

Homeownership, social insurance, and old-age security in the United States and Europe

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**HOMEOWNERSHIP, SOCIAL INSURANCE, AND OLD-AGE SECURITY
IN THE UNITED STATES AND EUROPE**

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Abstract

Relatively few Americans have accumulated substantial savings outside of their employer-sponsored retirement plans, yet most own their homes. The traditional view of the retirement income system as a three-legged stool supported by Social Security, private pensions, and savings may be better viewed as being supported by Social Security, pensions, and homeownership.

Country-specific economic, social, and political developments throughout modern history mean that homeownership rates and the relative importance of homeownership for old-age security vary widely across developed countries. Many countries, however, are increasingly promoting homeownership as an effective way of building assets, a de facto self-insurance mechanism for old-age security, and a substitute for various social transfers.

This paper uses data from the *Health and Retirement Study* (HRS) in the United States and the *Survey of Health, Ageing, and Retirement in Europe* (SHARE) to better understand the role of homeownership in retirement before and after the Great Recession for the United States and nine Western European countries: Austria, Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, and Sweden. It begins by comparing trends in homeownership rates among older adults and the key characteristics of housing-related policies and regulations that potentially impact home acquisition. It then examines home equity trends, the prevalence and burden of housing debt, and the relative importance of housing as a source of retirement wealth. Next it provides an overview of equity release options and estimates how much older households could increase their incomes by fully monetizing their housing equity. Finally, the paper discusses the prospects for and limits of home equity release and asset-based welfare policies.

The paper found that:

- Most older adults are homeowners, and homeownership rates generally increased between 2006 and 2012; however, there is substantial variation across countries.
- Housing-related policies in the Netherlands, Sweden, and Denmark provide comparatively high levels of support to both homeowners and non-homeowners, while those in Italy and Spain provide little support to either group. In contrast, housing policies in the United States provide some of the highest levels of support for homeowners and lowest levels of support for non-homeowners.

- Older American homeowners have substantial housing wealth, but compared with their European peers, housing represents a somewhat smaller part of their net total wealth.
- While the prevalence of housing debt among older adults is somewhat lower in the United States than in the Netherlands, Denmark, and Sweden, among older homeowners with housing debt, Americans have the highest loan-to-value ratios and the highest proportion of homeowners whose homes may be at risk of going underwater.
- If the housing equity of older Americans were completely monetized, median household income would increase by over a third – more than in countries like Sweden and Denmark, but well below countries like Spain and Italy. Across all countries in this study, tapping into housing equity could substantially reduce the share of older adults with household incomes below 50 percent of the median – the threshold for relative poverty.
- However, even *after* annuitizing housing wealth, the share of poor older Americans would remain as high as, or higher than, the share of poor older Europeans *before* accounting for annuitized housing wealth.
- Despite the potentially large impact of monetizing home equity on household incomes and the economic security of older Americans and Europeans, there remain impediments to tapping into home equity that may explain its low use. Objective obstacles include the high costs of withdrawing housing equity, uncertainty about life expectancy and the amount of financial resources required to support retirement, the adverse impact on eligibility for social benefits, and the concentration of housing wealth among (upper) middle- and higher-income individuals who are less likely to need additional resources in old age. Subjective obstacles include an aversion toward assuming additional debt in old age, different (often emotional) attitudes to housing compared with other types of wealth, bequest motives, and a lack of trust in financial institutions.

The policy implications of the findings are:

- Home equity has a potentially important yet limited role in supporting old-age security. Even if objective obstacles related to the design and pricing of home equity release products were fully addressed, subjective reasons for avoiding home equity withdrawal

and compositional differences in the concentration of housing wealth would still limit the scope of asset-based welfare.

- These limitations notwithstanding, using home equity to supplement retirement incomes and improve retirement security remains a potentially attractive option for a substantial number of older adults who have built housing wealth over their life course, but may either have insufficient retirement incomes or face unexpected and expensive life events (e.g. long-term care needs).
- What remains more uncertain and difficult to predict, though, are the long-run prospects for using home equity to support old-age security since younger generations of Americans and Europeans may find it more difficult to build home equity than their parents' generation.

Introduction

Relatively few Americans have accumulated substantial savings outside of their employer-sponsored retirement plans, yet most own their homes. The traditional view of the retirement income system as a three-legged stool supported by Social Security, private pensions, and savings may be better viewed as one supported by Social Security, pensions, and homeownership (Social Security Administration 2016a). Indeed, homeownership has long been recognized as a source of retirement security because it provides a rent-free place to live after a mortgage has been paid off. Less commonly, housing wealth has been used directly to pay for unexpected events (e.g., health emergencies) and to support consumption more generally, by using various mortgage products to tap into the home's equity or by selling the property and pocketing the net proceeds.

Country-specific economic, social, and political developments throughout modern history, mean that homeownership rates and the relative importance of homeownership for old-age security vary widely across developed countries (Mudrazija 2013; Toussaint 2011). Many countries, however, are increasingly promoting homeownership as an effective way of building assets, a de facto self-insurance mechanism for old-age security, and a substitute for various social transfers (Ronald and Doling 2012).

In this context, this study compares the United States with Western European countries to better understand the role of homeownership in retirement security. We explore trends in homeownership among older adults in different countries before and after the Great Recession, and examine how the link between homeownership and old-age financial security differs across these countries. We also examine and evaluate housing policies and institutional frameworks with respect to their impact on retirement security for homeowners and non-homeowners across Europe and the United States, highlighting possible policy lessons.

More specifically, we first document homeownership rates and recent trends for older adults in the United States and Europe using longitudinal data from the *Health and Retirement Study* (HRS) and the *Survey of Health, Ageing, and Retirement in Europe* (SHARE). We then compare key characteristics of housing policies across countries in the context of the distribution of homeownership and the resources and needs of different segments of the population. In the United States, for example, more than three-quarters of federal housing spending goes to homeowners (Sard and Fischer 2013; Reynolds 2007). This is primarily from mortgage interest

deductions on federal income taxes, but it also includes deductions for property taxes and tax credits for various home improvements. Additionally, some states reduce property taxes for low-income homeowners without providing similar property tax circuit breakers for renters. Treanor (2016) observes that housing policy in the United Kingdom also favors homeownership. In contrast, homeowners have fewer benefits in countries such as Germany, Austria, and Switzerland, and, as a result, these countries have comparatively more renters.

Next, we examine cross-national differences in housing wealth, housing debt, and home equity using the HRS and SHARE. We then provide an overview of equity release products and estimate how much older adults could potentially improve their retirement security by tapping into their housing equity, since this is the most valuable asset that most older Americans and Europeans have. For example, in the United States it accounts for nearly 90 percent of total net wealth for those of lower socioeconomic status (Butrica and Mudrazija 2016).

Finally, we discuss prospects and limits of asset-based welfare policies. Reverse mortgages, for example, are promoted in the United States as a way for older individuals to access housing equity, and in Europe some estimates suggest that older individuals could potentially access about €20 billion of home equity annually (Towers Watson 2013). However, various objective (e.g., high costs of equity withdrawal products or uncertainty about life expectancy) and subjective (e.g., debt aversion, bequest motives) obstacles prevent most older adults from using home equity release products. Moreover, because housing wealth is concentrated among (upper) middle- and higher-income individuals, even in the absence of obstacles to accessing home equity, housing asset-based welfare would not be able to fully assume the role of traditional welfare.

Recent Trends in Homeownership among Older Adults

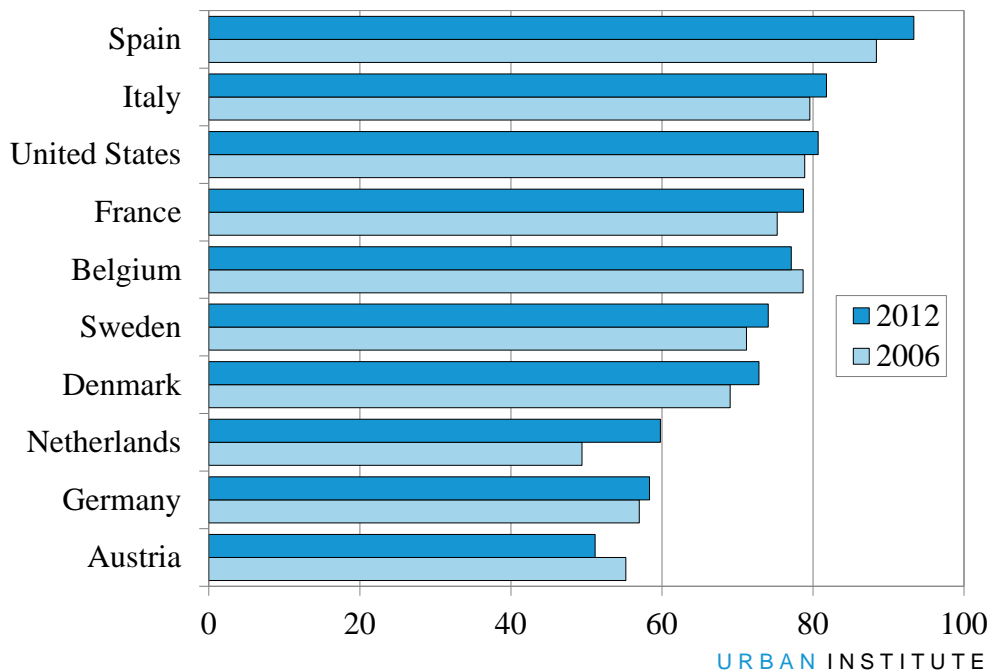
Homeownership rates traditionally vary across European countries. Southern European countries such as Spain and Italy have high homeownership rates, whereas countries like Germany and Austria have low homeownership rates and strong rental sectors (Pittini et al. 2015). The reasons behind these patterns are complex. Some suggest that housing policy in Southern Europe has been used almost exclusively as an economic policy tool to create jobs and stimulate economic growth (Allen et al. 2004). Others suggest that Southern European countries may have comparatively higher homeownership rates because of limited investment alternatives.

Mudrazija (2013), for example, explains that the heritage of political instability and weak institutions across these countries resulted in the lack of economic and legal security and transparency and led to low levels of confidence in institutions and interpersonal trust. The result is an (arguably comparatively risk averse) investment strategy, perpetuated across generations, which focuses on homeownership. More generally, social preferences for owning over renting, regardless of their origin, result in a redistribution of needs for resources over the life cycle. With the costs of buying particularly high for young and middle-aged adults, they are likely to oppose high taxes and substantial redistribution from the working-age population to older population, thereby increasing the importance of homeownership as a form of private old-age insurance vis-à-vis the traditional welfare state (Castles 1998; Kemeny 1978).¹

Figure 1 shows that the variation in homeownership rates across Europe and the United States has continued in recent years and that the differences previously observed for the general population extend to the older population as well. Following the Great Recession, over 90 percent of older Spaniards and 80 percent of older Italians were homeowners, compared with only about half of older Austrians and less than six in ten older Germans and Dutch. The United States homeownership rate was around 80 percent, just slightly lower than in Italy and higher than in France.

¹ For a detailed discussion of the origin of differences in homeownership across Europe, and the links between homeownership and welfare regimes, see Mudrazija (2013).

Figure 1. *Homeownership Rates for Population Ages 65 and Older (in %)*



Sources: HRS 2006, 2012; and SHARE 2006/2007, 2011, 2013.

Although the homeownership ranking changed little between 2006 and 2012, almost all observed countries experienced an expansion in homeownership over time. Homeownership rates for most countries increased 1-5 percentage points between 2006 and 2012 – with the largest observed increase in the Netherlands.

The rise in homeownership in recent decades and even during the recent economic downturn is consistent with our conjecture that with growing fiscal pressures related to population aging and traditional welfare-state retrenchment, governments are increasingly promoting homeownership as part of their old-age security policy. To do so, they implement a variety of policies and regulations that impact home acquisition. We recognize, however, that these policies are only one segment of the larger set of norms and regulations, ranging from the role of family in welfare provision to pension and healthcare system organization and various programs that target low-income individuals, which collectively determine the current extent of reliance on homeownership-based welfare across countries. Only a comprehensive consideration of all these aspects can fully explain cross-national differences in the reliance on homeownership for old-age security. In its absence, it could be argued that a comparative analysis of housing policy and institutional frameworks across countries is primarily appropriate for countries with

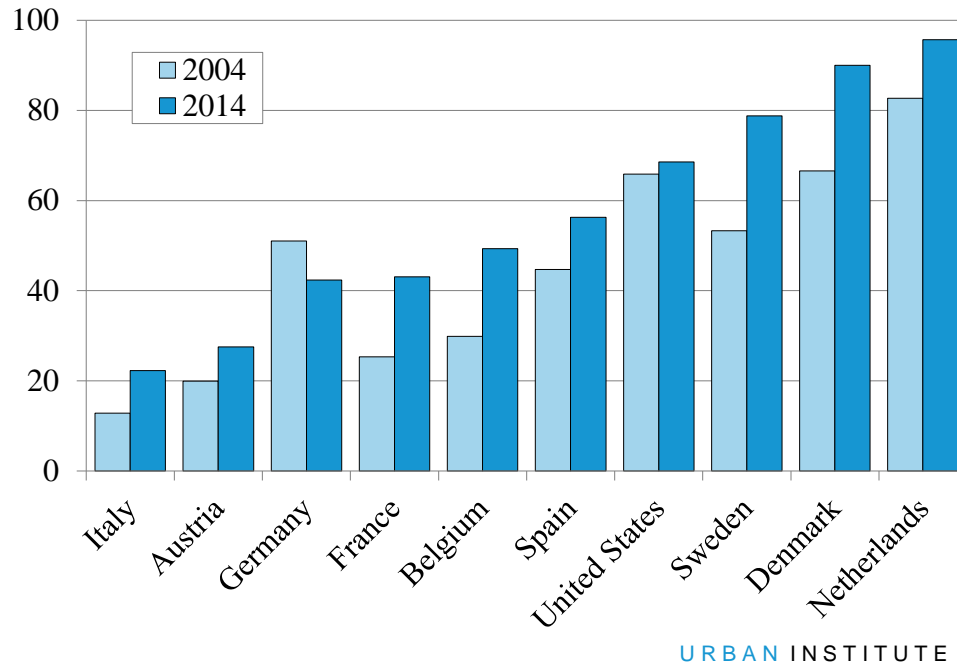
traditionally important role of the government, regardless of the type of their welfare regime, while potentially somewhat less relevant for countries where families have traditionally been the primary providers of social safety such as in Southern Europe. Nevertheless, with similar demographic challenges and ever larger economic and (at least in the case of many European countries) institutional convergence and interdependence, countries with historically different roles for government and family, different welfare regimes, and different housing tenure patterns have increasingly similar goals for expanding homeownership and increasing the role of asset-based welfare. Therefore, comparing policies and regulations that impact home acquisition across countries offers potentially important insights into the intended and unintended consequences for retirement security of older Europeans and Americans, which may translate to improved policymaking in this area.

Policy and Institutional Framework

Home Acquisition and the Role of Credit Markets

Theoretical insights suggest that developed Western countries can be divided into three groups with respect to which entity plays the key role in home acquisition: 1) the family (e.g. inheritance, transfers) and own savings, 2) credit markets and financial instruments (i.e., mortgages), and 3) government (e.g. providing social housing or imposing strict rental-market regulations) (Delfani, De Deken, and Dewilde 2014). While this distinction corresponds well with the observed differences in homeownership rates across countries, trends in recent decades suggest that homeownership has become almost universally more prevalent (Andrews and Caldera Sánchez 2011; European Mortgage Federation 2016). Driving these trends, in large part, is the expansion of mortgage markets and innovative mortgage and financial products, even in countries where mortgages traditionally have a smaller role in homeownership, and the enactment of public policies to support homeownership, primarily mortgage interest deductions and subsidies for certain homeowners (e.g., first-time homebuyers). As a result, homeownership is increasingly realized through debt, evidenced in the size of mortgage loans relative to gross domestic product (GDP) across Europe and the United States (Figure 2).

Figure 2. *Mortgage Loans as a Percentage of GDP*



Source: European Mortgage Federation 2016.

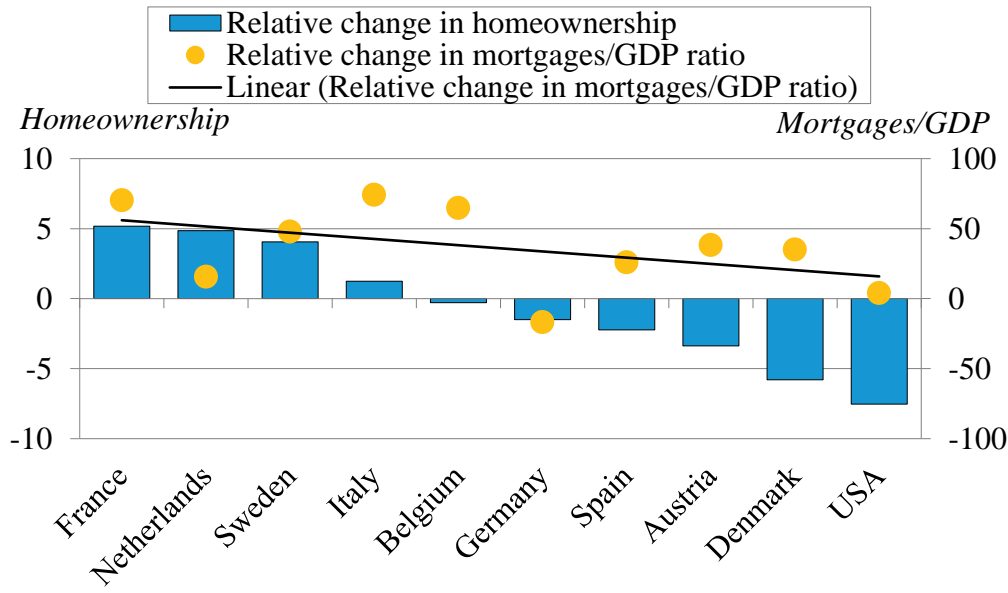
With the exception of Germany, all countries in Figure 2 recorded an increase between 2004 and 2014 in mortgages relative to GDP.² Compared with the United States, European countries experienced more growth in the mortgage market over the observed period, which can partly be attributed to the decline that the United States experienced in the aftermath of the Great Recession.

Despite being positively correlated, the expansion in mortgages did not universally translate into an increase in owner-occupancy rates (Figure 3). For example, countries such as France and Sweden had a large increase in both mortgages and owner-occupancy, while Belgium had no change in owner-occupancy despite a comparable increase in mortgages.³ This finding suggests that while access to mortgages may be important, it is not the only factor influencing homeownership. In this context, it is important to consider how different countries regulate their mortgage markets and what other policy instruments they may use to encourage homeownership.

² Several countries experienced a decline in mortgages relative to GDP following the Great Recession, but they still recorded an increase over the observed period. The post-recession decline was more precipitous in Spain and the United States, and much smaller in the Netherlands and Denmark. No such effect was observed in other countries.

³ The substantial increase in Italy's mortgages/GDP ratio is primarily due to a much lower basis than for other countries in the sample.

Figure 3. *Relative Changes in Homeownership and Share of Mortgages in GDP 2004-2014 (in %)*



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Source: European Mortgage Federation 2016.

Access to Mortgage Loans

Prior research shows that financial regulatory and credit practices related to mortgages play a key role in facilitating homeownership. For example, Andrews and Caldera Sánchez (2011) find that lower down-payment requirements in recent decades have had a similar impact on homeownership rates as population aging. These and other developments in the housing finance industry cannot occur outside the institutional and regulatory contexts set by governments. Therefore, indicators of the ease of access to mortgages reflect not only the level of financial sector development, but the underlying institutional and regulatory frameworks as well.

Table 1. *Indicators of Mortgage Loan Access, by Country*

	Typical loan-to-value ratio ¹	Typical mortgage loan maturity ²	Limit on loan-to-value is 80% or higher	Predominantly fixed interest rate for mortgage loans
Austria	Medium	Long	-	No
Belgium	High	Medium	Yes	Yes
Denmark	High	Long	Yes	Yes
France	Medium	Short	No	Yes
Germany	Medium	Long	No	Yes
Italy	Low	Short	Yes	No
Netherlands	High	Long	Yes	Yes
Spain	Medium	Medium	Yes	No
Sweden	Medium	Long	Yes	No
U.S.	High	Long	Yes	Yes

Notes: ¹ Low = 0.6 or lower; Medium = 0.6-0.79; High = 0.8 or higher; ² Short = less than 20 years; Medium = 20-24 years; Long = 25 years or longer.

Sources: Andrews 2010; Caballero et al. 2014; and European Mortgage Federation 2016.

Compared with European countries, the United States seems well-positioned with respect to the ability of potential homeowners to access mortgages (Table 1). The typical loan-to-value (LTV) ratio in the United States is high, and most mortgages have a fixed interest rate and long maturity.⁴ The most similar mortgage environment is found in Denmark and the Netherlands. At the opposite end, Italy appears to have the least favorable conditions for accessing mortgages, while other countries fall in between. Overall, however, citizens of all the countries except Italy (and to a lesser extent France) seem to have access to the financial resources needed to buy a home.

Tax Treatment of Homebuyers

In addition to providing an institutional and regulatory framework for the financial sector, government can also impact home buying directly through the tax system. For example, governments charge different taxes and fees for property transactions such as property transfer taxes, stamp duties (i.e., documentary stamp tax), land registry fees (i.e., recordation/registration

⁴ The LTV ratio is the amount of the mortgage relative to the home value. High LTV ratios signal homes that are risky assets. Most lenders will charge higher interest rates or require private mortgage insurance on loans for more than 80 percent of the home's value to cover the credit losses they expect because such loans are riskier.

tax), and notary fees. Subsequently they levy property taxes, but also provide incentives for homebuyers through policies such as the mortgage interest tax deduction. Sometimes, incentives will target a segment of buyers (e.g., first-time homebuyers). While there is no clear evidence of the effectiveness of these policies in encouraging (or discouraging) homeownership, and some research suggests that, for example, tax deductions may affect property values more than homeownership rates (e.g., Andrews and Caldera Sánchez 2011), property-related taxes, fees, and incentives undoubtedly reflect policy priorities with respect to homeownership. An overview of these policies is provided in Table 2.

Table 2. *Major Taxes and Transfers That Impact Property Buying, by Country*

	Transaction costs ^{1,2}	Property tax ^{3,4}	Property tax relief ⁵
Austria	Moderate	Low	Low
Belgium	High	High	High
Denmark	Low	Moderate	High
France	High	High	Moderate
Germany	Moderate	Low	None
Italy	High	Moderate	Low
Netherlands	Moderate	Low	High
Spain	High	Moderate	Moderate
Sweden	Moderate	Low	High
U.S.	Low	Moderate	High

Notes: ¹ Low = less than 5 percent of property value; Moderate = 5-10 percent; High = more than 10 percent; ² The OECD estimate of transaction costs does not account for value added tax that may apply to some costs or for tax breaks that may decrease transaction costs for certain categories of people or properties; ³ Low = less than 1.5 percent of GDP; Moderate = 1.5-3 percent; High = more than 3 percent; ⁴ Standardized using the U.S. homeownership rates; ⁵ Low = less than 0.2 percentage points difference between market and after-tax interest rates; Moderate = 0.2-0.8 percentage points; High = more than 0.8 percentage points.

Sources: Andrews 2010; European Mortgage Federation 2016; and OECD 2017.

The United States and Denmark have the lowest transaction costs (below 5 percent of the property value), whereas Belgium, France, Italy, and Spain have the highest – transaction costs in excess of 10 percent of the property value. Besides having the highest transaction costs (14-15 percent of property value in 2009, according to Andrews (2010)), France and Belgium have the highest property taxes measured as a share of GDP. As of 2015, property taxes in France and Belgium were about 4.1 and 3.5 percent of GDP, respectively, which is significantly higher than 2.7 percent of GDP in the United States (OECD 2017). Even if we standardize the results using

the U.S. homeownership rate, the adjusted property tax in France (4 percent) and Belgium (3.1 percent) remains higher than in the United States, which, in turn, is substantially ahead all other countries in the sample where the results range from 0.7 percent of GDP in Austria to 2.4 percent in Italy.

All countries in our sample provide at least some tax advantages for homebuyers, but the level of support varies. The lowest tax relief on debt financing for homeowners is in Italy and Austria, while at the opposite end is the Netherlands, followed by Denmark, Sweden, the United States, and Belgium (Andrews 2010). Overall, then, the tax systems in Denmark, the Netherlands, Sweden, and the United States seem more advantageous to homebuyers than the tax systems in other countries.

Homeownership Alternatives: Renting and Social Housing

Whereas increasing homeownership is an important goal for many governments, and home equity can importantly supplement (or possibly replace) traditional welfare, even in countries with the most supportive policy environment for homeownership there will be a sizeable minority of people who, for financial and other reasons, are not homeowners. In the context of old-age security for people who have not built home equity, it is therefore important to examine what government policies may be in place to protect non-homeowners who have to rely on the rental market for their housing needs. Table 3 shows how selected European countries and the United States compare in several key aspects that reflect underlying government policies in this area.

Table 3. *Government Intervention to Support Non-Homeowners, by Country*

	Rent control	Tenant protection	Population in subsidized rent tenure ³	Total social housing ⁴
Austria	Strong	Low	Large	Large
Belgium	Moderate	Moderate	Large	Small
Denmark	Strong	Low	Small	Large
France	Moderate	Moderate	Large	Medium
Germany	Strong	Moderate	Medium	Small
Italy	Weak	Moderate	Medium	Small
Netherlands	Moderate	Strong	Small	Large
Spain ¹	Weak	Moderate	Medium	Small
Sweden	Strong	Strong	Small	Large
U.S.	Weak ²	-	Small	Small

Notes: ¹ Spanish laws changed in 2013, making substantial changes to rental sector and relaxing some of the renters' protections (previously, they were moderate and high for rent control and tenant protection, respectively); ² The U.S. regulation on renting differs across states and therefore the assessment of rent control reflects the conditions applicable to most, but not all parts of the country; ³ Small = less than 2 percent; Medium = 2-8 percent; Large = more than 8 percent; ⁴ Small = less than 10 percent; Medium = 10-19 percent; Large = 20 percent or more; ⁵ Low = less than 25 percent of renters from the bottom quintile of the income distribution spending over 40 percent of disposable income on rent at market prices; Moderate = 25-50 percent; High = over 50 percent.

Sources: Caballero et al. 2014; Delfani, De Deken, and Dewilde 2014; and OECD 2016.

Rent control is generally more prevalent in Europe than in the United States where rents are mostly freely negotiable with some notable exceptions like California and New York that limit rent increases (Global Property Guide 2008). Particularly strong rent control regulations are often found in countries with a high proportion of renters relative to homeowners, such as Austria and Germany. Legal protections for tenants, such as those regulating landlord-tenant contracts, are less clearly linked with rental rates. Governments can also directly support renters by either providing social housing, subsidies to rent, or both. Consistent with its low homeownership rate and obvious strong reliance on the rental sector to provide housing, Austria subsidizes rent for a relatively large share of its population. Despite general housing trends that are similar to Austria, Germany, in contrast, provides somewhat less such support to its non-homeowners, making rent control and other tenant protections comparatively more important policy instruments. In almost all observed countries, social housing comprises a larger proportion of the total dwelling stock than subsidized rental housing. However, the relative importance of the two types of direct support to non-homeowners varies substantially – with

countries such as Denmark, Sweden, and the Netherlands almost exclusively relying on social housing, while some others (e.g., France, Belgium, Germany, and Italy) using a more balanced combination of the two approaches, albeit at different levels of support. In contrast to all other countries, the United States does not provide any substantial direct support to renters.

It is also important to consider these measures in the context of housing cost burdens among low income renters. Austria, France, and the Netherlands have strong social housing policies for non-homeowners (Table 3) and their low-income renters experience comparatively low housing cost burdens (OECD 2016). Sweden and Denmark renters also receive substantial public support; however, those with low incomes experience comparatively higher housing cost burdens. In the United States, however, 59 percent of low-income renters are cost-burdened (OECD 2016), and the existing regulations and policies offer comparatively little support to renters. Of the countries in Table 3, only Spain has a higher share (64 percent) of cost-burdened low-income renters; however, Spain also has the highest owner-occupancy rate among the observed countries, suggesting that a much smaller population may be adversely impacted by the lack of more substantial public support for renters.

Summary of Policies to Support Homeowners and Non-Homeowners: Housing Support Index

Our overview of the major institutional and policy features that influence home buying and renting provides important comparative information. However, to summarize the information and to better understand how the United States compares with its European peers, we construct a housing support index. The index assigns numerical values to various characteristics presented in Tables 1 through 3, and the normalized results range from 1 (the lowest score) to 3 (the highest score).⁵ It is important to note that numerical scores are assigned

⁵ For mortgage access, we assign values of 1, 2, or 3 for low, medium, and high typical LTV ratio, respectively, and add 0.5 for countries with low or medium typical ratios, but with a legally allowable LTV limits of 80 percent or more of property value. Similarly, we assign values 1, 2, or 3 for short, medium, and long typical loan maturity. We convert the binary characteristic of predominantly fixed interest rate by assigning 1 for no and 2 for yes, partly reflecting our assessment that the prevailing type of interest rate may be somewhat less consequential for access to mortgage loans than the limits on financial leverage and loan duration. The sum of the three categories is normalized to scores ranging from 1 to 3 (and we apply the same normalization procedure for summed up values across other individual scores and total scores). For direct government support to housing calculation, we assign values of 3, 2, and 1 for low, medium, and high scores, respectively, for two characteristics (i.e., transaction costs and property tax) that describe the level of burden imposed by governments on homebuyers. The scale is reversed for governmental support for homebuyers through property tax relief, ranging from 1 (low) to 3 (high). Finally, for government support to non-homeowners we use three elements: 1) regulatory support for renters, consisting of equally weighted direct rent control and other (qualitative) protections of tenants in contracts with

based on very broad categories summarizing key policy characteristics, as previously presented. Therefore, they do not necessarily convey actual levels of difference between countries across any particular policy or set of policies, but rather represent a potentially useful tool in establishing a relative ranking of countries and possibly suggesting countries that may exhibit similar characteristics across various policy and institutional aspects.

Table 4. *Housing Support Index, by Country*

		Direct government support for housing		Government support for non-homeowners		Total score A (equal weight to homeownership and non-homeownership measures)		Total score B (weighted by homeownership rate in each country)	
<i>Mortgage access</i>									
Denmark	3.0	Denmark	2.7	Austria	2.7	Netherlands	2.5	Netherlands	2.6
Netherlands	3.0	Netherlands	2.7	France	2.3	Sweden	2.4	Denmark	2.5
U.S.	3.0	Sweden	2.7	Sweden	2.3	Denmark	2.4	Sweden	2.5
Belgium	2.6	U.S.	2.7	Netherlands	2.2	Austria	2.4	Austria	2.3
Germany	2.6	Austria	2.0	Belgium	2.0	Belgium	2.1	U.S.	2.2
Sweden	2.4	Germany	2.0	Denmark	2.0	Germany	2.1	Belgium	2.1
Austria ¹	2.2	Belgium	1.7	Germany	1.8	France	2.0	Germany	2.1
Spain	2.0	Spain	1.7	Spain	1.8	U.S.	1.9	France	1.8
France	1.9	France	1.3	Italy	1.5	Spain	1.7	Spain	1.8
Italy	1.3	Italy	1.3	U.S. ²	1.0	Italy	1.4	Italy	1.4

Notes: ¹ Information on the maximum allowed mortgage loan-to-value ratio is missing for Austria. If the maximum was at 80 percent or higher, this would have increased the mortgage access score for Austria by 0.2. This would not affect Austria's ranking by total score, although the score would increase by 0.05-0.06; ² Data on tenant protections is missing for the United States. If tenant protections in the United States are moderate or high, this would increase its score on government support for non-homeowners by 0.2-0.3. Consequently, the total U.S. score would increase by 0.1-0.15 if support for homeowners and non-homeowners is weighted equally, and the United States would be ranked ahead of France. The increase in the total score weighted by homeownership rate would be much smaller and would not affect the U.S. ranking.

Source: Authors' calculations based on information from Tables 1-3.

The results suggest that the United States, Denmark, and the Netherlands top the list of observed countries with respect to supporting homeownership. Not only are mortgages very

landlords, each ranging from 1 (weak) to 3 (strong), 2) share of population with subsidized rents, and 3) share of social housing in total housing stock, with the latter two ranging from 1 (small) to 3 (large). We calculate the total score by obtaining the overall homeowner support index (the average of the indices for mortgage access support and direct government support for housing) and averaging it with the non-homeowner support index. The two elements of the final total score are either weighted equally (score A) or by the country-specific homeownership rate (score B).

accessible in these countries, but the governments also support homeownership through tax regulations. At the opposite end of the spectrum are Southern European countries, in particular Italy.

The situation is markedly different with respect to support for non-homeowners, since the highest score is recorded in Austria, a country with large proportion of non-homeowners, followed by Sweden and France. The United States has by far the lowest level of government support for non-homeowners among the observed countries. Italy and Spain again score low compared with other European countries, yet substantially higher than the United States.

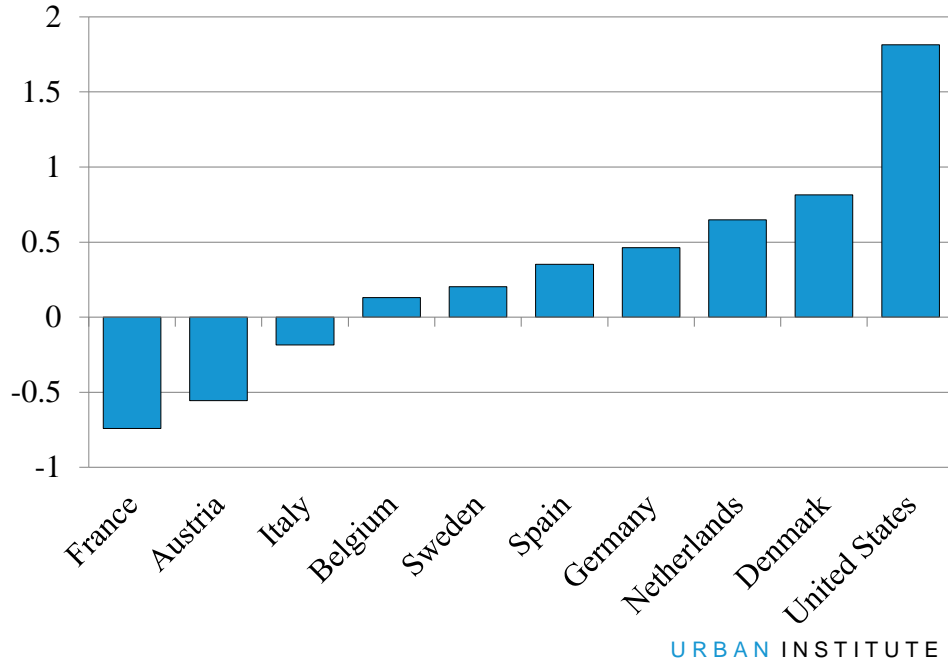
The final two columns present two versions of the overall score that are calculated using results from the three individual components previously described. The first measure equally weights two elements: support for homeowners, which consists of mortgage access and direct government support for housing, and support for non-homeowners. The second measure weights the two components by the share of homeowners and non-homeowners, respectively, in each country. The rationale for the second measure is that weighting by housing tenure may better reflect the appropriateness of the current housing policy mix for the actual population in each country.

The Netherlands scores highest under both measures, suggesting very generous support for both homeowners and non-homeowners. Denmark, with a similar profile as the Netherlands, and Sweden, with a more balanced support between homeowners and non-homeowners, closely follow. Austria, with the highest support for non-homeowners and moderately generous support for homeowners also ranks high. Italy, on the other hand, ranks lowest across both versions of the overall score, followed by Spain. The score for France, especially the second measure, is also low.

While the ranking of European countries is similar under both measures, the ranking of the United States changes dramatically. Given its low level of support for non-homeowners and high level of support for homeowners, the United States ranks markedly higher if the two elements of housing policy are weighted using housing tenure shares. However, due to the high level of inequality between homeowners and non-homeowners regarding housing supports, the United States ranks below the top group of countries irrespective of weighting. In fact, the difference between homeowners and non-homeowners support indices in the United States (1.8)

is more than twice as large as in the next closest country, Denmark (0.8), and near the maximum possible difference between the two scores (Figure 4).

Figure 4. *Difference between Homeowners and Non-Homeowners Support Indices*



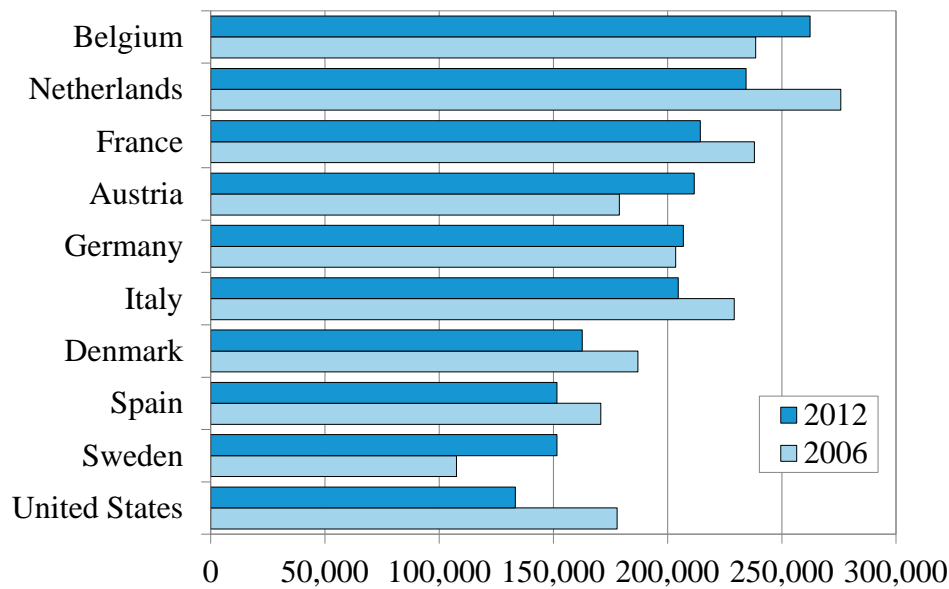
Source: Authors' calculations.

Overall, the ranking of countries based on the housing support index appears to favor countries that provide moderate to high levels of support to both homeowners and to non-homeowners. It should be noted that this interpretation is based on the underlying assumption that countries generally want to pursue two housing policy goals: promoting homeownership and providing affordable housing for all. However, while country-specific circumstances with respect to traditional home-acquisition strategies and living arrangements may differ, all the ranked countries have a mix of people by housing tenure and home acquisition. Therefore, the housing support index is a useful indicator of relative effectiveness of each country's housing policy in achieving the dual goal of facilitating homeownership and providing affordable alternatives to non-homeowners.

Home Equity Trends among Older Adults⁶

Previously, we showed that homeownership rates for older Americans and Europeans mostly continued increasing during the recession, making it increasingly likely for a person ages 65 and older to retire owning a home than in the past. Median net housing wealth, however, did not follow the same pattern over the 2006-2012 period (Figure 5). In fact, it declined 10 percent or more in six countries and increased 10 percent or more in three countries in our sample.

Figure 5. *Median Net Housing Wealth for Homeowners Ages 65 and Older (in €)*



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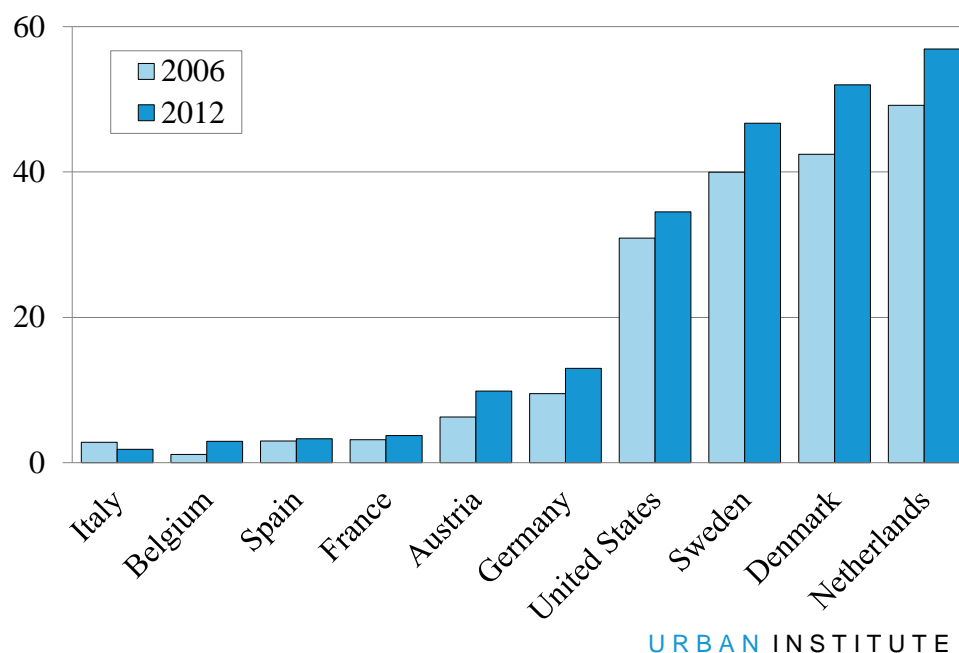
Sources: HRS 2006, 2012; and SHARE 2006/2007, 2011, 2013.

On one hand, some of the observed decline may reflect the impact of the Great Recession, especially in countries (e.g., Spain or the United States) where housing bubbles were closely associated with the onset of the recession. However, this does not sufficiently explain all the observed changes. The recession impacted all countries, yet changes in median net housing wealth vary across countries. On the other hand, changes in housing wealth seem inversely related to changes in homeownership rates. Countries such as Austria and Belgium experienced an increase in median net housing wealth and a decline in homeownership, while countries such

⁶ Methodological assumptions underpinning the analysis of data from the Survey of Health, Ageing, and Retirement in Europe (SHARE) and Health and Retirement Study (HRS), as well as the comparability of the two datasets are described in the Appendix.

as Spain, Denmark, and the Netherlands experienced a decline in housing wealth and an increase in homeownership.⁷ While it is not possible to deduce what is behind this finding without a more thorough analysis, we observe that over the same period the proportion of people ages 65 and older holding any housing debt (with the exception of Italy) increased across all countries (Figure 6). The rise in the proportion of homeowners ages 65 and older with housing debt was particularly strong in Denmark, the Netherlands, Sweden, and the United States – countries that already had an above-average share of older persons with housing debt. However, substantial gains were also observed in Austria and Germany – countries with traditionally low homeownership rates.

Figure 6. *Housing Debt Prevalence among Homeowners Ages 65 and Older (in %)*



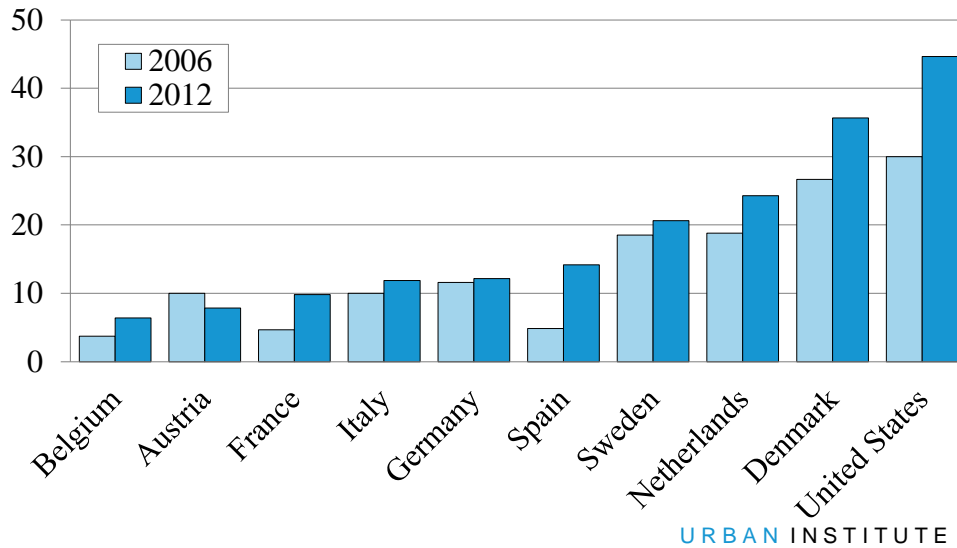
Sources: HRS 2006, 2012; and SHARE 2006/2007, 2011, 2013.

In addition to the proportion of homeowners reaching old age with outstanding mortgage debt, it is important to consider cross-national differences in loan-to-value ratios, as well as the

⁷ The results for Sweden may be partly skewed by the appreciation of the Swedish krona to the euro in the post-recession period. Our results are euro-denominated, which implies that the results for Sweden, Denmark, and the United States could be affected by changes in the exchange rates of their currencies with euros. Between 2006 and 2012, the exchange rate of the Swedish krona strengthened by about 6 percent, and of the U.S. dollar by less than 5 percent. The Danish krone, on the other hand, had a consistent exchange rate with the euro over the period.

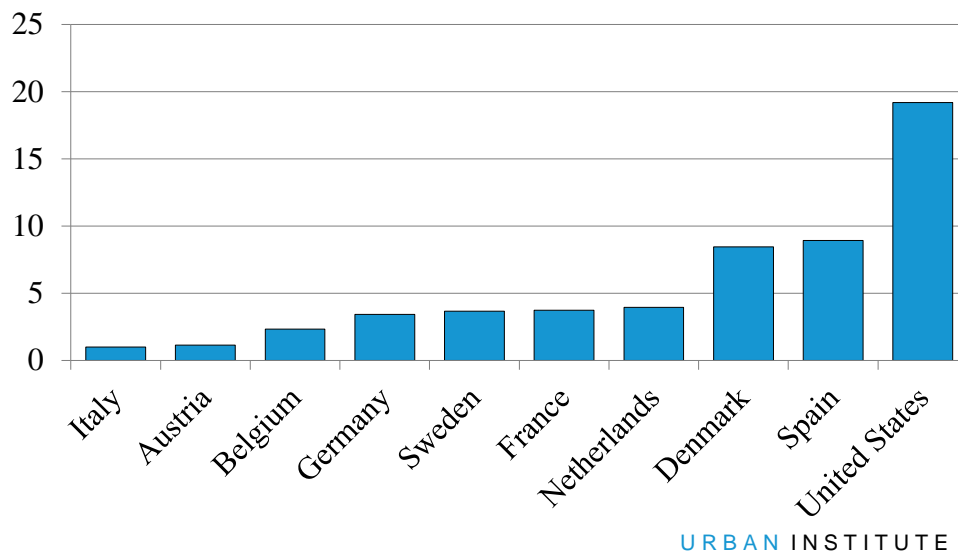
share of older homeowners for whom this ratio is particularly high (i.e., over 80 percent). They are shown in Figures 7A and 7B.

Figure 7A. Median Loan-to-Value Ratio for Homeowners Ages 65 and Older with Housing Debt (in %)



Sources: HRS 2006, 2012; SHARE 2006/2007, 2011, 2013; and authors' calculations.

Figure 7B. Share of Homeowners Ages 65 and Older with Housing Debt Whose Loan-to-Value Ratio Is Over 80 Percent in 2012 (in %)



Sources: HRS 2012; SHARE 2011, 2013; and authors' calculations.

The same four countries with the highest rate of indebtedness also have the highest level of indebtedness. In 2012, the highest LTV ratio was observed for the United States (45 percent),

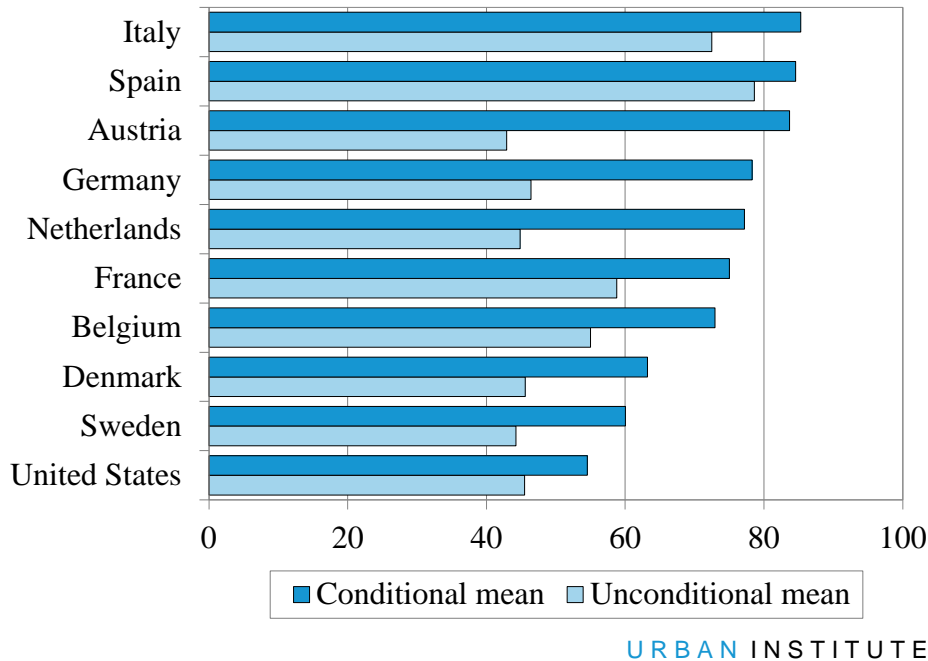
followed by Denmark (36 percent), the Netherlands (24 percent), and Sweden (21 percent), while all other countries were below 15 percent (Figure 7A). Almost all countries had a noticeable increase in the median LTV ratio between 2006 and 2012, which at least partly captures the effects of falling real estate prices during the Great Recession (especially in countries such as Spain and the United States), but may also reflect more housing debt for newer cohorts of older Americans and Europeans since not all the European countries experienced declines in residential real estate over the observed period (European Mortgage Federation 2016). Despite the increase in median LTV ratios, however, very few Europeans reach old age with high housing debt relative to the value of their property (Figure 7B). In 2012, the proportion of homeowners with LTV ratios above 80 percent varied from as little as 1 percent in Italy and Austria to 9 percent in Spain – well below 19 percent observed in the United States. This suggests that a much larger proportion of older Americans is at peril of their homes going underwater.⁸ Overall, then, trends in the prevalence of housing debt and LTV ratios suggest the possibility that the observed decline in net housing wealth at least partly reflects that older Americans and Europeans have become increasingly indebted and, more importantly, increasingly leveraged.

In the structure of older Europeans' net wealth, housing is the dominant component, ranging from 43 percent in Austria to 79 percent in Spain in 2012 (Figure 8). Older Americans had on average somewhat over 45 percent of their net wealth in housing. Country differences in the unconditional mean broadly mirror differences in homeownership rates, but comparatively low results for Sweden, Denmark, and the United States could also partly reflect higher rates of indebtedness as previously shown. Conditional on owning a home, housing is an even more important component of net total wealth, ranging from 55 percent in the United States to 85 percent in Italy. While housing wealth represents a large share of total wealth for the average older Italian or Spanish homeowner, it also represents the bulk of assets for Austrian and German homeowners – even though significantly fewer older people in Austria and Germany own homes. In contrast, housing wealth represents a low proportion of net assets among older American, Swedish, and Danish homeowners, which may reflect their level of indebtedness or their accumulation of other assets such as private pensions and savings. The fact that Dutch

⁸ A homeowner's mortgage is considered underwater if the LTV ratio is more than 100 percent, meaning the homeowner owes more than the house is worth.

homeowners have similar or higher levels of housing debt in old age, yet have a larger share of housing in total wealth than their American, Swedish, and Danish peers supports the latter explanation. Furthermore, changes in real estate prices in the Netherlands over the past decade have been similar to those in Denmark and substantially behind those in Sweden and the United States (European Mortgage Federation 2016). Consequently, it is unlikely that faster growth in real estate values vis-à-vis other assets could account for the observed differences in the share of housing in net total wealth between these countries.

Figure 8. *Share of Housing Wealth in Net Total Wealth for an Average Person Ages 65 and Older in 2012, by Country (in %)*



Sources: HRS 2012; SHARE 2011, 2013; and authors' calculations.

Home Equity Release Options

While acquiring a home and building home equity is a precondition for using a home as a source of old-age security, the extent of the welfare-enhancing potential of a home depends on the ability to extract liquidity from it. Traditionally, this has been achieved by selling an existing property and either purchasing or renting a smaller property (i.e., downsizing). This is still considered the most prevalent way for older adults to extract equity from their homes, although data from the United States and other developed countries suggest that downsizing is not very

common in retirement. Using a sample of 15 OECD countries, Chiuri and Jappelli (2010) find that homeownership rates start to decline after age 70, with a more noticeable decline of a percentage point per year only after age 75. These results are consistent with data from the United States which suggest that only about 3 percent of older workers plan to downsize and those who ultimately do are often compelled by a negative financial shock (Calvo, Haverstick, and Zhivan 2009; Munnell, Soto, and Aubry 2007; Sass 2017).

There are several other options for homeowners to extract liquidity from their homes without leaving them. For example, they can refinance their existing mortgage or take out a second mortgage. In the United States, these products were growing in popularity in the run up to the Great Recession, but have been used much less in its aftermath (Freddie Mac 2017; Leventis 2014). Another option that older adults have is to sell their property and lease it back. Mortgage-related and sale-and-lease-back products have been particularly popular in some European countries such as the Netherlands and Denmark (Reifner et al. 2009b). More broadly, renting part of a home to supplement retirement income or transferring a deed to it in exchange for housekeeping and caregiving (often provided by family members) is also an arrangement that allows seniors to tap into their home equity.

The main characteristic of all the aforementioned options, however, is that they have not been developed for the particular purpose of helping older persons tap into their home equity. Moreover, sale options generally require homeowners to leave their homes, and even if they lease the homes back, their continued residence depends on the ability to pay the rent. Finally, borrowing options such as second mortgages require continuous repayment similar to the original mortgage (or any other loan). This has led to the development of new financial products in recent decades that differ from other options by explicitly targeting older adults, enabling them to extract equity from their home while continuing to live in it, and generally relying on selling the property to repay the loan. The most common such products are reverse/lifetime mortgages and home reversions, with the main difference between the two being that home reversions involve the immediate sale of the property, whereas reverse mortgages typically involve sale upon borrower's death unless the heirs opt to repay the loan amount (Reifner et al. 2009a). With reverse mortgages, lenders carry the full risk of the loan balance following the sale of property. Research suggests that these and other features (e.g., higher payouts at the early

phases of the products' time horizon) make reverse mortgages more utility enhancing for older homeowners than home reversions (Hanewald, Post, and Sherris 2016).

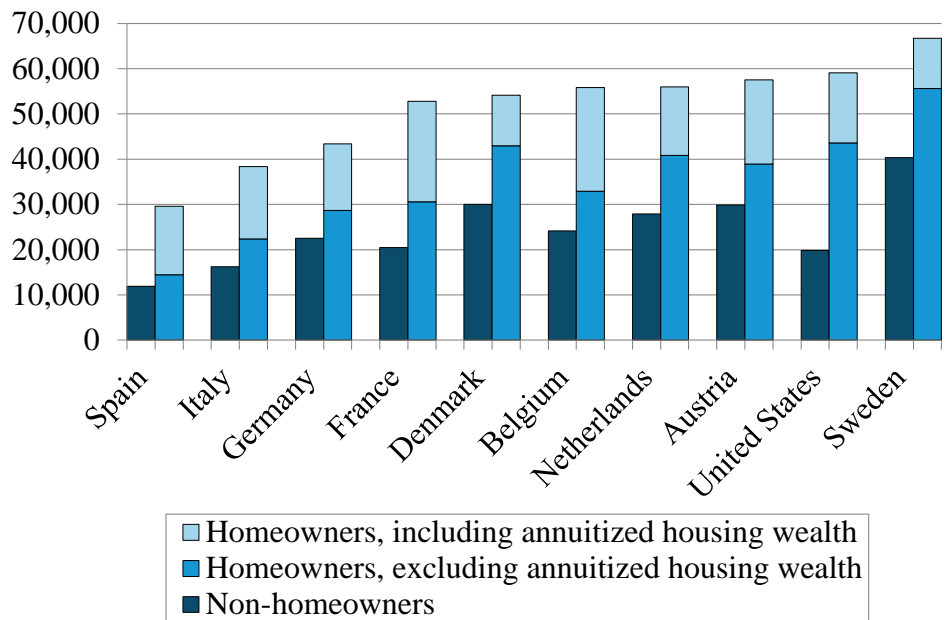
The number of countries offering dedicated equity release financial products for seniors has been on the rise. As of 2009, the United States and six other countries in our sample (Austria, France, Germany, Italy, Spain, and Sweden) had reverse mortgages (Reifner et al. 2009b). Belgium, France, and Spain also had home reversion products, with Italy and Sweden limiting them to family only (ibid). However, the actual market penetration of these products has been very limited across most European countries and even, albeit comparatively less so, the United States. For example, as of the late 2000s, reverse mortgages in the European Union accounted for less than 1 percent of the total mortgage market with the United Kingdom accounting for about three quarters of the total (European Mortgage Federation 2009; Reifner et al. 2009a). In the United States, while Home Equity Conversion Mortgages (HECM) grew substantially during 2000s, reaching a peak of 114,692 new reverse mortgages in 2009, HECM annual originations have since more than halved (National Reverse Mortgage Lenders Association 2017).

Although reverse mortgages and home reversions offer some advantages over other equity release schemes available to older adults, data on the use of housing equity in old age suggests not only that their importance is still limited, but also that comparatively greater reliance on housing equity withdrawal in some countries does not necessarily correspond with larger markets for reverse mortgages and/or home reversions. Among countries in our sample, equity withdrawal is most common in the United States (a country with a comparatively developed reverse mortgage market), Sweden (which has a limited availability of dedicated equity release products for older persons), and Denmark and the Netherlands (with no such products available) (Andrews 2010; Catte et al. 2004). What unites these countries is that their mortgage markets are generally more robust than in other countries. Indeed, in Denmark and the Netherlands there is some evidence that well-functioning mortgage markets have allowed older persons to easily access home equity, decreasing the need for developing any additional dedicated financial products (Reifner et al. 2009b). Although this suggests that a well-functioning mortgage market may be an effective substitute for dedicated housing equity release products, it is possible that with a growth in demand for such products, countries with mature mortgage markets may be best positioned to facilitate their market penetration.

Potential Impact of Home Equity Release for Older Adults

Our data analysis shows that older Americans and Europeans have substantial housing wealth, and our literature review suggests that an increasing number of home equity release products are being offered on the market. It is, therefore, worth exploring how much older Americans' and Europeans' retirement incomes could increase if they were to annuitize their housing wealth.

Figure 9. *Median Household Incomes of Non-Homeowners and Homeowners with and without Annuitized Net Housing Wealth Ages 65 and Older in 2012 (in €)*



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Sources: HRS 2012; SHARE 2011, 2013; and authors' calculations.

Figure 9 suggests that fully annuitizing housing wealth could substantially increase the median household income of older American and European homeowners. However, the impact varies significantly across countries. In 2012, the lowest estimated increase is in Sweden (20 percent) and Denmark (26 percent), whereas the largest estimated increase is in Spain, where the median household income of homeowners would roughly double. In the United States, median income would increase over a third (36 percent). These results suggest that even partly tapping into housing wealth could have a profound impact on the retirement incomes of older Americans and Europeans, especially in countries with widespread homeownership and comparatively

lower household incomes among older adults (in particular, in Southern European countries such as Spain and Italy, but also in some Continental European countries like France and Belgium).

Another important observation is that older non-homeowners in Europe have uniformly lower (by about 20-50 percent) household incomes than homeowners even without accounting for annuitized housing wealth, and the difference is even larger in the United States where the median household income of older non-homeowners is less than half the median household income of homeowners. This suggests that older European and especially older American non-homeowners have substantially more precarious financial situations than their homeowner counterparts, and they are likely to need comparatively more public support in retirement.

A particularly important aspect of monetizing homes is its potential impact on poverty among the older population. Consistent with prior research (e.g., Stephens and van Steen 2011), Figures 10A and 10B suggest that the poverty-reducing capacity of annuitizing housing wealth is generally large, but with substantial variation across countries. Countries with high homeownership rates and low levels of housing debt (Spain, Italy, France, and Belgium) could reduce the share of older adults with household incomes below 50 percent of median (the threshold for relative poverty) by roughly 50-75 percent. Gains in other countries that either have traditionally low homeownership rates (Austria and Germany) or rely more on debt financing to purchase homes (Denmark, Sweden) or both (Netherlands) are comparatively more modest, albeit still substantial. These estimates are consistent with previous assessments of the poverty-reducing potential of monetizing housing wealth in Europe through reverse mortgages (Moscarola et al. 2015).

In the United States, fully monetizing housing wealth could also substantially reduce the share of older adults with very low household incomes (by about 6-7 percentage points). However, even after this, the share of older Americans with household incomes below 50 percent of the median would remain around 13-14 percent, a level similar to European countries before accounting for the effects of monetizing housing wealth.

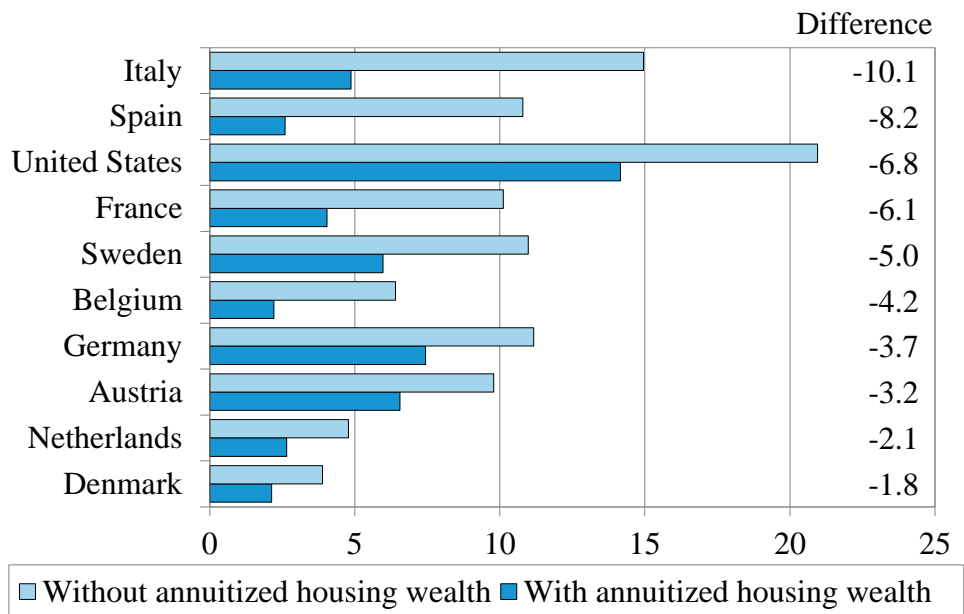
Figure 10A. *Population Ages 65 and Older with Household Incomes Below 50 Percent Median Before and After Accounting for Annuitized Housing Wealth (in %) and Their Difference (in Percentage Points), 2006*



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Sources: HRS 2006; SHARE 2006/2007; and authors' calculations.

Figure 10B. *Population Ages 65 and Older with Household Incomes Below 50 Percent Median Before and After Accounting for Annuitized Housing Wealth (in %) and Their Difference (in Percentage Points), 2012*

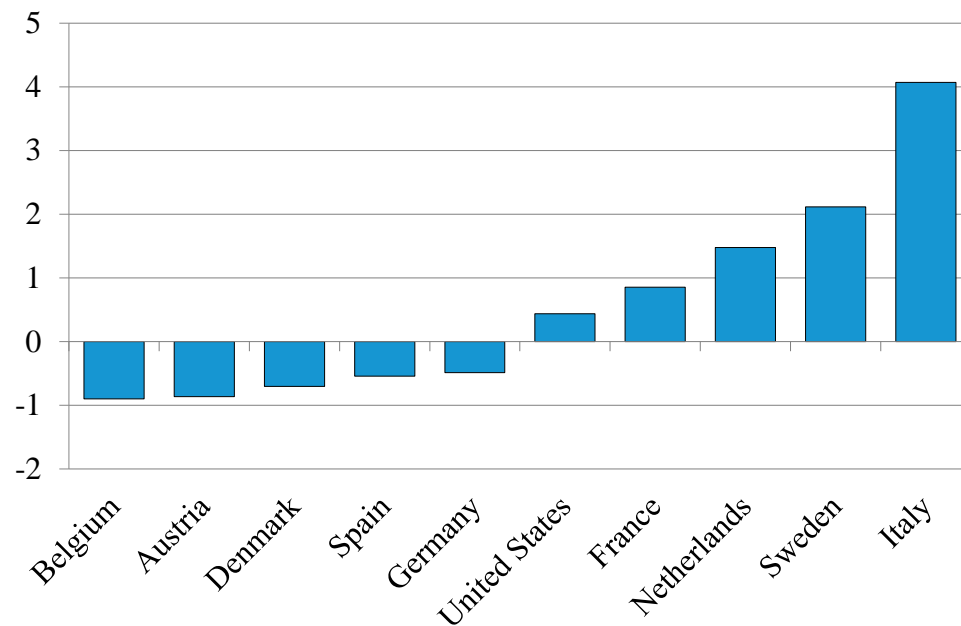


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Sources: HRS 2012; SHARE 2011, 2013; and authors' calculations.

While the described effect of annuitizing housing wealth holds both in the pre- and post-recession periods, it is interesting to examine whether the poverty-reducing capacity across different countries may be changing over time and in what ways. The results in Figure 11, which show the change over time in the difference that annuitized housing wealth has on relative poverty rates (i.e. difference-in-difference), suggest that the poverty-reducing capacity of tapping into home equity has particularly increased in Italy. It also noticeably increased in Sweden and the Netherlands. In other countries, this indicator remained essentially unchanged. Overall, then, the poverty-reduction capacity of monetizing housing equity appears to have either increased or remained unchanged between 2006 and 2012. One possible explanation is that the greater availability of credit to younger cohorts of retirees has allowed even less well-off individuals to buy homes and build equity prior to reaching old age.

Figure 11. *Change between 2006 and 2012 in the Difference in Relative Poverty Before and After Accounting for Annuitized Housing Wealth for Population Ages 65 and Older (in Percentage Points)*



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Sources: HRS 2006, 2012; SHARE 2006/2007, 2011, 2013; and authors' calculations.

Home Equity Release and Asset-Based Welfare Prospects

While the analysis of housing wealth among older Americans and Europeans suggests that tapping into it could substantially improve their retirement security, an overwhelming

majority of older homeowners are reluctant to do this (Haurin and Moulton Forthcoming). Objective obstacles to tapping into home equity include the high costs, uncertainty about life expectancy and the amount of financial resources required to support retirement, the adverse impact on eligibility for social benefits, and the concentration of housing wealth among (upper) middle- and higher-income individuals who are less likely to need additional resources in old age. Subjective obstacles include an aversion toward assuming additional debt in old age, different (often emotional) attitudes toward housing compared with other types of wealth, bequest motives, and a lack of trust in financial institutions (Jones et al. 2012; Naumanen and Ruonavaara 2016; Terry and Gibson 2006).

Objective obstacles can be addressed by policymakers if their goal is to facilitate home equity withdrawal for older individuals. Haurin and Moulton (Forthcoming) suggest several policy options for increasing older adults' interest in using their home equity to supplement retirement income. Subjective obstacles to tapping into home equity are more difficult to combat, but are no less important. In fact, countries with the highest assessed potential for increasing incomes by tapping into home equity (e.g., Southern European countries) are often characterized by the highest level of aversion toward doing so (Reifner et al. 2009b). However, while less pronounced, similar tendencies can be observed in countries like the United Kingdom, Germany, and Finland that have historically different experiences with respect to the role of family and government in the provision of welfare (Jones et al. 2012; Naumanen and Ruonavaara 2016).

In addition to objective and subjective obstacles, countries also face various compositional impediments to housing equity withdrawal. Arguably the most consequential is the concentration of homeownership and housing wealth among middle- and higher-income individuals, which is particularly pronounced in countries with comparatively low homeownership rates such as Germany and the Netherlands (Jones et al. 2012; Toussaint 2013), but also in the United States (Sass 2017; Schwartz 2012). Homeownership among lower-income households has further contracted in the aftermath of the Great Recession (e.g., Bouyon 2015). Housing wealth is also geographically very unequally distributed (Li and Goodman 2016; Searle and McCollum 2014). Therefore, although housing wealth may overall be somewhat less unequally distributed than non-housing wealth, it still has only a limited potential as a source of welfare for the segments of population with the largest need for supplementing their retirement

incomes. Moreover, following the Great Recession, at least in the United States, an increasing share of older households has reached retirement with outstanding mortgage debt and often lower home valuations than before the recession (Munnell, Hou, and Sanzenbacher 2016), resulting in less housing wealth to potentially tap into.

Overall, then, housing equity has a potentially important, yet limited role in supporting old-age security. Even if objective obstacles related to the design and pricing of home equity release products were fully addressed, subjective reasons for avoiding home equity withdrawal and compositional differences in the concentration of housing wealth would limit the scope of asset-based welfare. Moreover, much of the existing housing wealth accumulated from increasing real estate prices rather than mortgage repayments (Toussaint 2013), and some research suggests this is a one-off gain rather than a long-term sustainable trend (Montgomerie and Büdenbender 2015). Therefore, housing equity withdrawal and asset-based welfare more generally may primarily be strategies for middle class homeowners to supplement their retirement incomes if welfare state retrenchment continues. This is already evident in some countries such as the United Kingdom where the rise in homeownership is a direct response to the decline in support from the welfare state (Ronald, Kadi, and Lennartz 2015). However, tapping into housing wealth is less likely to be a successful strategy for addressing old-age income shortfalls among low-income individuals, primarily because housing is less common among them, but also because they face larger financial and institutional obstacles to accessing housing wealth, and many of these obstacles cannot be easily addressed. The question also remains about the long-term sustainability of any asset-based welfare strategy if housing prices do not continue to increase in the future. Finally, the basic macroeconomic limitation of relying on housing equity withdrawal and asset-based welfare as a potential substitute for the more traditional welfare provision is that it lacks countercyclical properties as demonstrated during the Great Recession (e.g., Lowe, Searle, and Smith 2012).

These limitations notwithstanding, using home equity to supplement retirement incomes and improve retirement security remains a potentially attractive option for a substantial number of older adults who have built housing wealth over their life course, but may either have insufficient retirement incomes or face unexpected and expensive life events (e.g. long-term care needs). In the United States, households ages 65 and older hold net housing wealth in excess of \$3 trillion that could potentially be tapped into (assuming that 75 percent of home

value is cashed-out) (Li and Goodman 2016). With a home equity valued at over €8 trillion (Haurin and Moulton Forthcoming), older homeowners in Europe could potentially access more than twice as much housing wealth. Even if homeowners opted to access only a portion of their housing wealth or if financial institutions had stricter LTV limits for equity release, tapping into home equity could still substantially increase retirement incomes and offset at least some retirement expenses for a non-trivial number of older Americans and Europeans. The idea of using housing equity to subsidize long-term care needs, for example, has gained traction among policymakers in recent years (Fox O'Mahony 2013; Colombo et al. 2011). Moreover, although housing wealth and income are correlated, research suggests that differences in their distribution are sufficiently large that accounting for homeownership reduces income inequality and poverty rates (Stephens and van Steen 2011), thereby supporting the notion that at least some lower-income homeowners could benefit from tapping into their housing equity. Finally, future cohorts of older homeowners may be more receptive than today's older homeowners to using their housing wealth to supplement their retirement incomes. For example, between 20 and 30 percent of Dutch homeowners under age 65 support using home equity to supplement pensions compared with only 10 percent of those ages 65 and older, and over 30 percent younger Dutch homeowners would use home equity to pay for additional care, compared with only about 20 percent of older Dutch homeowners (Toussaint 2013). This suggests that at least some of the subjective obstacles to tapping into home equity may diminish over time thereby raising the prospects for home equity as a part of a broader welfare policy.

Conclusion

This study had four objectives: (1) compare recent trends in homeownership rates for older adults in the United States and Europe and provide a comparison of the key characteristics of housing-related policies across countries; (2) examine home equity trends among older homeowners in the United States and Europe, the relative importance of housing as the source of retirement wealth, and cross-national differences in the prevalence and burden of housing debt; (3) provide an overview of equity release options and estimate how much older homeowners could increase their household incomes by fully monetizing their housing equity; and (4) critically discuss prospects for and limits of home equity release and asset-based welfare policies.

Our findings suggest that while the most older adults are homeowners, their homeownership rates vary substantially across countries, due to a complex mix of socioeconomic, political, and historical circumstances that shaped housing preferences and housing tenures in different societies. However, older adults' homeownership rates generally increased between 2006 and 2012 across all of the countries in our study. Our analysis of housing-related policies shows that countries such as the Netherlands, Sweden, and Denmark provide comparatively high levels of support to both homeowners and non-homeowners, while southern European countries such as Italy and Spain are at the opposite side of the spectrum. The United States, however, exhibits the greatest imbalance of all observed countries between policies supporting homeowners and non-homeowners, with some of the highest levels of support for homeowners and lowest levels for support to non-homeowners.

Our analysis of the HRS and SHARE data on home equity trends suggests that older American homeowners have substantial housing wealth, but compared with their European peers, housing represents a somewhat smaller part of their net total wealth. In this regard, they are most like older Swedish and Danish homeowners. While the prevalence of housing debt among older adults is somewhat lower in the United States than in the Netherlands, Denmark, and Sweden, among older homeowners with housing debt, Americans have the highest loan-to-value ratios and the highest proportion of homeowners whose homes may be at risk of going underwater.

If the housing equity of older Americans were completely monetized, median household income would increase by over a third – more than in countries like Sweden and Denmark, but well below countries like Spain and Italy. Across all countries in our study, tapping into housing equity could substantially reduce the share of older adults with household incomes below 50 percent of the median. However, even *after* annuitizing housing wealth, the share of relatively poor older Americans would remain as high as, or higher than, the share of relatively poor older Europeans *before* accounting for annuitized housing wealth.

Finally, our critical review of home equity release and asset-based welfare policies identifies important impediments to tapping home equity that may explain its low use. Understanding those obstacles may help policymakers and financial institutions when creating policies and financial products that could incentivize and facilitate monetizing home equity for

current and future retirees who might perceive their home as a source of potential income in old age.

Our analysis focuses only on the prospects for tapping into home equity for the current generation of older individuals. Due to demographic and socioeconomic changes, many younger Americans and Europeans may find it harder to build home equity than their parents' generation. In the United States, for example, income inequality has been growing, the supply of affordable housing has been falling, and mortgage-loan regulations have been tightening. As a result, the overall homeownership rate has declined. In 2015, the national homeownership rate was 63.5 percent, more than 5.5 percentage points below the 2004-2005 peak and the lowest level in two decades (Callis and Kresin 2016). Given current demographic, socioeconomic, and financial trends, the homeownership rate may not rebound to its pre-recession peak in the foreseeable future and could decline even further. If this occurs, relying on private housing for old-age support may underserve a growing segment of the U.S. population and limit the ability of Social Security to fulfill its mission to deliver “services that meet the changing needs of the public” (Social Security Administration 2016b). This is particularly important in the context of our assessment of the U.S. housing policy that heavily favors homeowners vis-à-vis non-homeowners.

These challenges are not limited to the United States. Many developed countries are confronting rising income inequality, continued fallout from the global financial crisis and Great Recession, and a rapidly aging population, intensifying fiscal pressures on social security systems and putting homeownership out of reach for a growing segment of the population (Lennartz, Arundel, and Ronald 2016). Therefore, while monetizing home equity may support old-age security for some current and near retirees, its potential importance in the long run remains much more uncertain and difficult to predict.

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Appendix

Data Sources and Methodological Approach to the Analysis of Home Equity Trends for Older Americans and Europeans

To analyze home equity trends among Americans and Europeans ages 65 and older, we use individual-level data from the *Health and Retirement Study* (HRS) and the *Survey of Health, Ageing and Retirement in Europe* (SHARE). The HRS is a nationally representative biennial survey of Americans over the age of 50 that began in 1992. The SHARE is a nationally representative survey of people age 50 and older from 20 European countries that began in 2004. We use information on nine SHARE countries that participated in all waves of the survey and had sufficient sample sizes for reliable estimates – Austria, Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, and Sweden. We focus our analysis on 2006 and 2012, the periods before and after the Great Recession. Given that the SHARE did not collect data in 2012 and the recession timing and duration varied across Europe, we approximate 2012 results for European countries by averaging the SHARE estimates for two adjacent survey waves – 2011 and 2013. On the other hand, the pre-recession SHARE survey wave (2006/2007) has a data collection frame that broadly corresponds with the 2006 HRS survey wave. Our HRS analytic sample of individuals ages 65 and older includes 10,970 respondents in 2006 and 10,296 respondents in 2012, while the SHARE analytic sample has 11,036 respondents in 2006/2007, and 15,947 and 22,938 in 2011 and 2013, respectively. Individual SHARE country samples range from 658 in Austria in 2006/2007 to 3,756 in Spain in 2013.

While the SHARE was designed to collect the HRS-comparable information on health status, employment and retirement, income and wealth, and other personal characteristics, there are multiple differences between the two surveys that make them challenging for use. We therefore mostly rely on an HRS-harmonized version of the SHARE data provided by the Gateway to Global Aging Data (G2G), a platform that provides access to harmonized data from the HRS family of international surveys such as the SHARE, English Longitudinal Study of Ageing, Mexican Health and Aging Study, and others. The harmonized SHARE follows same naming conventions as widely used RAND HRS data for the United States and applies several substantive adjustments to the SHARE data to make it comparable with the HRS data. For example, G2G provides assets information at couple level, which is consistent with the HRS

questionnaire, in addition to data at the household level, which is how the original SHARE information is elicited.

However, there are several important remaining methodological differences between the HRS and the harmonized SHARE for the purposes of this research. Most importantly, since the 2006/2007 survey wave, the SHARE collects exclusively information on the after-tax income as opposed to the pre-tax income as done in the HRS. To address this issue, we use the fact that for the 2004 wave of the SHARE we have information on both pre- and after-tax income, and make a simplifying assumption that the relative difference between the gross and net income amounts remained constant across the survey waves. This allows us to approximate pre-tax income values in the later SHARE survey waves that we can use concurrently with the corresponding HRS data. Although this approach inevitably introduces a degree of error in our pre-tax income estimates, we believe that this approximation is roughly accurate, since none of the SHARE countries in our sample undertook a major (income) tax reform over the observed period, and older persons' incomes have not changed dramatically either. Another difference between the two surveys is that the information on housing debt in the SHARE includes both mortgages and home loans, while the HRS provides this information separately. For comparability, we create a summary measure of housing debt in the HRS and conduct our analysis accordingly.

Beyond the adjustments necessitated because of the data-collection differences between the two surveys, we make several other methodological decisions that impact our results. First, to compare relative levels of poverty across countries, we calculate the proportion of population ages 65 and older living below 50 percent of median non-housing income for that age group. Given that the SHARE and the HRS collect information only on the older population, we cannot calculate the poverty threshold based on the entire population using these surveys, and therefore our poverty rate estimates are not comparable to those that use total population based measure of relative poverty. An alternative to our approach would be to use some other source of information on the median non-housing income for the entire population of our countries of interest. By combining the information from (at least) two sources of data to construct the poverty measure, however, our implicit assumption would have to be that these data are fully methodologically consistent with respect to, for example, population selection/representativeness or household income measure. In practice, such methodological consistency is hard to achieve and difficult to verify. Ultimately, we consider this issue to be of a lesser importance for our

study as we are primarily interested in estimating the impact of annuitizing housing wealth on relative poverty among the elderly rather than calculating the poverty rates themselves.

Furthermore, for the assessment of relative poverty reduction, we use per-person household income with and without annuitized housing wealth for homeowners. To calculate the per-person income amount we apply equivalence elasticity of 0.5 following the more recent OECD methodology (OECD 2015). Effectively, our household income measures are adjusted by the square root of the household size.⁹ This approach should arguably give us more precise estimates of both the actual level of relative poverty across countries and the impact of annuitizing housing wealth on poverty decline than the measure limited to couple income only. While our estimates show that some minor differences between the two approaches exist, they do not seem to have a major impact on our overall assessments of relative poverty across countries.

Finally, we convert nominal to real euro and U.S. dollar amounts using 2016 as the reference year, and we use OECD data on annual average exchange rates to convert U.S. dollars to euros. Euro-converted amounts for Denmark and Sweden are already available in the dataset we use.

⁹ We also tried with an alternative equivalence scale applied by the Eurostat that gives a weight of 1 to the first person in the household ages 14 or older, and weights of 0.5 and 0.3 to other persons in the household ages 14 or older and 0-13, respectively. The results remained consistent.

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