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Financing Long-Term Care in Portugal: Is there a Role for Home Equity Release Schemes?

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Abstract. Long-term care (LTC) needs are high in Portugal and in EU countries and tend to be concentrated among vulnerable populations. Despite public support, particularly for people with more severe needs, out-of-pocket costs with LTC remain high, and the social protection gaps may push older people into income poverty. Reforming LTC schemes to cope with increasing demand due to population ageing, protection gaps, fiscal sustainability, and intergenerational fairness is a significant challenge that many countries face. In an asset-based approach to welfare in which individuals accept greater responsibility for their welfare needs, policy solutions for balancing affordability for users and fiscal sustainability should not ignore the role of home equity release schemes (ERS). This paper investigates the role of ERS in the financing of LTC in Portugal. Using data from the Eurosystem Household Finance and Consumption Survey (HFCS), we analyse household wealth distribution, breakdown home equity estimates by socioeconomic group, and estimate the potential for income release from monetising home wealth through ERS mechanisms such as reverse mortgages and home reversion schemes. The empirical findings suggest that homeowners may tap into their accumulated home wealth to finance LTC costs, smooth consumption, and increase their resilience against financial shocks.

Keywords: Long-term care; Home equity; Social protection; Longevity risk; Bayesian model ensemble; Reverse mortgage.

1. Introduction

Reforming public (and private) pension and Long-Term Care (LTC) schemes to cope with population ageing is a significant challenge that many countries have been facing (Ayuso et al. 2021; Cullota et al. 2021; Bravo and Ayuso, 2020, 2021a,b). Longevity is increasing due to advances in medical technology and treatments, healthier lifestyles,

and better living conditions (Bravo, 2021a). People live longer but, in many cases, in a more disabled state, with disabilities or chronic care needs, including dementia.

As populations age, the demand for LTC home and community based personal care services, supportive services (e.g., house cleaning, meal preparation or shopping), home healthcare services (e.g., nursing, medical, therapy), custodial, social and community services (e.g., home-delivered meals and adult daycare), home healthcare services is expected to increase. For example, in the US recent studies estimate that more than half of 65-year-old Americans will need LTC services, 70% of adults who survive to age 65 develop severe LTC needs before they die, and 48% receive some paid care over their lifetime (Johnson, 2019).

The financing of LTC services for older adults requiring assistance with daily living activities varies significantly worldwide, as different countries use a combination of universal public LTC insurance, private LTC insurance, means-tested benefits, personal savings, and family support (Kotschy & Bloom, 2022). For instance, in Europe (e.g., Germany, The Netherlands, Sweden) and Asia (e.g., Japan, South Korea), many countries have established universal public programmes to cover LTC needs primarily through national insurance schemes funded by social contributions from employees and employers. Countries like Germany, France, Italy, and Austria have developed Cash-for-Care programmes allowing direct financial support to those who need assistance with daily activities, enabling them to pay formal or informal family-provided care or private caregivers.

Private long-term care insurance (LTCI) has developed in countries such as the United States, the United Kingdom, Australia, and France, although it is costly and the adoption rates are low due to high premiums and limited benefits. In Asian countries (e.g., China, India, and Thailand) and Latin America (e.g., Brazil, and Mexico), LTC is predominantly funded by personal savings and family contributions and community services provided by non-profit organisations funded by charitable donations or grants. In Singapore and Israel, public-private partnerships combine government-provided insurance with private insurer options to offer additional coverage to cover LTC expenses (Macdonald et al. 2024).

Traditionally, LTC has been largely dependent on informal family care. Recent studies estimate that about 12-18% of the EU population aged 18-75 provides long-term informal care at least once per week (EC, 2021). However, recent demographic shifts (falling fertility rates, urbanisation and migration), the evolving employment status of the traditional caregiver (women), along with the increase distance to care receivers, reduced the traditional family support at old age, made it increasingly difficult for families to fulfil traditional care duties and incentivised the formalisation of caregiving services. Additionally, informal care produces multiple indirect costs for caregivers and families (Hanewald et al. 2016).

The different retirement income reforms adopted in the last three decades to ensure the long-term affordability, equitability, and adequacy of traditional pay-as-you-go old-age social security systems (e.g., parametric pension reforms adjusting the contribution rates, pension ages, or benefit formulas; the expansion of the coverage of private occupational and personal prefunded defined-contribution retirement income schemes, switching from defined benefit to defined contribution links; the switch toward a Non-

Financial Defined Contribution (NDC) schemes) are expected to reduce the generosity of public income (and health care) annuities, transfer part of the risks of securing a decent standard of living to individuals, and require additional private savings (Ayuso et al. 2021a,b; Bravo & Herce, 2022; OECD, 2023). A low-for-long-interest financial environment has provided insufficient returns on retirement savings.

The shift from an informal care-based system of care arrangements to a formal care-based system is contingent upon (i) the financing and affordability of formal care services, (ii) the availability of formal care services, which is influenced by investment in residential care, (iii) the availability of care workers, (iv) the need to balance financial sustainability with intergenerational fairness, and (v) the implementation of mechanisms ensuring and monitoring the quality of informal care.

Recent surveys show that building housing wealth through homeownership and mortgage repayment is the main way European households set aside for funding retirement, LTC and health care out-of-pocket needs (HFCS, 2021). In Euro area countries, the household wealth (excluding social security and health care wealth, i.e., the present value of expected pension and public health care benefits) is primarily held in the form of real assets (79.9% of total assets, 85.8% in Portugal) with the remaining 20.1% (14.2% in Portugal) held in the form of financial assets (deposits, mutual funds, shares, bonds, voluntary pension/whole life insurance, etc.). The main residence (HMR) is the most important component of real assets in all net wealth classes except the top 10%, representing on average 58.6% of the total real assets (54.7% in Portugal), followed by other real estate properties (23% in the Euro area; 22.5% in Portugal). In the euro area, 61.7% of Europeans live in owner-occupied accommodation (70% in Portugal). Ownership preference is independent of wealth and income status, household size, and age.

Personal savings and home equity are thus the two main assets individuals hold to finance LTC in an asset-based approach to welfare in which individuals accept greater responsibility for their welfare needs. Home equity serves both consumption and investment functions, providing a stream of housing services and representing wealth that could be monetised at old age if required (and deemed appropriate) to supplement other income sources (Mayhew et al. 2017; Bravo, Ayuso, & Holzmann, 2019).

Against this background, this article investigates the potential of incorporating home equity into an LTC funding plan through equity release schemes (ERS) such as reverse mortgage, home reversion schemes, renting, family-mediated ERS, a Home Equity Line of Credit (HELOC), or downsizing. We used the latest European data from the Eurosystem Household Finance and Consumption Survey (HFCS) to analyse the household wealth composition and accumulation process in Portugal, to quantify the size of the housing wealth, and to estimate the size of the income release that could be obtained converting (monetising) home wealth into an income stream. To this end, we estimate cohort life annuity factors using the Bayesian model combination (BME) of heterogeneous stochastic mortality models (comprehending Generalised Age-Period-Cohort (GAPC) stochastic mortality models, principal component methods, and smoothing approaches) developed by Bravo et al. (2021, 2023).

Empirical findings suggest that homeowners can use their accumulated home wealth to finance LTC costs, smooth consumption, and increase their resilience against financial shocks. The results show that the higher the home equity and the LTV ratio and the

older the homeowner, the higher the income that can be released to fund LTC costs. Extracting home equity and purchasing a life annuity releases additional income to partially cover the annual reference cost per room in a nursing home. The remainder of this article is structured as follows. Section 2 provides a brief overview of the institution background for LTC protection in Portugal. Section 3 outlines the key concepts and research methods used in the paper, including the housing wealth data and the forecasting methods. Section 4 reports and critically discusses the empirical results of the paper. Section 5 concludes and highlights some avenues for further research.

2. Institutional background

2.1. LTC protection in Portugal

The right to social security in Portugal is realised through the Social Security System, which comprises three subsystems encompassing different levels of social protection. The first component is a mandatory earnings-related public welfare system comprising two separate but convergent schemes ("Sistema Previdencial" and "Regime da Protecção Social Convergente"), based on the principle of professional solidarity, covering private and public employees, self-employed workers, special schemes and optional enrolment schemes. With a few exceptions, it is designed to provide earnings replacement in the event of unemployment, sickness, old age, disability, maternity, paternity, and adoption leave, workers compensation insurance, and other contingencies.

The second component is a social assistance scheme ("Sistema de Protecção Social de Cidadania (SPSC)") aimed at guaranteeing citizens' basic rights and equal opportunities, while also promoting well-being and social cohesion. It is funded by general or dedicated taxes and comprises three subsystems, providing social benefits in cash to the general population (or segments of it in the case of means-tested benefits). The "Acção Social" subsystem aims to prevent and repair socio-economic deprivation and inequality, dependency, dysfunction, exclusion or social vulnerability situations, as well as the integration and promotion of people in the community and the development of their capacities, covering all citizens, particularly the most vulnerable groups in the event of poverty, dysfunction, marginalisation and social exclusion. The "Solidariedade" subsystem aims to ensure essential rights, prevent and eradicate situations of poverty and exclusion, guarantee benefits in situations of proven personal or professional need, essentially covering nationals in the event of lack or insufficiency of economic resources of individuals and households, invalidity, old age, death, and insufficiency of benefits to replace income from work or a contributing career. Finally, the family protection subsystem ("subsistema de proteção familiar") aims to ensure compensation for increased family burdens, covering most people in the event of family burdens, burdens in the field of disability and in the field of dependency.

The third component ("Sistema Complementar") encompasses private voluntary complementary individual and collective (occupational) insurance or pension fund schemes. The aim of the collective initiative supplementary schemes is to provide benefits in addition to those granted by the social security system, with a view to

strengthening the voluntary social protection of beneficiaries in the professional or interprofessional sphere, covering employees and the self-employed.

Traditionally, LTC in Portugal has been largely dependent on informal family care. However, in recent years, there has been a gradual shift towards the development of a formal care-based system based on the provision of community and institutional services. In Portugal, public and/or private LTC insurance is not available. Social protection provisions for LTC are essentially granted by the SPSC and include cash benefits and in-kind benefits (made available or supported by the social security system, through public, private, non-profit and charity social institutions) such as Conviviality Centres/Day Centres providing the elderly population with social, recreational, occupational, and cultural activities, as well as meals, and home Support Services ensuring care and services such as meals, personal hygiene, home hygiene, laundry, and ironing (Baptista & Perista, 2018). Examples of cash benefits include the dependency supplement, a cash benefit for dependent people who are cared for, granted to individuals requiring permanent assistance to perform daily life activities. The benefit amount varies according to the level of dependency and, as of 2024, amounts to 122,90 euros per month (50% of the non-contributory social pension) for 1st degree dependency recipients, and 221,21 euros per month (90% of the social pension) for 2nd degree dependency (e.g., diagnosed with severe dementia) beneficiaries.

Other benefits granted by the SPSC include the so-called third person attendance allowance, granted to the informal carer of a disabled child or young person in need of permanent care, cash benefits and leaves targeted at carers to counterbalance the income loss arising from their caregiving (e.g., allowance for care to a disabled or chronically ill child; child assistance allowance), the support allowance for the main informal carer, the public contribution under the cooperation scheme with the institutions of the solidarity network in the development of social responses, namely home support services, integrated home support, integrated support units, and residential facilities for the elderly. Recently, the role of informal caregivers has been formalised (September 2019) and cash and in-kind benefits for informal caregivers have been implemented.

The National Network for Integrated Continuous Care ("Rede Nacional de Cuidados Continuados Integrados – RNCCI") is the main network responsible for the provision of formal LTC, which integrates different levels of health and social services. Jointly established by the Ministry of Health and the Ministry of Labour, Solidarity, and Social Security in 2006, the network includes responses for LTC but also specific responses in terms of mental, paediatric, and palliative healthcare. The RNCCI financing model is specific and based on the nature of the services provided and may include household (means-tested) out-of-pocket copayments on top of public tax financing.

2.2. Assessment of LTC protection gaps

The prevalence of LTC needs among the older population in Portugal (36%) is one of the highest among the OECD countries, well above the 24% average estimated across the OECD countries. The needs vary widely in the OECD and gender, with more than 40% of women having LTC needs in Portugal and Hungary compared to less than 14% having needs in South Korea and Ireland (Fig. 1). The proportion of people with severe and moderate needs in Portugal exceeds that of those with low needs. This is mainly

explained by the age structure of the population in the country and the large gap between total life expectancy (which is one of the highest in the world) and health life expectancy. In Portugal, the share of healthy life years in total life years is 59.5% (77.9%) for women (men).

LTC needs are disproportionally concentrated among more vulnerable sociodemographic groups that may not even be able to afford out-of-pocket care expenses in the absence of high public support. The needs are high among low-income earners, people living in single households, and the oldest age groups (80+ years). Without social protection, out-of-pocket costs push most older people into income poverty. The asymmetry in the distribution of LTC needs has long-term implications for the affordability of LTC services and projected total fiscal spending (OECD, 2024).

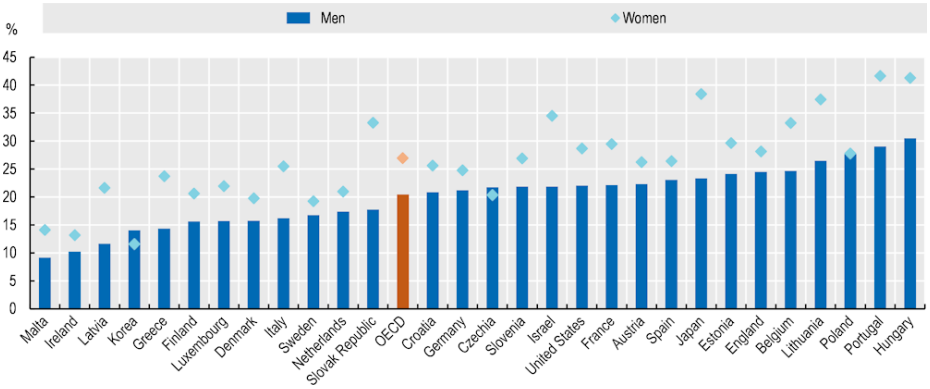


Fig 1 – Prevalence of LTC needs among older people in OECD countries, by gender. Source (OECD 2024).

The coverage of LTC needs in Portugal is one of the lowest in the European Union (less than 5%, compared to almost 30% in the EU-27 average). Public spending on LTC is low (0.4% of GDP) compared to an average of 1.7% and more than 3.5% in Nordic countries, but it is expected to increase at least 2.5 times by 2050 due to the ageing of the population (EC, 2021). Portugal is one of the 27 member states with the highest share of out-of-pocket funding for LTC, affecting household finances, narrowing access, and excluding important segments of the population. The risk of poverty among the elderly population with LTC needs is 32%, even after receiving public support. Unlike most OECD countries that provide more generous public support for home care provided at home when compared to institutional care, in Portugal the share of costs covered by public LTC systems is higher for institutional care. In addition, income and wealth testing is generally not conducted to determine the degree of public support.

3. Materials and Methods

3.1. Stochastic life annuity factors

Estimates of annual income streams released from monetising home equity require the computation of life annuity factors accounting for expected longevity development and

the dynamics of discount interest rates. To this end, we closely follow Bravo et al. (2021, 2023) and generate age-specific mortality rate forecasts using a Bayesian model ensemble of heterogeneous stochastic mortality models comprising generalised age-period-cohort (GAPC) stochastic mortality models, principal component methods, and smoothing approaches (see the original papers for details). Recent alternative approaches consider the use of machine learning and deep learning methods (Bravo, 2021b,c). Let each base stochastic mortality model in the starting model space $\mathcal{M}_0$ be denoted by M_l, $l = 1, \ldots, K$; $\mathcal{L}(y|\theta_l, M_l)$ represents the likelihood function of y (the response variable) in terms of individual model parameters ξ_l; $\pi(\xi_l|M_l)$ refers to the prior density of ξ_l under M_l. Let s denote the future value of y. The marginal composite posterior distribution can be written as:

$$(s|y) = \sum_{l=1}^{K} \pi(s|y, M_l)\pi(M_l|y), \tag{1}$$

with $\pi(M_l|y)$ is the posterior probability of model M_l given the observed data, and $\pi(s|y, M_l)$ is the forecast PDF based on model M_l; $\pi(M_l|y)$ refers to model M_l weight (posterior probability) with $\sum_{l=1}^{K} \pi(M_l|y) = 1$. In Step 1, we compose the model space $\mathcal{M} \subset \mathcal{M}_0$ selecting the candidate stochastic mortality models based on the forecast precision in the validation (test) period. Next, each model weight is estimated using the normalised exponential function. Finally, once the restricted model space is selected and the weights estimated, the ensemble BME point forecasts are obtained by probabilistically combining the individual algorithms.

Individual learners are first calibrated using total population data from 1960 to 2019 and the age range 60-95. The bootstrap technique is adopted to derive prediction intervals for age-specific mortality rates and life annuity factors considering both stochastic process and parameter risk. A closing method of the life table with the maximum age set at $\omega = 125$ is assumed for all years. Model fitting, forecasting, and simulation procedures were carried out using the R programming language (R Core Team, 2024). From the predicted mortality rates, the cohort life annuity factors are calculated as follows (Bravo & El Mekkaoui, 2018; Bravo, 2019, 2020, 2022):

$$\ddot{a}_x^c(t) := \sum_{k=0}^{\omega-x-1} exp\left(-\sum_{j=0}^{k-1} \mu_{x+j,t+j}\right) \cdot DF_k, \tag{2}$$

where $DF_k = \left(1 + r_{0,k}\right)^{-k}$ is a discount factor for maturity k, $r_{0,k}$ is the spot market interest rate for maturity k, which we will assume flat at 2% in this paper; $\mu_{x,t}$ is the mortality rate at age x in year t and ω is the highest attainable age in the life table. Estimates of the potential annual income stream released from home equity release B_t can finally be computed as follows:

$$B_t = \frac{HEW_t}{\ddot{a}_x^c(t)}, \tag{3}$$

where HEW_t is the home equity wealth at time t, computed by subtracting the total outstanding balance of household's debt liabilities (e.g. mortgages) from the market value of real estate assets.

3.2. Home Equity in Portugal

We estimate the size and distribution of home equity in Portugal using the latest release of the Portuguese Household Finance and Consumption Survey (ISFF). The 2020 ISFF was carried out between October 2020 and February 2021 as part of the Household Finance and Consumption Survey (HFCS) project coordinated by the European Central Bank (ECB) and by the Household Finance and Consumption Network. The purpose is to obtain harmonised data on household finances and consumption in euro area countries and other European countries. Information collected at the household level is supplemented with questions about received inheritances, future pension entitlements, income, and consumption, as well as several sociodemographic characteristics of individuals (e.g., age group, labour status, level of education). In Portugal, the survey is carried out by Banco de Portugal and Statistics Portugal (Bank of Portugal 2021).

Table 1 summarises the median value of real assets (Household main residence (HMR), other real estate property), outstanding debt, and estimated home equity in Portugal, conditional on household participation by asset type. The (conditional) median value of the HMR is nearly 120.0 thousand euros (TEUR) and, except the top 10% net wealth and income classes, it is by far the household's most valuable real asset. When analysing by labour status and education of the median reference person, the HMR value is higher for employees and self-employed individuals and individuals with secondary and tertiary education. The median value of HMR mortgage debt is 54.6 TEUR but is substantially higher in the low 20% net wealth classes (88.7 TEUR). The median values in the retired population are below average (18.0 TEUR).

The homeownership rate, the debt-to-asset balance (particularly at retirement ages), and the values of home equity are key indicators of the potential to monetise housing wealth for funding LTC. The results in Table 1 show that the estimated median value of HMR home equity in Portugal is 65.4 TEUR, with values ranging between -24.3 TEUR for the bottom 20% net wealth groups and 194.2 TEUR for the top 10% net wealth classes. As expected, home equity in Portugal increases with the net wealth, income and education level of the reference person, and is particularly higher for those in retirement (82.0 TEUR). This is an expected outcome of life cycle theory and the low debt-to-asset ratio at these ages (only 7.6%). Home equity is high for homeowners (outright or with mortgage), household size, and the older the reference person (HFCS, 2021).

4. Empirical results

Figure 1 summarises the forecasts (2020-2050) of the pure premium of a whole life annuity due at the ages of 75 and 85 for the Portuguese total population using a cohort approach (prospective life table) (i.e., accounting for expected longevity improvements), together with the historical (1960-2019) and 95% pointwise prediction intervals. In the computations, we assume a flat yield curve at a 2% interest rate. As of 2020, the estimated life annuity pure premium for a 75-year-old individual is $\ddot{a}_{75}^{C}(2020) = 10.712684$, whereas for a 75-year-old individual the annuity factor estimate is $\ddot{a}_{85}^{C}(2020) = 5.874898$. The cost of a life annuity is forecast to increase due to the

predicted life expectancy trends at retirement ages, which are set to continue its long-term positive trend.

Table 1. Median value of Real Assets, Debt and Home Equity, conditional on household participation by asset type, Portugal, ISFF 2020

Household characteristics	Asset type			Debt type			HMR	
	HMR	Other real estate property	All real assets	HMR mortgage	Other property mortgage	All debt	Debt to asset ratio	Home Equity
	(10^3 EUR)			(10^3 EUR)			(%)	10^3 EUR
Total	**120.0**	**69.6**	**121.4**	**54.6**	**57.1**	**38.5**	**25.1**	**65.4**
Net wealth groups (percentiles)								
≤ 20	64.3	3.6	3.4	88.7	53.0	6.7	86.9	-24.3
20 to 40	65.3	17.2	55.7	54.6	45.5	50.2	52.0	10.7
40 to 60	99.4	22.8	104.7	48.4	39.9	38.9	28.3	51.0
60 to 80	150.0	50.7	176.3	54.7	51.5	38.0	17.8	95.3
80 to 90	200.0	99.1	287.5	48.5	82.1	40.7	11.8	151.5
90 to 100	251.6	251.3	578.4	57.4	57.1	59.8	7.1	194.2
Income groups (percentiles)								
≤ 20	85.1	22.6	81.7	49.3	67.5	17.8	23.9	35.8
20 to 40	100.0	50.8	91.5	49.0	38.4	24.7	29.1	51.0
40 to 60	112.0	43.9	106.8	50.5	32.6	28.5	28.9	61.5
60 to 80	125.0	78.0	137.5	55.2	53.5	40.0	28.5	69.8
80 to 90	160.8	119.0	204.5	73.8	53.1	61.7	26.0	87.0
90 to 100	217.6	158.0	311.7	61.2	74.1	60.7	15.4	156.4
Labour status								
Employee	130.4	75.0	128.0	56.3	62.5	46.1	30.9	74.1
Self-employed	150.0	91.7	251.9	56.7	42.9	50.2	14.6	93.3
Unemployed	101.6	106.0	95.9	46.9	67.5	15.3	35.8	54.7
Retired	100.0	53.1	94.3	18.0	87.2	7.0	7.6	82.0
Other not working	100.0	32.2	103.4	17.7	50.0	14.5	8.2	82.3
Education								
Lower than secondary	100.0	42.3	100.2	45.7	52.4	20.1	22.7	54.3
Secondary	130.0	78.0	127.0	55.9	48.1	39.6	31.4	74.1
Tertiary	176.4	125.2	195.8	75.0	69.0	67.3	24.8	101.4

Source: Portuguese Household Finance and Consumption Survey 2020. **Notes:** The Household main residence (HMR) home equity of a household was estimated as the difference between the median value of the HMR and the median value of HMR mortgage. All real assets include the HMR, other real estate properties, self-employment business, vehicles, and valuables. The labour status and education are that of the reference person. All debt includes HMR mortgage, other property mortgages, non-mortgage loans, credit lines, overdrafts, and credit cards.

There are multiple ways of using home equity to provide cash and fund LTC but not all of them are suitable to older homeowners. For example, selling the home is only acceptable if homeowners are planning to move. Alternatively, opening a home equity loan (or a first or second mortgage) requires monthly interest and capital repayments adding to regular expenses, which older homeowners may not be able to cope with. Moreover, they require good credit and sufficient income to qualify. Another option is to enter an interest-payment only mortgage to finance the purchase of a life annuity, using some portion to pay interest on the mortgage.

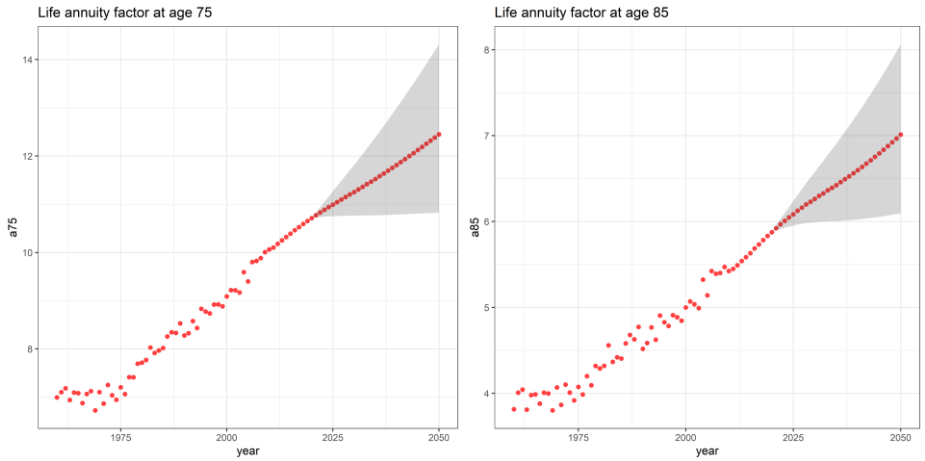


Fig 1 – Forecasts of the cohort life annuity factors at ages 75 and 85, along with 95% prediction intervals, Portugal, total population.

Differently, tenure reverse mortgages allow homeowners to borrow against the equity in their home, but do not require repayment until the homeowner moves out, sells the home, or passes away. In a reverse mortgage, the lender loans an amount each month to the homeowner. The periodic loans or lump-sum (often tax-free) cash amounts accumulate with interest until the due date, when outstanding liability is repaid to the lender, usually from the proceeds of selling the home. Contracts often include a No Negative Equity Guarantee (NNEG) stating that the lender cannot require repayment from assets other than the home or from spouses or descendants.

Table 2 reports an estimate of the income released from monetising HMR home equity at selected ages and alternative loan-to-value (LTV) ratios. In home equity loans and reverse mortgage contracts, the lender sets a maximum LTV (the maximum percentage of the home's value that homeowners can borrow), which compares the amount of the mortgage with the property's (appraised) value. Homeowners typically need at least 50% equity in their homes to qualify for a reverse mortgage. In addition to LTV, other factors affect the amount you can borrow through an ERS instrument, namely house price, borrower age, loan origination fees, mortgage insurance premiums, and estimated asset price movements (Knaack et al., 2020).

The findings in Table 2 show, for example, that borrowing 75% of home equity at age 75 and purchasing a life annuity releases 4.6 TEUR per year for life. This would be

sufficient to cover 27.3% of the annual reference cost per room in a nursing home with an agreement with social security in Portugal (16.8 TEUR). Borrowing the same 75% of the home equity at the age of 85 would extract 8.3 TEUR per year for life, an amount enough to pay almost half (49.7%) of the cost of a nursing home room.

Table 2. Estimates of the annual income released from monetising home equity at selected ages and alternative loan-to-value ratios, Portugal, 2020

Household characteristics	Home Equity HMR (TEUR)	Age 75			Age 85		
		LTV ratio (%)			LTV ratio (%)		
		100%	75%	50%	100%	75%	50%
Total	**65.4**	**6.1**	**4.6**	**3.1**	**11.1**	**8.3**	**5.6**
as a % of residential LTC cost		36.3%	27.3%	18.2%	66.3%	49.7%	33.1%
Net wealth groups (percentiles)							
≤ 20	-24.3	x	x	x	x	x	x
20 to 40	10.7	1.0	0.8	0.5	1.8	1.4	0.9
40 to 60	51.0	4.8	3.6	2.4	8.7	6.5	4.3
60 to 80	95.3	8.9	6.7	4.4	16.2	12.2	8.1
80 to 90	151.5	14.1	10.6	7.1	25.8	19.3	12.9
90 to 100	194.2	18.1	13.6	9.1	33.1	24.8	16.5
Income groups (percentiles)							
≤ 20	35.8	3.3	2.5	1.7	6.1	4.6	3.1
20 to 40	51.0	4.8	3.6	2.4	8.7	6.5	4.3
40 to 60	61.5	5.7	4.3	2.9	10.5	7.8	5.2
60 to 80	69.8	6.5	4.9	3.3	11.9	8.9	5.9
80 to 90	87.0	8.1	6.1	4.1	14.8	11.1	7.4
90 to 100	156.4	14.6	11.0	7.3	26.6	20.0	13.3
Labour status							
Employee	74.1	6.9	5.2	3.5	12.6	9.5	6.3
Self-employed	93.3	8.7	6.5	4.4	15.9	11.9	7.9
Unemployed	54.7	5.1	3.8	2.6	9.3	7.0	4.7
Retired	82.0	7.7	5.7	3.8	14.0	10.5	7.0
Other not working	82.3	7.7	5.8	3.8	14.0	10.5	7.0
Education							
Lower than secondary	54.3	5.1	3.8	2.5	9.2	6.9	4.6
Secondary	74.1	6.9	5.2	3.5	12.6	9.5	6.3
Tertiary	101.4	9.5	7.1	4.7	17.3	12.9	8.6

Notes: LTV = loan-to-value in a reverse mortgage operation, i.e., the maximum percentage of home's value it is possible to borrow from. Income values estimated considering the 2020 estimated cohort life annuity factors; Income release as a percentage of annual residential LTC cost estimated considering the 2024 annual reference cost per room in a nursing home with an agreement with social security in Portugal (16.8 TEUR).

The higher the home equity and the LTV ratio and the older the homeowner, the higher the income that can be released to fund LTC costs. This means, for example, that ensuring a high LTV is crucial to guaranteeing adequate LTC financing. Breaking down the results by net wealth, income, labour status, and education groups, the findings suggest that the top net wealth and income classes, employees and self-employed, and individuals with secondary and tertiary education are the ones that can benefit the most from developing monetising home equity. For example, the home equity release potential of an individual with tertiary education is 36.9% higher than that of an individual with secondary education and 86.8% higher compared to individuals with less than secondary education. The potential to release home equity of retired individuals is 49.9% higher than that of those in unemployment.

5. Conclusions

The growing demand for LTC care in Portugal due to the ageing of the population and reduced healthy life years and the associated increased costs present a significant challenge for public and private social protection systems. The need to ensure that LTC needs are satisfied and reduce poverty while keeping the systems fiscally sustainable, affordable, and fair across generations demands a combination between public and private earnings-related LTC insurance, LTC prefunding, broad-based funding sources such as general (income, property, consumption) or dedicated taxes, and searching for innovative financing solutions such as extracting income from housing wealth. Home equity release solutions are particularly beneficial for 'home-rich and cash-poor' households that may not meet the income requirements of a regular mortgage contract.

Governments can provide tax advantages (e.g., deductions or tax credits) to promote the take-up of voluntary private LTC as a supplement to existing public LTC services. To ensure better targeting, equity, and intergenerational risk sharing of social protection, countries could consider introducing and/or expanding progressive income and asset testing systems to determine eligibility for LTC support while ensuring universal coverage of LTC. To increase coverage, it is important to address information gaps and financial literacy, consider behavioural economics interventions to counteract inertia, optimism bias, intertemporal myopia, and moral hazard from means-testing, i.e., the conviction that public financing will ultimately pay most LTC expenses.

However, the supply of equity release schemes in Portugal and most OECD countries is in its infancy and severely constrained by multiple factors, including regulatory (compliance, capital, consumer protection), economic and market (e.g., funding, liquidity, property market volatility, interest rate risk, longevity risk, the insufficiency of risk pooling mechanisms), consumer demand and awareness (financial illiteracy, perceived poor value-for-money, misunderstanding of products, reputational risk), competition and market dynamics (absence or limited number of providers, pricing pressures), social and cultural factors (e.g., inheritance considerations, stigma and perception) and operational challenges.

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