (KSH 2011; for earlier research, see Bethlendi 2009). According to this, 725,000 households held mortgage credits, 80% for acquiring dwellings (ibid., p. 1). The share of mortgage credits was the highest in the highest income group (14%), while the lowest income group showed a share of only 8% (ibid. 3).

4.3 Fiscal Incentives for the Mortgage and Credit Market

These are the following fiscal incentives on the mortgage and credit market in Hungary: (1) the "traditional" state support of *home savings* ("lakástakarék"), which has been available on the market for almost 20 years and (2) *state subsidies for housing loans, like* the *Family Housing Allowance Program* ("CSOK").

4.3.1 Home Savings

One of the most important incentives in Hungary is given by the state aid for home savings (*lakástakarék*), based on Act CXIII of 1996 on Home Savings and Loan Associations. Four companies offer this product on the Hungarian market: Fundamenta, OTP, Erste, and Aegon. Apart from smaller differences, home savings work almost the same: *One* person with a tax number in Hungary (e.g., also foreigners working in Hungary) can close *one* savings contract for the *lakástakarék* with the purpose to invest saved money exclusively for acquiring a new home or renovating or improving an existing home (see Bankmonitor 2013). *Whose* dwelling is acquired or improved does not matter, only the evidence that the contractor invests the saved money in anyone's real estate is relevant. The state supports 30% of the monthly payments, capped at a maximum of 72,000 HUF/year. Moreover, the interest is free from capital gains tax. In Hungary, a country with high homeownership rates and small incomes, this is a widely used product.

These home savings products are allowed to be used to repay mortgage credits, which implies a real reduction of the interest burden of a mortgage. Since a *lakástakarék* contract can be closed with any person with a tax number, many families close contracts for as many family members as possible to use as much of the subsidies from this source as possible.

4.3.2 State Subsidies for Housing Loans

State subsidies for housing loans have existed for more than one decade. After 2000, the government implemented state subsidies to increase investment in the housing market. A new interest rate subsidy and tax exemptions were introduced for housing loans (Hegedűs et al. 2014, p. 45). In 2005, the interest rate subsidy was cut, but the subsidies for renovating were expanded (ibid., p. 46). In accordance with a new regulation in 2009, there is a state subsidy for loans for purchasing or renovating residential property (legal source: Government Decree 134/2009. [VI. 23.]). Recently, the state has again expanded its subsidizing activities by supporting loans for buying new dwellings or for renovating a building for a period of 5 years (see Government Decree 341/2011. XII.29.). Regarding building or buying a new property, the supported loan is capped at 15 million HUF and for existing property at 10 million HUF. Overall, the value of new property must not exceed 30 million HUF if buying without VAT and building new property with VAT. The value of existing property must not exceed 20 million HUF, and modernization costs must not exceed 15 million HUF. A minimum of 70% of the costs have to be formally documented by VAT invoices. If the support exceeds 70% of the costs, the whole sum has to be documented. If acquiring new property, the interest rate subsidy amounts to 60% for families with a maximum of two children. Families with more than two children can receive a subsidy of 70%. In the case of existing property, the subsidy is 50% (Hegedüs et al. 2014, p. 58).

4.3.3 Family Housing Allowance Program

Besides the financial support provided by the state for acquiring, enlarging, or renovating residential property, the state subsidizes housing loans for families within the "Family Housing Allowance Program" (see Sect. 4.3.1).

4.4 Additional Information

Table 7 displays the distribution of loan contracts in Hungary regarding provider, volume, and state aid.

Table 8 provides an overview of the housing loans given to private households in 2014 according to data provided by the Hungarian Central Bank. The table provides information regarding the quality of the loans taken out. Because since 2015 the Hungarian Central Bank does not collect data regarding the quality of loans, all numbers are calculated from the gross data provided in December 2014. According to these figures, housing loans and especially subsidized housing loans show a high quality, but overall the ratio of dubious, bad, or below average loans is critical. The inferior quality of the foreign currency-based loans in the last quarter of 2014 is a problem meanwhile addressed by prohibiting foreign currency lending and by introducing macroprudential instruments.

Table 7 Loans for housing, 31 December 2016

Provider	With state aid	Without state aid	Total	Foreign currency base
	Number of contracts			
Banks	66,452	226,186	292,638	950
Mortgage providers	130,064	84,040	214,104	64
Savings banks and credit cooperatives	9497	16,896	26,393	2
Home loan banks	–	109,095	109,095	–
Total	206,013	436,217	642,230	1016
	Volume in million HUF			
Banks	237,992	1,491,600	1,729,592	5353
Mortgage providers	419,591	388,051	807,642	681
Savings banks and credit cooperatives	34,006	57,808	91,814	36
Home loan banks	–	283,357	283,357	–
Total	691,589	2,220,816	2,912,405	6070

Source: Own compositon based on KSH (2017e)

Table 8 Quality of loans in Hungary

Type of housing loan	Unproblematic	Requiring extra attention	Below average	Dubious	Bad	Total
	% of credit portfolio					% of contracts
Market-based interest and others (in HUF)	82.85	2.78	1.35	7.99	5.03	5.65
			Together: 14			
Subsidized (in HUF)	93.29	3.27	1.57	1.07	0.80	4.6
			Together: 3			
Mortgage (in foreign currency)	49.19	28.16	5.36	10.71	6.57	4.14
			Together: 23			
Mortgage equity withdrawal (in HUF)	58.68	7.22	3.62	15.31	15.16	3.23
			Together: 34			
Mortgage equity withdrawal (in foreign currency)	34.41	30.28	7.41	16.03	11.86	5.13
			Together: 35			

Source: Own composition based on Hungarian Central Bank (2015)

4.5 Conclusion

In Hungary the mortgage and credit markets have still not completely recovered from the GFC (see Hypostat 2016, p. 16). But though recovery is slow, the market situation is improving. New macroprudential regulation provides greater stability. The current policy creates an environment that stimulates homeownership with several incentives and may provide a greater long-term stability on the mortgage markets. Thus, the present developments seem to benefit the accumulation of housing wealth.

References

Act C of 1990 on local taxes.
Act CLVI of 2005 on retirement saving accounts.
Act CLXX of 2011 on securing housing of natural persons not being able to comply with their obligations set in credit contracts.
Act CXIII of 1996 on home savings and loan associations.
Act CXVII of 1995 on personal income tax.
Act CXVII of 2007 on occupational pension and its institutions.
Act LXV of 1990 on local governments.
Act LXXVII of 2014 on settling certain issues related to the conversion of the currency of certain consumer loans and to the rules governing interest rates
Act LXXVIII of 1993 on housing.
Act LXXXI of 1997 on social security pension benefits.
Act LXXXII of 1997 on private pension funds.

Act XCIII of 1990 on duties.
Act XCVI of 1993 on voluntary mutual insurance funds.
Act XVII of 2014 on the modification of Act LIII of 1994 on judicial execution
Act XXX of 1997 on mortgage-loan institutions and debenture bonds.
Aegon Relax Nyugdíjbiztosítás (Aegon). (2014). *Aegon Nyílt Lapok*. Accessed April 11, 2016 from https://www.aegon.hu/media/dokumentumok/Nyugdijbiztositas/NYIA03-NYL-140919-01_0.pdf
Augusztinovics, M., Gál, R. I., Matits, Á., Máté, L., Simonovits, A., Stáhl, J. (2002). A Magyar nyugdíjrendszer az 1998-as reform előttt és után. In *Közgazdasági szemle, XLX*, június (pp. 473–517).
Bankmonitor. (2013). *Mi az a lakástakarék?* 6.11. 2013. Accessed April 6, 2016 from http://www.bankmonitor.hu/jobb-tudni/mi-az-a-lakastakarek.htm
Bethlendi, A. (2009). Consumption and savings of hungarian households. The importance of credit market. *Acta Oeconomica, 59*(1), 23–55.
Central Administration of National Pension Insurance (CANPI). (2016a). *The statutory pension insurance system*. Accessed March 10, 2016 from https://www.onyf.hu/en/structure/statutory-pension-insurance-system.html
Central Administration of National Pension Insurance (CANPI). (2016b). *The voluntary private pension scheme*. Accessed March 10, 2016 from https://www.onyf.hu/en/structure/voluntary-private-pension-scheme.html
European Insurance and Occupational Pensions Authority (EIOPA). (2014). *Database of pension plans and products in EEA*. Accessed April 11, 2016 from https://eiopa.europa.eu/Publications/Reports/EIOPA-OPC-14-059_Database%20of%20pension%20plans%20products%20in%20EEA.xlsx
Eurostat. (2015). *Statistics on population change – demographic balance and crude rates at national level*. Accessed April 11, 2016 from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_gind&lang=en
Eurostat. (2016a). *Statistics on old age dependency ratio*. Accessed April 11, 2016 from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=tsdde510&lang=en
Eurostat. (2016b). *Statistics on income and living conditions, distribution of population by tenure status*. Accessed April 11, 2016 from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en
Eurostat. (2017). *Statistics on baseline projections: demographic balances and indicators (proj_15ndbims)*. Accessed April 28, 2017 from http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do
FHB. (2017). *FHB Lakásárindex 2016 III. negyedév*. Accessed April 28, 2017 from http://www.fhbindex.hu/FHB-Index/FHB-Lakasarindex/Legutobbi-kiadvanyunk
Gardos, I., & Nagy, A. (2013). A devizahtitel jogi alapkérdései. In: *Hitelintézeti Szemle, 5*. Accessed April 12, 2016.
Global Property Guide (GPG). (2016). *After a dramatic two-year property boom, what next for Hungary?* August 15, 2016. Accessed July 17, 2017 from http://www.globalpropertyguide.com/Europe/Hungary/Price-History
Government Decree 128/2012 (VI. 26.) on certain rules relating to the operating of the National Asset Management Agency.
Government Decree 134/2009. (VI. 23.) on public support for the housing loans of young people and families with several children.
Government Decree 16/2016. (II. 10.) on the subsidy for housing purposes for the building or acquisition of new properties.
Government decree 17/2016. (II. 10.) on the family housing allowance demandable for the acquisition or enlargement of existing properties.
Government Decree 341/2011 (December 29, 2011) on the home-creation interest rate subsidy.
Government Decree 361/2009. (XII. 30.) on prudent retail lending and the assessment of credit eligibility.
Hegedüs, J., & Tosics, I. (1991). Privatizáció a lakásrendszerben. *Esély, 3*, 60–67.

Hegedüs, J., Horváth, V., Teller, N., & Tosics, N. (2014). *TENLAW: Tenancy Law and housing policy in multi-level Europe*. National report for Hungary.
Hungarian Central Bank. (2014). *Upper limit on the payment-to-income-ratio protects households as dept cap*. Accessed October 4, 2017 from https://www.mnb.hu/en/pressroom/press-releases/press-releases-2014/upper-limit-on-the-payment-to-income-ratio-protects-households-as-a-debt-cap
Hungarian Central Bank. (2015). *A háztartási szektor részére nyújtott hitelállomány összetétele*. Downloaded February 06, 2016 from https://www.mnb.hu/letoltes/a-haztartasi-szektor-reszere-nyujtott-hitelallomany-osszetetele.xls
Hungarian Central Bank. (2016). *Trends in lending*, February 2016. Accessed July 11, 2016 from https://www.mnb.hu/en/publications/reports/trends-in-lending/trends-in-lending-february-2016
Hungarian Central Statistical Office (KSH). (2011). *Statisztikai Tükör V. évfolyam 77. szám*, november.
Hungarian Central Statistical Office (KSH). (2015). *Statisztikai Tükör 72. szám, október. Lakossági lakáshitelezés, 2015. I. félév, összeállította Központi Statisztikai Hivatal*.
Hungarian Central Statistical Office (KSH). (2016a). *Statisztikai Tükör 2016, aprilis 15. Lakossági lakáshitelezés*. https://www.ksh.hu/docs/hun/xftp/idoszaki/lakashitel/lakashitel1512.pdf
Hungarian Central Statistical Office (KSH). (2016b). *Statistical reflections 29, January*. Housing prices, housing price index, Quarter 3 2015. http://www.ksh.hu/docs/eng/xftp/stattukor/elakaspiacar/elakaspiacar153.pdf
Hungarian Central Statistical Office (KSH). (2016c). *Issued new construction permits (2003–) (2/2)*. Accessed July 11, 2016 from https://www.ksh.hu/docs/eng/xstadat/xstadat_annual/i_zrp002b.html
Hungarian Central Statistical Office (KSH). (2016d). Miben élünk? A 2015. évi lakásfelmérés főbb eredményei. Augusztus.
Hungarian Central Statistical Office (KSH). (2017a). *Dwelling stock, inhabitants density within dwellings, 1 January (1990–) (2/2)*. Accessed July 17, 2017 from https://www.ksh.hu/docs/eng/xstadat/xstadat_annual/i_wde001b.html
Hungarian Central Statistical Office (KSH). (2017b). *Data of total households by deciles, regions and type of settlements (2010–) (4/4)*. Accessed July 17, 2017 from https://www.ksh.hu/docs/eng/xstadat/xstadat_annual/i_zhc014d.html?down=1060
Hungarian Central Statistical Office (KSH). (2017c). *Mikrocenzus 2016. 2. A népesség és a lakások jellemzői*. Felelős Szerkeztő: Kovács Marcell főosztályvezető. Budapest. Accessed November 27, 2017 from https://www.ksh.hu/docs/hun/xftp/idoszaki/mikrocenzus2016/mikrocenzus_2016_2.pdf
Hungarian Central Statistical Office (KSH). (2017d). *Dwelling and holiday house construction (1960–)*. Accessed July 11, 2016 from http://www.ksh.hu/docs/eng/xstadat/xstadat_long/h_zrs001.html
Hungarian Central Statistical Office (KSH). (2017e). *Housing credits (2001–) (1/2)*. Accessed July 19, 2017 from http://www.ksh.hu/docs/eng/xstadat/xstadat_annual/i_zrh001a.html?down=80
HVG. (2015). *Így húzd le nyugdíj-kiegészítésért az államot*. 18 November 2015. Accessed April 11, 2016 from http://hvg.hu/gazdasag/20151118_Igy_huzd_le_nyugdijkiegeszitesert_az_alla
Hypostat. (2015). In Colonna, P., & Bertalot, L. (Eds.), *EMF Hypostat 2015. A review of Europe's mortgage and housing markets*. Brussels: European Mortgage Federation.
Hypostat. (2016). In Westig, D., & Bertalot, L. (Eds.), *EMF Hypostat 2016. A review of Europe's mortgage and housing markets*. Brussels: European Mortgage Federation.
Index. (2015). *Elképesztő, mi jöhet most az ingatlanpiacon*. Accessed July 17, 2017 from http://index.hu/gazdasag/2015/12/30/csok/
International Monetary Fund (IMF). (2014). IMF country report 14/155. Hungary.
Jenei, M. (2012). *Milyen középosztályra gondolhatott Orbán?* 2012.03.05. Accessed April 11, 2016 from http://index.hu/gazdasag/magyar/2012/03/05/kozeposztaly/
Kovács, L. (2013). A devizahitelek háttere. In *Hitelintézeti Szemle, 3*, pp. 183–193.
Lukács, M. (2013). *A magyar nyugdíjrendszer pénzintézeti szereplői*. Accessed April 11, 2016 from http://www.tradiciopenztar.hu/doksik/penzugy_nyugdij201310.pdf

Lukács, M. (2014). *A magyar nyugdíjrendszer pénzintézeti szereplői*. Accessed April 11, 2016 from http://www.patikapenztar.hu/dok/penzugy_nyugdij20141113.pdf

Magyar Biztosítási Alkuszok Szövetsége (MABIASZ). (2014). *Kaphatsz sokkal több nyugdíjat is: 30-40 milliód lehet*. Accessed April 11, 2016 from https://www.mabiasz.hu/hirfigyelo/kaphatsz-sokkal-tobb-nyugdijat-30-40-milliod-lehet

National Tax and Customs Administration (NTCA). (2016). *Guidelines, summaries on taxation*. Accessed July 11, 2016 from http://en.nav.gov.hu/taxation/taxinfo/Fees_charges_duties.html

Nemzeti Adó- és Vámhivatal (AVH). (2012). *Tájékoztató a lakáscélú hitel törlesztéséhez kapcsolódó adókedvezmény áthúzódó kedvezményként történő igénybevételéről*. 15.05. Accessed April 11, 2016 from http://nav.gov.hu/nav/ado/szja/lakascelu_athuzodo.html?honap=2015_3

Nemzeti Eszközkezelő Zrt. (NAMA). (2015). *Jelentős segítség a Nemzeti Eszközkezelő a szociálisan rászoruló, eladósodott családoknak*. Press release 16.01.2015. http://www.netzrt.hu/wp-content/uploads/2015/10/2015_01.pdf

Nemzeti Eszközkezelő Zrt. (NAMA). (2016). Éves beszámoló. 2016 december 31. Budapest. Accessed July 17, 2017 from http://www.netzrt.hu/wp-content/uploads/2017/06/NET_%C3%89ves-besz%C3%A1mol%C3%B3-2016.pdf

Nyugdijbiztositas. (2014). Nyugdíjbiztosítás összehasonlítás. Accessed July 11, 2016 from http://nyugdijbiztositas.com/nyugdijbiztositas-osszehasonlitas/

OECD. (2015). *Pensions at a glance 2015. OECD and G20 indicators*. OECD Publishing, Paris. Accessed July 21, 2017 from http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/pensions-at-a-glance-2015_pension_glance-2015-en#.WXVtKYjyhPY

OECD. (2016). *Average wages*. Accessed September 28, 2016 from https://data.oecd.org/earnwage/average-wages.htm

Officina. (2016). *Ingatlan Illeték 2016 eladás vagy vétel esetén: mennyi az átírási illeték és adó mértéke lakás vagy ház eladásakor?* Accessed April 11, 2016 from http://officina.hu/gazdasag/113-ingatlan-illetek?jjj=1459708936368

Otthon Centrum. (2016). *Nincs megállás az ingatlanpiac fellendülésében*. Accessed July 17, 2017 from https://www.oc.hu/ingatlanpiac/hirek/ingatlanpiaci-hirek-vevoknek/otthon-centrum-nincs-megallas-az-ingatlanpiac-fellenduleseben

Pénz-Navigátor. (2016). *Nyugdíjhelyzet*. Accessed July 11, 2016 from http://penz-navigator.hu/penzuegyi-strategiak/nyugdijhelyzet/nyugdijhelyzet.html

Pittini, A. (2012). *Housing affordability in the EU. Current situation and recent trends*. Accessed April 11, 2016 from http://www.iut.nu/Literature/2012/CECODHAS_HousingAffordability2012.pdf

Pitz, M. (2012). A svájcifrank-alapú jelzáloghitelek kamatait alakító tényezők. In *Hitelintézeti Szemle* (pp. 62–68). Különszám.

Verba, G. (2014). *Nyugdíj Előtakarékossági Számla (NYESZ) vagy Nyugdíjbiztosítás?* Accessed April 11, 2016 from http://nyugdijbiztositas.com/nyugdij-elotakarekossagi-szamla-nyesz-vagy-nyugdijbiztositas/

Part IV
Countries with a Low Degree of Homeownership and a Low Degree of Private Pensions

Germany: Ageing Economy with Rising Pension Gap, Stable Mortgage Market and Well-Developed Rental Market

Sebastien Clerc-Renaud, Dirk Ulbricht, and Doris Neuberger

1 General Country Information

Germany is one of the wealthiest and the largest EU Member State, but its population of 80.9 million is facing one of the strongest demographic shifts in Europe in the decades to come (as a result of increasing life expectancy and low fertility to be countered by an as of yet not reflected increase in net migration) which is forcing younger generations to increase private savings for retirement. As shown in Table 1, an assessment of the conditions for development of private pension provision associated with ownership of residential real estate in Germany is largely driven or limited by the country's comparatively low homeownership rate, historically stable mortgage markets and a considerably lower net replacement rate from mandatory sources of retirement income. In this country study, three relevant dimensions for one's retirement income in old age (pensions, housing and mortgages) will be explored by describing the situation and identifying the policy options paths that have been chosen in those areas so far.

S. Clerc-Renaud · D. Ulbricht
Institut für Finanzdienstleistungen, Hamburg, Germany
e-mail: sebastien.clerc-renaud@iff-hamburg.de; dirk.ulbricht@iff-hamburg.de

D. Neuberger (✉)
Institut für Finanzdienstleistungen, Hamburg, Germany

University of Rostock, Rostock, Germany
e-mail: doris.neuberger@uni-rostock.de

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Table 1 Country overview of key conditional factors (2014 values)

Category	Germany	EU median
Population (million)	80.9	7.9
Population growth (%, 2014–2050)	−10.9	−0.1
Old-age dependency ratio (%)	32.2	27.3
65+ (% of total population)	21.4	18.6
Owner occupation (% of population, 2014)	52.5	74.5
Total outstanding residential loans (million euros)	1,237,410	75,982
Growth in mortgage debt (%, 2004–2014)	6.9	118.4
Residential mortgage debt (% of GDP)	42.4	40.6
Per capita mortgage debt (€)	18,271	11,106
Net replacement rates on mandatory pension programmes (%)	50.0	63.7
Replacement rate of public pension in relation to wages (%)	37.5	55.8
Per capita private pension fund assets (€)	2630	2426

Source: Eurostat, European Mortgage Federation, OECD, see Hennecke et al. (2017)

2 Private Pension Schemes

2.1 General Information on Old-Age Security System

The German pension system can be divided into the usual three pillars and a "fourth pillar" through social assistance. It is still dominated by the public pillar, designed as a pay-as-you-go (PAYG) system where the working population is directly paying the pensions of the retired rather than being built on capital saved over a lifetime, which is, however, being challenged by population ageing. One of the worst demographic shifts in Europe—with 21.4% the median share of elderly (65+) in total population already above the EU median (18.6%, 2014)—is forcing younger generations to increase private savings for retirement (OECD 2015). The state and private pensions are often insufficient to sustain living standards in retirement. Old-age poverty has been a current topic covered by the media in the run up to the German elections in autumn 2017. The subject was the main theme of discussions at the annual financial services stakeholder conference organised by the German consumer movement in 2017 (iff 2017). Predictions have the risk of old-age poverty following an ever-increasing trajectory as forecasted by economists in a study also assessing the effects of pension reforms on the development of old-age poverty. The ratio of elderly persons at risk of poverty in Germany is forecasted to increase by 25% from a level of approximately 16% in the period 2015–2020 to reach 20% by 2036 (Bertelsmann Foundation 2017).

2.1.1 Public Pensions

Ninety percent of employees are enrolled in the statutory pension insurance, which is structured as a PAYG scheme (Deutsche Rentenversicherung 2015). With 10.6% of

GDP, the German public spending on old-age benefits is higher than the OECD average (7.9%). State pension level forecasts predict a further drop in the replacement rate from 47.9% today to 44.6% by 2029 and 41.6% by 2045 if no new measures are taken (ZEIT Online 2016). The German median net replacement rate from mandatory sources of retirement income is already considerably lower than the EU median of 63.7% (OECD 2015). In 2016, all employees who are subject to statutory welfare contributions contribute 18.7% of their gross income to the scheme. Contributions are divided equally between employer and employee (with exceptions like the minijobs) (Better Finance 2016). The pension entitlement is determined by the level of income, number of contribution years and retirement age. While the generation of men (women) born until 1950 receive on average 1000 (800) € monthly public pensions, those born between 1967 and 1971 can expect on average only 600 €. This is less than the basic social security provision by the state (Oberhuber 2015). To cope with population ageing, the statutory retirement age is gradually increased from 65 to 67 within a transition period from 2012 to 2029. For those who contributed to the public pension system for at least 45 years, the statutory retirement age was reduced to 63 in 2014 but is gradually increased from 2016 until it reaches 65 in 2028 (OECD 2015).

2.1.2 Occupational Pensions

Occupational pensions are the second largest pillar. In 2013, nearly 15 million individuals held entitlements to active occupational pensions (Better Finance 2016). On average 46% of all employees receive occupational pensions in Germany, which are provided by 41% of companies.[1] The parties forming the government coalition have agreed to carry out the "*Nahles-Rente*" which will lead to an opt-out version of the current occupational pension system if an agreement with the trade unions can be reached (Berliner Morgenpost 2016). If implemented, this will give a considerably larger importance to this pillar. Since 2002 employees have the right to occupational pensions through deferred compensation. This means that future salary or special payments can be converted to pension entitlements, if this is not regulated differently by a labour agreement. Employers must comply and execute this demand but can freely choose between five different funding vehicles: direct pension promise ("*Direktzusage*", i.e. book reserves), direct insurance ("*Direktversicherung*"), "*Pensionskasse*", pension fund and support fund ("*Unterstützungskasse*") (Better Finance 2016). Two or more funding vehicles can be combined, but at least a direct insurance has to be offered. In this case, employees may benefit from tax advantages and social security contribution savings. Although employers are not obliged by law to participate financially in the occupational pension plans, many collective agreements include this obligation. Therefore, occupational pensions are mostly employer-funded. However, the number of deferred compensation arrangements,

[1] http://www.pensionfundsonline.co.uk/content/country-profiles/germany/92

where contributions are exempted from taxation and social security contributions, has increased, which implies lower claims from the statutory pension insurance (Better Finance 2016).

2.1.3 Voluntary Private Pensions

The third, still smallest pillar consists of voluntary private pensions, which may be provided by banks, insurance companies or investment funds. The Riester and Rürup pensions, introduced in 2002 and 2005, respectively, are promoted by government subsidies and tax benefits. From 2001 to 2016, the number of private Riester pension contracts increased from 1.4 to about 16.5 million (see below for more details).

2.1.4 Social Assistance

If individual pensions from all income sources are not sufficient, additional means-tested benefits, which refer to the individual primary needs, can be claimed from social assistance (so-called "fourth pillar"). Means-tested provision is determined by the difference between the individual need and household income, which includes pension benefits (OECD 2015).

2.2 Overview on Private Pension Product Types

The third pillar of private pensions consists of personal pension plans and life insurance or private pension insurance products. Riester and Rürup pension savings are encouraged by state subsidies and taxation reliefs.

The following types of investments are eligible as Riester products (BMAS 2014; Better Finance 2016):

- Pension insurance ("Rentenversicherung"): offered by insurance companies in one of two forms—(1) pension insurance contracts with guaranteed annuities and a participation in profits and (2) hybrid contracts where the retirement savings are partly invested into investment funds, which consist of a guaranteed and a unit-linked part.
- Bank savings plan ("Banksparplan"): typically long-term bank savings plans with fixed interest rates.
- Investment fund savings plan ("Fondssparplan"): unit-linked savings, which are invested into investment funds. The intermediary that sells such funds is obliged to guarantee that the invested money plus the government subsidies are available at the moment of retirement. However, the pensioner may lose capital, if he or she withdraws the funds prematurely.

- Homeownership savings agreements ("Wohnriester/Eigenheimrente"): real estate savings contracts or building loan contracts for owner-occupied residential property. Tax benefits are provided to savings contributions and loan repayments. If the owner sells or leaves the residential property, he or she may invest the remaining funds into an alternative real estate or into a certified pension contract.

The main suppliers are life insurance companies, banks, mutual funds and building societies ("Bausparkassen") (BMAS 2014; Better Finance 2016).

2.3 Individual Private Pension Products

2.3.1 Riester Pensions

Riester pensions are formally certified personal pension products to build up a funded retirement pension supplement. In contrast to other countries (e.g. Sweden), they are voluntary and managed on individual accounts by private suppliers. Since the Riester products aim to close the pension gap resulting from the declining performance of the statutory pension insurance, they are targeted only to those individuals who will be affected by this decline. The amount of the state support was designed such that mainly consumers with low propensity to save (families, low-income individuals) are reached (Börsch-Supan et al. 2016).

Subscribers to a Riester product receive state subsidies, which are maximised, if the total contributions (i.e. personally invested contributions plus subsidies) reach at least 4% of the individual's income of the previous year. The subsidies amount to 154 € per adult, 185 € per child born before 2008 and 300 € per child born since 2008. A bonus of 200 € is paid to individuals that are younger than 25 years at the moment of subscription to a Riester product. Such Riester subsidies are also applicable to occupational pension plans in the form of "Pensionskassen", pension funds and direct insurances. Riester pensions are subject to deferred taxation (Better Finance 2016; BMAS 2014). The pension benefits can be paid out not before the age of 62 or 60 for contracts concluded before 2012. The subscriber may choose between a life annuity and a programmed withdrawal where up to 30% of the savings can be paid out as a lump sum. This right can also be bequeathed. One fifth of the Riester savings is reserved for life annuities starting at the age of 85. Total contributions to a Riester product up to 2100 € are exempted from initial taxation. During the period of savings accumulation, also investment income is tax exempted. Benefits from Riester pensions are taxed in the retirement phase but are exempt from social security contributions (Better Finance 2016; BMAS 2014).

Table 2 shows the development of Riester pensions in Germany. At the end of 2016, about 16.5 million Riester contracts have been subscribed to, two-thirds of them in the form of pension insurance contracts (BMAS 2017b). The share of housing Riester contracts shows a late but steady increase from year to year. About 200,000 contracts per year have been added since 2012. By contrast, the

Table 2 Number of Riester contracts (in 1000)

	Pension insurance	Bank savings plans	Investment fund savings plans	Housing Riester/ homeownership pension	Total
2001	1400	n.a.	n.a.	n.a.	1400
2005	4524	260	574	n.a.	5358
2010	10,484	703	2815	460	14,462
2011	10,998	750	2953	724	15,426
2012	11,023	781	2989	953	15,746
2013	11,013	805	3027	1154	16,000
2014	11,030	814	3071	1377	16,293
2015	10,996	804	3125	1564	16,489
2016	10,903	774	3174	1691	16,542

Source: BMAS (2017a)

number of Riester pension insurance and bank savings plans have decreased since 2014 (BMAS 2017b). Since an individual can hold several Riester contracts, a direct inference of the number of individuals possessing a Riester contract is not possible.

For 78% of the households, Riester pensions can close the pension gap by 100% or even more. However, 10 years after their introduction, only about 44% of the potential customers have been reached (Börsch-Supan et al. 2016). Suggested explanations for this weak diffusion include individual factors such as insufficient financial literacy and pension planning (Börsch-Supan et al. 2016), as well as the financial crisis along with less favourable media coverage of Riester products that reinforced general doubts concerning funded retirement savings (Hagen and Kleinlein 2011, pp. 3–13). Riester and occupational pensions together have reached only about 70% of employees with social insurance. Many small- and medium-sized enterprises do not provide occupational pensions, and low-income earners often do not conclude a Riester contract. Even those 70% with supplementary private or occupational pensions may not receive enough for their living because they mostly do not take full advantage of Riester subsidies and occupational pensions are often low (Wagner 2016).

Only about 20% of households in the bottom income quintile use such products, which is significantly lower than at high-income households (Börsch-Supan et al. 2016). For low-income earners, it is not worth concluding a Riester pension, because the benefits would be deducted from basic social security payments. Thus, individual private pensions are lacking where they are needed most. To make complementary private pensions viable in the low-pay sector, tax allowances would have to be introduced in the basic subsistence income for the elderly (Wagner 2016). Empirical evidence shows that Riester pensions neither induced people to save more nor reduced income inequality. Only 7.3% of the aggregate Riester subsidy accrues to the bottom quintile of the population, while 38% accrues to the top quintile. The Riester scheme is almost neutral to income distribution but increases the share of the population below the poverty line by nearly one percentage point. Households with

higher wealth are more likely to benefit from the Riester scheme (Corneo et al. 2015). Nevertheless, the Riester products cannot be considered to have failed, because they are the mostly used form of additional pension insurance for low-income earners (Börsch-Supan et al. 2016).

Other problems of Riester pensions are lack of transparency, high costs of distribution and administration and calculation of benefits based on too high life expectancy (Börsch-Supan et al. 2016). This has led to misselling and excessive fees to be paid by policyholders at the time of contract conclusion. Often the rate of return of a Riester product does not exceed the rate of return of a bank saving account (Hagen and Kleinlein 2011; Maisch and Schick 2014). The yearly losses to consumers because of misselling of Riester products amount to at least one billion euro (Oehler 2012, p. 1). Proposals to improve the efficiency and diffusion of Riester pensions include the development of standardised products to increase transparency and making them obligatory or introducing an opt-out mechanism (Börsch-Supan et al. 2016).

2.3.2 Rürup Pensions

The Rürup pension (or "Basisrente") has been introduced in 2005 as a further private pension that is supported through tax exemptions. It addresses in particular self-employed persons and freelancers, who have no access to occupational pensions and Riester products. Similarly to the statutory pension insurance, contributions are utilised for monthly life annuities paid after retirement. Lump sum payments are not possible. The retirement phase starts at the age of 62 (or 60 for contracts concluded before 2012). The personal benefits cannot be transferred, bequeathed, lent, disposed or capitalised. Rürup pension plans may take the form of pension insurance contracts or investments in investment funds through savings plans. In contrast to the Riester insurance contracts, the Rürup insurance contracts are irredeemable, and the invested money cannot be regained before the retirement phase (Better Finance 2016).

Contributions to Rürup pensions are exempted from taxation for up to the maximum contribution to the pension insurance scheme for miners [knappschaftliche Rentenversicherung (West)], which was 22,767 € in the year 2016 (Bundesministerium der Finanzen 2016). Initially, 60% of this ceiling was exempt from taxation. This percentage will rise at a rate of 2% each year during a transitional phase. In the retirement phase, benefits from Rürup pensions are taxed at the personal rate. Initially, 50% of the benefits were subject to deferred taxation. Until 2020, the taxable part will increase by 2% each year and afterwards by 1% each year, until benefits will be fully taxed from the year 2040 on (see Table 3) (Bundesministerium der Finanzen 2013).

The diffusion of Rürup contracts remains weak. Until the end of 2015, nearly 2 million Rürup contracts have been subscribed to (GDV 2016).

Table 3 Overview of change in tax deductibility for Rürup pensions until 2025

	Year of contribution/benefit			
Tax deductibility	2005 (%)	2015 (%)	2020 (%)	2025 (%)
Tax exemptions for Rürup contributions	60	80	90	100
Taxation of Rürup benefits	50	70	80	100

Source: Bundesministerium der Finanzen (2013) (only extract of certain years shown)

2.3.3 Life Insurance and Pension Insurance Contracts

If not certified in the framework of the Riester pension, Rürup pension or an occupational pension plan, pension insurance or life insurance contracts do not benefit from allowable tax deductions or subsidies. Such contracts usually start paying out after retirement, but there are also contracts that pay immediately after conclusion ("*Sofortrente*"). Both lump sum and annuity payments are possible (Better Finance 2016). In contrast to a personal pension plan, life insurance integrates financial security for surviving dependents.

Life insurance products play an important role in old-age provisions in Germany. The number of life insurance contracts subscribed reached 85.7 million (i.e. 1.05 contracts per individual) at the end of 2015. The majority (46.7%) of these contracts are pension insurance contracts, followed by capital life insurance (38.1%) and risk life insurance contracts (15.2%) (GDV 2016). However, life insurance products have become less attractive for consumers due to declining guaranteed interest rates and benefits (Oberhuber 2015).

Such retirement savings products are taxed as follows for contracts concluded since 2005: contributions are not tax deductible. Benefits from standard pension insurance contracts and life insurance contracts are taxed on their earnings (difference between contributions and total payouts) in the retirement phase. In the case of a contract with a lump sum payout, which runs at least 12 years and where the insuree is older than 62 years, only 50% of this amount is subject to taxation. If these conditions are not met, all earnings are taxed with the flat tax rate of 25%. In the case of life annuities, further tax reliefs are possible depending on the age of the retiree at the time of the first retirement payout. At the age of 62, 21% of the earnings are taxed at the personal tax rate. This percentage is reduced to 18% at the age of 65 and 17% at the age of 67. These taxation rules apply for classic insurance contracts and unit-linked ones (Better Finance 2016).

2.4 Conclusion

The incentive programme for private pension provision through state subsidies and tax exemptions (Riester and Rürup products) is insufficient in its current state. Academic criticisms of the programme have been published, and policymakers will need to seek ways of improving the efficiency of these measures. Especially,

the Riester incentives appear to focus essentially on the higher-income earners and do not deliver the desired saving behaviours from the lower-income groups in most need of supplementing their state and occupational pensions. Although the use of housing Riester pensions has increased, it remains low, and recent reforms to improve them especially in allowing them to operate on a more level playing field with financial investment options do not seem sufficient to make a big difference in allowing housing assets to play a bigger role in contributing to pension provision in old age.

3 Housing Market

Private homeownership and owner occupancy are relevant for household economic wellbeing on two accounts: firstly, as a medium to accumulate wealth in the form of a housing asset and secondly as a choice of housing consumption based on a tenure that with time is supposed to provide security and expenditure savings in old age. The nature and state of a nation's housing market and policies largely determine the resulting housing situation, and, in Germany, housing policy has relied upon four main instruments: tenancy law (*Mietrecht*), housing benefits (*Wohngeld*), a home subsidy scheme (*Eigenheimzulage*) and social housing (*Sozialer Wohnungsbau*).

Germany's housing market is a European outlier in two regards: homeownership and owner occupation are low; and, in contrast to most other countries, real house prices (until the crisis) had fallen for most of the pre-crisis 15 years, especially in the East, before prices picked up since the crisis. Furthermore, acquisition of housing has not traditionally been seen by German households as an investment but more with a focus on living in the respective purchased property for the duration of their lifetime. This remains broadly true despite several recent factors suggesting some departure from these historical attitudes towards housing decisions by households.

3.1 Housing Situation

Some general features of the German housing situation are shown in Table 4.

After the post-war boom in housing construction (9 million housing units built between 1949 and 1965), the housing situation was marked by half of the social

Table 4 General features of the German housing situation in 2015

Country's population (million)	82.2
Number of households (million)	40.7
Housing stock (in number of million housing units)	41.4
Share of vacant dwellings (% of total dwelling stock)	7.9

Source: Destatis (2016a, b, c, f). Note: data refer to the year 2015 except share of vacant dwellings which is for 2014

dwelling units constructed gradually passing into private rental markets over time, and a differentiated situation due to different developments observed in the former West and East Germany (TENLAW 2015). Following reunification (1989) the Federal Government started to slowly withdraw from the housing sector, as the approach to promote new buildings (*Wohnbauförderung*) was replaced with promotion of living space (*Wohnraumförderung*) as the country experienced a change in its ownership structure in the East of the country where municipal housing was privatised and over 600,000 dwellings there were returned to their original previous owners. The housing market demand was then affected, like the broader economy and society, with a substantial migration of former East Germans to the ex-West German states. Since the 1990s there has been a noticeable but not very dynamic increase in the number of owner-occupied dwellings as homeownership levels rose slowly. Germany's housing policy has also been shaped by external as well as domestic migration: from the wave of workers' immigration (in the 1950s and 1960s), followed by immigrants and asylum seekers as a result of the Balkan wars of the 1990s and the extraordinary inflows of refugees from the Middle East and Africa since 2015.

In former West Germany, housing regulation was—in contrast to many other European countries—cut down after world war induced strict regulation (e.g. after the war, many Germans were forced to share their housing with Germans that had been expelled from their homes in the former Eastern German territories). This liberalisation has fostered investment in housing creating a well-developed rental market with high-quality rental apartments. This in combination with a functioning public rental system (until the 1990s) has not created conditions of necessity for Germans to buy or build a house as a strategy for old-age pension provision (Kholodilin and Ulbricht 2014).

More recently, the advent of sizeable numbers of immigrants (predominantly from Afghanistan, Iraq and Syria) that have a right to stay in Germany for the foreseeable future has further contributed to an existing overall housing shortage and to housing market price increases. Furthermore, the typical German household disinclination to take risks for old-age provision (through investment in shares) combined with the low attractiveness of typical investment vehicles such as capital life insurances and savings accounts due to the low/negative interest rate policy of the ECB has led to a soaring of housing prices in some German municipalities as retail and institutional investors have focused on real estate for better returns. Particularly affected by shortages of dwellings are the large urban agglomerations. Prices have decoupled from rents indicating the built up of a house price bubble in many localities (Kholodilin et al. 2014).

3.1.1 Overview of the Current Situation for Dwellings

There were about 41 million dwellings in Germany in 2014 of which 16.4 million were owner-occupied and 19.7 million were used for renting. About 54.5% of these were thus used for renting, while 45.5% of them were used by their owners

(Destatis 2016h). During the last 20 years, the ownership rate increased by almost 4%, and a few years ago, it was forecasted to increase by another 4% until 2025 (BBSR 2010). Germany is also characterised by significant regional disparities with the corresponding share of owner-occupied dwelling higher in the West (48.4%) than in the East of Germany (34.4% in 2014). This gap has reduced somewhat over the years as the homeownership rate grew faster in that part of the country after reunification. As economic growth has been higher in the West, many East Germans have moved there, resulting in a drastic decline of population in many cities in the East, while numbers living in urban agglomerations like Berlin, Munich, Cologne and Hamburg have grown persistently.

The number of vacant dwellings was 3.1 million representing a 7.9% average vacancy rate, ranging from 4.4% to 13.8% depending on the federal state, with greater vacancies observed in the rural areas. Despite being one of the more economically developed EU Member States, the importance of non-metropolitan areas is reflected in housing statistics for Germany compared with those of the EU. Germany stands out with 35.8% of dwellings in the cities (EU, 40.4%), 41.8% in towns and suburbs (EU, 31.7%) and 22.4% in rural areas (EU, 28.0%) (Eurostat 2016). The extent of urbanisation becomes more visible when looking at the nature of the type of dwellings: 41.4% are in houses (60% detached and 40% semi-detached) (EU, 57.3%) and 57.3% are in flats (EU, 42.1%).

3.1.2 Types of Housing Tenures and Homeownership

In Germany, of the two main forms of housing tenure, the rental status (whether from the private market, social renting or as a member in a cooperative) dominates as seen above. Other special types of tenure such as the right of residence, the usufruct and the permanent residential right also exist but are statistically insignificant. Official estimates indicate that 45.1% of German households live in owner-occupied homes (Destatis 2016d). Calculated on a population basis, a homeownership method resulting in higher numbers that allow for European comparisons, the owner-occupation rate for Germany represented 50.7% (West, 53.3%; East, 40.0%) in 2014. Based on both measures, the regional outliers are Berlin (14.2% or 17.7%) and Saarland (62.6% or 65.9%).

While homeownership status can be obtained through inherited property, the main route to ownership is through purchase, and for many households, this will require financing using external funds from credit institutions. While some limited flow data exists on the proportion of purchases made with loan financing, and the average outstanding balance of a loan for a residential property is estimated at 99,200 €, there is little data to provide a further breakdown based on the extent a property is still being financed or owned outright. Using the average transaction value of property on the market (*Verkehrswert*) of 236,100 € reveals the extent to which the housing asset has already been repaid and thus is free of encumbrance (Behrends and Kott 2010, p. 3). EU-wide survey-based statistics do provide some indication of the prevalence of homeownership associated with a mortgage or a loan,

and in Germany in 2015, 50.5% of owners had outstanding commitments compared to an EU-28 average of 38.8% (Eurostat 2016). While the share of the population with owner occupation status while still having to pay off a loan is about a third, the share of mortgage debt of households as a percentage of GDP is less than 40% in Germany, showing a large difference to the EU average (Hennecke et al. 2017). See Sect. 4 describing the German market for mortgage loans. Aspiration to homeownership has been facilitated by private financing of residential property having become easier over the years [e.g. the need for the average household with one child to spend about 38% of their income for financing of their property projects in 1994 had fallen to 13% by 2010 (Landesbausparkassen 2013)], and in 2010, almost half of all loans in Germany were housing loans usually secured by a land charge (Grundschuld) which is unlike the accessory mortgage (Hypothek) not accessory to the secured claim.

In all of the larger German cities, the homeownership rate is significantly lower than the already low national average. A study by Empirica shows that while the homeownership rate varies considerably between the 16 federal states ranging from over 50% in Saarland, Rhineland-Palatinate and Baden Württemberg to 16% and 24% for the city-states of Berlin and Hamburg, respectively, these differences are much smaller when the homeownership rates for only the 40- to 49-year-old cohorts are taken into account (the typical age group for first-time acquisition of property) (Empirica 2016a). Likewise, when broken down by age groups, the younger cohorts in the former East Germany have almost reached the homeownership rates of their West German peers. The reason younger households are showing stagnating homeownership rates is attributed to a decline in the creation of families and increase in single-person households, which while increasingly likely to also be homeowners are statistically much more likely to be renting: families with children under 18 (74% homeownership rate in the West and 64% in the East), couples without children (53%, resp. 57%) and single person (28%, resp. 20%).

As identified in a historic-institutionalist and path-dependence explanation for German homeownership levels, the low rate is not only attributable to culture, government housing policy or typical socio-economic factors but also to institutional features of housing market supply, such as urban land, housing finance and construction (Kohl 2017). According to this author's view, the German housing trajectory does not lie in the lack of household desirability for this form of tenure (as shown by surveys exploring preferences in tenure) but is a result of historical supply structures (e.g. physical shape of cities), institutional set-ups and local governance (e.g. landlord dominance at city councils and local network industries in municipal ownership driving the development of cities rather than the expansion of the agglomeration to suburban living), building land supply, building-control and building norms and limited access to capital for urban settlers. The tenancy choice was also supported historically by mortgage banks that preferred rental housing, vested interests by landlords and tenants in favour of the maintenance of the private rental housing stock in its early form, the weak legal tradition of apartment ownership (i.e. few conversions of rental into owner-occupied units than observed in other countries with single-house traditions) and the vocational led mode of building single-family houses rather than mass production (Kohl 2017).

Table 5 Data on the current situation of the housing market

New housing constructions (2014) (1)	200,000
House prices (average annual change, 2015) (2)	5.9
Housing market transactions (2015) (3)	596,000
New housing loans (million euros, 2015) (3)	208,600

Source: (1) Deutsche Bundesbank (2016a), (2) Deutsche Bundesbank (2016b), (3) EMF (2016)

3.2 Economic, Urban and Social Factors

3.2.1 Current Situation of the Housing Market

The German housing market is generally dynamic and especially at the current time as several demand and supply side factors coincide to fuel and create tension in what has traditionally been a relatively stable market. In its 2017 report on the housing situation covering developments from 2012 to 2016, the Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety highlighted the structural changes affecting Germany and especially the large and university cities. Large increases in population from internal and external migration have led, together with other factors such as the buoyant economy, low interest rates and fortuitous financing conditions, to rising rental and house prices. This surge in demand has been met by significant increases in supply since 2009 with building permits and completed works reaching 375,000 and 278,000 new dwellings in 2016, respectively (313,000 and 248,000 in 2015) (see Table 5 for further information). However, supply will continue to lag demand for many years to come, with the latest government estimating a need for new construction of 350,000 units per year until 2020 (BMUB 2017). As explored in Sect. 4, disbursements of new mortgage loans have steadily increased since 2009 and rose by 16% in 2015 alone (with over 200 billion euros worth of loans extended that year). Based on lending industry data, modernisation and maintenance of the property make up the greatest share of loan use (accounting for two-thirds of total construction) ahead of construction of a new or the purchase of an existing home. Edging close to 200 billion euros in 2015, construction work on existing buildings and new construction has seen an uninterrupted increase in volumes since 2009 after a period of decline from 1999 to 2005. In contrast, new construction stood at just over 50 billion euros in 2015, mainly driven by the rise in completed units in new multifamily houses on the back of more attractive yields (vdpResearch 2016). The market fluidity is also buoyant as measured through transactions of existing property, with sales revenues rising since 2009 reaching over 150 billion euros in 2015, largely explained by price rises. The annual number of transactions has remained relatively stable at about 600,000 (with 248,000 new dwellings having entered the market in that year), a number that has remained stable because of a hesitant supply side as potential sellers held back from selling in the expectation of further house price rises as well as the lack of alternative profitable investments (vdpResearch 2016).

The German housing market shows large social and regional differences but with a strong Germany-wide tendency for choosing to live in the city centres and a

corresponding fall in inhabitants in rural areas. Between 2000 and 2010, there are examples of both West and East German cities that have seen population declines of around 10%, whereas high population growth was recorded in many cities in South Germany (e.g. Freiburg im Breisgau (+9.3%), Munich (+11.8%) and Frankfurt a. M. (+5.1%) (TENLAW 2015). This trend has led to a high shortage of affordable rental dwellings in those high-growth areas, and especially social housing, which have been neglected following devolution of federal competence and the expiration of the commitment clauses following repayment of the financing for subsidised housing. The measures to tackle the shortage rely on increasing construction which was part of the coalition's "Package for Affordable Building and Housing" (TENLAW 2015).

3.2.2 Demand for Housing and Trends in Household Numbers

The demographical development and the upward trend in the number of households suggest that despite the total number of the population forecasted to fall from 82.2 million in 2015 (Destatis 2016a) to between 67.6 million and 73.1 million in 2060, depending on migration (Destatis 2016e), the number of households will still be increasing from 40.7 million in 2015 to 41.1 million in 2025 (Destatis 2016f). This is due to the increasing tendency to live in single-person households, forecasted to reach 43.4% of all households in 2030 (from 39.8% in 2009). Only 7% of these single-person households are younger than 25 years, while 35% are older than 65 years of age (Destatis 2016g). Various factors explain this trend such as increased life expectancy, low birth rate, increase in life partnerships with separate housekeeping, increase in number of divorces and high occupational mobility. The total number of households will nevertheless reach its climax in 2025 after which household numbers should decline (Destatis 2016f). Homeownership rates increase continuously with the age of the household members, with 91% of persons under 30 years of age renting their dwelling compared to persons older than 60 years of age mainly being owners (55.3%). Immigrant groups living in Germany also show a lower homeownership rate as 73.8% live in rental dwellings. In terms of household formation, housing inhabited by couples with children has a higher owner occupancy rate (58%) than single households (27.5%) (Destatis 2016d). In Germany, families as a household type are falling both in nominal and in relative terms. The increase in childless households and single-person households is also linked to the rise in the elderly who no longer live with their children, partly driven by seniors enjoying a higher owner occupation rate than previous senior generations (Empirica 2016b). The past couple decades have also witnessed a noticeable shift in preferences with regard to dwelling types being purchased, from houses to flats (for all homeowners, 13% in 1993 lived in flats compared to 21% in 2013—a 50% increase; for homeowners in cities of more than 500,000 inhabitants, 31% in 1993 to 50% in 2013). Again, the changes in household form may explain this trend, e.g. single-person households (both young and old) tend to prefer central locations which have more flats than compared to areas with more green spaces/gardens that families prefer. However, other factors include stringent building standards and cost

increases that have led homeowners to favour the purchase of smaller more price competitive flats instead of the larger and more expensive houses (Empirica 2016b).

3.2.3 Issues of Price and Affordability and Resilience of the German Housing Market

After decades of stagnant real house prices and even a decline over 2000–2008, German house prices rose much faster from 2010. The boom in construction activities and the current dynamic housing market have subsequently generated concern among German policymakers and regulators towards possible build-up of speculative house price bubbles (with reports of an overvaluation of German metropolitan residential real estate of up to 25%) (Kholodilin et al. 2014). An arithmetic average of annual real house price growth rates over the period 2010–2016 shows 4% p.a. (compared to a Euro area average of −0.3%) (OECD 2017). Seen from an international perspective, German house price levels and movements are deemed relatively low and are still modest when assessed against underlying market factors such as the sound macroeconomic fundamentals, the substantial migration flows and the increasing rents (Kholodilin and Ulbricht 2015; IWK 2013). In addition, the house price inflation is largely concentrated in selected urban markets around the more prosperous metropolitan areas experiencing very strong economic and population growth, i.e. in cities like Berlin, Hamburg and Munich (Dombret et al. 2013). Elsewhere, such as in the more rural areas, house prices have not followed this trend. Likewise, house price dynamics vary significantly across regions and by market segment for dwellings where flats have seen the greatest price rises.

While relative affordability of housing has been a feature of the German housing market, recent developments together with a previous period of weaker construction activity after the reunification spike have led to recent concern for both tenants and potential homeowners choosing to live in the larger cities. Following a 20-year period of stable or improved affordability, measures such as the price-to-rent and the price-to-income ratio have shown a reversal since 2010. Historically less volatile than ratios observed in most other countries, the current level of these measures remains moderate despite significant increases in the price-to-rent ratio—often an indicator of a heightened risk appetite of investors (Kholodilin et al. 2014). Since 2011, house price inflation has been greater than increases in household disposable income as well as rents. Per OECD data, both house price-to-income and house price-to-rent ratios were close to their long-term averages in 2016 (OECD 2017). For 2016, against an average long-term value of 100, the house price-to-rent ratio was 102.8 for Germany, and the house price-to-income ratio was 95.2 (108.3 and 108.5, respectively, for the Euro area) (OECD 2017).

Even before the large repercussions of the migrants to Germany, there was a lack of supply of housing, with a housing shortfall of several thousand homes in many cities. Various policies aim to increase housing supply including federal government plans to subsidise micro-housing (target of 120 million euros nationwide) and to allow more federal land to be rezoned for construction purposes, but these are

believed to be insufficient based on estimates of over 400,000 new housing units needed every year until 2020 (of which 100,000 of these for housing refugees) (DB Research 2016).

Recent concern in Germany has also increasingly focused on ensuring financial stability and controlling macroprudential risk. A law was thus passed in 2017 giving the German financial regulator the tools and power to control excessive housing price rises by curtailing lending to households through various ways (see Sect. 4).

Mostly relevant to tenants but also to the large share of private owners letting out their property is the introduction of a rent brake (*Mietpreisbremse*) in 2015. Since that year, new tenancies can be subject to a rental ceiling which limits the rent to no more than 10% of the local reference rent (*ortsübliche Vergleichsmiete*) determined based on benchmark lists of representative rents (*Mietspiegel*). These rent brakes are neither automatic nor permanent. They are introduced by each state on a need basis depending on the tightness of local housing markets under their jurisdiction, and rules do not apply to certain properties such as those granted to first-time tenants of newly built or substantially modernised housing. This policy builds on already existing limits on how much a landlord can raise rents on sitting tenants by extending controls on new contracts to slow down the rise of rental prices in high-pressure areas. Rent control policies are believed to have helped to moderate rents for a short while. However, some analysts believe the medium-term impact contradicts the original objective of creating "affordable housing" (Kholodilin and Ulbricht 2014), and the effectiveness of this latest instrument, as currently designed and implemented, has been questioned on the basis of preliminary reports of non-compliance and circumvention of the rule by landlords. Regulation of rents in Germany makes a distinction between rental tenures with and without a public task as well. In contrast to landlords of housing with a public task (i.e. built using public funds, which represent less than 10% of rented dwellings), controls over rents in the private and cooperative rental market were moderate prior to the rent brake (based largely on civil law provisions of extortionate rent and rent increases). Social housing is however subject to strict rent controls restricting the amounts they can demand from their target group of tenants. Rents are limited to the coverage of current expenditures and subject to a maximum determined at the outset of the public-private agreement as a condition for receiving subsidies and usually constrain them for a 15–20-year period after which they can increase rents progressively towards market prices (TENLAW 2015).

The German housing cost overburden rate for 2015 as reported by Eurostat (measured as the percentage of the population living in households where the total housing costs represent more than 40% of disposable income—"net" of housing allowances) shows that relative affordability is greater for tenants from the private sector as compared to European peers but compares less favourably to the EU averages for homeowners and for all tenure types together: 15.6% (11.3% for the EU) for all tenure types, 22.8% (EU, 27%) for tenants paying rent at market price, 16.1% (EU, 12.4%) for non-market rents, 9.2% (EU, 6.8%) for owners with no outstanding mortgage and 10.7% (EU, 6.7%) for owners with a mortgage (Eurostat 2016).

Overall, the German housing market has proven to be resilient as several of its institutional characteristics have made housing less volatile and vulnerable to external shocks with wider implications on economic activity levels. As mentioned above, as opposed to the typical trend for EU Member States, Germany did not witness house price appreciation during the period prior to the financial crisis nor did it experience a severe downward correction afterwards. It has only been since the crisis that the trend has reversed and prices have taken an upward trend. Unlike most of its European peers, the housing market did not have any major economic consequences with neither speculative overshooting nor a credit crunch. Notwithstanding reduced transaction levels, the German housing and real estate market prove to be a stabilising element for the economy.

3.2.4 Urban and Social Aspects of the Housing Situation

An important characteristic of housing in Germany is the different housing structure in the rural areas as compared to the cities. While rural areas continue to lose their inhabitants, the shortage of dwellings in the urban areas becomes more and more dramatic. This is underpinned by strong regional differences (see figures discussed above).

Homeownership is regarded as a safe protection for periods after retirement and a safeguard against being potentially subject to exogenous rental price changes. Despite slowly changing ownership rates, the fact of owning real estate is still considered to be a sign of wealth in Germany. Especially the wealthier social groups disclose high ownership ratios. In 2010, about 70% of the households with a disposable monthly income of more than 3000 € were owners. Germans also recognise the high importance of homeownership as a provision for old age as reflected in Sect. 2 on private pensions which describes how owner-occupied dwellings have been integrated into the system of tax deductions in private pension plans.

The housing market is also significantly affected by population ageing and the changes in preferences and requirements this entails for building and housing quality. This together with the commitments on energy efficiency will therefore require housing policy to concentrate on adapting the existing housing stock in addition to encouraging new construction.

3.3 Housing Policies, Subsidies and Taxation

The German approach to housing policy was mainly build around four policy instruments that either focused on securing sustainable outcomes in rental markets (via regulations from tenancy law and housing benefits for tenants) or targeting the construction of more housing (via home ownership subsidies and social housing) (Egner 2011). The latter two instruments have relied on especially large programmes

in the past but have been substantially reduced today. These past policies explain the housing situation described in the previous sections. Per established welfare regime typology, Germany is considered as a conservative welfare state (Esping-Andersen 1990), and the prominence of social housing policy is based on an understanding that lower-income households struggle in finding appropriate housing, especially in growing cities experiencing a shortage of supply.

3.3.1 Main Governmental Actors and Governance

As a federal state, all levels of government play a role in housing policy in Germany: the federation (*Bund*), the states (*Bundesländer*) and the local authorities. The design of the general political framework through the subsidy system is set at the federal level with a main task in housing policy being the cofinancing of housing allowances and support for subsidy programmes run by the states and municipalities. The division of competences means that the federation is responsible for drafting tenancy and tax laws and managing important policies with a strong impact on housing such as climate policy, regional planning and urban development promotion.

The federal level has withdrawn itself as a direct actor in social housing policy ever since it conceded its competence to the federal states in 2006. However, it continues to share competence with the states in areas such as legislation and regulation of housing allowance (*Wohngeldrecht*) and housing construction allowance (*Wohnungsbauprämienrecht*). Having assumed the financing of the social housing system, the states receive federal government support for this task with a total annual contribution to their budgets of 518.2 million euros until 2019 (TENLAW 2015).

The main actors of housing policy are arguably the local authorities that plan residential spaces and manage existing stock of housing. While municipal ownership of housing has dropped considerably across the country through transfer of these properties to the private sector, management of the supply of housing continues to include the following instruments (see, e.g. Kholodilin and Ulbricht 2014):

- Acquiring rights to allocate dwellings to tenants in need
- Milieu protection statute (to preserve physical structures and urban character of an area)
- Redevelopment measures in urban planning
- Modernisation and refurbishment measures

As the dominant housing form of tenure, stakeholders of the rental markets are influential in Germany, and this is reflected in a political system that is very sensitive to the rights of tenants. Private homeownership is nevertheless a key aspect behind the well-functioning and sizeable private rental market. Given the demographic development of the German society, appropriate housing for elderly people has been recognised at the federal level with the following policy priorities (BMFSF 2016):

- Increased supply for age-appropriate housing
- Overcoming entrance and interior dwelling barriers and surrounding access points
- Optimising funding instruments to enable removal of barriers or construction of fully accessible new housing
- Strengthening the provision of information and advice about housing forms and adaptation possibilities

A further important characteristic of German housing policy is the role played by housing companies for the rental market. The two largest associations of housing enterprises in Germany are the Federal Association of German Housing and Real Estate Companies (*Bundesverband deutscher Wohnungs- und Immobilienunternehmen e.V., GdW*) and the Federal Association of Free Real Estate Companies and Housing Associations [*Bundesverband Freier Wohnungs- und Immobilienunternehmen e.V. (BFW)*], the first encompassing approximately 3000 housing enterprises, managing 6 million dwellings for about 13 million persons (about 28% of total German rental housing stock), and the second encompassing 1600 housing enterprises, managing 3 million dwellings for 7 million persons (14% of the rental sector) (TENLAW 2015).

3.3.2 Kind and Scope of Subsidisation

The main German subsidy programme for homeownership which started in 1949 was discontinued in 2006 after modifications of the programme in 1995 that delinked the allowance from tax payments. At its peak in 2003, the subsidy programme totalled 11 billion euros but was considered too expensive with respect to the modest outcomes achieved in terms of increasing homeownership rates among the middle class (Egner 2011). The German system of subsidisation of housing relies on two main instruments: social housing subsidies to promote supply and direct housing allowance to support demand and purchasing power. Table 6 outlines these two main subsidy schemes:

Table 6 Main subsidies concerning housing in Germany

Subsidisation	Details
Supply side measures	All landlords are entitled to apply for social housing subsidies (Law on State Funding of Housing and Housing Construction), but this support comes attached with corresponding landlord limitations such as rent ceilings and occupancy control
Demand side measure	Support for low-income households in the form of state benefits are of twofold: a housing allowance (Wohngeld) (either rent allowance for tenants or expense benefit for owner-occupiers) and an accommodation cost subsidy (Kosten der Unterkunft) if the household is a recipient of minimum social welfare

Source: TENLAW (2015)

The following are the main subsidy schemes related to housing and the promotion of homeownership in Germany, starting with the measure already mentioned in Sect. 2 on pensions:

Housing Riester Pension Introduced in 2008 this programme has included housing within the state's Riester subsidy and tax relief scheme for personal pensions (see Sect. 2.3). By including the eligibility for subsidies to people who have bought or built a housing unit with a loan, the housing Riester (*Wohnriester* also known as *Eigenheimrente*) translates the government's acknowledgement of homeownership as a source of supplementary private pension provisioning. The real estate in question, which includes houses, apartments and shared apartments and shares of a building society, must be used directly by the Riester saver as owner-occupied housing. To receive the full subsidy, the same prerequisites as for other Riester contracts apply (see Sect. 2.3). The contributions can either be used to reduce one's taxable income or can be received as a direct payment. In case of a two-parent, two-children family, this payment is around 900 € per year. However, if the tax savings exceed this sum, it will be used instead. While the subsidy portion is relatively small, combined with the tax relief, the housing Riester provides an incentive for potential homeowners to take out a loan and has seen strong growth in take-up by consumers since its inception. The programme was subject to improvements in 2013 and now allows taking out capital for works involving the removal of barriers in the home. This measure is an important incentive ever since the homeownership subsidy programme was abolished in 2006, and the main providers of the housing Riester are the building societies, whose customers received over 247 million euros in Riester benefits in 2013 (BMUB 2017).

Premiums for Housing Saving Contracts As part of the incentives to support savings for the purchase, building or modernisation of a home through building societies, the payment of premiums under housing saving contracts (*Bausparprämie*) awards funds to cover expenditures arising from plans for housing construction such as the contributions to Bausparkasse (the saving component of a building society contract that enables obtaining a loan at a predetermined and advantageous rate of interest) as well as expenses linked to the purchase of cooperative shares and contributions to saving contracts (TENLAW 2015). The main eligibility criterion is a salary ceiling amounting to 25,000 € per year for single households and 51,200 € per year for couples. The funding is awarded on a yearly basis and amounts to 8.8% of the expenses with a limit set at 518 € for single households and 1024 € for couples. Under evaluation this year, this programme funded by the federation has cost an average of 500 million euros per year and cost 223 million euros in 2016 (BMUB 2017).

Employee Saving Bonus Also linked to enhancing homeownership through the building societies is the savings bonus scheme to encourage employees to save (*Arbeitnehmersparzulage*). Under this scheme, a bonus is granted on contributions to capital accumulation by employees when an employer invests payments to the benefit of the employee in either a building society savings account (*Bausparen*) or

a capital investment saving account (*Beteiligungssparen*). In the latter case, the bonus will not exceed 80 € for single persons and 160 € for married couples per year (only eligible for employees with taxable income below 20,000 € for single persons and 40,000 € if they are married). Similarly, in the case of building society savings, the bonus cannot exceed 43 € for single persons (for incomes not exceeding 17,900 €) and 86 € for married couples (with incomes of less than 35,800 €) (TENLAW 2015). The cost of this programme is carried equally by the federation and the states (both 42.5%) and local authorities (15%) and has been declining with a total cost of 93 million euros in 2015, of which 56% for building society savings (BMUB 2017).

Loans from Promotional Banks An important subsidy source facilitating homeownership and renovation works to one's property is available through the programmes of the state-funded promotional bank the Reconstruction Credit Institute (*Kreditanstalt für Wiederaufbau, KfW*). Among the diverse subsidies awarded by the KfW, most typically it takes the form of preferential (low) interest rates on mortgage loans. In many cases the subsidised loans from the KfW are combined with interest rate reductions. These subsidies apply for homeownership but also support special-purpose investments such as energy-efficient construction and modernisation of residential buildings. The KfW also promotes the construction of housing for both low-income households and those that have difficulty in finding appropriate living space e.g. ex-convicted prisoners or homeless individuals (Westerheide 2011), as well as offering subsidies for refurbishment and improvements allowing better access for disabled people. In 2016, the programme as a whole was funded with two billion euros by the federation, but the KfW also has own funds for homeownership promotion, including support for acquiring shares of cooperatives, for which it extended 5.4 billion euros worth of loans in 2015 (BMUB 2017).

There are also several regional programmes that have their own incentives. While there is no federal guarantee scheme for mortgages in place, some federal states do provide loan guarantees for owner-occupied and residential building. Others, like the State of Schleswig-Holstein, support small private landlords as well as owners who plan energy-saving modernisation works including measures aimed at adapting dwellings to the needs of disabled persons.

In addition to the subsidy schemes incentivising homeownership, two further demand side subsidies exist to support the meeting of housing needs:

Housing Allowance (*Wohngeld*) this form of social transfer is granted by local authorities to support the economically weaker tenants if the tenant can no longer afford the rent or the owners their housing costs. The allowance amount is determined by household composition, income and cost of housing and can be claimed by any German resident. Most federal states have a calculator to assist tenants in finding out about their entitlement to the housing allowance. There are around 5 million households in Germany who receive either the housing allowance (1 million) or the accommodation cost subsidy (4 million). The amount of funding is about 16.7 billion euros (TENLAW 2015).

Accommodation Cost Subsidy Households in need can receive support in the form of direct aid at the basic social security level. It can assist by covering costs such as rental payments due, deposits, costs of regular minor repairs, moving costs and utility bills. In the case of rent payments, these can be paid directly by the communal authority to the landlord. Around 3.6 million households (9% of all households) were eligible for social security assistance in 2013 (TENLAW 2015).

3.3.3 Kind and Scope of Taxation

Several taxes apply to homeownership. Table 7 summarises the main taxes levied based on the investment stages from acquisition to disposal of the property.

In Germany, imputed rent (the implicit value of owner occupation of a property) is not considered as taxable income, and owner-occupiers are not subject to capital gains derived from the sale of their residential home unless they sell this property within 10 years of its acquisition. As outlined in Table 7, the taxes affecting real estate in Germany include a real estate transfer tax, payable as a sales tax on the purchase of landed property (typically set at 3.5% of the assessment value but this rate has been increased to 5.5% in many of the states), and a real estate tax levied on landed property by local authorities (amounting to an average of 0.20 € to 0.30 € per month/m^2). In addition to these taxes, in Germany, property acquisition requires the services of a notary, the fees of which can reach up to 2% of the property price and required to be paid up front. While land register fees (for public registers mainly kept by the district courts) are low, other fees and charges associated with property purchases may also include financing costs or estate agent fees (which are typically between 3 and 7% of the purchase price, plus VAT).

Because Germany allows special-purpose companies to be used for the acquisition of real estate property and project development, real estate investment trusts (REIT) and German open-end and closed-end real estate funds administered by an investment company are also subject to taxation. In the case of open-end funds, investors/unit holders in the fund are taxed based on their individual circumstances; however, German closed-end funds are generally subject to further regulation (e.g. under certain circumstances and the meeting of requirements on holding periods etc., the investors can benefit from depreciations and offset losses and can be exempted for capital gains at disposal).

Below are the details presented by legal text based on TENLAW (2015):

VAT Act Renting and leasing plots of land are exempted from the value-added tax under the VAT Act (*Umsatzsteuergesetz*). Not applicable to owner-occupiers, this exemption also applies to the lifelong right of residence, the permanent right to use the usufruct and the easement in accordance with German civil code (BGB). The VAT exemption applies to auxiliary services as well as the rent (e.g. heating and water supply but not to electricity).

Income Tax Act The German Income Tax Act treats rental revenues as a type of income subject to tax (either as rental income by private landlords or business

Table 7 Overview of taxation affecting homeownership

Tax	Explanation
Taxation at point of acquisition	
Real estate transfer tax (RETT)	Tax levied upon the purchase or transfer of real estate, usually borne by the buyer, and tax rate depends on the state (3.5%–6.5%)
Value-added tax (VAT)	This tax is not generally applied to real estate, neither when transferred nor when used to generate rental income
Taxation during ownership	
Land tax	Tax assessed and levied by municipalities annually based on the rateable value (typically below market rates) assessed by the fiscal authorities. By determining the multiplier used, municipalities decide the applicable tax rate which in Germany varies between 1.3% and 1.5%
Value-added tax (VAT)	Rental income from renting out property is generally VAT exempt
Taxation of rental income	Double taxation treaties mean that net rental incomes are taxable in the country in which the property is located. The progressive individual income tax rate can reach a maximum rate of just under 50% including a solidarity surcharge. The tax basis for income tax is in general net income which excludes costs of the investment such as the interest payments on the mortgage loan which since 2008 has a stricter limit to the deduction of interest expenses. This rule capping interest deductibility applied to the interest surplus is set at a maximum of 30% of earnings before interest, tax and depreciation subject to exemptions and with depreciation typically assessed using the straight-line method (e.g. 2–3%)
Taxation at the end of occupancy	
Capital gains tax	Disposal of a property is subject to different taxation of the capital gain. Private owners, as opposed to businesses or private owners who sell more than three properties in a 5-year period, are only subjected to income tax if the property is sold within 10 years of its acquisition. In addition, dividends and capital gains from firms or partnerships selling owned property are also taxed
Inheritance tax	Based on property value, the tax rates depend on the relationship to the heir based on three categories with rates ranging from 7% to 50% based on those categories of lineage and property value. Also based on the level of family lineage, different tax-free limits are set, e.g. spouses and civil partners have a tax-free amount of 500,000 € available, children of 400,000 € and grandchildren of 200,000 €. Tax relief is granted for property used as the family residence by the surviving spouse or civil partner

Source: DLA Piper (n.d.) and TENLAW (2015)

income by firms). Only cooperatives and REITS can be exempted from this tax. Households and firms can deduct cost items such as for mortgage interests, depreciation administration or dwelling modernisation and maintenance works from their taxable income. Depreciation can be deducted at a rate of about 2% of the purchase price each year over 50 years. An owner acting in a private capacity who holds the dwelling for at least 10 years before selling it will not be subject to capital gains tax.

Inheritance Tax Law The tax obligation arising from inheritance or a gift inter vivos is subject to the Inheritance and Gift Tax Act (*Erbschaftssteuer- und Schenkungssteuergesetz*). The tax amount payable is based on the property assets value governed by the Valuation Act (*Bewertungsgesetz*). Co-ownership of the property to spouses, civil partner or children is exempted from this tax provided owner occupation of the property. The law also grants general franchises for family members with tax-free amounts varying depending on family lineage: spouses and civil partners (500,000 €), children (400,000 €) and the grandchildren (200,000 €).

Real Property Tax Act Collected by the municipalities, property tax revenues are generated from levies on ownership of land, houses, condominium properties and fractional property as well as leasehold flats and partially heritable building rights. In accordance with the jurisdiction of the Federal Constitutional Court, the tax on the owner-used condominium complies with the Constitution. The annual property tax is 0.35% of the assessment value multiplied by a multiplier defined by each municipality. However, the reference amount for the taxis is not based on real market prices but the so-called standard value (*steuerlicher Einheitswert*). Generally, landlords will indirectly pass on the cost of this tax to their tenants as allowed for in the Regulation on Operating Costs (*Betriebskostenverordnung*).

Real Property Transfer Tax Act This transfer tax (*Grunderwerbsteuer*) collected by the Länder is a transaction tax usually borne by the buyer of real property located in Germany. The rate of tax was previously uniform at 3.5%, but federal states have been setting their own rates ever since the Constitutional Reform in 2006. As an attractive revenue source for the states, several have increased their tax rates to 5% or 6.5%.

Corporate Tax Act The Corporate Tax Act (*Körperschaftssteuergesetz*) allows exemptions from corporate tax to commercial and industrial cooperatives and associations that are responsible for of the construction or purchase of dwellings that will be provided to their members on the basis of a tenancy contract or contracts concerning cooperative rights of residence.

REIT Act Real estate investment trusts (REITs) introduced in 2007 are exempted from corporate and trade tax and thus treated differently to other stock exchange listed companies. They share, along with other investment vehicles such as open- and close-end funds, the opportunity for investors to invest in residential property without having the associated property management responsibility.

As outlined above, tax relief is afforded to private landlords that rent out their property to tenants within the income tax regime. The private rental sector is thus supported as landlords are able to deduct at least part of their tax payments as well as certain property-related expenses from their gross rental income so that the tax applies only to what remains after the deduction. From the tax law point of view, the landlords—not the owner-occupiers—benefit from the tax system. This was not always the case in Germany. Until 1995, the homeownership subsidy scheme (abolished in 2006) was based on the principle of tax relief whereby private expenditure on the creation or purchasing of housing could be deducted from taxable

income over a 7-year period. Because the programme was seen to work excessively in favour of high-income households trying to reduce their tax burden rather than promoting homeownership across society more broadly, this was modified into an allowance unrelated from tax liability in that year (Egner 2011). This change together with other conditions such as the introduction of a maximum annual income eligibility threshold for recipients of the subsidy to persons earning less than 82,000 € per annum led to the gradual demise of the incentive scheme for homeownership. Overall, on the back of the discontinued owner-occupied homes premium (*Eigenheimzulage*), there has been an ongoing shift in the relative importance of various categories of tax benefits, and those targeting the housing sector have dropped significantly to less than 1% of total tax benefits. At 1.8 billion euros in 2016, subsidies for housing have nevertheless increased by 12% since 2013 primarily due to the KfW development bank support scheme for energy efficiency-related building refurbishments. To put this number into perspective, the total federal subsidies allocated in 2016 for pensions were lower at 0.8 billion euros (Bundesministerium der Finanzen 2015).

There are no regulatory differences between landlords being a professional or a private owner, except for the application of consumer law. Thus, the distinction which regulations are applicable is based on the kind of housing the landlord provides and not on who he is.

3.4 Additional Information

Despite the comparatively low homeownership rate reported in this section, housing assets of private households in Germany have doubled in the last 20 years to a total of 6 billion euros in 2013 (IWK 2013). The results of a 2014 household survey confirm the importance of property within household asset composition compared to financial investments largely driven by the valuation of housing assets used as main residence estimated at an average and median of 231,400 € and 159,800 € and other property assets at 228,900 € and 89,300 € for the average and median, respectively (compared to 54,200 € and 16,600 € for financial assets). Compared to 2010, housing assets have increased by more than 10% over that period (Deutsche Bundesbank 2016c). While skewed by the overrepresentation of housing assets in the highest-income groups, this total property wealth is still the most important form of assets representing over half of all private assets. As with other types of asset, real estate is unevenly distributed between low and high earners, old and young, employed and unemployed and Western and Eastern Germany. The wealthiest 20% own 75% of all property, and there has been no noticeable change in this distribution in recent years (IWK 2013). Just under 10 billion euros worth of inherited assets consist of property, representing almost a third of inherited assets (IWK 2013). This proportion has generally increased over time both in absolute and relative terms.

3.5 Conclusion

The German homeownership rate is lower than those across the EU. This is largely the result of a tenure-neutral housing policy and as well as a well-functioning and regulated private rental market for housing which constitute an attractive alternative to homeownership because of the security of tenure and rent controls in place. Typically stable and responsive, the German housing market has become a lot tighter since 2012, both for dwellings for owner occupation and tenancy. Large and university cities are experiencing very dynamic markets driven by a range of factors but primarily due to a continuous and sizeable migration from other parts of Germany, the EU and crisis countries from the Middle East and Africa. Population growth combined with a strong economy, low interest rate environment and shortage of alternative investments has led to significant price rises for housing. Demand for housing will also increase in the decade to come due to changes in household formation and the expected increasing share of single-person households. Population ageing will also constitute a challenge in terms of adaptation of existing dwellings which is already an important policy priority in terms of meeting climate protection goals.

House prices have increased significantly in specific regions in recent years after having stayed stagnant for decades (against the European trend during the period of deregulation and liberalisation). Although construction in Germany is booming, the pressure of demand is such that supply is lagging demand in certain localities, and construction of new housing units of over 300,000 every year is not expected to be able to close the gap in housing shortages forecasted. House prices have continued to surge (with the national average price increase for 2016 at 5.8% (5.1% inflation-adjusted) (OECD 2017) on the back of structural market tightness and extremely low interest rates. Housing bubbles have developed in certain metropolitan areas, driven by low rates, flight to safety, capital inflows and investor activity. There may be also a real side to the bubble (over-optimism on fundamentals). However, rural/commuting areas are in stagnation. House prices have been rising faster than rents and incomes. In addition, Germany's rental yields are currently seen as being low (and generally lower the larger the flat), partly because of recent price rises but also because investment in housing used to be heavily subsidised by tax breaks.

Despite favourable conditions for accessing mortgage loans, prospects for significant increases in homeownership in Germany are low. Because property price rises in the main urban areas have grown faster than incomes in recent years, purchases have become more difficult and periods of savings needed for a mortgage ever longer. Acute difficulties are nevertheless restricted to only the major metropolitan areas, and in other areas or regions, housing vacancy rates are higher.

With the home subsidy scheme and main instrument of housing policy promoting homeownership discontinued in 2006, public incentives rely on several programmes but mainly through the housing Riester pension scheme supporting households with their loan repayments and via other state subsidy schemes such as the one encouraging saving by providing top-ups on saving contributions to enable granting of a

loan through the building societies. The tax regime in Germany is also supportive of long-term ownership and investment without encouraging speculative investments (e.g. the capital gains tax regime offering tax exemption after a 10-year period of holding the property). Owner-occupied homes are treated as consumption goods for tax purposes, so no deduction of mortgage interest is possible, although interest tax deductibility exists for properties that are let out as these can be offset with the rental income generated. Affordable housing has increasingly become a focus of policy attention as past achievements in delivering these have waned and availability is reduced. With increasing pressure on rental market prices and fears of overheating in property, markets policy priorities are unlikely to lead to significant changes in the incentives for homeownership in the short to medium term.

4 Mortgage and Credit Market

Because mortgage loans are the primary way for households to finance the acquisition of residential property by themselves, the functioning of the credit market will determine the ease and prevalence of homeownership from both the demand side (prospective homeowners) and from the supply side (supplying the capital to make purchases possible).

4.1 General Overview of Mortgage and Credit Market

With a limited number of homeowners in comparison to other EU countries as described in Sect. 3 on the housing market, it is logical to infer that the German mortgage credit market is more conservative than others in the EU. This is reflected in a moderate overall level of indebtedness both in terms of per capita and GDP. Total outstanding residential loans at the end of 2014 stood at 1237 billion euros with an average per capita amount of 18,271 € (see Table 8). The growth in mortgage debt from 2004 to 2014 has been 6.9% against a median increase for the EU of over 100% (EMF 2016).

Although credit regulation and provider practices are considered conservative in comparison to the EU (Dübel and Rothemund 2011), aggregate macro numbers for total outstanding residential mortgages in Germany are large, and lending has shown a positive trend over the past years. Despite strong demand for loans, the mortgage loan ratio as a percentage of GDP has fallen significantly since 1998 (from 82.1% of GDP to 40.9% in 2014). As of July 2015, outstanding home loans amounted to 1061 billion euros with 25.3 billion euros worth of new loans (Deutsche Bundesbank 2016b). This is partly attributable to changes in tax incentives over the period. German homebuyers mostly borrow at fixed rates of interest with 68% of the new loans during the period 2003–2014 approved with an initial rate fixation of 5 years or

Table 8 Total outstanding residential loans in 2014

Country	Value in billion euros	% change (2013–2014)	% of GDP	% of household disposable income	Per capita
Germany	1237	2.36	42.4	66.0	18,271
Hungary	17	−7.31	16.6	29.1	2106
Ireland	92	−4.53	49.4	101.7	26,830
Italy	359	−0.62	22.2	32.6	7094
Netherlands	634	0.34	95.7	197.3	47,390
UK	1667	8.59	75.0	116.4	32,884
Euro area 18	4457	0.67	44.1	70.7	16,344
EU 28	6909	2.52	49.6	79.0	16,787

Source: EMF (2016)

more. Loans with rate fixation periods of less than 1 year have never exceeded 20% of new loans approved (and stood at 15.9% in 2014).

Cyclical fluctuations in conditions and availability of mortgage credit have been small in Germany, and gross residential lending has been stable throughout the financial crisis. Current lending conditions on the basis of the figures for the month of April 2016 collected by one of the more established mortgage brokers (Dr. Klein 2016) show that new loans have the following characteristics: the average loan amount has increased to 193,000 €, the average mortgage rate term is fixed for 14 years, the average LTV ratio is 78.3%, the average amortisation rate 3%, and the average instalment amount being repaid per month is 454 € (for a 10-year fixed rate mortgage loan of 150,000 € at 2% amortisation and 80% LTV).

A very rough estimate of the number of mortgage loan contracts in Germany would suggest that there are currently over 5 million mortgage loan contracts [calculated on the basis of average loan size reported by Dr. Klein (2016) (193,000) with the outstanding volume of mortgage loans over a 5-year duration to private households (1049 billion euros)].

Table 9 shows some indebtedness and debt burden statistics for households in Germany and across the Euro area. These show that with the exception of mortgage debt as a share of total household liabilities, all ratios for Germany show a more sustainable indebtedness situation than across Euro area countries.

Figure 1 shows that loans have been constantly rising in the last decade. However, the debt to GDP ratio is not indicative of excessive debt. Loans for households as a ratio to GDP have followed a constant decline since 2000.

Figure 2 shows that interest rate payments on loans have been falling considerably over the last decade. At least since the financial crisis, this is attributable to expansive monetary policy. More recently, interest fixation periods have become increasingly long term (over 10 years) as an increasing number of households have sought to benefit from the low interest rates being offered for as long as possible.

The typical maturity of mortgage loans for home purchases is between 10 and 15 years. At under 60% of GDP, the level of household indebtedness can be classified as moderate in comparison to other EU countries. Unlike most banks in Europe who rely on their general funding sources such as deposits for housing loans,

Table 9 Mortgage debt ratios for Germany and the Euro area

Ratio	Germany	Euro area
Median mortgage debt service to income ratio (%)	12.8	15.9
Outstanding balance of mortgage debt (% of total debt)	87.7	82.8
Median debt to income ratio (%)	37.3	62.0
Median mortgage debt to income ratio (%)	32.7	51.3

Source: ECB Household Finance and Consumption Survey, July 2013

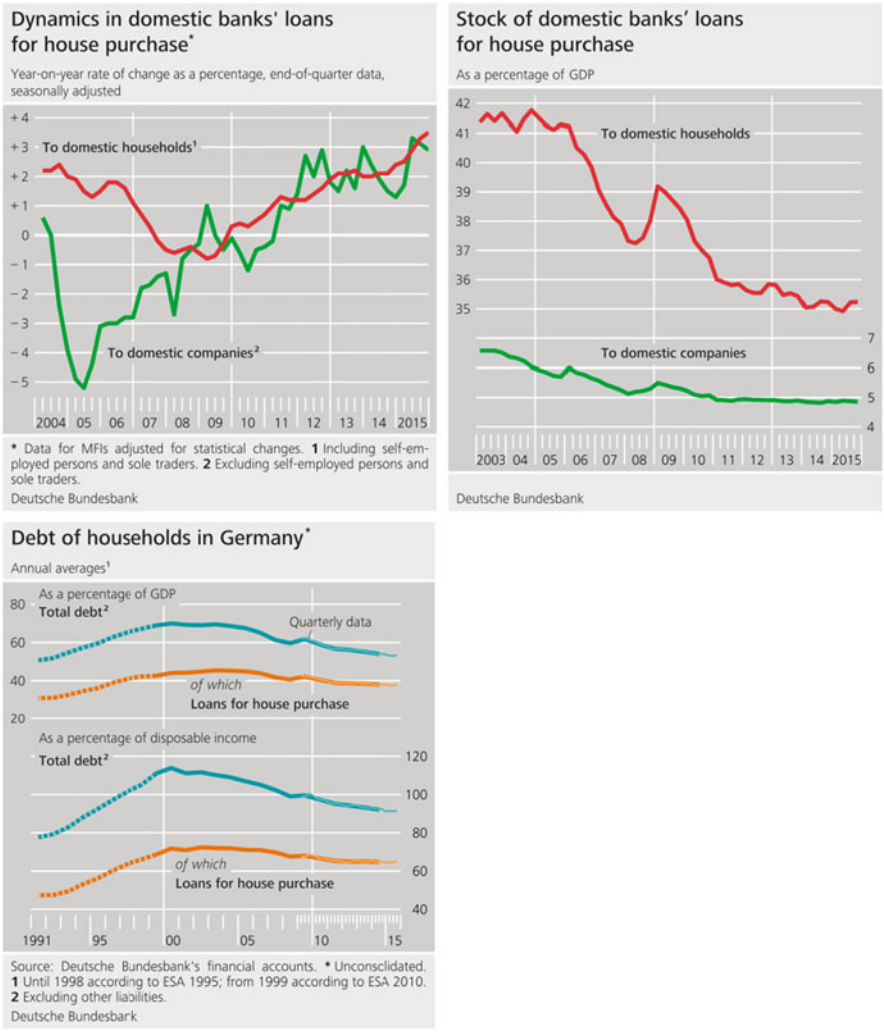

Fig. 1 Dynamics and stock in domestic bank loans for house purchase and overall household indebtedness (February 29, 2016). Source: Deutsche Bundesbank (2016b)

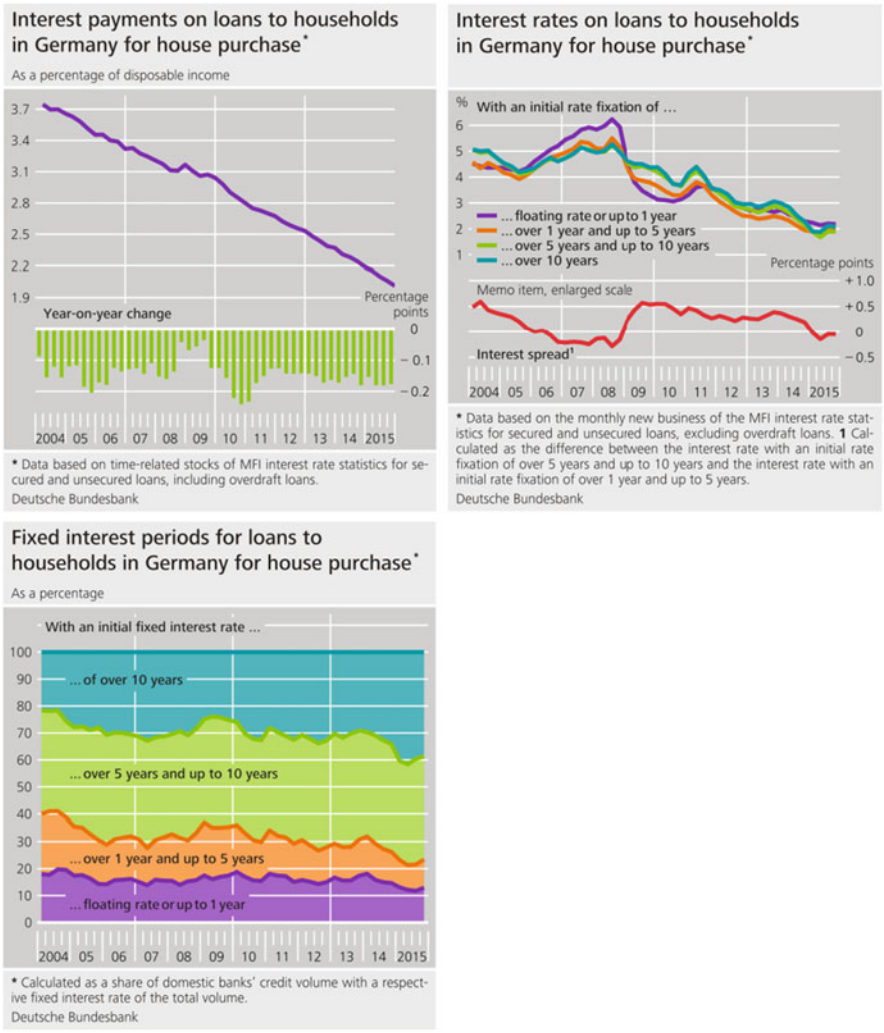

Fig. 2 Interest payments, interest rate levels and fixed interest periods on loans to households in Germany for house purchase (February 29, 2016). Source: Deutsche Bundesbank (2016b)

banks in Germany do issue long-term covered bonds (*Pfandbriefe*[2]) that are in line with household preferences for long fixed interest rate loans, but these are not significant.

[2]The "Pfandbrief" is the German type of a covered bond (used by Pfandbrief banks as an important funding source for mortgage credit where the mortgages serve as collateral for outstanding Pfandbrief bonds) which is a strongly regulated area that is a positive feature of the German financial system.

In Germany, financing of private and commercial landlords is also typically arranged predominantly by bank credit extended usually at about 80% to 90% of total financing volume provided by a single institute (Bettink 2013) although this may be changing as professional investors consider alternative ways to raise funds.

4.1.1 Providers

Household loans in general are provided by a diverse range of financial institutions. The share of the different providers in the extension of consumer credit (including secured and unsecured) in Germany can be broken down as follows using data from 2014: private commercial banks (30.4%), savings banks (28.8%), cooperative banks (23.4%), building societies (9.6%), real estate banks (3.1%) and the remaining 4.7% made up of the Landesbanken and special-purpose banks (Bankenverband 2015).

The main German-based institutions offering private residential financing are the nonspecialised institutions (such as the former Pfandbrief banks (*Pfandbriefbanken*), local saving banks (*Sparkassen*), cooperative banks and private commercial banks), the specialised institutions (building societies (*Bausparkassen*[3])) and life insurance companies.

4.1.2 Tax Incentives

There is no longer a favourable tax treatment of interest payments as tax relief that previously existed has been removed making the current German housing tax and subsidy system more or less tenure neutral. With no general support of the mortgage and credit market, subsidies for homeownership are much lower than in most other countries, and the main fiscal incentives that exist are associated with the building society schemes (see Sect. 3 on the housing market). Owner-occupied homes are treated as consumption goods for tax purposes, so no deduction of mortgage interest is possible, although interest tax deductibility exists for landlords that rent out their properties as these can be offset with the rental income generated by this "business". The most important instrument promoting homeownership is the subsidisation of a form of personal pension scheme (Riester pension). This subsidy scheme for the accumulation of financial assets for retirement is also applicable to the formation of owner-occupied residential property (Housing Riester, "Wohnriester") (see Sect. 2 on pensions). In the context of the WohnRiester, the state grants are related to savings rates or principal payments on the basis of either Bauspar savings or mortgage loan contracts.

[3]These building societies are specially authorised credit institutions that deal exclusively with financing of housing. Their business objective is to accept deposits from customers and to grant loans from these aggregate savings to other customers for the financing of a home.

4.1.3 Conservative Mortgage Lending

The German conservative mortgage lending habits manifest themselves in mortgage market characteristics such as moderate average LTV ratios and a low proportion of adjustable-rate loans. In addition, the use of credit database screening (from the private credit referencing agency, Schufa, that records incidences of bad payment history), general lender focus on avoiding debtor repayment difficulties and insolvency mean that high-risk loans are an exception in the German market. The generalised high standard of personal creditworthiness required from mortgage borrowers is supposed to foster good credit quality as does the way mortgage lending values are calculated (i.e. reliant on the long-term sustainable characteristics of the property).

Kofner (2014) stresses the historical tradition and thus path dependency behind the resilience of the German mortgage markets. Some observers would describe German mortgage markets as containing elements of credit rationing as applicants are selected on the basis of stricter creditworthiness criteria. Access to mortgage credit is therefore difficult for the sub-prime customers on low incomes and with a blemished credit history. This is most reflected by the generally larger use of equity by consumers to finance their house purchases than households buying property elsewhere. At a 42% homeownership rate (calculated per household), lenders have a higher-quality selection by favouring those household applicants that have the safer jobs, i.e. those with better educational attainment levels. This thus restricts homeownership to a smaller group of households. This is supported by statistics regarding homeownership rates by income strata that show that the majority of the housing wealth is in the hands of the higher-income groups (see Sect. 3 on Housing).

While German consumer characteristics such as a cultural disposition against indebtedness are reflected in the demand side for mortgages, as mentioned in the previous section on housing, the positive association with the rental status conferring strong tenant rights means that there is a relative weaker incentive for potential mortgage applicants to acquire a property at an early stage in their working lives. Consumers taking out a mortgage for their property for the first time will typically have an average age of 40 years. This age of entry into the "property ladder" is much higher in Germany than in other EU countries, and in fact this notion of the property ladder is not reflective of the mentality which some describe as more "own for life" approach to their homeownership approach.

Nevertheless, there are high-LTV loans being offered, but these will often be linked to the purchase or renovation/restructuring of luxury apartments, for example. A slight trend in the distribution of new loans towards more than 100% LTV ratios was reported in the German central bank's 2014 issue of its Financial Stability Review and reproduced in the chart below (Deutsche Bundesbank 2016b).

Figure 3 showing the credit-volume-weighted distribution of the German sustainable LTV ratio (*Beleihungsauslauf*) for new mortgage loans granted to households by German banks should nevertheless be interpreted with caution. While the chart shows alarmingly high proportions of 100% LTV ratios in lending decisions

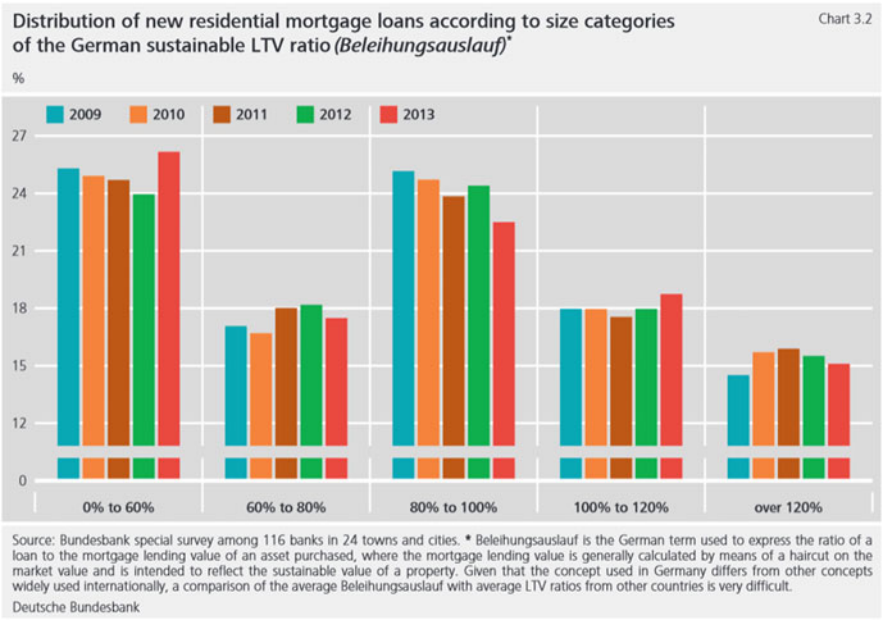

Fig. 3 New mortgage loans by size of the German sustainable LTV ratio. Source: Deutsche Bundesbank (2014)

(i.e. over a third of all new loans), it is important to note that the German mortgage lending value ratio (*Beleihungsauslauf*) is calculated using a different concept than the typical loan-to-value (LTV) concepts internationally used. The German mortgage lending value, heritage from the conservative Pfandbrief funding LTV limits, is designed to reflect the sustainable value of a property which often implies a haircut of between 20% and 40% on the market value.

Until today, no general LTV limit restricting lending exists in Germany, and excesses in lending have been largely mitigated by an obligation of 60% LTV for Pfandbrief refinancing. However, following the establishment of a lead macroprudential supervisor, the German Financial Stability Committee (G-FSC) in 2013 by the Act on Monitoring Financial Stability (Schneider and Wagner 2015), the financial regulator (*Bundesanstalt für Finanzdienstleistungsaufsicht*, BaFin) was granted new powers by lawmakers in 2017 to enable it to intervene to limit financial stability risks resulting from real estate financing (Act Supplementing Financial Supervision Legislation, *Finanzaufsichtsrechtergänzungsgesetz*). There is however no plan to impose a ceiling on mortgage loans as of mid-2017 despite the concern raised by authorities about housing price increases, which they do not see as connected to excessive lending practices nor falling standards (BaFin 2017). A similar conclusion was reached based on empirical work that found that mortgage lending volumes follow a weaker trend than what the factors would suggest and that neither the loan to value ratios, the repayments nor the maturities of these loans

suggest extra build-up of risks that would imply a need for stricter regulation (Bendel and Voigtländer 2016). Should BaFin discretion be applied, the rules would be able to target new business by imposing a ceiling on levels of mortgage loans extended as well as stipulating terms of loan repayment such as minimum amounts of principal to be repaid. As practices are today, such requirements on amortisation would however only be relevant for a very small number of loans since interest-only loans are the exception in Germany. To ensure these new instruments do not affect housing supply, the legislators have excluded the applicability of these rules to specific modernisation loans, social housing loans and bridge financing. The German regulator therefore has an additional tool to control mortgage lending beyond those that were already conveyed in terms of bank capital requirement rules.

Sustainability of debt commitments can also be assessed from a borrower perspective, and protection from unforeseen payment difficulties is a risk that can be covered by credit insurance policies associated with a mortgage loan. In Germany, while detailed statistics are not available, an overwhelming majority of mortgage debtors subscribe to payment protection insurance (PPI) for their mortgage loan with various degrees of coverage. Consumer organisations in the country while critical of PPI practices and their value for consumers in the area of unsecured consumer credit do however broadly encourage PPI for mortgage loans to cover the risk of inability to pay back the loan due to unemployment, sickness or death. However, the market is still flawed with high commissions, lack of transparency, weak competitive conditions and misselling of unwanted policies. The stock of payment protection insurance in the case of premature death at the end of 2014 stood at 21.67 billion euros from 3.26 billion contracts (BaFin 2015). In addition, German household overindebtedness statistics show that very few of the overindebted households have mortgage debts outstanding in default, and where this occurs, they will typically be self-employed (iff 2015).

In Germany, mortgage lending was not curtailed by the financial crisis, and neither was owner-occupied housing damaged. No specific housing-related legislation was introduced in response to the crisis. In the field of repossessions, the crisis did not seem to have a remarkable impact either. Data on the number of property repossessions in the years from 2006 to 2014 even show a decline in repossessions during this period (Statista 2017).

4.1.4 Legal Framework and Relevant Aspects of Its Evolution

The EU Mortgage Credit Directive (MCD) was transposed into German law in March 2016, and while some consumer-friendly protection provisions will help promote responsible lending, some German commentators have said that the new law could make it more difficult for consumers to purchase or renovate their own home, especially the less than average income earners and pensioners (Freiberger 2016). The provider obligation to check creditworthiness and ability to repay the credit is now extended throughout the entire duration of the life of the loan which is said to increase the risk to the provider in cases of default. In addition, the decision to

extend a mortgage loan will no longer be justified based on expected property value (i.e. only the income and asset situation of the credit applicant can be used in the loan assessment). This means that lending decisions can no longer rely on the debtor's sale of the property as source of debt repayment. As a response to arguments that the law may cause more difficult access for households with low recurrent income flows (borrower populations such as young families and the elderly) and to limit the unintended negative consequences of the MCD on credit provision to these groups, the government attempted to clarify the wording of the legal text transposing the MCD into German law in its March 2017 amendment law on financial supervision which had the main purpose of introducing macroprudential rules.

While the MCD harmonises rules across the EU, the German context, as mentioned above, had a more conservative approach to mortgage lending based on mortgage lending values rather than market prices that may include expectations of value appreciation. This traditional prudent lending in Germany will be important should the economic situation deteriorate. As covered in the section on housing, the lending growth and property price rises in Germany are not thought to be a speculative driven phenomenon but more a catch-up with the EU peers in terms of homeownership rates at a time of low returns in financial investments elsewhere. The more expensive properties combined with the lender requirements for borrowers to save large amounts in order to obtain a loan suggest that homeownership plans will be delayed, if at all realisable, for large sections of the population for some time to come.

4.2 Overview of Product Types

The credit institutions in Germany offer the following types of mortgage products (Bundesverband Deutscher Banken 2017; Bachofner 2008; TENLAW 2015).

Fixed Rate Loans Loans with fixed interest periods of 5, 10 or maximum 25 years. The entire term of the loan secured by a land charge normally amounts to 25 or 30 years. These are the most popular loans in Germany.

Variable Rate Loans These loans are less popular, and the interest rates are adjusted either according to the discretion of the financial institution or according to the Euro Interbank Offered Rate (Euribor) Index.

Combined Loan Products Loans that are combined with either a life insurance policy or a building society saving account where only interest payments are made and the principal is repaid later in a bullet payment from the amount accumulated from the interest payments made. Referred to as *Bausparsofortfinanzierung* or *Kombidarlehen*, these are riskier products for consumers, and consumer advocates typically warn them against subscribing to such complicated constructions unless they are willing to take the risk of having longer and larger debt commitments than necessary (VZHH 2017).

Building Loan Contract (*Bausparvertrag*) These contracts offered by the equivalent of building societies (*Bausparkassen*) are a key feature of the German landscape. As in other EU countries where they also exist, they allow a future borrower to first save into a savings programme before potentially accessing a loan at preferential interest rates. *Bausparen* is a contractual savings scheme that links a savings phase to the right to receive a mortgage loan. Both the saving and loan are typically associated with lower interest rates than market rates at the time of conclusion of the contract. The interest rates are fixed from the outset and for the entire contractual term. The complicated construction can be broken down into four phases: contract determination (terms, amounts, savings rate etc.), a savings period (lasting about 5 to 6 years where savers normally save about 40% to 50% of the total contract sum on the basis of agreed instalments), loan take-up phase including a probable waiting period while queuing for actual loan disbursement (the loan amount determined by the difference between the saved capital and the contract sum) and the loan repayment phase (which does not penalise faster repayments) (Verband der Privaten Bausparkassen 2016). Building loan contracts are a popular type of financing in Germany and a key route to homeownership. The trade association for building societies reports that there are 26 million Bauspar savers with 28.7 million accounts with a total contract sum of 763 billion euros, i.e. one of every two German households has at least one Bauspar contract (Verband der Privaten Bausparkassen 2016). These numbers can be explained by the two policy instruments (the housing Riester subsidy and the employee savings bonus) that provide grants to consumers linked to these building societies (see Sect. 3 on Housing).

Despite their continued popularity (judging by the number of new contracts and stable total number), consumer advocates have raised doubts about the adequacy of the building society business model as they gradually expand their offering beyond their traditional collective-based products to, for example, bridge financing and other types of loans extended with fewer provider conditions. This liberalisation of their activities follows from legal changes to enhance their financial situation which is structurally affected by the current low interest environment (VZHB 2016). At the time they were concluded years ago, the interest rates of the agreed potential loan were advantageous; however, compared to the historically low rates available for mortgages in the free market today, these may no longer look so good for consumers who want to take out a loan immediately. This according to consumer advocates may incentivise Bauspar clients to cancel their contracts, which could lead to loss of their rights to accumulated subsidies and could potentially damage the reputation and sustainability of the Bauspar model. These fears were qualified as excessive by the financial regular in answers provided for a study that investigated the poor and confusing reporting of the issue by journalists and consumer protection commentators (Fasel and Schwöbel 2017). In its assessment of the financial viability and safety of the Bauspar instrument as a vehicle for promoting homeownership and social stability, the BaFin makes the following assurances: contracts must be respected, supervisor product and conduct scrutiny are intense and unique (including control that contract sums are not inflated by the commissions intermediaries receive) and guarantees go beyond the applicable 100,000 € deposit limit. The BaFin did however

acknowledge the problematic waiting times for actual disbursement of the loan that desiring borrowers experience when they have fulfilled their saving requirements and applied for their agreed loan.

Other loans include those from the KfW promotional bank that have preferential rates for specific modernisation or eco-friendly works or building purchases (see Sect. 3 on Housing). Also, a further rare financing option is the so-called hire and purchase plan (Mietkauf) addressing the needs of the less creditworthy debtors or those unable to provide the bank with the required 20% of own equity deposit. According to the respective tenancy contract, the tenant has a right to purchase the rented dwelling after a decided period of time, usually 5 up to 20 years (TENLAW 2015).

According to Dr. Klein (2016), the share of the products having been sold in April 2016 can be broken down into standard loans (70%), KfW loans (11%) and forward rate loans (16%) with variable rate loans at less than 1%. Over 70% of newly issued mortgage loans have a fixed rate of more than 5 years (Deutsche Bundesbank 2016b), and there is no sign of lending standards having become more relaxed over time. The German mortgage market offers a number of options for borrowers with respect to the form of amortisation they choose. While interest-only mortgages are still insignificant, several intermediaries do offer alternative financing concepts which put off repayment of principal to later years (the combination products mentioned above). In addition, most credit institutions in Germany offer their borrowers the possibility to make extra repayments up to a certain level (*Sondertilgung*). While this option may be attractive for borrowers who are expecting Christmas bonuses, pay rises or inherited money, the contractual condition usually comes at a cost to the borrower in the form of a higher interest rate.

4.3 Conclusion

Several dimensions of German housing loans are conducive to financial stability. These include the prevalence and relatively long duration of fixed interest rates, a financial system that does not support equity extraction by way of using rising house prices to extract additional loans from the property for consumption purposes, and limited securitisation of loan portfolios by banks despite the wide use of covered bonds as means of refinancing.

The mortgage markets currently enjoy low interest rates that have led to increased demand for loans. Germany is the only country whose real estate and housing market remained relatively unaffected by the financial and economic crisis. The German conservative mortgage lending habits manifest themselves in mortgage market characteristics such as moderate average LTV ratios and low proportion of adjustable-rate loans. The use of credit database screening, general lender focus on avoiding debtor payment difficulties through strict credit quality and debtor capital adequacy requirements mean that high-risk loans are an exception in the German market. The generalised high standard of personal creditworthiness required from

mortgage borrowers fosters good credit quality as does the way mortgage lending values are calculated (i.e. reliant on the long-term sustainable characteristics of the property). The trade-off for such conservative lending is nevertheless a corresponding weaker or more generally restricted access to mortgage loans for households (reflected in the lower homeownership rates in Germany). The stronger responsible lending provisions transposed from the EU Mortgage Credit Directive (credit assessments not to be based on expected appreciation of collateral values but repayment ability) will make lending more sustainable but may also make it more difficult for the riskier potential borrowers to be granted a loan and thus hamper them from being able to consider homeownership. A more difficult access to ownership means that German potential borrowers need to save for longer periods of time to have a deposit large enough to enable obtaining a loan. While lending practices by banks can be classified as relatively conservative, such practices can change over time, so there is no guarantee that banks will continue to be conservative despite the new EU rules supporting the maintenance of prudence in lending, and the new macroprudential powers of the regulator will contribute to stabilising housing markets that show destabilising signs.

In terms of the credit institutions, the role of the building societies (*Bausparkassen*) is large and an integral part of housing policies to promote homeownership. Their saving and loan contracts continue to be very popular. Although the Bauspar business model is experiencing intense challenges due to the low interest environment, the political and social importance of these specialised lenders should ensure that they continue to play a role in encouraging savings and the aspirations of homeownership for as wide a population as possible. Lastly, promotional banks (the KfW and potentially its state equivalents) also play a significant role in delivery of adequate housing by facilitating credit to households on favourable terms with the exclusive purpose of energy efficiency renovations and age-conform restructurings of existing buildings.

References

Bachofner, M. (2008). *Analyse von Systemen der Wohneigentumsfinanzierung in Europa und die Beurteilung ihrer Effizienz*. Karlsruhe Universitätsverlag. doi:10.5445/KSP/1000008714. Accessed July 27, 2017.

Bundesanstalt für Finanzdienstleistungsaufsicht. (2015). *Statistik der BaFin – Erstversicherungsunternehmen 2014, Entwicklung der Versicherungswirtschaft und der Pensionsfonds*. Berlin, 21.12.2015. Accessed July 27, 2017, from https://www.bafin.de/SharedDocs/Downloads/DE/Statistik/Erstversicherer/dl_st_14_erstvu_gesamt_va.pdf?__blob=publicationFile&v=2

BaFin. (2017). *Residential mortgage loans: BaFin gains new macro-prudential powers. 03.07.2017 (English version). Bundesanstalt für Finanzdienstleistungsaufsicht*. Accessed July 10, 2017 from https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Fachartikel/2017/fa_bj_1706_wohnimmobilienkredite_en.html

Bundesverband deutscher Banken. (2015). *Zahlen, Daten, Fakten der Kreditwirtschaft*. Berlin, October 2014. Accessed July 27, 2017, from https://bankenverband.de/media/publikationen/Immobilienfianzierung_final_web.pdf

BBSR. (2010). *Wohnungsmärkte im Wandel. Zentrale Ergebnisse der Wohnungsmarktprognose 2025*. Bonn: Federal Institute for Research on Building, Urban Affairs and Spatial Development (Bundesinstitut für Bau-, Stadt- und Raumforschung, BBSR). Accessed July 13, 2016 from http://www.bbsr.bund.de/cln_016/nn_456412/BBSR/DE/Veroeffentlichungen/BerichteKompakt/2010/BK012010.html

Behrends, S., & Kott, K. (2010). Haus- und Grundbesitz - im Zeitvergleich und nach der Art der Immobilie. *Wirtschaftsdienst, 90*(2), 132–134. http://link.springer.com/article/10.1007%2Fs10273-010-1047-z?LI=true.

Bendel, D., & Voigtländer, M. (2016). *Eine Risikoprüfung für die deutsche Wohnimmobilienfinanzierung, IW-Trends – Vierteljahresschrift zur empirischen Wirtschaftsforschung aus dem Institut der deutschen Wirtschaft Köln, 43*(4), ISSN 0941-6838 (Printversion); ISSN 1864-810X (Onlineversion). Accessed July 20, 2017 from https://www.iwkoeln.de/studien/iw-trends/beitrag/daniel-bendel-michael-voigtlaender-eine-risikopruefung-fuer-die-deutsche-wohnimmobilienfinanzierung-317869

Berliner Morgenpost. (2016). In Kerl, C. *Die "Nahles-Rente" soll die Altersarmut endlich stoppen*, 9 July 2016. Accessed October 20, 2016 from http://www.morgenpost.de/politik/article207811335/Die-Nahles-Rente-soll-die-Altersarmut-endlich-stoppen.html

Bertelsmann Foundation. (2017). Entwicklung der Altersarmut bis 2036: Trends, Risikogruppen und Politikszenarien. In Haan, P., & Stichnoth, H. et al. (Eds.), *Deutsches Institut für Wirtschaftsforschung and Zentrum für Europäische Wirtschaftsforschung, June 2017*. Gütersloh: Bertelsmann Stiftung. Accessed July 11, 2017 from https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/Entwicklung_der_Altersarmut_bis_2036.pdf

Better Finance. (2016). *Pension savings: The real return* (2016 Ed.). Better Finance.

Bettink, J. (2013). Immobilienfinanzierung ändert sich gravierend, *Börsen-Zeitung*, 05 October 2010–2013. Accessed October 1, 2016 from https://www.boersen-zeitung.de/index.php?li=1&artid=2013191802

BMAS. (2014). *Zusätzliche Altersvorsorge*. Bonn: Bundesministerium für Arbeit und Soziales.

BMAS. (2017a). *Statistik zur privaten Altersvorsorge*. Accessed July 20, 2017 from http://www.bmas.de/DE/Themen/Rente/Zusaetzliche-Altersvorsorge/statistik-zusaetzliche-altersvorsorge.html

BMAS. (2017b). *Entwicklung der Riester-Verträge – Tabellarische Übersicht*. Bonn: Bundesministerium für Arbeit und Soziales. Accessed June 20, 2017 from http://www.bmas.de/SharedDocs/Downloads/DE/Thema-Rente/riesterrente-I-2017.pdf;jsessionid=20F8A5F00B536FFD513BCCD015236F78?__blob=publicationFile&v=2

BMFSF. (2016). *Ältere Menschen. Zuhause im Alter – Soziales Wohnen. Federal ministry for families, elderly, women and youths*. Accessed October 28, 2016 from https://www.bmfsfj.de/bmfsfj/themen/aeltere-menschen/zuhause-im-alter-soziales-wohnen

BMUB. (2017). *Dritter Bericht über Wohnungs- und Immobilienwirtschaft in Deutschland und Wohngeld- und Mietenbericht 2016*. Federal ministry for environment, nature conservation, building and nuclear safety (Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit), July 2017. Accessed July 25, 2017 from http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Bauwirtschaft/wohnungs_immobilienwirtschaft_bericht_2016_bf.pdf

Börsch-Supan, A. et al. (2016). *15 Jahre Riester – eine Bilanz*. Expertise für den Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung Munich Center for the Economics of Aging (MEA), Arbeitspapier 12/2016.

Bundesministerium der Finanzen. (2013). *Die geförderte private Altersvorsorge*, Monthly report 22.07.2013. Accessed October 24, 2016 from http://www.bundesfinanzministerium.de/Content/DE/Monatsberichte/2013/07/Inhalte/Kapitel-3-Analysen/3-4-die-gefoerderte-private-altersvorsorge.html

Bundesministerium der Finanzen. (2015). *25th subsidy report of the federal government* – Report on the development of federal financial assistance and tax benefits for the years 2013 to 2016. Accessed July 20, 2017 from http://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Press_Room/Publications/Brochures/2015-11-19-25th-subsidy-report-summary-summary-pdf.pdf?__blob=publicationFile&v=13

Bundesministerium der Finanzen. (2016). *Basisrentenverträge (sog. Rürup-Rente)*. 12.12.2016. Accessed June 20, 2017 from http://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Steuern/Weitere_Steuerthemen/Produktinformationsblatt/2016-12-12-Produktinformationsblatt-Basisrente.html

Bundesverband deutscher Banken. (2017). *Private Immobilienfinanzierung, Fokus verbraucher, Eine Information der privaten Banken*, Berlin. https://bankenverband.de/media/publikationen/Immobilienfianzierung_final_web.pdf

Corneo, G., König, J., & Schröder, C. (2015). *Distributional effects of subsidizing retirement savings accounts: Evidence from Germany*. Berlin: Freie Universität Berlin.

Destatis. (2016a). *Bevölkerungsentwicklung, demografischer Wandel*. Wiesbaden: Federal Statistical Office. Accessed July 13, 2016 from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Bevoelkerung.html

Destatis. (2016b). *Wohnungsbestand in Deutschland*. Wiesbaden: Federal Statistical Office. Accessed May 30, 2016 from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/EinkommenKonsumLebensbedingungen/Wohnen/Tabellen/Wohnungsbestand.html

Destatis. (2016c). *Leerstandsquote nach Bundesländern im Zeitvergleich*. Wiesbaden: Federal Statistical Office. Accessed May 30, 2016 from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/EinkommenKonsumLebensbedingungen/Wohnen/Tabellen/Leerstandsquote.html

Destatis. (2016d). *Haushalte im selbst genutzten Eigentum und in Mietwohnungen nach Haushaltstyp*. Wiesbaden: Federal Statistical Office. Accessed July 13, 2016 from https://www.destatis.de/DE/Methoden/Zensus_/Tabellen/Wohnsituation_HH_Zensus11_EigentumMiete.html

Destatis. (2016e). *Bevölkerungsvorausberechnung*. Wiesbaden: Federal Statistical Office. Accessed October 28, 2016 from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Bevoelkerungsvorausberechnung/Bevoelkerungsvorausberechnung.html#Tabellen

Destatis. (2016f). *Vorausberechnung Haushalte in Deutschland*. Wiesbaden: Federal Statistical Office. Accessed October 28, 2016 from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/HaushalteFamilien/Tabellen/VorausberechnungHaushalte.html

Destatis. (2016g). *Familie, Lebensformen und Kinder. Auszug aus dem Datenreport 2016*. Wiesbaden: Federal Statistical Office. Accessed October 28, 2016 from https://www.destatis.de/DE/Publikationen/Datenreport/Downloads/Datenreport2016Kap2.pdf?__blob=publicationFile

Destatis. (2016h). *Bestand und Struktur der Wohneinheiten – Fachserie 5 Heft 1 – Mikrozensus-Zusatzerhebung 2014, 23.12.2016*. Art. nr.: 2055001149004. Wiesbaden: Statistisches Bundesamt. Accessed July 20, 2017 from https://www.destatis.de/DE/Publikationen/Thematisch/EinkommenKonsumLebensbedingungen/Wohnen/EVS_HausGrundbesitzWohnverhaeltnisHaushalte2152591139004.pdf?__blob=publicationFile

Deutsche Bundesbank. (2014). *Financial stability review 2014*. Accessed July 13, 2016 from https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Financial_Stability_Review/2014_financial_stability_review.pdf?__blob=publicationFile

Deutsche Bundesbank. (2016a). *Housing price indicators*. Accessed May 30, 2016 from https://www.bundesbank.de/Navigation/DE/Statistiken/Zeitreihen_Datenbanken/Unternehmen_und_Private_Haushalte/unternehmen_und_private_haushalte_details_value_node.html?tsId=BBDY1.A.B10.N.G100.P0010.A&listId=www_s300_iswi_preise1

Deutsche Bundesbank. (2016b). *Indicators*. Accessed May 30, 2016 from https://www.bundesbank.de/Navigation/EN/Statistics/Enterprises_and_households/System_of_indicators/system_of_indicators.html

Deutsche Bundesbank. (2016c). *Monatsbericht März 2016*. https://www.bundesbank.de/Redaktion/DE/Downloads/Veroeffentlichungen/Monatsberichtsaufsaetze/2016/2016_03_vermoegen_finanzen_private_haushalte.pdf?__blob=publicationFile

Deutsche Rentenversicherung. (2015). *Jahresbericht 2015*. www.deutsche-rentenversicherung.de

DLA Piper. *Real estate investment in Germany*. http://www.dlapiperrealworld.com/export/sites/real-world/brochures/downloads/Germany-Investor-Guide.pdf

Dombret, A., Braun, R., Rottke, N. B., Oertel, C. Y., Mense, A., & Schumacher, J. (2013). Miet- und Immobilienpreissteigerungen: Droht eine Immobilienblase. *Ifo Schnelldienst, 66*(2), 3–20. Accessed July 27, 2017, from https://www.econstor.eu/handle/10419/165219

Dr. Klein. (2016). *Dr. Klein Trendindikator Baufinanzierung 04/2016*. Accessed July 13, 2016 from https://www.drklein.de/durchschnittliche-tilgung-auf-neuem-hoechststand.html

Dübel, H-J., & Rothemund, M. (2011). *A new mortgage credit regime for Europe – Setting the right priorities, June 2011*. Centre for European Policy Studies/European Credit Research Institute. Accessed July 27, 2017 from http://aei.pitt.edu/32098/1/New_Mortgage_Credit_Regime_for_Europe.pdf

Egner, B. (2011). *Housing policy in Germany – A best practice model?*. Friedrich Ebert Stiftung Briefing Paper Shanghai No. 4. Accessed July 27, 2017 from http://library.fes.de/pdf-files/bueros/china/11398.pdf

EMF. (2016). *Hypostat 2015*. European Mortgage Federation. Accessed November 27, 2017 from http://www.ehipoteka.pl/ehipoteka/pol/content/download/108923/543376/file/Hypostat_2015.pdf

Empirica. (2016a). *Vermögensbildung in Deutschland, Teil 1: Haushalts- und Personenbezogene Woheigentumsquote*. Study commissioned by LBS Bundesgeschäftsstelle Berlin, 2016. http://www.empirica-institut.de/fileadmin/Redaktion/Publikationen_Referenzen/PDFs/_Vermoegensbildung_LBS_Teil_1_WQ.pdf

Empirica. (2016b). *Vermögensbildung in Deutschland, Teil 2: Gebäudeart und Haushaltstyp der Selbstnutzer*. Study commissioned by LBS Bundesgeschäftsstelle Berlin, 2016. http://www.empirica-institut.de/fileadmin/Redaktion/Publikationen_Referenzen/PDFs/_Vermoegensbildung_LBS_Teil_2_Wohnstatus_Gebaeudeart_HH-Typ.pdf

Esping-Andersen, G. (1990). *Three worlds of welfare capitalism*. Princeton, NJ: Princeton University Press.

Eurostat. (2016). *Housing statistics (Distribution of population by tenure status, type of household and income group – EU-SILC Survey [ilc_lvho02] and [ilc_lvho07])*. Data extracted in February 2017. Accessed July 17, 2017 from http://ec.europa.eu/eurostat/statistics-explained/index.php/Housing_statistics

Fasel, C., & Schwöbel, H. (2017). *Bausparen: Wenn Verbraucherjournalismus misslingt – Aktuelle Studie des Instituts für Verbraucherjournalismus (ifv), June 2017*. Accessed August 1, 2017 from http://www.fachjournalist.de/bausparen-wenn-verbraucherjournalismus-misslingt/

Freiberger, H. (2016). *EU-Regulierung Die neue Immobilienkredit-Richtlinie hilft niemandem*. Süddeutsche Zeitung. Accessed May 27, 2016 from http://www.sueddeutsche.de/wirtschaft/eu-regulierung-die-neue-immobilienkredit-richtlinie-hilft-niemandem-1.2996443

GDV. (2016). *Die deutsche Lebensversicherung in Zahlen 2016*. Berlin: Gesamtverband der Deutschen Versicherungswirtschaft e.V.

Hagen, K., & Kleinlein, A. (2011). *Zehn Jahre Riester-Rente: Kein Grund zum Feiern* (pp. 3–14). DIW Wochenbericht Nr. 47/2011. Berlin: DIW.

Hennecke, P., Murro, P., Neuberger, D., Palmisano, F. (2017, October). *Pensions and housing wealth: Quantitative data on market conditions for equity release schemes in the EU*. http://hdl.handle.net/10419/170488

iff. (2015). Neuberger, D., Knobloch, M., & Laatz, W. *iff-Überschuldungsreport 2015, Überschuldung in Deutschland*. Institut für finanzdienstleistungen e.V. (iff). Hamburg. www.iff-ueberschuldungsreport.de

iff. (2017). *Internationale Konferenz zu Finanzdienstleistungen*, Hamburg 11./12. Mai 2017 – Konferenz-Reader. Institut für finanzdienstleistungen e.V. (iff). Hamburg. https://www.iff-hamburg.de/index.php?id=3284

IWK. (2013). *Clamor, T., & Henger R. Verteilung des Immobilienvermögens in Deutschland, März 2013 [Distribution of real estate assets in Germany]*. Köln: Institut der deutschen Wirtschaft Köln, IW Medien GmbH, Köln; doi:10.2373/1864-810X.13-01-05.

Kholodilin, K., & Ulbricht, D. (2014). Mietpreisbremse: Wohnungsmarktregulierung bringt mehr Schaden als Nutzen. In *DIW Wochenbericht* Nr. 15. https://www.diw.de/documents/publikationen/73/diw_01.c.442364.de/14-15.pdf

Kholodilin, K., & Ulbricht, D. (2015). *Urban house prices: A tale of 48 cities*. Economics discussion papers, No. 2015-13, Kiel Institute for the World Economy. http://www.economics-ejournal.org/economics/discussionpapers/2015-13

Kholodilin, K., Michelsen, C., & Ulbricht, D. (2014). *Speculative price bubbles in urban housing markets in Germany*. Deutsches Institut für Wirtschaftsforschung, Discussion Papers 1417, 2014. https://www.diw.de/documents/publikationen/73/diw_01.c.487920.de/dp1417.pdf

Kofner, S. (2014). The German housing system: Fundamentally resilient? *Journal of Housing and the Built Environment, 29*, 255. https://doi.org/10.1007/s10901-013-9383-0.

Kohl, S. (2017). *Homeownership, renting and society: Historical and comparative perspectives*. Taylor & Francis. https://www.bookdepository.com/Homeownership-Renting-Society-Sebastian-Kohl/9781138644946

Landesbausparkassen. (2013) *Markt für Wohnimmobilien 2013*. Berlin, 2013.

Maisch, N., & Schick, G. (2014). *Positionspapier: Verbraucherpolitischer Neustart für die private Altersvorsorge! Vierteljahreshefte zur Wirtschaftsforschung, 83* (pp. 101–111). Jahrgang 03.2014. Berlin: DIW.

Oberhuber, N. (2015). *Der Renten-Irrweg*, ZEIT-Online, 10 August 2015.

OECD. (2015). *Pensions at a glance 2015: OECD and G20 indicators, Germany report*. http://www.oecd.org/publications/oecd-pensions-at-a-glance-19991363.htm

OECD. (2017). *Analytical house prices indicators, data for 2015*. Accessed July 27, 2017 from https://stats.oecd.org/Index.aspx?DataSetCode=HOUSE_PRICES

Oehler, A. (2012). *Die Verbraucherwirklichkeit: Mehr als 50 Milliarden Euro Schäden jährlich bei Altersvorsorge und Verbraucherfinanzen*. Befunde, Handlungsempfehlungen und Lösungsmöglichkeiten. Accessed July 13, 2016 from https://www.uni-bamberg.de/fileadmin/uni/fakultaeten/sowi_lehrstuehle/finanzwirtschaft/Transfer/20122012x__Milliardenschaeden_bei_Altersvorsorge_und_Verbr....pdf

Schneider, M., & Wagner, K. (2015). *Housing markets in Austria, Germany and Switzerland* (pp. 42–58). Monetary Policy and the Economy. Austrian Central Bank. https://www.oenb.at/dam/jcr.../mop_2015_q1_analyses4.pdf

Statista. (2017). *zwangsversteigerung.de. n.d. Anzahl der zwangsversteigerten Immobilien in Deutschland in den Jahren 2006 bis 2014*. Statista. Accessed August 1, 2017 from Verfügbar unter: https://de.statista.com/statistik/daten/studie/70036/umfrage/zwangsversteigerungen-von-immobilien-in-deutschland/

TENLAW. (2015). Cornelius, J., & Rzeznik, J. *Tenancy law and housing policy in multi-level Europe project of the European Union*. Germany Country Report. http://www.tenlaw.uni-bremen.de/reports.html

vdpResearch. (2016). In Eilers, F., & Hofer, T. (Eds.) *Vdp spotlight real estate: Residential property loans continue to rise – Cause for concern?* vdpResearch, Berlin, September 2016. Accessed July 25, 2017 from http://www.vdpresearch.de/wordpress/wp-content/uploads/2016/09/vdpSpotlight_09.2016_EN.pdf

Verband der Privaten Bausparkassen. (2016). *The "Bauspar" System in Germany (Information as of August 2016)*. Accessed July 27, 2017 from http://www.bausparkassen.de/fileadmin/user_upload/english/Bausparen_in_Deutschland_en_160908.pdf

VZHB. (2016). *Bausparen – Risse im System: Eine Untersuchung der Verbraucherzentrale Bremen im Rahmen des Projektes Marktwächter Finanzen, Verbraucherzentrale Bremen*, Juni 2016.

Accessed August 1, 2017 from https://www.verbraucherzentrale-niedersachsen.de/media1160264A.pdf

VZHH. (2017). *Problemfall Kombidarlehen, Verbraucherzentrale Hamburg (Consumer centre of Hamburg)*. Accessed July 27, 2017 from http://www.vzhh.de/baufinanzierung/518426/problemfall-kombidarlehen.aspx

Wagner, G. (2016). *Altersvorsorge. Eine Deutschlandrente für (fast) alle*. ZEIT Online, 18 February 2016.

Westerheide, P. (2011). The private rented sector in Germany. In *LSE, towards a sustainable private rented sector* (p. 45). Accessed October 1, 2016 from http://eprints.lse.ac.uk/56070/1/Towards_a_sustainable_private_rented_sector.pdf

ZEIT Online. (2016). *Nahles rechnet mit steigendem Rentenbeitrag*, 5 October 2016. Accessed October 20, 2016 from http://www.zeit.de/politik/deutschland/2016-10/rente-rentenpolitik-andrea-nahles-rentenniveau-mindesthoehe