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A photograph of the interior of the Central Bank of Malta building. The space is characterized by a high ceiling with a dramatic, colorful sky (orange, red, and blue) projected onto it. The walls are made of light-colored stone blocks. On the right, there are several rows of white, rectangular, three-dimensional architectural elements that resemble a grid or a series of steps. In the foreground, there are long, curved, light-colored stone benches. In the background, there is a large, arched stone doorway leading to another part of the building. The overall atmosphere is modern and architectural.

# CENTRAL BANK OF MALTA WORKING PAPER



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## *Financialisation of the Maltese household?*

### *Household debt dynamics, the mortgage market, and housing in Malta*

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## Abstract

This paper provides a comprehensive assessment of household debt dynamics in Malta between 2010 and 2020. Drawing on the Household Finance and Consumption Survey, it argues that a process of financialisation of the household is underway on the Maltese islands, primarily via the mortgage market. This process is characterised by (i) *financial extension*, in which more households partake in mortgage finance in their entry to homeownership, and (ii) *financial intensity*, in which households accumulate more debt in accessing the property market. In explaining this process, I claim, firstly, that mortgage finance represents an ‘alternative’ channel to older dominant institutional entryways to homeownership. Secondly, Maltese households are engaging in financial intensification in order to stretch their purchasing power in the property market, and possibly to maintain a standard of living comparable to older generations’. While this is the case for the average Maltese household, results point to some heterogeneity across different households, as younger and lower-income households are relatively more indebted, though the latter are also being driven out of the property market in the context of rising property prices. The paper sets out a novel agenda for scholarship in the Maltese context, namely to put under scrutiny the increasingly central place of finance in Maltese society.

JEL classification: Z13; G5; D1

Keywords: household debt, financialisation, mortgage market, housing, homeownership

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## 1. Introduction

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The financialisation of the household, a term referring to the process by which households are increasingly participants in and subject to finance and its logic, has been receiving growing attention in the literature (Epstein 2007; Krippner 2005; Palley 2007; van der Zwan 2014; Aalbers, 2019). Among various forms and modalities of financialisation, scholarship has given attention to household debt as one of the main elements of household financialisation. While debt has a long history of characterising economic exchange even at the level of the household (Graeber, 2011), the conditions shaping recent patterns of household indebtedness – of mortgage debt and other forms of debt – are often traced back to the US’ democratisation of mortgage finance (Prasad, 2013; Quinn, 2019) and to the proliferation of household credit from the 1970s onwards in the Anglo-Saxon world (Prasad, 2013; Crouch 2011) and in the rest of Western Europe (Fuller, 2016; Schwartz and Seabrooke, 2009). The financial crisis of 2008 prompted a reckoning with the consequences of debt-driven economic growth, but households have resumed the accumulation of debt after the crisis (IMF, n.d.), especially in the context of rising property prices and accommodative monetary policies by central banks.

Despite this literature, and important scholarship which provides typologies of financialisation (and housing finance systems) across European societies (Schwartz and Seabrooke, 2009; Van Gunten and Navot, 2018), the process of financialisation (or lack thereof) of the household in the Maltese context has received scant attention. We know little about the place of finance in Maltese society, and specifically, in the Maltese household. Nor do we know much about the institutional framework of Malta’s residential housing system and, more specifically, whether this has been moulded by financialisation over recent years. In setting out and advancing this novel agenda, this paper provides a first comprehensive and systematic assessment of household debt dynamics in Malta between 2010 and 2020, examining whether the Maltese household has experienced financialisation, the shape and form this process has taken, and the drivers behind it.

Over the past decades, Malta has undergone significant economic growth, together with structural economic and financial developments (Grech, 2015), including the liberalisation of the banking sector in the early 1990s (CBM, 2019). More recently, a period of rapid social and economic change has characterised the Maltese economy, including rising property prices and rising female labour participation. Indicative survey results suggest that over the period 2010 to 2016 Maltese households have experienced rising indebtedness, as median household outstanding debt (conditional on participation) grew from €15,669 in 2010 to €40,000 by 2016, while the median value of outstanding *mortgage* debt (conditional on participation) rose from €35,000 to €80,000 over the same period (Caruana and Pace, 2013; Gaskin, Attard, and Caruana, 2017; Attard and Georgakopoulos, 2019).

The paper argues that Maltese households have become more financialised primarily via the mortgage market. Adopting Van Gunten and Navot's (2018) typology of financialisation of the household, the paper finds that higher indebtedness levels can be explained by both 'financial extension' and 'financial intensity' but not by 'financial inclusion'. As the homeownership rate (financial inclusion) remained largely unchanged over the period 2010-2020, the process of Maltese households' financialisation is thus expressed both in terms of more households partaking in finance via mortgages (financial extension), as well as households accumulating more (mortgage) debt (financial intensity). In other words, it is a case of more households borrowing *and* households borrowing more. The latter implies that households are accumulating more debt even as they take on longer mortgages, as they extend the maturity date to the maximum (retirement age), and with higher loan-to-value ratios.

But what stands behind rising Maltese household indebtedness? While rising property prices have undoubtedly contributed significantly to indebtedness levels, it would be overly simplistic to claim that property prices are drivers of indebtedness. Instead, I offer a deeper argument that brings to bear Malta's social, economic and institutional context in explaining the financialisation of the Maltese household. I claim, firstly, that Maltese households are resorting to the mortgage market to partake in the housing market as *homeowners* in a context where the norm of homeownership has been firmly embedded in Malta's residential housing system since the 1970s (see Vakili Zad, 2007). Multiple factors contributed to the promotion of homeownership in Malta, including state intervention via housing policy along the years<sup>2</sup>, economic and financial conditions that rendered housing attractive as an investment<sup>3</sup>, and socio-cultural conditions in which the *status* of homeownership matters and where '*the home*' may involve deep-seated cultural meanings. Mortgage finance, in this context, represents an alternative (or, more accurately, coexisting) channel to older dominant institutional entryways to homeownership, including the provision of housing via the family – such as self-help, intergenerational transfers, and inheritance (see Stephens et al., 2015) – and via the state over decades prior. Finance, then, opens up new possibilities particularly in a context of fast-rising property prices.

Secondly, I tentatively suggest that Maltese households are increasingly engaging in financial intensification - stretching their purchasing power, as evidenced by higher debt burdens, mortgage maturities increasingly extending to retirement age, higher loan-to-value ratios - by leveraging the mortgage market to maintain a standard of living that keeps up with older generations. As incomes rise

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<sup>2</sup> This includes policies related to the supply of housing, incentives for homeownership, and regulatory controls of the rental market that push households into homeownership.

<sup>3</sup> Such economic and financial conditions, including property price inflation outpacing the nominal cost of borrowing and rates of return on other assets, allowed the property market to serve as an outlet for commercial investment (such as rentals) via mortgages on second and third properties beyond the main residence property. However, the data in this paper is not conclusive over the extent of this phenomenon across Maltese society. But homeownership itself may be perceived as a long-term form of investment. For instance, while purchasing one's home presents significant upfront costs, these offset post-pension age housing costs when households experience a sheer drop in incomes upon retirement. Secondly, housing is a key source of intergenerational transfer of wealth within the family, and property ownership allows parental support to children via inheritance or gifts, especially important in contexts such as Southern Europe where the family is a key institution in the provision of welfare.

but fail to keep up with the across-the-board upward trend in property prices, households take on even more mortgage debt to access properties that allow them to offset a potential decline in their standard of living. For instance, while the size of property per household has been on a downward trend across the board over the review period, financial intensity via debt is allowing Maltese households to counter an otherwise larger loss of property area.

Results also suggest some divergence across the cross-sections of Maltese society. Younger households make higher resort to the mortgage market for homeownership purposes, and they are also more indebted than other households, in part due to the fact that households take on debt when young and repay it over their life-course, but also due to rising property prices over the past few years. However, increasing financial intensity is allowing younger households to offset a decline in property size, and indeed they are the households which have sacrificed less property in terms of area in relative terms. But because households are extending their mortgage repayment over a longer stretch of their life-course, it is possible that higher mortgage market participation may be partly explained by older households exiting at a slower rate from the mortgage market.

With respect to education levels, households with a secondary level of education, and especially tertiary educated households, have been shifting towards mortgage-based homeownership. The latter are on average more indebted than households with a secondary level of education, though the OLS regression results show that this is largely driven by a demographic effect where younger households, who are more indebted than the rest, are increasingly reaching tertiary levels of education.

In terms of the income distribution, the bottom 20% of households are increasingly unable to participate in the mortgage market due to housing affordability issues, and as a result are driven out of the property market and into tenancy. Those within the bottom 20% who succeed in gaining access to the property market are doing so with much higher relative levels of mortgage debt burdens. As a result of these developments, households in the bottom 20% are simultaneously having to make do with significantly smaller properties. The rest of the income distribution has experienced significant rises in mortgage participation *together with* rises in their debt burdens.

This process was supported by an environment that proved favourable for prospective homeowners over the past decade, including historically-low interest rates, women joining the labour market, low unemployment rates, and highly accommodative supply-side and demand-side housing policies. This may raise questions on the impact which a shifting socio-economic and institutional environment may have on indebtedness, debt sustainability, access to the property market, and homeownership broadly.

This paper is structured as follows: section 2 takes stock of the literature on financialisation and household debt specifically, while section 3 provides a brief overview of household debt in Malta based on aggregated data and puts this overview in the context of European trends of household debt. The following section analyses household debt dynamics in Malta based on the HFCS, including general

trends of household debt, its distribution and the institutional framework of the mortgage market, together with a counterfactual analysis of the analytical models adopted in this paper. Section 5 goes into more depth with an assessment of household debt across socio-economic household characteristics, including age, income and education. Section 6 presents regression results for an assessment of financial intensity, together with a tentative analysis of the motivations behind household debt in Malta in terms of property size. Section 7 concludes.

## **2. Reviewing the literature**

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The phenomenon of financialisation has been defined by Epstein (2005, p. 3) as “the increasing role of financial motives, financial markets, financial incentives, financial actors, and financial institutions in the operation of domestic and international economies”. The concept has earlier roots in the French Regulationist school which recognised the increasingly strategic role of finance as an engine of growth in the 1990s (Boyer, 2000; Aglietta, 2000). The stable institutional compromise between capital and labour up until the 1960s gave way to a series of social and economic transformations that ultimately congealed into an arrangement at the heart of which stood the financial system (Boyer, 2000). Financialisation therefore entails a process by which the share of profits derived by non-financial firms is tilted towards financial channels more than productive channels (Krippner, 2005), which takes hold of corporate governance via the shareholder value (Boyer, 2005; Fligstein, 1990; Fligstein and Shin, 2007), and which exerts pressures on governments and policy (Hardie, 2011). Finance has also been argued to be a core functional component of developmental and growth models in institutional contexts where market liberalisation replaced financial repression (McKinnon, 1973; Shaw, 1973; Maxwell Fry, 1989; Dornbusch and Reynoso, 1989; Roubini and Sala-i-Martin, 1992).

Households, too, have been enrolled into finance, from housing (Aalbers, 2019; Fuller, 2016; van Gunten and Navot, 2018; Schwartz and Seabrooke, 2009), pensions (Langley, 2006), to consumer credit (Trumbull, 2012). However, the most powerful driver of financialisation of the household by some stretch has been the mortgage market through the housing system, as is evident in the US (Dyner and Kohn, 2007) and other advanced economies (IMF, 2017). Prasad (2013) traces the historical trajectory by which US households turned towards finance via what she calls ‘mortgage Keynesianism’. The US state played an important role in this process by enacting demand-side policies such as loose monetary policy and federal credit programmes (see also Quinn, 2019), which democratised finance and led to a credit boom. Prasad (2013) singles out the US and the US mortgage market as exceptional, characterised by high loan-to-values, fixed rates for longer, and lower and stable repayments costs. But others, taking a comparative approach, have claimed that household debt dynamics in the US are not necessarily exceptional, but that such dynamics may vary according to specific institutional complementarities. Some have therefore referred to ‘varieties of indebtedness’ in mortgage markets (Van Gunten and Navot, 2018) or ‘varieties of residential capitalism’ (Schwartz and Seabrooke, 2009).



The rise in household debt is often portrayed as a reaction to the declining fortunes of the middle-classes as real incomes stagnated and the gap between wages and productivity grew larger, especially from the 1970s onwards, in what is known as the ‘middle-class squeeze’ (Erickson, 2014; Wolff, 2010; Harvey, 2010). As a result, households turned towards credit-fuelled consumption to protect their standard of living via debt rather than incomes, a theory which has achieved ample empirical support in explaining rising household indebtedness (Barba and Pivetti, 2009; Crouch, 2009; Leicht and Fitzgerald, 2013). This is particularly the case in contexts of rising income inequality where households try to keep up or catch up with other households breaking away from them on the income distribution (Goldstein and Hastings, 2019; Barba and Pivetti, 2009; Harvey, 2010). Going back to Veblen (1899) and Duesenberry (1949), this view suggests that households actively seek to maintain their social status relative to their peers. In the case of housing, households may treat the home as a ‘positional good’ (Hirsch, 1977; Frank, 1985) and seek to establish or maintain their status as *homeowners* (Gurney, 1999; Foye et al., 2018) by resorting to debt-funded consumption via the mortgage market (Fligstein et al, 2017).

A complementary argument claims that these processes are supported by the emergence of a financial culture, where households treat their income and wealth as objects of investment, become less risk-averse, and develop financial strategies such as stock trading and leveraging home equity (Fligstein and Goldstein, 2015; Goldstein, 2013). Growing debt may therefore be independent of income dynamics, and may be more accurately conceived of as an outcome of a financial culture providing a conducive environment for aggressive risk-taking behaviour through debt-funded (leveraged) investment (Davis 2009; Cynamon and Fazzari 2009).

A different strand of the literature treats indebtedness as a way by which households smooth out consumption over time based on expectations of future income, in line with the life-cycle hypothesis (Modigliani and Brumberg, 1954; Modigliani, 1975; Deaton, 2005; Dynan and Kohn, 2007; Dumitrescu et al., 2022). Households thus save less and borrow more in the earlier stages of their life-cycle, especially if they expect their income to improve substantially over time. Younger households and households with higher education tend to hold more debt, in relative terms, than older households and households with lower levels of education. This theory would also suggest that rising house prices may push households to borrow larger amounts to be able to consume the ‘same’ property or housing services.

Recently, Van Gunten and Navot (2018) have offered a more systematic typology of financialisation and rising household indebtedness. Starting from the premise that housing and mortgage markets are primary drivers of indebtedness across Europe, they argue that rising indebtedness may be due to three non-mutually exclusive factors: financial inclusion, financial extension and financial intensity. In the most part, literature tends to assume that indebtedness rises as a result of financial inclusion, namely on the rate of participation of households in the housing market as owner-occupiers (with an underlying

assumption that any change in homeownership is necessarily mortgage-based). Change in housing market participation, specifically the homeownership rate, is therefore reflected in debt levels.

But participation in the housing market does not necessarily drive indebtedness levels because households may bypass the mortgage market completely and purchase properties outright. If households acquire properties without resorting to mortgages (i.e. via a non-financially intermediated acquisition, or through inheritance or gifts) homeownership may increase without any effect on indebtedness levels. This is a prevalent phenomenon in Southern European or Mediterranean contexts – such as Italy - where homeownership rates are high but mortgage participation relatively low (Allen et al., 2008; Schwartz and Seabrooke, 2009). Scholars have emphasised the second model, namely financial extension, which refers to participation in the *mortgage* market as a driver of indebtedness, irrespective of changes in homeownership (i.e. the relative rates of ownership and tenancy).

Van Gunten and Navot (2018), however, claim that a third model, namely financial intensity, in which households accumulate more debt, is an equally important factor in explaining debt levels particularly in contexts of rising property prices. Households may thus borrow more relative to their incomes, thus *intensifying* their debt burdens. Often, financial intensity is aided by *institutional frameworks*, such as the type of mortgage market, the length of main residence mortgages and second property mortgages. But it is also supported by *housing-related policy*, from banking regulation such as macroprudential policies on loan-to-value (LTV) ratios and debt-servicing-to-income (DSTI) ratios, regulation in the rental market, to the various schemes in the long-term provision of public housing, taxation on property acquisition, and planning policies that influence the supply and demand of housing. Through a comparative study on a selected number of European countries, the authors find that financial intensification is a determinant of cross-national variation in debt, and that this is both a result of household behaviour as well as the particular mortgage market institutions in the respective countries. This paper adopts Van Gunten and Navot’s analytical typology of financial inclusion, extension and intensity in order to assess whether rising debt levels in Malta can be explained by any one (or more) of these factors.

### **3. Household Debt Levels and Composition in Malta and Europe: A brief overview**

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This section provides a brief overview of household debt in Malta and Europe between 2000 and 2020 based on aggregate data. Household debt in Europe has been on the rise in the two decades following the turn of the millennium. Aggregated data in Figure 1 show that household debt-to-GDP in the euro area stood at 49.3% in 2000, growing to 62% in 2020. A degree of variation is evident when dissecting the data at the country level, as household debt in Denmark and the Netherlands grew to exceed their

respective GDP levels, while figures for Romania, Hungary, and Latvia amongst others remain relatively low.

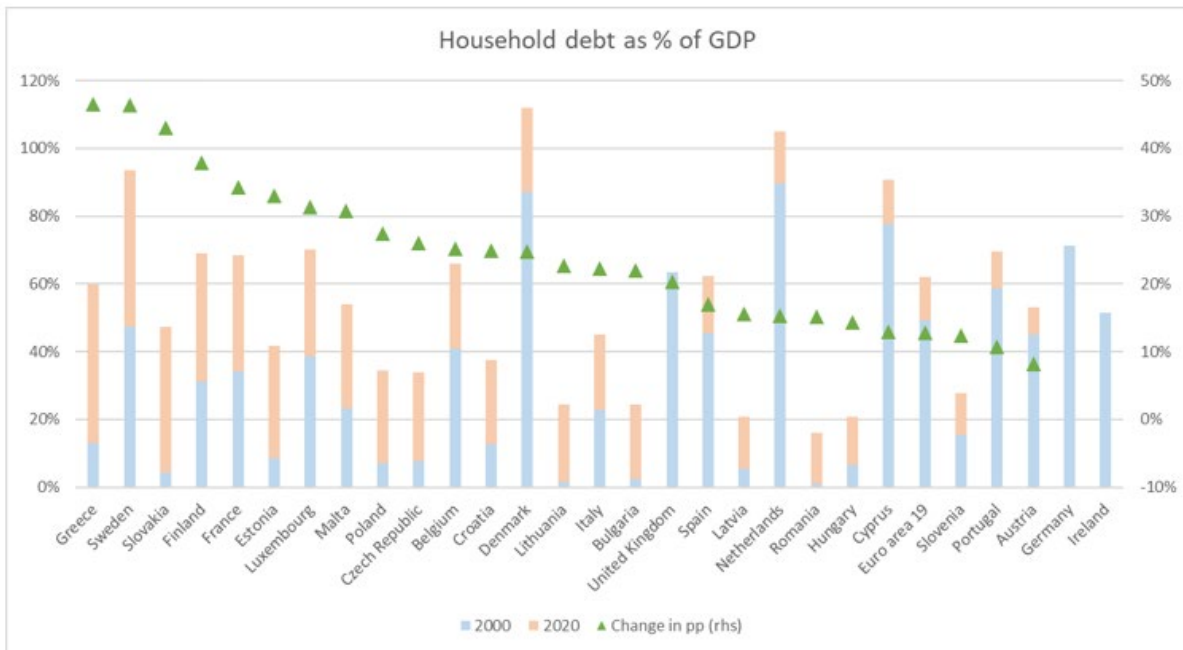


Figure 1: Household debt as % of GDP

Source: SDW

Data refer to liabilities for households and non-profit institutions serving households (NPISH)

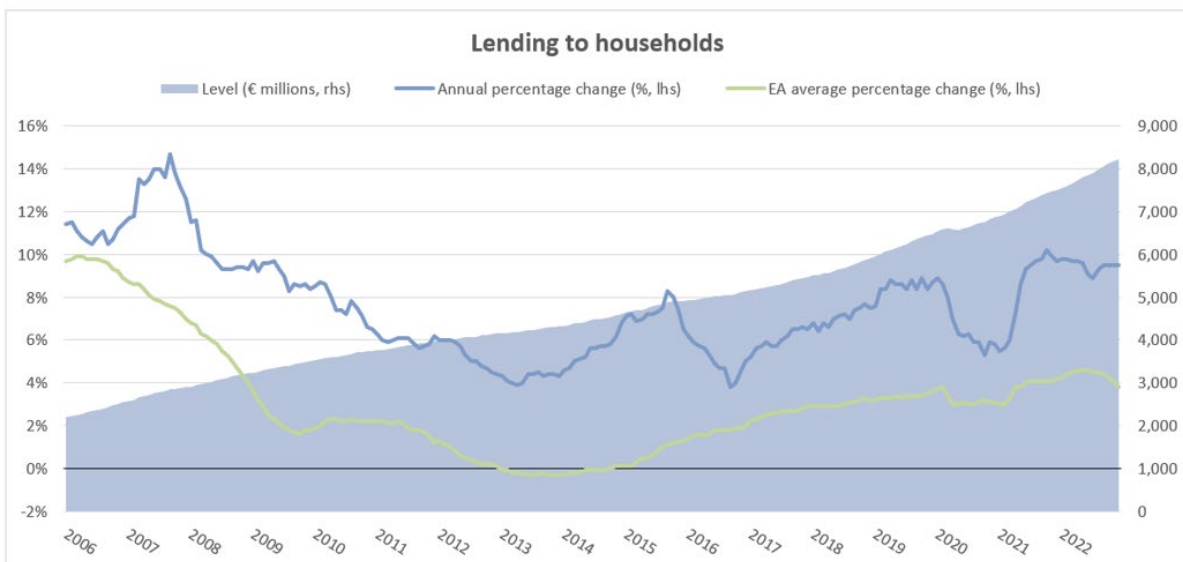


Figure 2: Loans to households, Malta, and the EA

The figures represent loans provided to households and non-profit institutions serving households by monetary financial institutions (MFIs) (excluding ESCB).

Source: SDW

Household debt in Malta rose particularly fast around the period of accession to the European Union in 2004 up to the Great Recession of 2007/08 (see Figure 2). Although borrowing moderated thereafter in

terms of annual percentage change, between 2010 and 2020 household borrowing saw a year-on-year average growth of 6.9%. Overall, Malta’s household debt-to-GDP rose from 23% in 2000 to 54% by 2020, even as Malta’s nominal GDP was registering fast growth from 2012 up to the Covid-19 pandemic.

Mortgage debt remains the most important component of household debt, and increasingly so, as mortgages represented about 77% of total loans to households in the EA in 2020 up from 70% in 2005 (Statistical Data Warehouse, 2022). In countries where mortgages took a significantly lower share of total loans to households in 2005, such as Cyprus, Luxembourg and Slovenia, they have been converging rapidly to the euro area average. In Malta, mortgages represented 70% of all bank loans to households in 2005, and by 2020 took up a larger share of all such loans, standing at 85%, one of the highest shares in the EA. Indeed, lending for house purchase grew by 9.6% year-on-year (compared to 6.9% for all household lending), far above the average EA growth of 4.1% year-on-year. As Figure 3 suggests, Malta’s mortgage market flows almost quadrupled (284%) between 2005 and 2020. In the period under review in this paper, 2010 to 2020, mortgage lending in Malta doubled, growing faster than most in Western and Central European countries, and especially faster than in its Southern European counterparts where mortgage flows shrunk between 2011 and 2020 owing to the European sovereign debt crisis.

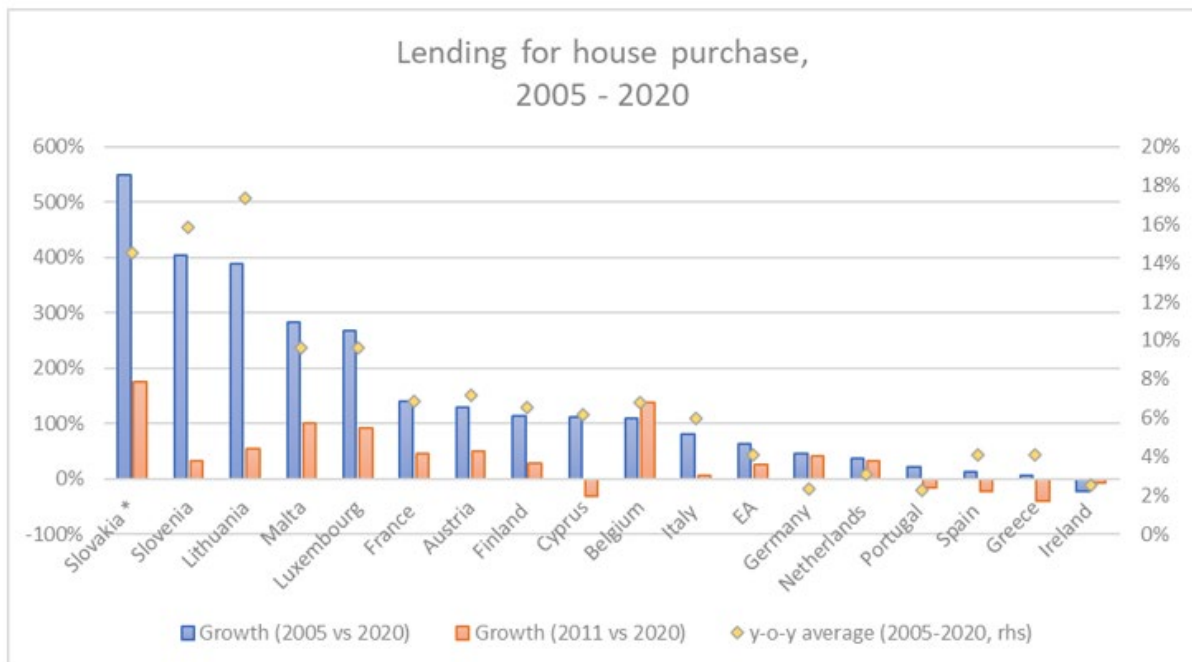


Figure 3: Lending for house purchase, 2005 - 2020  
 Source: SDW  
 \* Data for Slovakia refers to 2006

#### 4. Rising debt in Malta: More households borrowing or households borrowing more?

The previous section evidences rapid growth in household debt in Malta, largely owing to mortgage debt dynamics, raising the question of what stands behind rising household debt: is it a case of financial inclusion, financial extension, or financial intensity? Following Schwartz and Seabrooke (2009), and Van Gunten and Navot (2018), this section analyses the (changing) structure of Maltese housing markets and Maltese debt markets to assess whether debt dynamics are being driven by higher rates of homeownership (financial inclusion), by higher participation in the mortgage market (financial extension), or by intensification of debt per household (financial intensity).

The results are henceforth based on the Household Finance and Consumption Survey conducted by the Household Finance and Consumption Network, unless otherwise stated<sup>4</sup>. The survey collects household-level data on finances and consumption, including variables related to real assets and their financing, liabilities and credit constraints, private businesses and financial assets, employment, income, pensions and insurance, intergenerational transfers and gifts, and consumption on food, utilities and other forms of consumption. It presents a snapshot representative of the Maltese household population for each wave, and has so far covered four waves for the Maltese context: 2010, 2013, 2016 and most recently 2020, the latest wave consisting of a sample of 979 households. Further detail on the survey methodology can be found in HFCN (2020).

##### 4.1 Malta's residential housing structure

Malta's residential housing structure						
Housing Status			2010	2013	2016	2020
Main residence property	Own main residence	All home-owners	77.7%	80.2%	81.4%	79.0%
		Owners outright	64.9%	64.3%	63.5%	60.4%
		Owners with mortgage	12.8%	15.9%	17.8%	18.6%
	Do not own main residence	All tenants	22.3%	19.8%	18.6%	21.0%

Table 1: Malta's residential housing structure  
Source: HFCS

<sup>4</sup> Figures from the HFCS survey may differ slightly from other publications due to different calculations and revisions to the datasets.

Table 1 displays four snapshots of the Maltese residential housing structure between 2010 and 2020, based on the four waves of the HFCS. The table presents the proportion of Maltese households owning or renting the property in which they reside, together with a decomposition of homeownership into whether households own their property through a mortgage or outright.

A clear picture emerges from the table upon inspection, where Maltese households are in their most part homeowners. At around 80%, Malta's high rate of homeownership is characteristic of Southern Mediterranean societies (Eurostat, 2021). Over the past decade, the homeownership rate grew between 2010 and 2016, from 77.7% to 81.4% but dropped back to 79.0% in 2020 as the proportion of tenants increased. These figures are broadly in line with NSO's Statistics on Income and Living Conditions. Although these figures suggest stable homeownership over the past 10 years, they may conceal emerging trends in the Maltese residential housing structure.

Indeed, the composition underlying homeownership has been undergoing a clear shift as the proportion owning their residence with a mortgage and those owning it outright are moving in the opposite direction. Whereas in 2010 owners outright made up 64.9% of the household population, the figure has been dropping across each wave, and in 2020 stood at 60.4%, an overall drop of almost five percentage points. In contrast, owners with a mortgage represented about 12.8% of the household population in 2010, but this figure increased substantially across the waves. As a result, the overall proportion of owners with a mortgage rose by almost six percentage points to 18.6% over the period under review.

Because the data point to broadly stable homeownership between 2010 and 2020, it is unlikely that financial inclusion (access to the housing market) is a driver of higher household debt levels in Malta. Instead, the data suggest that financial extension (access to the mortgage market) holds stronger explanatory power over indebtedness. Given the rising proportion of mortgage-holders in Malta, higher debt may be partly explained by more households borrowing as more households participate in the mortgage market to purchase their main residence. However, while Table 1 refers to household main residence, mortgage debt may also be on the increase due to households purchasing second, third or more properties via mortgages. An additional possibility is that of a slower exit from the mortgage market for older households. Furthermore, although as we have seen mortgages are the most important component of household debt, it is also possible that more households are participating in the credit market other than mortgage debt. Indeed, this is what the literature suggests for US middle-class households who in the 1970s started replacing stagnant wages with credit card debt to maintain their consumption and standards of living (Harvey, 2010). This warrants a deeper look into the household debt market in Malta.

## 4.2 The structure of the Maltese household debt market

Structure of the Maltese household debt market					
Debt status		2010	2013	2016	2020
Proportion of households	with debt	34.7%	37.1%	34.3%	33.1%
	with mortgage debt*	16.8%	19.1%	20.9%	21.4%
	<i>mortgage on main residence**</i>	12.8%	15.9%	17.8%	18.6%
	<i>mortgage on other property**</i>	5.5%	4.2%	3.3%	3.2%
	with other debt*	25.2%	27.6%	22.8%	16.0%

Table 2: Structure of the Maltese household debt market

Source: HFCS

\* Proportion of households 'with mortgage debt' and 'with other debt' do not add up to proportion of households 'with debt' given that there are some households which concurrently hold mortgage debt and other debt.

\*\*Proportion of households 'with mortgage debt on main residence' and 'with other property debt' do not add up to proportion of households 'with mortgage debt' given that there are some households which concurrently hold debt on their main residence and on other property.

About one third of Maltese households hold debt, and this pattern was broadly stable between 2010 and 2020. The proportion of households holding mortgage debt (on the main residence and/or other property), however, increased steadily across each wave, from 16.8% to 21.4%. From its decomposition, we can deduce that this was largely driven by households taking on debt to buy their main residence, rather than to purchase second and third properties. Indeed, the proportion of households holding mortgages on other properties decreased from 5.5% in 2010 to 3.2% in 2020. In contrast, and as we have seen, the share of households owning a mortgage on their main residence increased by almost six percentage points over the four waves.

The proportion of Maltese households holding other (non-mortgage) debt decreased from 25% in 2010 to 16% in 2020. Other debt includes credit lines/overdrafts, credit card debt, and other loans (such as car loans, consumer loans, instalment loans, as well as private loans from relatives, friends, or employers). Among households owing other debt, 8% of households held credit card debt and 7% of households held non-collateralised loans (private debt), these being the most common types of credit over the period 2010-2020. While this debt deserves more scrutiny in the local context<sup>5</sup>, the evidence leans against it being a driver of higher indebtedness levels in Malta. Rather, it is increased participation in the mortgage market that may (in part) explain higher indebtedness. More specifically, this seems to be due to increased participation in the mortgage market *for household main residence (HMR)* rather

<sup>5</sup> Any analysis of such debt would need to include not only credit card debt, but any other form of informal credit, such as hire purchase, credit notes, informal microfinance and microcredit, amongst other forms, which may not be picked up by surveys such as the HFCS.

than participation in the mortgage market for other properties, which has been on the decline. This points clearly to a process whereby more households are borrowing to finance their main residence property.

A structural shift is under way in the Maltese housing market, as households remain homeowners but via the mortgage market rather than outright ownership of their main residence. As property prices rise in Malta – indeed they almost doubled over the period 2010-2020 (Figure 4)<sup>6</sup> – and as incomes fail to keep up with the growth in property prices, households are less able to access the housing market without resorting to the institutionalised mortgage market. This may have also been supported by banking regulation favouring mortgages over commercial credit, the low interest rate environment, and a decrease in the supply of public housing. Similar to other Southern Mediterranean contexts, households are increasingly accessing the housing market via the mortgage market (rather than outright, aided by familial support or other institutionalised mechanisms). It is possible that the housing model prevalent in Mediterranean countries is being weakened, as suggested by Van Gunten and Navot (2018), and that Malta is following this trajectory, but further research is required in this regard.

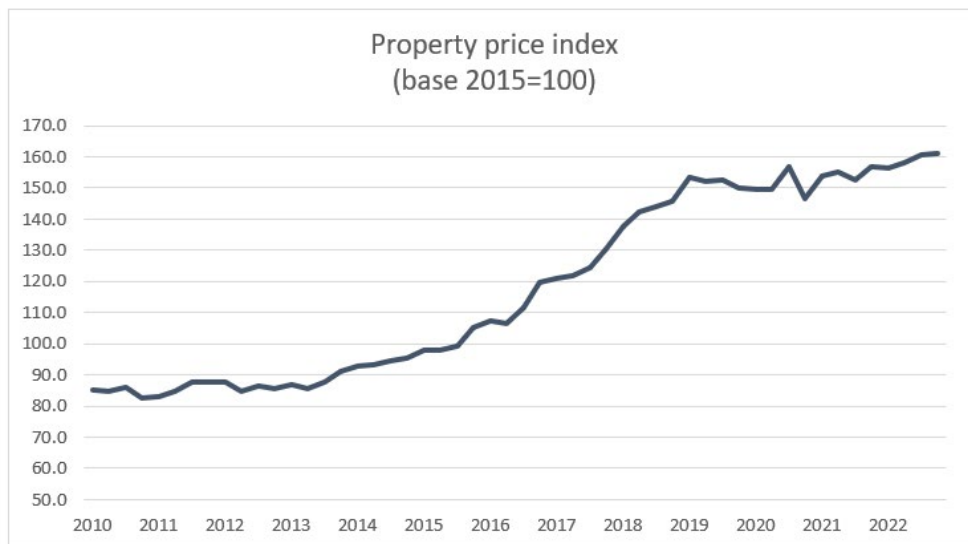


Figure 4: Property price index, based on advertised prices  
Source: CBM

Nevertheless, it is also possible that higher debt levels are due to households intensifying the level of debt and debt burdens they take on, in line with the financial intensity model. In other words, the overall increase in debt may be due to not only more households borrowing, but also to households borrowing more. This requires an analysis of debt levels and debt burdens for the Maltese household *conditional on participation*, i.e., debt levels and burdens of households participating in the debt markets.

<sup>6</sup> An analysis by Grant Thornton (2023) finds that house prices increased by 100% between the first half of 2013 and the first half of 2021.



### 4.3 Debt levels and debt burdens of Maltese households

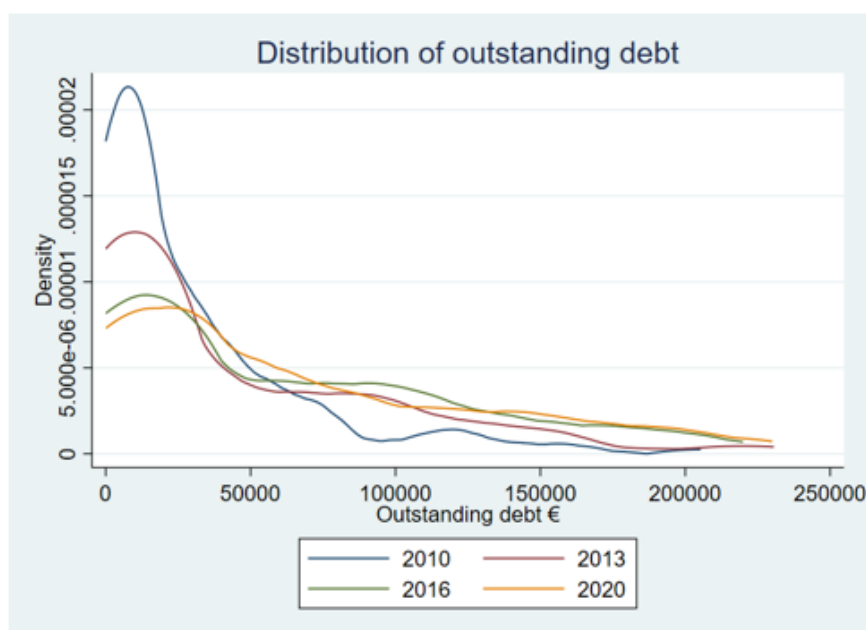


Figure 5: Distribution of outstanding debt  
Source: HFCS

This section measures the extent of financial intensity of Maltese households by surveying the distribution of debt across Maltese society, and the debt levels and debt burdens of households. Figure 5 displays the distribution (kernel density) of outstanding debt conditional on participation across the four waves: 2010, 2013, 2016 and 2020. Observations above €250,000 have been excluded for ease of scrutiny. It is also important to keep in mind that the figure represents outstanding debt, referring to debt that is still to be paid by each household (and therefore excludes any debt that has been paid off). As is evident from the figure, the distribution has widened considerably over the 10-year period, with a widening observed wave-to-wave. The curves have flattened significantly on the left-hand side, while they have widened towards the right-hand side. The flattening is strongest between 2010 and 2013, and also significant between 2013 and 2016. Skewness towards the right is most visible between 2010 and 2013, but is especially flat for 2020. This is evidence that households are accumulating more (outstanding) debt.

Figure 6 displays boxplots for ‘mortgage debt outstanding’, ‘other debt’ outstanding’, ‘outstanding mortgage debt on main residence’, and ‘outstanding debt on other property’, supporting the finding of increased debt accumulation. The distribution of outstanding debt has been widening steadily for the purchase of property, though not for other types of debt. The interquartile range for the boxplots representing mortgage debt grew wider, the medians shifted upwards across the waves (with the exception of 2020), while the whiskers became more elongated. In contrast, the boxplots for other debt shrunk, reflecting a shrinking in the interquartile range and maximum figures.



Figure 6: Boxplots for mortgage debt and other debt

Source: HFCS

\*Outside values represent those values larger than 1.5 times the upper quartile and smaller than 1.5 times the lower quartile, as in Tukey (1977)

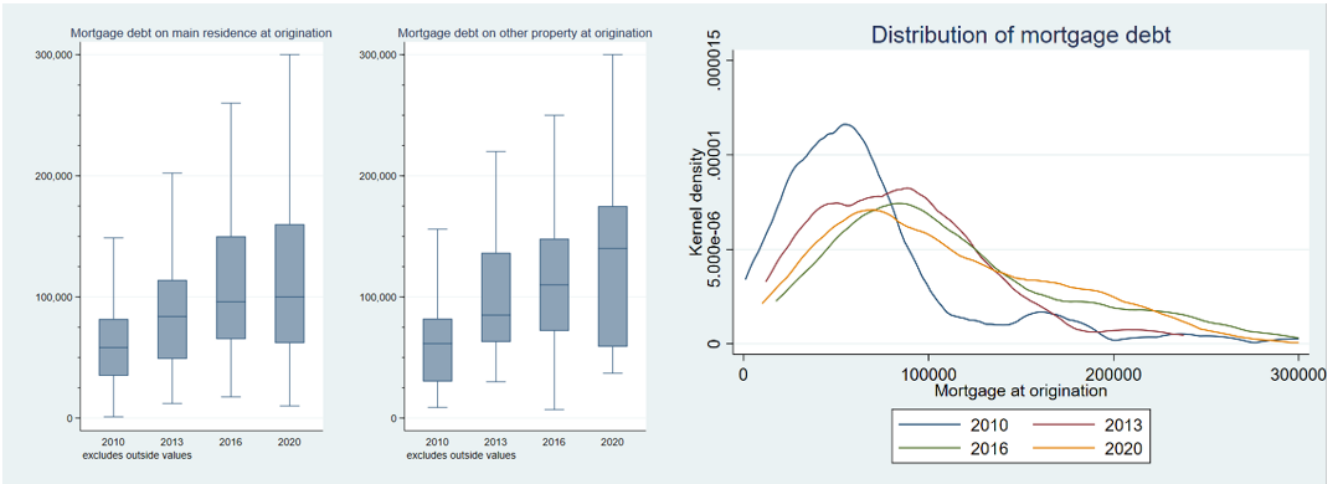


Figure 7: Box plots and density distributions for mortgage debt at origination

Source: HFCS

\*Outside values represents those values larger than 1.5 times the upper quartile and smaller than 1.5 times the lower quartile, as in Tukey (1977)

The widening of the distribution is also evident when considering mortgage debt *at origination* (rather than outstanding), which refers to the level of mortgage debt that a household contracted when it first took out the mortgage. Figure 7 shows the interquartile ranges and maximum and minimum for mortgage debt at origination on main residence and other property. For mortgage debt on the main residence, across each wave, the box plots' interquartile range widened and shifted upwards. The median doubled from just above €50,000 in 2010 to €100,000 in 2020 for main residence debt and more than €125,000 for other property debt. Both the lower quartile and upper quartile for the two box plots moved upwards and the interquartile range became wider, while whiskers (with a maximum cut-off point) elongated. Similarly, the kernel distribution for all mortgage debt (with a cut-off point of €300,000) saw significant widening, with an observable flattening over the years and a widening on the right-hand side.

It is important to note here that these figures and distribution for mortgage at origination are composed of households which have, at any point in their lifetime and as long as their mortgage was still outstanding, taken out a mortgage on their property, and therefore represent mortgages that were taken out between the 1980s and 2020. This would account for what might seem like low figures relative to the current average going prices for property which are significantly higher than the median values in Figure 7<sup>7</sup>. Yet, precisely because of this, it is noteworthy that mortgages taken out during the past 10 years have pulled the whole distribution upwards (box-plots, left-hand side panel) and flatter and wider (kernel density distribution, right-hand side panel) in a significant manner, evidently a result of rising property prices and thus higher indebtedness levels over the past decade.

Table 3 and Table 4 support the view that household debt levels and burdens were on an upward trajectory between 2010 and 2020, particularly for mortgage debt. Households owning debt in 2010 held on average about €40,000 in debt but held more than €70,000 by 2020 (median debt increasing from €17,000 to €45,000). This is equally pronounced for mortgage debt which on average grew from €65,000 to more than €96,000, and more than doubled over the same period in median terms, from €35,000 to €73,000 per household, conditional on participation.

Mortgage debt on the main residence grew over the review period, as a number of households accumulated significantly more debt than the rest (thus pulling the average away from the median). These households took on their debt more recently, specifically after 2013, and they tended to be younger households in their thirties. While fewer households are participating in the mortgage market to acquire second or third properties, those that do so are doing so with significantly higher debt, from about €80,000 to €120,000 on average (or from €35,000 to €130,000 in median terms).

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<sup>7</sup> Djar and EY Malta (2021) reports that the average asking price in the first quarter of 2021 was €400, 000, and around €300,000 for the average apartment. NSO's (2021) figure for average contracted property prices is closer to €200,000.

It is interesting to note that median outstanding mortgage debt dropped from 2016 to 2020, largely due to a decrease in outstanding HMR mortgage debt. This is at face value surprising given that property prices registered a strong uptick over the same period. Upon closer inspection, data from HFCS reveal that households between 2016 and 2020 have been, on average, repaying their outstanding loans faster than households have been accumulating new debt. Indeed, the HFCS also shows that new mortgage loans (at origination) have continued increasing over the same period, though at a slower pace than the 2010-2016 period. This may be due to a faster increase in household gross incomes over the 2016-2020 period compared to previous years, together with declining interest rates.

	Total debt (€)		Mortgage debt (€)		Other debt (€)		HMR mortgage debt (€)		Other property mortgage debt (€)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<b>2010</b>	39,854	17,000	64,831	35,000	11,779	4,000	50,519	38,000	80,054	35,000
<b>2013</b>	46,591	19,000	74,744	62,000	10,813	2,936	65,865	55,430	90,363	75,000
<b>2016</b>	63,796	40,000	91,683	80,000	11,975	3,502	89,449	80,000	96,328	100,000
<b>2020</b>	70,574	45,000	96,162	73,000	17,717	3,578	88,983	65,000	120,148	130,000

Table 3: Outstanding debt levels by type of debt, conditional on participation  
Source: HFCS

	Debt-to-Income (%)		Mortgage Debt-to-Income (%)		Mortgage Debt-to-Income, main residence (%)		Mortgage Debt-to-Income, other property (%)		Mortgage Debt Service-to-income (%)		Monthly payment, main residence (€)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<b>2010</b>	127.5	59.6	200.7	160.8	181.3	153.6	267.4	188.2	16.3	14.5	376.2	308
<b>2013</b>	136.6	55.0	215.0	190.0	221.1	190.0	223.5	202.6	19.3	13.9	491.4	374
<b>2016</b>	176.0	110.6	251.3	209.2	255.7	209.2	230.8	224.6	18.8	14.5	552.5	454
<b>2020</b>	202.7	122.3	282.2	200.4	281.3	185.0	250.4	225.2	18.6	13.6	555.6	500

Table 4: Outstanding debt burden ratios by type of debt, conditional on participation  
Source: HFCS

The upward trajectory in household indebtedness (conditional on participation) is also clear when assessing debt burdens<sup>8</sup>. Debt-to-income (outstanding debt as a proportion of a household's gross yearly income) per household rose from 59.6% in 2010 to 122.3% in 2020 in median terms; and from 127.5% to 202.7% in mean terms. This suggests that while in 2010 outstanding debt represented half of a household's yearly gross income, it now represents 1.2 times its yearly gross income (or, if measured in average terms, from 1.2 times their income in 2010 to more than twice their income in 2020). This is even more pronounced for mortgage debt, where debt-to-income (DTI) ratios rose from 161% to 200% over the same period when looking at the median households (or from 201% to 282% on average). Similar to debt levels, debt-to-income ratios were higher for other property mortgages than for main residence mortgages. The median debt-to-income ratio for households holding mortgage debt on their main residence stood at 154% in 2010 compared to 188% for households holding an outstanding mortgage on other property in the same year. By 2020, these ratios stood at 185% and 225% respectively, implying that DTI ratios increased significantly.

These findings paint a similar picture to the Central Bank of Malta's Real Estate Lending Practices Survey (RELPS), which finds a significant upward trajectory in loan-to-income (LTI) ratios (CBM, 2019). Average weighted LTI ratios are significantly higher in RELPS, standing at about 400% in 2020Q3. The difference in LTI ratios between our estimations based on the HFCS and those based on RELPS owes to two main factors: firstly, RELPS data refer to a representative sample of new mortgages taken out in a *specific* year or quarter, and as such differs from the HFCS, which provides a snapshot of all outstanding mortgages at a point in time. The LTI ratios obtained from the HFCS are therefore an average of mortgage holders whose origination of the mortgage spans decades. Secondly, given that HFCS does not ask for household income figures at the point at which the mortgage was granted, the LTI ratio based on the HFCS refers to 'outstanding debt' as a proportion of current household income, meaning that households may have paid off some of their debt over the years (reducing the numerator) while their income (denominator) may have also changed over the life-course of the household<sup>9</sup>.

The debt servicing-to-income (DSTI) ratio refers to the monthly debt repayments on the mortgage as a proportion of a household's monthly gross income. Although the same caveats are applicable to debt servicing-to-income ratios (DSTI), it is interesting to note that average monthly debt repayments represented about 16% of a household's income in 2010, going up to 19% and plateauing between 2013 and 2020. The equivalent median figure hovered between 13.6% and 14.5% with no clear trajectory over the waves. Figures from RELPS are higher for DSTI (similar to LTI ratios) given the reasons above, with the average weighted DSTI standing at 25.2% in 2019 (in 2020 it was closer to 24% over

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<sup>8</sup> Given that the HFCS is based on self-reported information, a caveat is in order given that there may be some under-reporting of income by respondents.

<sup>9</sup> The HFCS data for mortgages is also exclusive of those households which have paid off their mortgage in full.

the first three quarters), from 22.1% in 2011. It is evident, however, that debt repayments grew strongly across the HFCS four waves, on average from €377 to €556 per month, despite declining interest rates. Incomes, therefore, grew in tandem with monthly repayments such that the debt service-to-income ratio remained broadly constant.

It is clear, therefore, that by most measures financial intensity has been occurring in Malta over the past decade. Households with debt have accumulated higher debt levels and debt burdens, a similar finding to CBM's (2019) Financial Stability Report. This is the case for mortgage debt, both HMR mortgage debt and especially other property mortgage debt, but less so for other types of debt, suggesting that financial intensity is occurring in the mortgage market. Coupled with RELPS data for mortgages, the picture is one of significantly higher financial intensity, as higher property prices push households to accumulate more debt even as their incomes rise.

#### 4.4 The institutional framework of the Maltese mortgage market

The results above are also a function of the mortgage market institutional framework (shaped by policy, regulation, and credit institutions' practices) that allow varying degrees and forms of risk, and costs of mortgage contracts (Van Gunten and Navot, 2018). This does not only impact access to credit, but also the type of mortgage contract accessible to households. A mortgage market institutional framework may shift risks towards the borrower and away from the credit institution if mortgages carry variable rates and vice-versa if mortgage rates are fixed. Policies, such as macroprudential policy, may set the boundaries for household debt-eligibility tests, primarily via borrower-based measures such as loan-to-value limits and debt service-to-income ratio limits. Table 5 presents figures that throw light onto the institutional framework of the Maltese mortgage market, covering loan-to-value ratios, down payments, interest rates, and maturity.

	<b>Loan-to-Value at origination, HMR (median, %)</b>	<b>Down payment at origination (median, €)</b>	<b>Interest rate (median, %)</b>	<b>Maturity at origination (median, years)</b>	<b>Age of borrower at loan maturity, (median, years)</b>
<b>2010</b>	77	12,000	4.0	30	59
<b>2013</b>	86	11,500	3.5	30	61
<b>2016</b>	90	11,500	3.3	31	61
<b>2020</b>	88	17,500	3.0	30	63

Table 5: Institutional conditions of the mortgage market  
Source: HFCS

The loan-to-value (LTV) ratio represents the mortgage as a proportion of the property value, with the shortfall (down payment) needing to be forked out by the buyer via other means. The LTV ratio on main residence *at origination* (i.e. when the mortgage was first taken) stood at 77% in 2010 and increased to about 88% in 2020. It is evident, therefore, that households are taking on as much debt as possible, extending it to the maximum 90% which is the LTV limit imposed on credit institutions by macroprudential policy, in line with the Central Bank Directive No. 16 for Category 1 buyers (borrowers purchasing their primary residence) for loans with a market value in excess of €175,000 (CBM, 2021)<sup>10</sup>.

RELPS data indicate a weighted LTV average for residential real estate loans of 75.9% in 2019 up from 72.4% in 2011<sup>11</sup> (CBM, 2019), lower than the ratio obtained from the HFCS. The RELPS survey in this case is bound to be more accurate because its data collection is not based on private individuals' recollection of figures of mortgages and property value, but on commercial banks' internal data. One limitation of RELPS, however, is that it does not survey pre-2011 mortgage data, which is the case for HFCS. Nevertheless, both RELPS and the HFCS seem to indicate generally rising LTVs for Maltese households.

The flipside of the LTV ratio represents the down payment, namely the difference between the property value and the mortgage that a buyer forks out at the time of the property purchase. No clear trend can be deduced from the data in terms of the down payment between 2010 and 2020. The median down payment on the main residence mortgage was close to €12,000 in 2010 and €17,500 in 2020, suggesting a substantial increase. Although property prices have been rising wave-to-wave over the decade under review, down payments have not followed the same trend, primarily due to the increase in LTV ratios just mentioned<sup>12</sup>. In other words, as property prices increased between 2010 and 2016, households have been opting to leverage debt over a larger proportion of the property value instead of forking out a larger down payment, such that LTVs have offset what would otherwise have been significantly higher down payments, except for 2020 when down payments increased.

Households have also been extending the age by when they would need to have repaid the mortgage in full. Table 5 indicates that, while maturity (the length of time over which the mortgage is to be repaid) has been broadly stable between 2010 and 2020, households are extending the mortgage to the age of retirement. Indeed, the average age at maturity for main residence mortgages has shifted upwards from 59 years to 63 years. This also implies that households are taking out a mortgage on their main residence at a later stage in their life than previously, possibly due to affordability issues: postponing the purchase

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<sup>10</sup> Directive No. 16 also involves a 'speed limit' which allows banks to exceed the regulatory limits for a stipulated portion of their volume of loans (in this case, 10% of the volume of loans) (CBM, 2021).

<sup>11</sup> The weighted average LTV ratios (based on RELPS) for first-time buyers went up from 75.3% in 2011 to 79.8% in 2019, while for non-first-time-buyers the ratio increased from 70.9% to 73.4%. Figures fluctuated somewhat over the review period, generally increasing between 2012 and 2014, decreasing slightly between 2014 and 2017, and picking up more strongly between 2017 and 2019.

<sup>12</sup> As a caveat, one cannot infer the median mortgage value directly from the median LTV and downpayment in Table 5.



of property would allow an individual (or couple) to save up more for the down payment<sup>13</sup> (although this may come at the expense of mortgage maturity, and therefore implying higher repayments). Another plausible reason is that younger individuals are remaining in education for longer (Gauci, 2021) before moving out of their parents' property at the average age of 30 (Eurostat, 2021). Given the latter age, a loan maturity of 30 years implies that households are close to maxing out their maturity since the pension age acts as a ceiling on maturity, as imposed by the CBM directive<sup>14</sup> and mortgage market practices. This 'maxing out' is evident in the 'age at maturity', which is moving closer to 65 years, the statutory age of retirement for those born after 1961. Furthermore, while mortgage refinancing is not widespread in Malta, its incidence seems to be rising, if slowly, and this may going forward push the age at maturity higher still.

Mortgage market conditions have also been (increasingly) favourable for borrowers between 2010 and 2020. This period has been characterised by falling interest rates (see Figure 8) - the lowest average interest rates for property purchase since the turn of the millennium (CBM, 2019) - and this is confirmed by HFCS's data. The reported interest rate for main residence mortgage was 3% in 2020, down from more than 4% in 2010. This was also aided by mortgage contracts shifting from variable rates to hybrid contracts which, most commonly, carry a lower and fixed rate for the first few year/s, after which they turn to higher and variable rates for the rest of the contract. Indeed, according to the HFCS, in 2010 about 74% of mortgage contracts in Malta were at a variable rate, while in 2020 that figure was down to 41%. Although these figures are subject to some self-reporting errors, this trend is also reported by Hypostat (2021), which finds that the share of variable rates (including mortgages with a 1-year fixation) between 2010 and 2020 dropped from 91% to 58%<sup>15</sup> in Malta. The rest were mostly made up of mortgage contracts with a relatively short fixed period, between 1 year and 5 years. Nevertheless, variable rates pose higher risks for borrowers given potential fluctuations in interest rates, and therefore fixed rates may support financial extension – access to the housing market via mortgages – and financial intensity. The institutional framework of the mortgage market has therefore aided both financial extension and intensity – in other words, helping more households to borrow and helping households to borrow more<sup>16</sup>.

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<sup>13</sup> This also comes on top of other costs related to purchasing a property, namely notary fees, architect fees, bank administration costs, and costs associated with taking out life and home insurance policies. Additional costs would also include costs related to finishing works and furnishing.

<sup>14</sup> The CBM directive (p. 5, emphasis mine) stipulates: "The Maturity at Origination of an RRE loan granted to Category I Borrowers shall not exceed the horizon of 40 years *or the official retirement age, whichever occurs first.*"

<sup>15</sup> The difference between HFCS self-reported data and Hypostat's may be due to the definition of 'fixed rates'. For the latter, fixed rates do not include mortgage contracts with a fixation of 1 year, while HFCS respondents may interpret this as a fixed contract.

<sup>16</sup> Nevertheless, the Central Bank of Malta's regular stress testing exercises show that households remain able to repay their mortgages (though some vulnerabilities remain) in the context of macroprudential borrower-based measures (CBM, 2019; see also Abela and Georgakopoulos, 2022).



Figure 8: Cost of borrowing for households for house purchase  
Source: SDW

#### 4.5 Inclusion, extension, intensity: A comparative and counterfactual analysis

This section will investigate further the role of inclusion, extension and intensity in Maltese households' indebtedness. Malta's relatively low household debt-to-GDP in Europe in 2000 (see Figure 1), at 23%, was largely due to the relatively low mortgage participation (financial extension, or lack thereof). However, I will show through a counterfactual analysis how the past decade's *rise* in household debt (standing at 54% of GDP in 2020) is due to *both* financial extension and intensity.

Van Gunten and Navot's (2018) comparative analysis, based on HFCS, focuses on a selected number of European housing/mortgage markets, splitting them into high-debt countries (Netherlands, Portugal, and Spain) and low-debt countries (France, Germany, Italy). Their analysis finds that higher debt countries have more debt not simply because they have a higher rate of mortgage participation but also because on average households tend to borrow more. Indeed, the model of financial intensity is able to explain more than half of the variation in mortgage debt-to-income ratios across the countries, particularly for Germany and France, though not for Italy. When applying counterfactually the same rate of mortgage participation to Italy as that of high debt countries (Netherlands, Spain and Portugal), it is clear that Italy's lower debt-income ratio in 2010 may be explained by its low mortgage participation rate.

The structure of the housing market in Malta in 2010 resembled very closely Italy's, in line with the "Catholic-familial" model (Allen et al., 2008): Italy's rate of homeownership was 73%, of which 11% held a mortgage, while Malta's rate of homeownership was 77.7%, of which 13% held a mortgage. This structure differs strongly from countries in which renters make up the majority of households (e.g. Germany) or in which homeownership is largely mortgage-based (e.g. Netherlands). Extending Van Gunten and Navot's exercise to Malta reveals that, similar to Italy, the lower rate of mortgage

participation holds explanatory power over the relatively lower debt-to-income. However, while median mortgage debt-to-income ratios for ‘high debt countries’ ranged between just below 200% and just above 250%, and for the ‘low debt countries’ stood around 130-140%, it is interesting to note that, at 161%, Malta’s median mortgage-debt-to-income put Malta in between high-debt and low-debt countries. Malta’s debt-to-income in 2010, therefore, was already higher than Italy’s and the gap between Malta’s and the ‘high debt’ countries was narrower. Conditional on participation, DTI was higher than Italy’s, the housing market of which resembled closely Malta’s, suggesting that households in Malta were already in 2010 somewhat engaging in financial intensity. This may be a result of fast-rising property prices in the run-up to Malta’s accession to the EU in 2004 (see Figure 2), possibly driven by undeclared assets (including Maltese Lira) being channelled into the property market (Vakili-Zad and Hoekstra, 2011) via tax amnesties, as well as property price expectations (Gatt and Grech, 2016).

In order to elucidate the relative effects of the three models on Maltese household debt over the past decade, I follow Van Gunten and Navot’s (2018) exercise but adapt it to identify whether the three models can explain the *change* in Maltese household debt between 2010 and 2020. I construct a *weighted* average debt-to-income ratio for three HFCS waves (i.e. 2010, 2016 and 2020). I estimate the average income and average debt for non-property owners, owners with mortgage, and owners outright, and I weight these by the relative share each category holds in total household population. I then construct a counterfactual for weighted debt-to-income by varying the structure of the housing market (weights) in terms of a hypothetical homeownership rate and relative composition of homeownership (i.e. ownership outright and ownership via mortgages). Doing so allows us to understand the extent to which homeownership and participation in the mortgage market can explain the rising debt-to-income in Malta, while the residual is attributed to financial intensity (rather than the structure of the housing market). Given that the homeownership rate between 2010 and 2020 remained constant, Table 6 only presents the counterfactuals in which mortgage participation was changed while keeping homeownership rate constant.

		Actual			Counterfactual		
		2010	2016	2020	2010	2016	2020
<b>Mean income</b>	Non-property owner	18,913	19,869	23,284	18,913	19,869	23,284
	Owner with mortgage	34,677	50,453	46,553	34,677	50,453	46,553
	Owner, no mortgage	25,666	29,150	37,870	25,666	29,150	37,870
<b>Mean debt</b>	Non-property owner	12,035	15,505	12,402	12,035	15,505	12,402
	Owner with mortgage	63,812	96,855	93,177	63,812	96,855	93,177
	Owner, no mortgage	29,917	30,513	46,506	29,917	30,513	46,506
<b>Proportion of households</b>	Non-property owner	0.22	0.19	0.21	0.22	0.19	0.21
	Owner with mortgage	0.13	0.18	0.19	0.14	0.19	0.20
	Owner, no mortgage	0.65	0.64	0.60	0.64	0.63	0.59
<b>Weighted debt-to-income (%)</b>		<b>119.63</b>	<b>126.68</b>	<b>130.52</b>	<b>120.53</b>	<b>127.93</b>	<b>131.46</b>

Table 6: Counterfactual exercise of debt-to-income and debt levels in Malta, 2010 – 2020

Source: HFCS; author's own workings

The counterfactual shows that, keeping homeownership constant, a rise of 1 percentage point in the share of households with a mortgage, i.e. mortgage participation, (together with a corresponding drop of 1 percentage point in the share of owners outright) is associated with a 0.9pp rise in the debt-to-income ratio. Given that mortgage participation grew by 5.7pp over the 10-year period, the rise in participation would therefore have mechanically induced a 5.4pp rise in debt-to-income if we were to assume that mortgage participation (extension) alone explains the actual rise in debt-to-income. However, the rise in actual weighted debt-to-income was of 10.9pp, meaning that a higher mortgage participation rate can only explain about half of the rise in debt-to-income. Given that financial inclusion holds little explanatory power as the homeownership rate remained constant over the period, the residuals in debt-to-income must be explained by financial intensity.

The result of this counterfactual exercise is confirmed by Central Bank of Malta aggregate data reported by commercial banks active in the mortgage market in Malta. Between 2010 and 2017, the *number* of mortgage accounts in Malta grew by a year-on-year rate of 3%, while the average *value* per mortgage account grew by a year-on-year rate of 5%. These converged to a rate of 4% y-o-y for both measures between 2018 and 2020. In line with the counterfactual results, both financial extension and financial intensity can explain the rise in household debt, though the latter holds larger explanatory power.

For a brief comparative assessment, Figure 9 presents the deviation of mortgage market participation rates and debt-to-income ratios from the respective mean of selected European countries in 2016<sup>17</sup>. It reveals that most countries combined either a) lower debt-to-income with lower mortgage market participation or b) higher debt-to-income with higher mortgage market participation. Malta represents something of an outlier as it combines a higher debt-to-income ratio with lower mortgage market

<sup>17</sup> The 2016 HFCS dataset for participating European countries is the latest dataset available for use. The selected countries are Austria, Belgium, Cyprus, Germany, Estonia, Spain, Finland, Greece, Croatia, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovenia, and Slovakia.

participation relative to the European average. This indicates that, while fewer Maltese households take part in the mortgage market, those that do so have a higher debt burden relative to their incomes when assessed against other countries in Europe. Significantly, a similar exercise for 2010 reveals that Malta had even still lower mortgage market participation and debt-to-income relative to other European societies, falling in the bottom left quadrant in 2010. Deepening the counterfactual analysis, this comparative analysis allows us to draw a conclusion that both financial extension and intensity seems to be able to explain the higher debt in Malta, particularly when compared to its counterparts in Europe.



Figure 9: Debt-to-income and mortgage market participation deviation from mean, selected European countries

Source: HFCS

Figures for mortgage market participation are conditional on households owning their home.

In conclusion, we have observed that, while Maltese households' indebtedness in 2010 was largely due to their lower mortgage market participation, rising indebtedness may be explained by both financial extension and, especially, financial intensity. In other words, since 2010 rising debt is explained by a combination of a larger share of Maltese households taking out a mortgage, and even more importantly, households that are taking out larger mortgages.

## 5. Financial extension and financial intensity: A cohort analysis

### 5.1 Age

Age of household reference person	Household Status	% of households within age bracket		
		2010	2020	Change (pp)
16-34	Owner outright	45%	33%	-12
	Owner with mortgage	31%	41%	+10
	Tenant	24%	27%	+3
35-44	Owner outright	59%	50%	-9
	Owner with mortgage	31%	37%	+6
	Tenant	10%	13%	+3
45-54	Owner outright	66%	65%	-1
	Owner with mortgage	13%	18%	+5
	Tenant	21%	17%	-4
55-64	Owner outright	74%	70%	-4
	Owner with mortgage	3%	9%	+6
	Tenant	23%	20%	-3
65 and over	Owner outright	67%	72%	+5
	Owner with mortgage	0%	0%	0
	Tenant	33%	28%	-5

Table 7: Residential housing structure by age brackets, 2010-2020

Source: HFCS

Figures might not equal to 100% due to rounding.

Decomposing the data by age<sup>18</sup>, we are able to observe how the residential housing structure has been changing across generations. Table 7 presents the residential housing structure broken down by age. The age refers to the household 'reference person', determined by identifying the household type as per the following: 'one of the partners in a de facto or registered marriage with, then without dependent

<sup>18</sup> While an analysis decomposing the data by birth year, rather than age, would have been ideal, data limitations across the four waves of the survey necessitated a decomposition by age.

children, lone parent with children, the person with the highest income, and finally the eldest person' (HFCS, 2021, p. 160).

Assessing the residential housing structure in terms of age reveals a clear pattern in which younger households are increasingly owning their homes via mortgages rather than outright. Although homeownership has dropped slightly for households aged 16-34 and 35-44 as more households within those age brackets are in the rental market in 2020 compared to 2010, they remain overwhelmingly homeowners. However, outright ownership dropped by 12pp and 9pp respectively as the relative share of households within those brackets shifted to mortgage-based ownership by 10pp and 6pp respectively.

Relatively older households aged 45-54 and 55-64 have also seen an increase in mortgage-based ownership but the change was only partly driven by a shift from outright ownership to mortgage-based ownership, as a share of households who were in the rental market now own their homes via a mortgage. Interestingly, this could point to another aspect of financial extension in which rising participation in the mortgage market is not only due to a larger share of younger households taking on mortgages to access homeownership, but also one in which households repay their mortgage over a longer stretch of their life-course. Older households, then, may increasingly remain participants in the mortgage market. Put differently, financial extension may also be explained by a slower 'exit' from the mortgage market of older households who repay in full their mortgage, possibly compounded by refinancing and equity withdrawal. This is supported by the figures in Table 5, where the age of the borrower at loan maturity is being stretched towards 65. However, the age of 65 is the maximum official retirement age, and prescribed as the ceiling by the CBM directive for residential lending, as reflected in the housing structure of those aged 65 and over, which remained one of outright ownership and increasingly so (by 4pp) between 2010 and 2020 with no mortgage holders.

It is clear, therefore, that Maltese households are enduring a process of financialisation in which homeownership is maintained via participation in the mortgage market. This is a process that is unfolding across-the-board in terms of age, but is even stronger for younger households. The recent increases in property prices have meant that households who wish to be homeowners need to access the property market through bank finance, especially the younger cohort. Indeed, in the 16-34 age bracket there are now more households owning a property with a mortgage (41%) than households owning property outright (33%), and although the 35-44 bracket is still composed of more outright owners than owners with mortgages, the trend is clearly one of an inverse relationship in the relative shares of ownership. If this trend continues and assuming debt-to-income ratios remain the same (or even increase), Malta would move to the top right quadrant of Figure 9 joining the likes of Spain, Portugal, Cyprus, and the Netherlands.

It is also evident that the older the household the more common it is that households own property outright relative to mortgage participation. This may be due to the household life-cycle in which



households own a mortgage when younger and pay it off over their life-cycle, hence the relative low proportion of households in the older age brackets holding a mortgage. However, while that may account for some of the differences across the age brackets, this phenomenon is more likely due to the cultural and institutional features of Maltese society in which households would in the past buy outright with the help of the family, in line with the ‘familial model’ of Schwartz and Seabrooke (2009), or indeed the state: via interfamilial transfers, or in which they would inherit properties following the demise of the parents, or via state-led land distribution schemes in which they would receive plots and then build the properties themselves (self-help systems). This claim is supported by the fact that the Maltese mortgage market is a relatively recent institution and was still in its infancy when those households within the older age brackets (55-64 and 65 and over) were located in the younger age brackets (i.e. before 1990). It is also useful to note that the financial sector was only liberalised in the 1990s (Grech, 2015), leading to an increase in the availability of credit, including mortgages.

	<b>Mortgage Debt-to-Income (mean)</b>					<b>Mortgage Debt-to-Income (median)</b>			
	<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>		<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>
<b>16 - 34</b>	236%	288%	304%	298%	<b>16 - 34</b>	240%	223%	303%	236%
<b>35 - 44</b>	198%	190%	203%	224%	<b>35 - 44</b>	154%	159%	166%	214%
<b>45 - 54</b>	187%	161%	129%	165%	<b>45 - 54</b>	79%	180%	86%	141%
<b>&gt; 55</b>	:	:	:	:	<b>&gt; 55</b>	:	:	:	:
	<b>Mortgage Debt service-to-Income (mean)</b>					<b>Mortgage Debt service to-Income (median)</b>			
	<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>		<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>
<b>16 - 34</b>	16%	20%	18%	17%	<b>16 - 34</b>	15%	14%	18%	14%
<b>35 - 44</b>	15%	16%	16%	14%	<b>35 - 44</b>	13%	12%	14%	14%
<b>45 - 54</b>	17%	17%	15%	14%	<b>45 - 54</b>	15%	11%	13%	12%
<b>&gt; 55</b>	:	:	:	:	<b>&gt; 55</b>	:	:	:	:

Table 8: Debt burdens by age brackets, 2010-2020

Source: HFCS

Not only are younger households participating in mortgage markets to a larger extent, but they are also overall more indebted than other households, as measured by debt burdens. Indeed, between 2010 and 2020 younger households have amassed more mortgage debt. In 2020, the average household aged 16-34 held about €120,000 in mortgage debt, up from €71,000 in 2010 (at origination, average mortgage debt per household went up from €81,500 to €127,000 over the same period). The mortgage debt-to-income on average grew from 236% to 298% (although, in median terms, outstanding mortgage debt-to-income did not grow). However, the mortgage debt service-to-income ratio for this cohort did not grow. Households aged 35-44 also saw their outstanding mortgage debt increase, from €64,000 to €94,500 (at origination, average outstanding debt grew from €65,500 to €113,000). Their debt-to-income ratio increased over the same period, from 198% to 224% on average (154% to 214% in median terms).

Those households within this age bracket intent on accessing the housing market via mortgages - and these constitute not only individuals accessing the market for the first time, but also others such as the recently divorced or separated (see Marmara and Brown, 2021) - may find themselves in a disadvantaged position where rising property prices together with their declining potential maturity (given that they are older) impacts their housing affordability. As a result, they take on higher debt burdens, as reflected in the high debt-to-income ratios, spurring the introduction of the ‘Equity Sharing Scheme’<sup>19</sup> by the local Housing Authority, aimed at supporting those aged over thirty who are unable to access the residential housing market without external assistance<sup>20</sup>.

Finally, outstanding debt for those aged 45-54 increased, though less strongly than other cohorts. Indeed, their outstanding mortgage debt rose from €67,000 to €79,000. However, their debt-to-income ratio decreased on average (but rose in median terms), while their debt service-to-income ratio dropped in both average and median terms. Given the relatively minimal participation of older households (above 55 years of age) in the mortgage market, figures for these households are not reliable and hence are not reproduced here.

Once again, these debt burden patterns are explained by both the life-cycle as well as the *shifting* institutional set-up of Malta’s residential housing in which intergenerational transfers and inheritance play an important role in explaining the lower indebtedness of *older* households but less so for younger households. We are not here claiming that the institutional setup of Southern Mediterranean contexts - in which the family or indeed the state acted as key institutions in the provision of access to homeownership – is being dismantled in the Maltese context. Indeed, while these institutional features may have allowed some households to own their homes without partaking in the mortgage market, the same features may *interact* with the mortgage market via a process where households come to own their households partly via a mortgage and partly via intergenerational transfers, including gifts and inheritance, as reflected in substantial intergenerational transfers. However, it is also true that, as a system of housing finance, mortgage financing is becoming increasingly core in homeownership access.

## 5.2 Income

While the patterns presented throw important light on how households at different ages are relating with finance and housing, the picture may be further variegated when scrutinising the same patterns by income. This section also aims to assess the concept of the ‘middle class squeeze’ for Malta, a process

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<sup>19</sup> The Equity Sharing Scheme supports persons above 30 years of age who would like to purchase a property but are unable to do so. Applicants purchase at least 50% of the property, supported through a mortgage from a local bank, and the rest is covered by the Housing Authority. After 20 years the applicant will be required to purchase the equity from the Housing Authority at the original value. For further information, see <https://housingauthority.gov.mt/wp-content/uploads/2022/08/Equity-Sharing-Conditions-English-2019.pdf>

<sup>20</sup> This is only one of many schemes set up by the Maltese state over the past year. Although fundamentally these are *fiscal* schemes that form part of a larger policy of homeownership - as *social* policy (Shelkle, 2012a, 212b) - they have been increasingly relying on finance as the modus operandi. As a result, they are necessarily also supportive of processes of financialisation, and as such deserve more scrutiny.

where households engage in debt-fuelled consumption to make up for declining standards of living in the context of stagnant wages. Evidence for this has been found for the US and elsewhere where households turn to non-mortgage debt to continue their consumption as incomes stagnate (Erickson, 2014). The latter is, however, not a process that is incipient in Malta as non-mortgage debt is not significant and has been on the decline. Average gross household incomes in Malta grew steadily from €25,320 in 2010 to €36,369 in 2020 in a context of low inflation, implying rising purchasing power of Maltese households, amid declining rates of unemployment. Yet, there remains the possibility that Malta is experiencing a middle-class squeeze via the property and mortgage market.

While the concept of the ‘middle class’ is not unproblematic, and indeed it has been the subject of debate and competing definitions, I operationalise the term in terms of the income distribution (i.e. middle income households) for the purposes of this paper<sup>21</sup>. I take Fligstein et al’s (2017) approach and I break down the distribution into quintiles, limiting them to the working age population (i.e. those below 65), thus excluding pensioners who would have little access to the mortgage market anyway.

Figures 10 and 11 show that both homeownership and mortgage participation generally increase the higher the gross income of a household. Homeownership rates ranged from an average of 68% for the bottom income quintile to 94% for the top income quintile across survey waves. Similarly, mortgage participation rates range from an average of 12% in the bottom quintile to 31% for the top income quintile across the survey waves. Between 2010 and 2020, homeownership rates have changed marginally across the income distribution. While the top 80% have broadly seen slight increases in homeownership rates (except for the 40-50% income bracket, which dropped by 2pp), the bottom 20% have experienced a significant drop in homeownership, from 66% in 2010 to 59% in 2020, suggesting that a larger proportion of that income bracket has been driven out of homeownership and into the rental market or social housing<sup>22</sup>. This is most likely due to the high and rising costs associated with purchasing property in Malta, including frontloaded costs such as the down payment (Marmara and

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<sup>21</sup> More sophisticated approaches to the concept of social class emphasise that class is a function not only of material factors such as income or wealth, but also of cultural factors such as taste, as well as access to social capital and occupations. The traditional tripartite classification of upper/middle/lower class is also deemed problematic due to its roots in industrial society. For further reading on the concept of social class, and the middle-class, see Savage (2015).

<sup>22</sup> It is important to note here that income quantiles break the income distribution into fixed buckets across the four waves and thus make no claim about household mobility along the distribution. In other words, one quantile is very likely to be composed of *different* households over time. The analysis, therefore, refers to the income distribution and its composition over time, rather than household mobility (which would require a panel-based data analysis).

Brown, 2021) as such households find themselves having to fork out upfront a higher proportion of the property value (at 39% in 2016) than others to access the property market.

Despite this, participation in the mortgage market has increased in the bottom 20%. As evident in Figure 11, in 2020 (yellow bar) about 15% of that income quintile owned its property through a mortgage, up

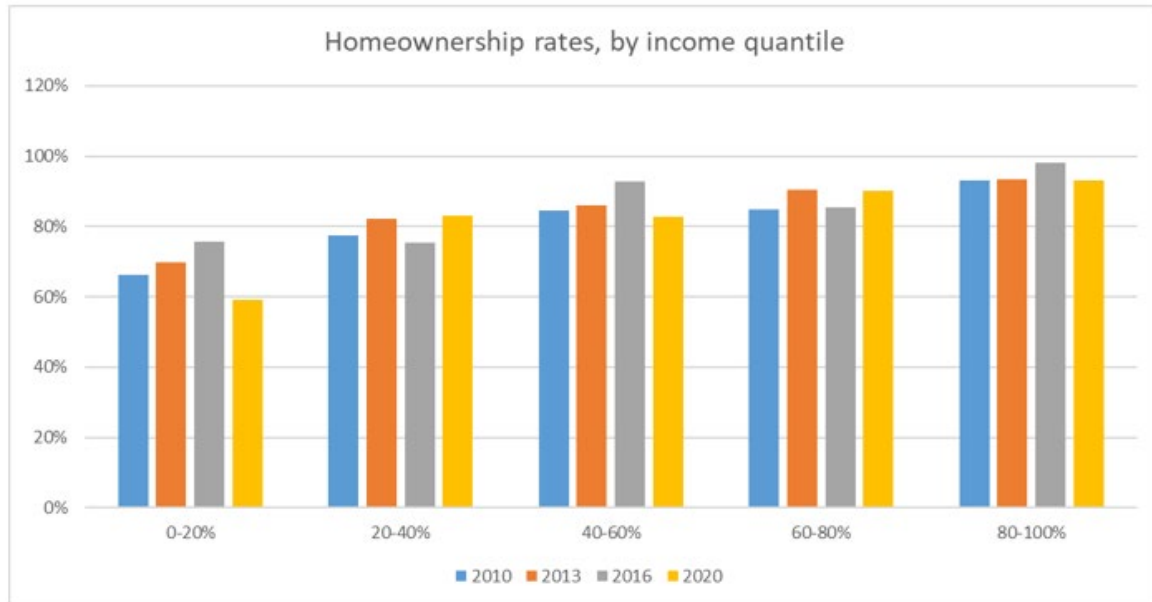


Figure 10: Homeownership rates by income quintile  
Source: HFCS

from 7% in 2010 (blue bar), suggesting that while homeownership dropped in the bottom 20%, those that remain homeowners are increasingly doing so via a mortgage. The same picture of rising mortgage participation was reflected across the rest of the income distribution, except for the top 20% where participation rate dropped significantly between 2016 and 2020. The latter was largely compensated for by a rise in the share of outright ownership in the same quintile, possibly due to the strong rise in incomes for this cohort which allows them to pay off the mortgage or to purchase outright (see Figure 14). Increases in mortgage participation across each wave were especially strong for the three middle-income quintiles, and particularly so for the 20-40% and 60-80% income brackets where the participation rate grew from 13% to 25% and from 18% to 39% respectively over the review period. This entailed a shift from outright ownership to mortgage-based ownership as middle-income households maintained the homeownership rate via financialisation between 2010 and 2020. The figures, therefore, imply that more households are borrowing in 2020 compared to 2010.

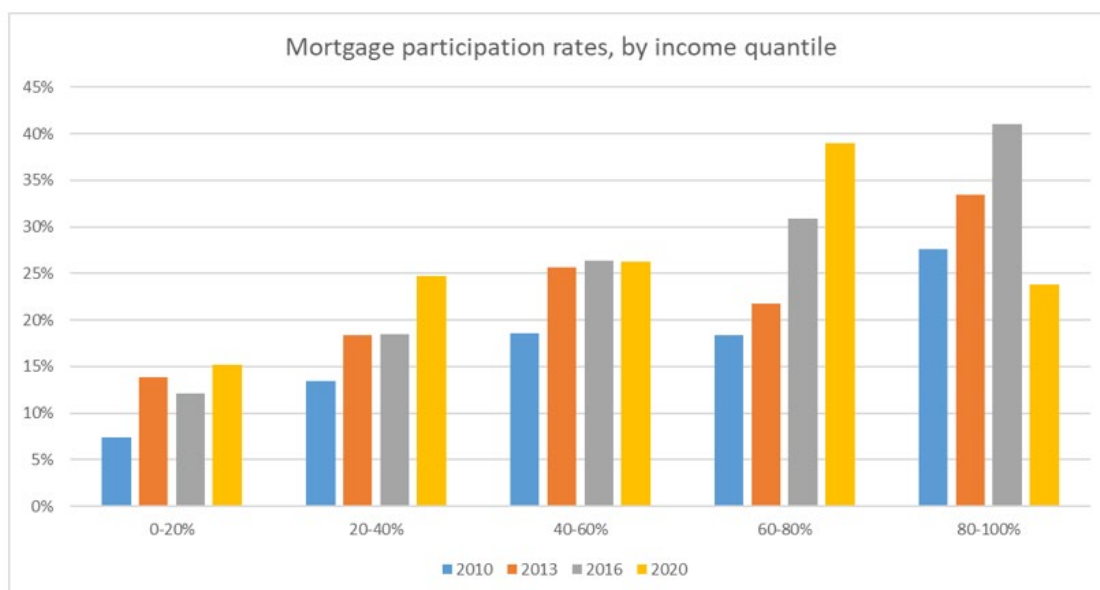


Figure 11: Mortgage participation rate by income quantiles  
Source: HFCS

However, it is also true that those household that borrow are borrowing more. Figures 12 and 13 display the debt burdens of Maltese households broken down by income quintiles. Debt-to-income ratios (Figure 12) increased across the board, but especially so for the bottom 20% and for the middle-income households between 20-80% of the income distribution. While debt-to-income ratios generally grew significantly in 2016 and 2020, those in the top 20% saw a decline in this ratio in 2020, possibly due to those within this bracket managing to pay off (partially or in full) their mortgage faster, supporting the drop in mortgage participation.

Debt servicing-to-income ratios (Figure 13) generally rose and then declined over the review period as households across the income distribution have experienced increases in their debt repayments as a proportion of their gross income, but then saw a slight decline in 2020. The growth was especially strong for those in the bottom 20% where DSTI ratios grew from 8% to 21% between 2010 and 2016, thus edging closer to the internal policy standard of 30% maintained by commercial banks<sup>23</sup>. While the bottom 20% are being driven out of the property market and into the rental market, those that are able to access the property market do so via mortgages at ever higher debt burdens, such as higher debt-to-income ratios and debt servicing-to-income ratios. This is in line with CBM's (2019) Financial Stability Report which suggests that borrowers have been required to borrow more and that pockets of vulnerability exist<sup>24</sup>. The rest of the income distribution also saw general increase in DSTI ratios,

<sup>23</sup> The maximum DSTI ratio stipulated by the Central Bank Directive No 16 is 40% for loans with a market value above €175,000. However, commercial banks tend to maintain a lower ceiling, generally at around 30%. Some banks have also introduced progressive ceilings according to the income of the household, generally lower ceilings for lower-income households and higher ceilings for higher incomes. Some banks also combine this with the residual income approach, as in Stone (2006), as an additional buffer.

<sup>24</sup> This is supported by Marmara and Brown's (2021) research, which administered a survey questionnaire to more than 2,000 social accommodation applicants in Malta (making up around 60% of all applicants in Malta). Asked to identify the

especially between 2010 and 2013, but then experienced a decline (except for the 60-80%). This may be the result of declining interest rates over the period, which may have offset the increase in debt accumulation by households.

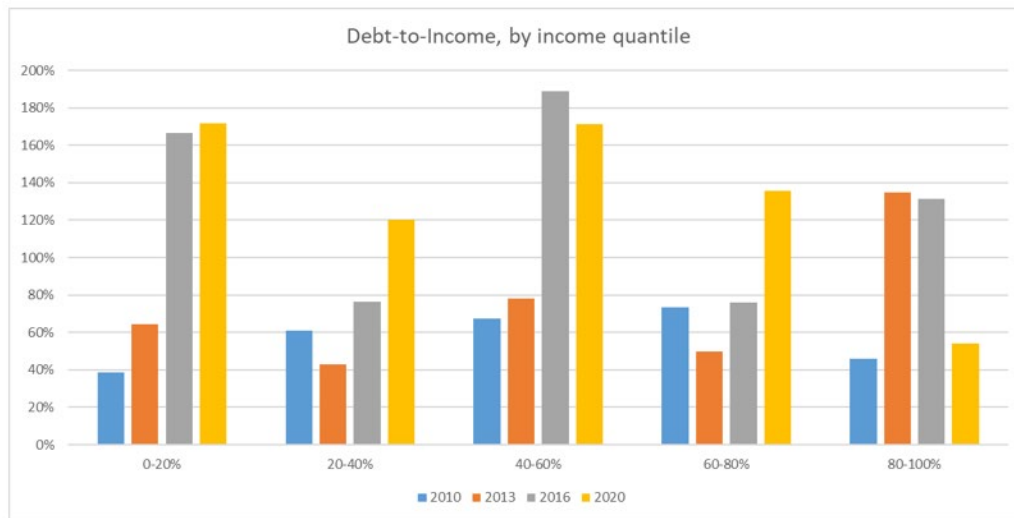


Figure 12: Median debt-to-income, by income quantile  
Source: HFCS

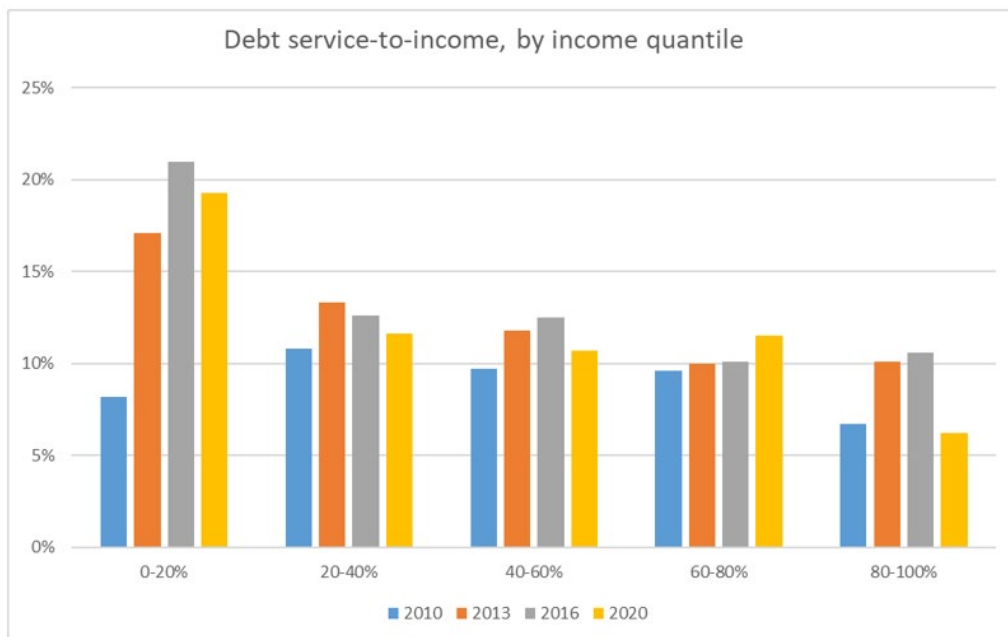


Figure 13: Median debt service-to-income, by income quantiles  
Source: HFCS

main challenge/s in taking on a mortgage, most respondents cited the down payment, monthly repayments, and their income, amongst other factors. The Housing Authority, beyond providing social housing accommodation, has also set up other schemes, such as 'Social Loans' in which the Authority partners up with a commercial bank and where the commercial bank finances 100% of the property value (i.e. doing away with a down payment requirement) and a monthly subsidy on the loan repayment for low-income earners. Another scheme includes the '10% Deposit Scheme' which assists those who do not hold the necessary liquidity for the down payment. As argued earlier, these schemes are conducive to financialisation in terms of financial extension.

While we cannot from these empirics speak of a ‘middle class squeeze’, partly because rising indebtedness and debt burdens are phenomena being experienced across the board, it is evident that the lower along the income distribution a household is located, the more problematic it is for it to maintain homeownership, and increasingly so. Figure 14 displays changes in average gross household income and average property value at time of acquisition by income quintile between 2010 and 2020. Average property values (at acquisition<sup>25</sup>) within each cohort (conditional on those owning a property) increased significantly across the board (except for the top 20%), while incomes grew strongly for the top and middle-income households, and less strongly for the bottom households.



Figure 14: Average gross income and property value, by income quintile  
Source: HFCS

This significant disconnect between changes in incomes and property prices for the lower-income households presents a problem of housing affordability (Briguglio and Spiteri, 2022). Particularly in a context where households are increasingly relying on debt to access the housing market, they are subject to the commercial bank’s calculative assessment of eligibility that is ultimately a function of income, interest rates, maturity as well as the conditions and requirements of the regulator (and internal credit practices by commercial banks), including maximum LTV ratios, DSTI ratios and the ceiling of pension age for maturity. Given the regulation on DSTI ratio caps, this presents a material limit on the extent of financing that a prospective mortgage holder may be afforded, disadvantaging lower-income households whose DSTIs reach the cap (generally around 30% as per the internal practices of the core

<sup>25</sup> Figures for property values at acquisition include properties purchased between the 1980s and 2020.

local commercial banks) more easily than other households with higher incomes<sup>26</sup>. As their income fails to keep up with the rate of change of property prices, those properties at the bottom of the distribution previously affordable for such households will incrementally become unaffordable to them (unless the upward trajectory of property prices stalls).

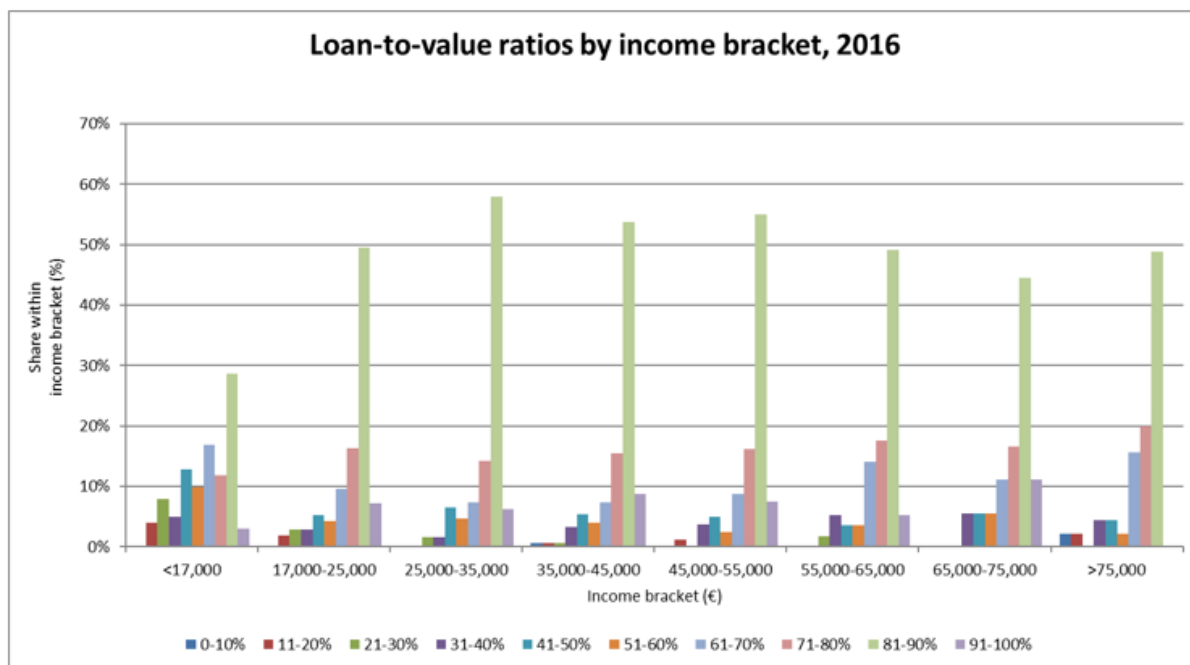


Figure 15: Loan-to-Value ratios by income bracket, 2016  
Source: RELPS, CBM

This is evidenced by Figure 15 displaying LTV ratios at origination of first-time buyers, in which lower-income households (purchasing their main residence for the first time) make use of a mix of debt and upfront cash when purchasing property in order to retain affordability, thus ending up with a *lower* average LTV ratio than other households, at least in 2016. While this may at face value seem counter-intuitive, lower-income households are rationed a relatively low stock of debt (given CBM regulations and commercial bank internal practices), as they hit ceilings of debt-to-income and DSTI ratios quicker than other households (see Table 11). As a result, the eligible home loan they are afforded is significantly lower than current property prices (even those properties at the lower end of the property price distribution), leaving a large portion of the property value not covered by the loan (hence the lower LTV). This drives some households at the bottom end of the distribution to put upfront a larger down payment that allows them to access a property that was otherwise not affordable through a mortgage *alone*<sup>27</sup>. To be sure, as found by Marmara and Brown (2021), the down payment is a major challenge in itself when purchasing a property, and many lower-income households will therefore be excluded

<sup>26</sup> While credit limits disadvantage lower-income households in terms of access to finance, and specifically in terms of access to mortgage-based homeownership, they are intended to safeguard financial stability broadly, and a borrower's debt sustainability specifically.

<sup>27</sup> This is supported by the fact that within this cohort DSTI ratios are higher and, more importantly, there is a higher incidence of DSTI ratios at or close to the DSTI maximum capping.



from the mortgage market unless they make use of one of the state’s schemes. However, those lower-income households<sup>28</sup> who may have either some wealth stored in savings (or elsewhere), or even more importantly, are able to rely on familial support in the form of intergenerational transfers (gifts or family loans), can access the housing market through a mix of debt and liquid assets. This is a practice that requires further scrutiny, particularly in the context of research on housing affordability, which so far has neglected it.

While potential housing affordability issues may be dealt with through these strategies, they are nevertheless being offset by the rise in incomes across the board (but mostly for higher-income households) coupled by an increase in female participation in the labour market (though this is expected to level off) that boosted households’ purchasing power in the property (and debt) market. However, between 2010 and 2020 property prices almost doubled (see Figure 4), growing much faster than incomes (see also Grant Thornton, 2023). While issues around housing affordability are not making a mark in terms of the *homeownership rate* for the middle-income households, they are manifesting themselves in *indebtedness levels*. In contrast, lower-income households may find themselves unable to gain a foothold onto the property ladder, and when they are successful, they do so with significantly higher debt burdens.

### 5.3 Education

Education level of household reference person	Household Status	% of households within education category		
		2010	2020	Change (pp)
Primary education	Owner outright	65%	65%	0
	Owner with mortgage	1%	1%	0
	Tenant	35%	35%	0
Secondary education	Owner outright	65%	60%	-6
	Owner with mortgage	14%	18%	+4
	Tenant	20%	22%	+2
University education	Owner outright	63%	55%	-8
	Owner with mortgage	25%	35%	+10
	Tenant	12%	10%	-2

Table 9: Residential housing structure by level of education, 2010-2020  
Source: HFCS

<sup>28</sup> It is also possible that these lower-income households may hold some undeclared income. However, since this is data collected *during* the loan origination itself, this possibility is largely immaterial to our analysis because banks rely on the (self-)declared income (and qualitative assessments of bank statements and transactions) in their decision-making of whether or not to extend credit and the volume of credit to be extended. While these households would be located higher on the income distribution, it is the *declared* income which determines their credit eligibility.

The pattern of a shift in the composition of homeownership, from outright ownership of the main residence to ownership of the main residence via a mortgage, is particularly pronounced for households with a secondary level of education, and especially for those households with a tertiary level of education. The relative status of housing for households with a primary level of education remained broadly constant over the review period. Most households within this category (65%) owned their main residence outright, while 35% were tenants. Within the same category, those owning their main residence via a mortgage represented a negligible share. In contrast, secondary-educated households remained for the most part homeowners (79% in 2010 and 78% in 2020) but the relative composition has shifted further towards mortgages rather than outright (although outright ownership is still more common). The same pattern, though more intensified, is exhibited in the case of university-educated households. Within this category, homeownership remained stable (88% in 2010 and 90% in 2020) but the in-category share of owners with a mortgage increased by 10pp as the share of outright ownership dropped by 8pp.

While these patterns cutting across education levels are relatively clear, an important underlying factor is generational patterns in educational attainment. The HFCS data reveals that, in general, the older the household the more likely it is that it holds a lower level of education, and vice-versa. Indeed, among households above the age of 65, about half hold a primary level of education. In contrast, middle-aged and younger households tend to be educated up to secondary level. Comparing the educational structure in 2010 with the 2020 wave shows that the relative proportions in education levels are shifting from primary to secondary for older households, from primary to secondary and from secondary to tertiary for middle-aged households, and from secondary to tertiary for younger households. The findings and figures map very closely those by Gauci (2021) based on Eurostat data.

Because, as we have seen, younger households are more likely (and increasingly so) to hold a mortgage, the generational changes in educational attainment may stand, to a large extent, behind the residential housing trends identified in the table. In other words, the fact that more tertiary educated households are owning their homes via a mortgage is, to an extent, an effect of the shift of younger households from secondary to tertiary education. For instance, among those with a university level of education, about half of the younger households now own their main residence via a mortgage, while only a quarter aged 45-54 and 55-64 own their residence via a mortgage (though this may, in part, also be due to some households having repaid in full their mortgage over their life-course). Nevertheless, while these generational effects have some hold on the relative proportions of homeownership, it is also true that the higher income afforded by higher education (Debono, 2021) could be a factor in supporting financial extension, i.e. increased participation in the mortgage market.

Assessing debt burden ratios by level of education shows that tertiary educated households are generally more indebted than secondary educated households (data for households with a primary level of

education is not reproduced due to the low number of observations, as these tend to be older households who are not mortgaged for the institutional reasons identified earlier). Tertiary educated households hold more debt in absolute terms than secondary educated households, but they are also more indebted relative to their income. The former are likely to have a higher income, on average, than other households and it may seem surprising, therefore, that they hold more debt as a proportion of their income. Yet, this result is in line with empirical literature which finds that households with a higher level of education are more indebted (Dynan and Kohn, 2007). One interpretation for this could be that these households, especially younger ones (and indeed younger households tend to be university educated), expect a stronger income mobility that would depress their debt burden ratios over the life-course. They could also choose to maximise their income's purchasing power and opt for more expensive properties. But it is also possible that because university students begin their working lives later in life, they are able to amass less savings which they could deploy in the housing market.

	<b>Mortgage Debt-to-Income (mean)</b>					<b>Mortgage Debt-to-Income (median)</b>			
	<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>		<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>
<b>Primary education</b>	:	:	:	:	<b>Primary education</b>	:	:	:	:
<b>Secondary education</b>	187%	204%	218%	224%	<b>Secondary education</b>	141%	184%	183%	200%
<b>University education</b>	232%	236%	251%	218%	<b>University education</b>	172%	200%	225%	217%
	<b>Mortgage Debt service-to-Income (mean)</b>					<b>Mortgage Debt service to-Income (median)</b>			
	<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>		<b>2010</b>	<b>2013</b>	<b>2016</b>	<b>2020</b>
<b>Primary education</b>	:	:	:	:	<b>Primary education</b>	:	:	:	:
<b>Secondary education</b>	16%	19%	17%	16%	<b>Secondary education</b>	14%	14%	14%	12%
<b>University education</b>	15%	17%	17%	15%	<b>University education</b>	15%	14%	16%	16%

Table 10: Debt burdens by level of education, 2010-2020  
Source: HFCS

Table 10 also reveals a marked increase in mortgage debt-to-income ratios across secondary and tertiary educated households over the review period. Mortgage debt-to-income for secondary educated households saw a wave-to-wave increase, rising from 187% in 2010 to 224% in 2020 (from 141% to 200% in median terms). University educated households also saw a rise in the debt-to-income between 2010 and 2016, but the average (and median) figure saw a decline between 2016 and 2020, a result of the declining outstanding debt identified earlier in which households may repay early some of their debt. We can therefore claim that it is largely households with a university level of education that have been succeeding in repaying their loans earlier, primarily due to their higher incomes.

In terms of the debt service-to-income ratios, both secondary educated households and tertiary educated households saw broadly steady DSTI ratios. While both types of households saw their monthly repayments rise steadily (from an average of €360 to €500 for secondary educated households, and from €460 to €610 for tertiary educated households), their incomes generally grew faster than repayments over the past few years, such that their DSTI ratios moderated and fell back to 2010 figures. In part, this may also be due to low (and decreasing) levels of interest rates which depress the otherwise higher levels of repayments.

## **6. Debt dynamics and household behaviour**

### **6.1 A further analysis of financial intensity**

To further assess the role of financial intensity, I run a set of OLS regression estimations on Maltese households' debt burdens: mortgage debt-to-income (DTI) and mortgage debt-servicing-to-income (DSTI) and include in the model a set of independent variables (maturity, level of interest rates, and whether the household holds other property), representing institutional determinants of household debt<sup>29</sup>. The model is controlled for by a set of demographic variables, including age, education and income, and a control variable 'years mortgage origin', referring to how long ago the mortgage was taken.

The estimations are reported for all four HFCS wave, with bootstrap standard errors in brackets. The reference group is a household with a primary/secondary level of education, and an income in the middle tercile (33-66%) of the income distribution. The model is standardised according to the HFCS survey design, taking into account the survey's multiple imputation process, survey and replicate weights (HFCN, 2020). Large outliers for both dependent variables, specifically those with low values of income, were excluded from the estimation model. For robustness purposes, the estimations were tested for multicollinearity, and run multiple times controlling for different variables. Results were robust and stable across these tests.

The most clear-cut test of financial intensity is maturity. We expect that, holding DTI constant, as households stretch their maturity towards retirement their debt burdens (specifically DSTI) drop. Stretching a mortgage over a longer period of time allows a household to smoothen repayments, while, in contrast, a shorter maturity implies a frontloading of repayments, and therefore higher mortgage-debt-service-to-income. However, in line with financial intensity, a household may decide to use the maximum maturity to increase its purchasing power, possibly to purchase a more expensive property.

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<sup>29</sup> Maltese households do not participate extensively in refinancing or second mortgages.

In this case, holding DSTI constant, a household takes on a larger stock of debt as a percentage of income (DTI).

The latter is indeed what the regression evidence shows. An extra year of stretching is associated with a rise of 4.9% in debt-to-income, statistically significant at the  $p < 0.001$  level. Longer maturities also marginally raise debt service-to-income ratios by 0.1%, and the intertemporal smoothing effect whereby higher maturities push down DSTI ratios is therefore not observed. The estimates provide support to the model of financial intensity, as households are maxing out their debt eligibility via higher maturities and higher debt-to-income.

Higher (lower) interest rates raise (lower) the DTI and DSTI ratios by 7% and 0.8% respectively for every 1% change in interest rates, which coefficients are statistically significant. However, the DTI coefficient increases across each wave in a context characterised by *declining* interest rates, suggesting that other factors are at play in raising financial intensity (DTI), which is possibly the result of households stretching maturity for higher purchasing power, as claimed earlier. In turn, coefficients for DSTI across the waves were, on the other hand, dropping in line with an effect of declining interest rates. The estimations also suggest that households with second (or more) properties have higher debt intensity than those owning a singular property, in line with the descriptive data discussed earlier.

The estimations also suggest that younger households are significantly more indebted than older households, DTI declines by 2.9% the higher the age, at a statistically significant level. While this may be the result of the life-cycle (Dynan and Kohn, 2007), where households pay off their debt as they grow older, a similar analysis on mortgage at origination reveals that the relationship remains (even when controlling for the year of mortgage origination), and younger households are still more indebted than other households. More importantly, as we have seen in the descriptive data, the younger age group is in 2020 significantly more indebted than the same age group in 2010 both in relative and absolute terms, suggesting that there is more to rising indebtedness than simply the life-cycle effect.

More educated households are more indebted than less educated households, in line with the descriptive data, holding an additional 12.9% in DTI and 0.2% in DSTI, though both coefficients are not statistically significant. This is in line with the descriptive findings showing higher indebtedness levels for tertiary educated when compared to households with a lower level of education. The descriptive findings also showed that tertiary educated households have seen their debt burdens grow over the decade under review. However, we had claimed that this is possibly due to an age effect, whereby younger households (who are more likely to be indebted, and to hold a larger stock of debt) are increasingly reaching tertiary levels of education. The regression results support the latter point, in which DTI and DSTI ratios are best explained by age, rather than education levels. While the latter's coefficients are in line with the descriptive results, they are not statistically significant. Age is therefore a stronger predictor of financial intensity than education.

The estimations also throw light on debt burdens across the income distribution. A clear picture emerges where lower-income households take on higher debt burdens compared to the middle-income households while households further up the income distribution have lower debt burdens. Higher income households are significantly less indebted both in terms of DTI (55.7% less than middle-income households) and DSTI (4.1% less than middle-income households). Lower-income households are more indebted (with an additional 68.9% in DTI and 7.8% in their DSTI). Finally, the more recently a mortgage was contracted, the higher the DTI and DSTI, with an increase of 10.4% and 0.5% respectively per year.

	Mortgage debt-to- income (DTI)	Mortgage debt service-to- income (DSTI)
[Wave 1]		
Wave 2	<b>.112</b> (.178)	<b>.033**</b> (.013)
Wave 3	<b>.380*</b> (.169)	<b>.030**</b> (.011)
Wave 4	<b>.513**</b> (.155)	<b>.027**</b> (.010)
Maturity	<b>.049***</b> (.004)	<b>.001***</b> (.000)
Interest rate	<b>.070*</b> (.033)	<b>.008**</b> (.002)
[Owns other prop]		
No other prop	<b>-.313**</b> (.116)	<b>-.024**</b> (.009)
<b>Control variables</b>		
Age	<b>-.029***</b> (.004)	<b>.000</b> (.000)
[Non-tertiary educ]		
Tertiary educ	<b>.129</b> (.073)	<b>.002</b> (.005)
Low Income	<b>.689***</b> (.152)	<b>.078***</b> (.012)
[Middle income]		
Top income	<b>-.557***</b> (.086)	<b>-.041***</b> (.006)
Years mortgage origin	<b>-.104***</b> (.008)	<b>-.005***</b> (.001)
Constant	<b>1.425***</b> (.310)	<b>0.133***</b> (.019)
N	<b>456</b>	<b>456</b>

Table 11: OLS regression of mortgage debt-to-income & mortgage debt service-to-income

Bootstrap standard errors in brackets

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001

## 6.2 Financial intensification and property size: A tentative analysis

The picture just outlined can be deepened by an analysis of property size (Table 9). To this end, a cross-sectional analysis is required in order to make plausible, though necessarily *tentative*, claims about changes in property size.

		Mean property size (m <sup>2</sup> )			Median property size (m <sup>2</sup> )		
		2010	2020	Change	2010	2020	Change
<b>Housing status</b>	<b>Owners outright</b>	191.0	175.4	<b>-8%</b>	164	140	<b>-14%</b>
	<b>Owners with mortgage</b>	193.8	155.1	<b>-20%</b>	156	130	<b>-17%</b>
	<b>Non-owners</b>	137.7	106.9	<b>-22%</b>	120	100	<b>-17%</b>
<b>Income</b>	<b>Below 20%</b>	151.9	121.0	<b>-20%</b>	146	100	<b>-32%</b>
	<b>20% - 40%</b>	165.6	135.1	<b>-18%</b>	137	120	<b>-12%</b>
	<b>40% - 60%</b>	173.0	175.5	<b>1%</b>	150	135	<b>-10%</b>
	<b>60% - 80%</b>	189.0	155.0	<b>-18%</b>	164	150	<b>-8%</b>
	<b>80% - 100%</b>	211.7	182.1	<b>-14%</b>	178	150	<b>-16%</b>

Table 12: Property size by Housing Status and Income  
Source: HFCS

Properties have been shrinking in size across the board, from an average of 179.5m<sup>2</sup> in 2010 to 158.5m<sup>2</sup> in 2020<sup>30</sup>. However, on average, households with a mortgage lost about 20% (39m<sup>2</sup>) of their property between 2010 and 2020, a much more significant loss compared to outright owners who lost 8% (16m<sup>2</sup>). Whereas in 2010 mortgage holders owned property of about the same size as outright owners, they now own smaller properties. The decrease in size of properties for tenants was comparable to that of mortgage holders, though the former had already much smaller properties in 2010. Faced with rising property prices, those households accessing the property market via the mortgage market have been intensifying their debt to mitigate what would otherwise be a much more significant drop in property size. Indeed, average mortgage debt per square metre grew steadily over the course of the four HFCS waves: €355 in 2010, €452 in 2013, €616 in 2016, and €704 in 2020. Despite the intensified indebtedness levels, households with a mortgage have still seen a loss in property size.

<sup>30</sup> Coupled with the fact that property prices have been increasing steadily (see Figures 4 and 15), this is a finding which would suggest that prices standardised by property size have been increasing even much faster.



It would be difficult to disentangle the reasons behind this phenomenon. Shrinking property size could be, on the one hand, supply-side driven as developers build ever-smaller properties. However, this may also be driven by demand-side factors as households opt for smaller properties. Rising property prices have raised issues around housing affordability, and households may go for smaller properties simply because they are more affordable. Nevertheless, this could also be an active choice by households irrespective of affordability. Cultural change may drive households to develop new tastes (Bourdieu, 1984) in properties, for instance by purchasing smaller houses of character in older parts of older towns in Malta.

Structural change may drive households to opt for smaller properties (e.g. smaller apartments) mirroring both the shrinking family size and the domestic distribution of labour. Indeed, smaller family size may lead households to opt for smaller properties, but it is also possible that the causality runs in the opposite direction: i.e. the increasing cost of housing – in terms of rising property prices and higher debt repayments – may shape choices on family size, as household are constrained to form smaller families<sup>31</sup>. The decline in the supply of larger housing units, coupled with the higher housing costs of these units, may also influence such choices. Furthermore, as more women become active participants in the labour market, the traditional distribution of labour within the family shifts: while historically men and women would distribute labour in terms of domains - i.e. labour in the market setting performed by men and labour in the domestic setting performed by women - as women move into the labour market, the distribution becomes further inclined towards the market domain. Opting for smaller properties could reduce the volume of domestic labour (e.g. upkeep and maintenance of the property), thus reflecting the structural shift.

While the average property is larger the higher the income of a household (for those households below the age of 65), the variation of property size across the income quintiles is not excessively wide – ranging between 152m<sup>2</sup> and 212m<sup>2</sup> - because the current snapshot (Table 8) reflects historical socio-economic processes from the 1980s onwards. Indeed, policy under the home ownership schemes of the 1970s and 1980s not only actively subsidised the property market via the selling of land plots (Falzon et al. 2005) but is likely to have entailed some redistribution of assets across the income distribution. Lower-income households had, therefore, higher access to larger properties through those schemes than they would otherwise have had, and this may be reflected in the table above.

Over the 10 years of the HFCS's waves, the bottom 20% (of working age) experienced the biggest drop in property size, at 32% in median terms. Within the bottom 20%, the biggest losers were tenants closely followed by mortgage holders. While a significant portion of the bottom 20% was driven out of homeownership, those renting are now living in much smaller residences. Those within the bottom 20%

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<sup>31</sup> Maltese women's fertility rate has been declining over the past decade, especially between 2016 and 2019, and represents in 2021 the lowest rate in Europe. While it is not self-evident that a relationship exists between the increasing cost of housing and Malta's fertility rate, further research is required in this regard.

who managed to access the property ladder through a mortgage also saw a drop in property size despite the strong increase in their debt burdens, as outlined earlier. Households in the rest of the quintiles (between 20% and 100% of the distribution) also saw decreases in property size, but to varying extents, ranging from 8% to 16% in median terms<sup>32</sup>. While households in the middle-income brackets have higher debt burdens than the top 20%, no distinctive trends can be identified in terms of property size between the middle and top incomes. This finding, coupled with a lack of distinctive trends in indebtedness for middle-income households (see section 5), suggests that the socio-economic dynamic where middle-income households significantly intensify their debt levels to keep up with those at the top to maintain their social status (by treating housing as a positional good [Hirsch, 1977; Frank, 1985]), and as identified by Fligstein et al. (2017) for the US case, is not as strong in Malta.

Instead, a different - though sociologically equally interesting – dynamic emerges for Malta. Older generations tend to be outright owners of their main residence, partly due to the institutional residential housing structure in Malta established through historical processes of homeownership, whether via public policy (e.g. homeownership schemes) or intergenerational transfers within the family. As outright owners, these households have also historically succeeded in accumulating larger properties, often in the form of terraced houses. Indeed, according to the 1995 Census of Population and Housing, occupied terraced houses represented the most common type of dwelling in Malta in 1995, at about 46.6% of all occupied dwellings (dropping to 39.3% in 2005, to 34.4% in 2011, and 22.9% in 2023<sup>33</sup>) (NSO, 2007; NSO, 2014; NSO, 2023). The size of these properties was relatively large by historical and current standards. Indeed, as reported in the 2011 Census, 66% of occupied terraced houses and townhouses had six rooms or more, while 70% of apartments, penthouses, maisonettes or ground floor tenements had five rooms or less.

Average and median properties for all households have shrunk over the years, and younger generations hold less property than older ones (Table 9). While an assessment of the reasons behind this lies beyond the scope of this paper, it is possible to draw a tentative conclusion that the rise in property prices over the past two decades has meant that households would opt for smaller properties (most often, apartments rather than houses) as these are more affordable. Importantly, however, the process of financialisation where households purchase properties via the mortgage market has opened up a new possibility for these households, often younger ones. By leveraging finance, younger households may be attempting to safeguard their standard of living (here defined in terms of property size) to keep up with older generations, such as their parents. Such households are now able to amass debt to acquire properties that compare (or that are not too dissimilar) to their parents' properties.

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<sup>32</sup> The small rise in average property size for the 40%-60% is due to a few outlier households pulling the average property size upwards in 2020.

<sup>33</sup> The figure for 2011 includes townhouses.

The data do offer a degree of support to this claim (Table 9). While younger households on average have *lost* property between 2010 and 2020 – with the average property size falling from 157 m<sup>2</sup> to 146 m<sup>2</sup>, and in median terms from 150 m<sup>2</sup> to 125 m<sup>2</sup> - those younger households who have acquired a property through a mortgage have not. On average, they have gained about 23m<sup>2</sup> since 2010 while in median terms they have only lost 5m<sup>2</sup> (compared to the 25m<sup>2</sup> lost by all young households, or the 43m<sup>2</sup> lost by outright owners within the same age cohort). As we have seen in Section 5, younger households are more indebted than older households, and they have amassed more debt (outstanding and at origination) over the review period, made possible by rising incomes. Indeed, RELPS data covering the period between the fourth quarter of 2020 and the second quarter for 2022 shows that as more and more households have increasingly higher debt-to-income ratios, about 60% of the first-time buyers (who tend to be younger) who took out a mortgage in the review period had a debt-to-income above 500% (some even above 700%), and a weighted average maturity of 32.5 years (CBM, 2022). Within this period, about a quarter of first-time buyers financed via a mortgage a property with a market value above €355,000. Financialisation has therefore allowed younger households to access more expensive, possibly larger properties.

In contrast, however, the loss of property size experienced by the average mortgage holder is largely due to those between 35 and 54 years of age. These households held a larger property over the waves when compared to younger mortgage holders (and indeed the older the mortgaged household is the higher the property size), suggesting that these households had also used debt to gain property size when the household was younger. However, while these brackets may represent households which took out a loan in the 1990s and 2000s, they also include households which took out a mortgage recently. Indeed, the average maturity of their mortgage *at origination* is *lower* for these households than for the younger cohort. Mortgages for older households need to be repaid over a shorter span of time, resulting in higher affordability problems at the point of property acquisition, which affordability seems to be deteriorating between 2010 and 2020 as property prices increase significantly. Such households need to make do with relatively smaller properties, and this is evident from Table 9 where the median household aged 45-54 lost 60m<sup>2</sup>, while the median household in the 35-44 age cohort lost 32m<sup>2</sup>, compared to the 16-34 age cohort which lost only 5m<sup>2</sup>. It is also possible that, within these cohorts, family breakdowns (separation and divorce) may be leading to smaller households (single individuals) who need (or possibly can only afford) smaller properties.

Means	Property size, all households				Property size, mortgage holders (on main residence)				Property size, outright owners (of main residence)			
	2010	2013	2016	2020	2010	2013	2016	2020	2010	2013	2016	2020
Age												
<b>16 – 34</b>	156.6	159.0	164.2	145.5	160.9	167.5	169.1	184.2	163.7	171.3	182.3	130.4
<b>35 – 44</b>	170.1	180.7	164.6	133.4	180.8	201.0	173.9	127.4	175.0	185.6	166.6	145.9
<b>45 – 54</b>	184.1	207.8	172.9	157.3	255.6	216.6	202.8	191.7	180.4	216.6	175.4	168.1
<b>55 – 64</b>	188.5	188.4	199.8	177.6	:	137.2	191.6	:	203.6	214.1	226.5	206.6
<b>Over 65</b>	183.7	187.6	165.5	169.2	:	:	:	:	206.0	218.2	186.4	186.4
Medians	Property size, all households				Property size, mortgage holders (on main residence)				Property size, outright owners (of main residence)			
	2010	2013	2016	2020	2010	2013	2016	2020	2010	2013	2016	2020
Age												
<b>16 – 34</b>	150.0	139.3	145.0	125.0	152.1	147.1	148.6	147.0	162.5	136.5	:	120.0
<b>35 – 44</b>	152.1	152.0	139.3	120.0	152.1	160.0	150.0	120.0	168	175	150.0	130.0
<b>45 – 54</b>	156.0	160.0	150.0	130.0	200.0	190.0	170.9	140.0	156	161.9	159.0	143.0
<b>55 – 64</b>	153.8	150.0	170.0	134.0	:	:	:	:	165.8	163.5	200.0	140.0
<b>Over 65</b>	152.0	145.0	132.8	130.0	:	:	:	:	170.9	179.4	150.0	150.0

Table 13: Property size by housing status and age brackets

Source: HFCS

## 7 Conclusion

This paper has set out on and advances a new agenda for the Maltese context, namely that we need to bring financialisation within our purview, to take it more seriously as a (increasingly) core domain in Maltese society and economy, and to place it at the centre of the relevant scholarship and of the wider public conversation. This is urgent if we are to understand societal and economic developments in Malta going forward: indeed, the ever-growing banking sector and demand for credit – possibly as younger generations may be culturally less averse to debt and indebtedness than older generations – makes it likely that local socio-economic developments and institutions will increasingly hinge on the ebbs and flows of finance. This is (especially) the case for Malta’s residential housing system and the property market more broadly, but possibly also for non-property related forms of consumption. Furthermore, finance as a driver of growth and development will lead to far-reaching transformations not only for the way households engage in consumption and investment, but also for firms and government activity.

The paper has brought forward a stock of evidence to claim that a process of financialisation of the household is underway in Malta. Similar to other European contexts, household financialisation in Malta has been primarily characterised by mortgage debt, as the domestic mortgage market developed and expanded since the 1990s. I argued that the process of financialisation is driven by financial extension (i.e. higher participation in the mortgage market) and financial intensity (i.e. higher debt burdens), but less so by financial inclusion (i.e. higher homeownership rates).

While historically Malta coupled high homeownership rates with low mortgage participation, supported by specific institutional features that maintained high homeownership (e.g. via self-help or self-build systems, intergenerational transfers, and housing policy), households seem to be shifting towards finance as an ‘alternative’ to these institutional features. This is not to say that such processes of financialisation necessarily supplant older institutions, but that a new entryway to homeownership – homeownership via mortgage debt – is taking shape in a context where the norm of homeownership is firmly established and supported (Vakili-Zad, 2007; Vakili-Zad and Hoekstra, 2011), including by way of economic and financial policies qua *social* policy (Schelkle, 2012a, 2012b), and the social, cultural and economic conditions which make this possible.

It is evident that the housing market and the formal mortgage market in Malta are increasingly intimate as the mortgage market develops. Property in Malta, then, is increasingly contingent on finance. Any assessment of Malta’s property market, especially of housing affordability, will going forward necessarily need to be sensitive to the financial institutions and practices on which property in Malta stands. Nevertheless, while the local institutional mortgage market has been growing over the past two decades, it admittedly remains overwhelmingly bank-based, and the lack of mortgage securitisation

(experienced in other contexts) has meant that housing and debt relations have not been enrolled into transnational circuits of capital in any meaningful way, at least so far.

But it is not only *participation* in the mortgage debt market that has fuelled higher debt levels in Malta. Financialisation is also manifesting itself in terms of financial intensity, as Maltese households have also been intensifying their debt accumulation in recent years. Debt burdens have increased substantially between 2010 and 2020 in the context of fast-rising property prices. Those households participating in the mortgage market have been stretching themselves financially to maximise their purchasing power in the property market.

The picture is more complex when analysing debt dynamics across the cross-sections of Maltese society. Younger households are generally more indebted than older households, as middle-aged households accumulated higher debt as a proportion to their income between 2010 and 2020. Debt burdens have grown especially for lower-income households, particularly those in the bottom 20% of the income distribution. Households with a tertiary level of education are also more indebted than other households, though this is also driven by a demographic effect where younger households (who are more indebted relative to older households) are increasingly reaching tertiary levels of education.

While the drivers behind these cross-sectional trends are not easy to draw out, findings suggest that the bottom 20% have been intensifying their debt to *maintain* homeownership. Others within the bottom 20% were driven out of property ownership as housing affordability (including access to the mortgage market) amid rising property prices proves challenging for this cohort of the population. Younger households have been using finance not only to maintain homeownership, but also to offset a loss in property size, as they try to keep up with older generations whose properties were much larger. In contrast, while relatively older households stretch themselves in terms of financial indebtedness, they have lost property size possibly due to affordability issues. From this viewpoint, we can conclude that rising property prices have meant that those not already on the property ladder have been disadvantaged (either in terms of homeownership, indebtedness burdens, and/or property size) when compared to those already on it.

The process of financialisation of the Maltese households just outlined was made possible by a favourable institutional and socio-economic environment that supported prospective homeowners (more accurately, mortgage debt holders): a decade of low interest rates, low credit constraints, more women joining the labour force, and supportive demand-side housing market policies. A shifting environment going forward may put pressure on households (both prospective homeowners qua mortgage-holders, and current mortgage-holders on variable rates) as rising interest rates expose them to higher costs of borrowing in the mortgage market. This would imply further challenges around housing affordability and access to credit, as well as debt sustainability as monthly repayments rise, squeezing disposable income (after housing costs), and as a result putting more pressures on pockets of

vulnerability – particularly the more leveraged households and lower-income households - while potentially revealing new ones (CBM, 2019; CBM, 2022).

In light of this, policymakers, players in the mortgage market, other relevant stakeholders, and academics may find useful the stock-taking and evidence-based insights that this paper brings forward, particularly in a shifting institutional, policy and socio-economic context that may add further pressures on indebtedness dynamics, housing affordability and the property market more broadly.

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