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<b>Authors(s)</b>	Waldron, Richard, Redmond, Declan
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# **“We’re just existing, not living!” Mortgage Stress and the Concealed Costs of Coping with Crisis**

**Richard Waldron & Declan Redmond**

School of Architecture, Planning and Environmental Policy, University College Dublin, Ireland

[richard.waldron@ucd.ie](mailto:richard.waldron@ucd.ie)

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## **Abstract**

Following the financial crisis, an extensive literature has examined the vulnerabilities facing mortgagors in default and foreclosure. However, in addition to these ‘*overt casualties*’ of the crash, many households are struggling to meet their mortgage payments by enduring severe cutbacks to their quality of life. The experiences of these ‘*unrevealed casualties*’ of the financial crisis and the coping strategies they employ to respond to mortgage stress remain under-explored. Drawing on survey data of Irish mortgagors (n=433), this paper examines the impacts of mortgage stress upon quality of life and mortgagors’ coping strategies to respond to their financial difficulties. The findings suggest that mortgage stress affects a broader range of households than previously considered; mortgage stressed households adopt a range of expenditure, employment, finance and housing-related responses; and more punitive responses correlate with greater mortgage stress levels, thereby providing a fuller account of the real cost of coping with the crisis impacts.

## **Introduction**

Since 2007 financial and housing markets have experienced a period of extreme volatility, characterised by the collapse of national banking systems, falling property values and rising mortgage default and foreclosure rates<sup>1</sup> (Wolfson and Epstein, 2013). The origins of the crisis lie in the liberalisation and empowerment of finance capital from the 1980s and the creation of speculative asset bubbles in the property market to absorb over-accumulating capital and compensate for the lack of alternative investment opportunities (Harvey, 2010). Aalbers (2008) contends that the expansion of mortgage markets and the linking of global capital markets to local housing markets was a key facilitator of global investment strategies in which homes and homeowners could be exploited for financial sector gain. As banks cultivated an increased appetite for risk accumulation as part of profit-maximising strategies, a range of mortgage product innovations (*e.g. subprime loans*) were developed to extend mortgage debt encumbrance among low-income households and those with weaker credit ratings who traditionally were considered too risky to lend to (Immergluck, 2011, Wyly et al., 2009). As such, in countries most affected by the financial crisis, including Ireland, Spain and the US, a broader range of households were vulnerable to the impacts of the crash than ever before, and the most adversely affected are made up of a larger proportion of poorer households (Ronald and Elsinga, 2012).

While renters have also been affected by the vagaries of the crash (Dewilde and De Decker, 2016), much of the housing literature has examined the economic vulnerabilities arising for mortgaged households, particularly the socio-spatial impacts of the concentration of mortgage defaults and foreclosures among US subprime borrowers (Schafran, 2013, Crump et al., 2008, Brown et al., 2013). However, for Forrest (2011, 9) this focus on the finite events of mortgage arrears and repossession only capture the “*overt casualties*” of the crash. Households who are struggling to maintain their financial position, but who have not entered mortgage default, are often overlooked in the academic and policy literature meaning the full extent of the crisis impact remains under-examined (Botein, 2013). Additionally, the impacts of the mortgage crisis for quality of life remain under-researched, nor

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<sup>1</sup> In this paper, the terms mortgage default and foreclosure (US) and mortgage arrears and repossession (UK) are used interchangeably

is it clear how households have responded to mortgage payment stress and the effects of coping with the crisis (Hall, 2015, Wallace et al., 2014). These are important omissions if we are to more fully appreciate the full costs of coping with the crash.

Using Ireland as a case study, this paper examines the consequences and experiences of the financial crisis for mortgaged households. The Irish case is particularly pertinent considering the severity of the collapse in the country's banking and property sectors, which culminated in an extensive taxpayer funded bank bailout (€64bn), a fiscal crisis of the State and an emergency IMF/ EU bailout (€67bn), a sharp contraction in the domestic economy and the imposition of a severe austerity regime (Mercille and Murphy, 2015). At the household level, these macro-economic pressures resulted in large reductions in income and a mortgage arrears crisis that is considered by the Irish Government (2013) to be the country's primary social and economic challenge. Indeed, at the peak of this crisis in December 2013, almost one-in-five residential mortgages were in arrears (Central Bank of Ireland, various). Drawing on data from a large-scale, survey of Dublin mortgagors (n=433) we examine the impact of the mortgage crisis upon quality of life and explore households' responses to their mortgage difficulties. This contribution enhances understanding of how households mitigate the uncertainties of the market-liberal model of housing provision and plan for their family's well-being in adverse economic circumstances. Critically, by drawing on Waldron's (2016) framework of mortgage stress, we extend analysis of the crash beyond those households impacted by arrears and repossessions (*i.e. the 'overt casualties'*) and include those struggling with burdensome mortgage commitments, affordability and illiquidity problems (*i.e. the 'unrevealed casualties'*). In doing so, we provide a fuller account of the degree to which mortgagors are bearing the costs of coping with the crisis. The next section situates the research within the literatures on the neoliberalization and financialization of housing and the literature on coping with mortgage default and over-indebtedness. Thereafter, we discuss the financialization of Irish homeownership within its wider political economy context, before the methodological approach is outlined and applied in the results section. Finally, some broad conclusions are discussed in relation to the results and their implications for the literature and policy.

### **Neoliberalizing Homeownership, Financialization and the Costs of Coping with Crisis**

Discussion on the drivers and consequences of the global financial crisis has emphasised the roles played by the intertwined concepts of neoliberalization and financialization (Aalbers, 2013, French et al., 2011). The former is generally presented as a deepening, often contradictory, process of marketised governance and politics that seeks to strengthen corporate power through a range of state-supported mechanisms (Mercille and Murphy, 2015), while the latter refers to a pattern of accumulation in which profit making occurs increasingly through financial channels rather than through trade and commodity production (Aalbers, 2009). Taking these concepts in turn, neoliberalism is often used as a lens to examine the shifting balance between the state and the market where market ideology is increasingly placed at the centre of traditional government actions within the socio-economic sphere. While this process has been characterised as '*roll-back*' and '*roll-out*' neoliberalism (Peck and Tickell, 2002), it should not be confused with a diminution of the State's size or function, but more accurately represents the redeployment of state power through legislation, policies and revised regulations to actively promote elite economic interests (Harvey, 2005). This process occurs through a range of mechanisms including regulatory experimentation, through systems of inter-jurisdictional policy transfer that allow neoliberal policy proto-types to be deployed across territorial spaces and the implementation by transnational rule regimes, comprised of large-scale institutional arrangements, regulatory and legal frameworks (*e.g. IMF, EU*), of specific parameters around policy experimentation and regulatory reorganisation (Mercille and Murphy, 2015). The implementation of neoliberalization processes should not be considered as straight-forward or uni-directional and are in fact deployed in highly variegated means across places and spaces which result from the continuous evolution in neoliberalization projects over time and their colliding with inherited

political institutional arrangements at a variety of spatial scales (Brenner et al., 2010). As such, neoliberalization is never fully implemented in its utopian, theoretical form, but rather in varying incomplete, volatile and hybrid modalities that are constantly reshaped, renewed and revised (Hall, 2011). Neoliberalization may be considered a systemic '*straightjacket*' built into the political economic context that generates significant and markedly differentiated cumulative effects upon the regulation of contemporary capitalism (Hodkinson, 2011). This hybrid nature is discussed in detail below regarding the Irish case to demonstrate how neoliberal regulatory experimentation in the banking, housing and planning spheres set the stage for the major speculative property bubble commonly referred to as the "*Celtic Tiger*."

With regard to neoliberalization and housing, Aalbers and Christophers (2014) make a strong case for considering more closely the relationship between the State's political economy and the housing and finance sectors, particularly because (1) housing is central to enabling the circulation of capital and as a "*fix*" for problems of effective demand and over-accumulation; (2) social relations under capitalism are manifested and reinforced in and through the housing system; and (3) homeownership promotion has been utilised to reinforce capitalist (neoliberal) ideologies with regard to private property rights and market allocation mechanisms. Indeed, as Rolnik notes (2013) housing has played a crucial role in the neoliberal transformation of society and economy since the 1970s, evident in the diminishing role of the State in public housing provision and the privatisation of social housing in favour of an '*asset based*' approach to welfare, whereby Government encourages individual welfare provision through financial and property assets (Doling and Ronald, 2010, Forrest and Hirayama, 2014). Under such a system the function of owner occupied housing becomes transformed, with a diminishing emphasis on '*use value*' (*i.e. its social function as shelter*) and an increased emphasis on '*exchange value*' (*i.e. its value as an asset for sale in the market-place*) (Soaita and Searle, 2016). By highlighting housing as an investment good, individuals become increasingly committed to their stake in the market-based system and the relationship between individuals and the state becomes increasingly mediated through the market (Ronald, 2008).

Housing has also been key to neoliberal practice with regard to the liberalisation and re-regulation of the operations of international financial capital, a process outlined above as financialization. While financialisation has been criticised for the over-estimation of its theoretical and empirical contribution (Christophers, 2015), it nonetheless remains a useful emerging concept through which to examine the ways the financial sector is infiltrating and altering economic and social life at a variety of spatial scales (Lawrence, 2015). Indeed, financialisation research has been at its most useful when applied to the sphere of housing (Fernandez and Aalbers, 2016), examining the linking of global stock markets to local mortgage markets and the expansion in mortgage liquidity via securitisation practices (Langley, 2006); the development of '*exotic*' mortgage products to extend the mortgage market among lower-income households (Immergluck, 2008); and the application of financial risk modelling to facilitate mortgage market expansion (Hall, 2012). The financialization literature has documented how mortgage markets have been transformed from '*facilitating markets*' for individuals seeking credit for home purchase to one which increasingly facilitates the global investment strategies of financial firms (Aalbers, 2008). These structural transformations led to a dramatic increase in capital entering housing markets as mortgage debt-to-GDP ratios increased sharply in Ireland (31% - 83%), the UK (56% - 80%) and the US (59% - 93%) between 2000 and 2008 (EMF, 2012). Increased lending levels led to rapid house price appreciation as borrowers drew down increasingly larger mortgages (Aalbers, 2009, Kim and Renaud, 2009). As banks adopted looser underwriting criteria and targeted their expansion in lending among lower-income households greater degrees of risk were taken onto banks' balance sheets, particularly as borrowers were enabled to borrow ever-increasing multiples of their incomes with much higher loan-to-value ratios (Smith et al., 2008).

This creation of a more financially leveraged, commodified form of homeownership was to have serious economic and social consequences in the aftermath of the crash of 2008. House prices

collapsed across advanced economies, with Ireland, Spain and the US experiencing peak-to-trough falls of 53%, 40% and 28% respectively (Andritzky, 2014). As the collapse of the financial markets and the credit crunch impacted upon the wider economy, household incomes fell as unemployment rates rose. This, in combination with high levels of indebtedness, precipitated a rapid rise in mortgage default and foreclosure rates. By the end of 2013, almost 20% of Irish residential mortgages were in arrears, while in Spain and the US, the figures were closer to 10% (ibid). An extensive literature from the US, particularly with regard to the subprime market, has documented the geographic concentration of mortgage defaults and foreclosures among low-income households, ethnic and racial minorities and neighbourhoods and how these are compounding existing patterns of inequality and disadvantage (Kaplan and Sommers, 2009, Martin, 2011, Niedt and Martin, 2012, Rugh et al., 2015, Thomas, 2013).

While the macro-economic impacts of the financial crisis are increasingly understood, there has been less focus on how households have experienced and responded to mortgage difficulties arising from the financial crisis (Hall, 2015, Murphy and Scott, 2014a, Wallace et al., 2014). Mainstream economic accounts understand mortgage default within an option theory framework, whereby a mortgagor pays down debt and avoids default as long as income flows are sufficient to meet payments without undue financial burden (Connor and Flavin, 2015). However, if the value of the property falls below the value of the outstanding mortgage, the household has negative net equity invested in the property and the mortgagor may strategically opt to default on the loan; albeit this decision is influenced by reputational costs, ethical considerations and the legal/ regulatory context (Guiso et al., 2009). The economics literature places a great degree of emphasis on the role of moral hazard regarding mortgage default and differentiating between those who strategically default (*i.e. those that can repay their mortgage but choose not to*) and those who default due to unaffordability. Indeed, some studies have suggested that between one-fifth and one-quarter of mortgage defaults may be strategic in nature (Guiso et al., 2013, Experian-Oliver Wyman, 2009). Such accounts suggest the financial crisis was caused by overly-exuberant consumers over-indulging on credit, yet when faced with unsustainable mortgage commitments these imprudent debtors have taken to strategically defaulting on their loans to gain more favourable repayment terms. Indeed, within the Irish financial sector the country's high rate of mortgage arrears is explained as a "*growing culture of strategic non-payment of debt*" (Davy Research, 2013), with some bank executives suggesting 20% of arrears cases result from strategic default (The Irish Times, 2013). This is despite the Governor of the Central Bank (2013) considering the term "*ill-defined in the Irish context,*" where its use is "*value-loaded*" and applied in an "*inauthentic manner which obscures the diversity and complexity of arrears circumstances.*"

Within more sociological accounts of mortgage default the option theory is criticised for failing to give an accurate representation of the lived experience of households in managing their debt. Indeed, Berry and Dalton (2000, 446) emphasise that the psychological and cultural significance ascribed to homeownership means that "*.....it is unlikely that mortgage default, so intimately tied up with personal and social identity, could be completely and adequately captured by the utility maximising calculus of mainstream economics.*" This literature emphasises households' responses to mortgage arrears and the lengths to which households go, and the sacrifices they endure, to try to maintain mortgage payments and remain within their family home (Ford et al., 2001). These coping strategies may be chosen voluntarily or forced upon by context and for some households adopted strategies are temporary inconveniences, while for others longer term strategies are necessary, involving deeper cuts to quality of life (Pickvance and Pickvance, 1994).

Coping strategies can take multiple forms and are influenced by individual circumstances, but typically lower income households are forced to adopt coping strategies which involve the greatest sacrifice and more penal strategies are also correlated with age, poorer quality housing and less attractive housing locations (Forrest and Kennett, 1996). Trying to maximise employment and income, while minimising household expenditure is a common response but is dependent on local labour

market conditions, the absence of employment constraints and the willingness to work additional hours (Wallace, 2011, Fields et al., 2007). Juggling bills in an effort to “*pay Peter by robbing Paul*” is also common, where the immediate bills get prioritised, often with the mortgage or credit card bills assuming secondary importance (Dominy and Kempson, 2003). Cancelling incidental expenses, such as insurance policies, to minimise expenditure can expose households to further financial vulnerability. Liquidating housing equity, or other family assets, may also be a response to generate income, but could leave the household vulnerable to future economic shocks (Thomas, 2013). Mobilising resources from within the family is also common and households in mortgage arrears often rely on financial and non-financial assistance from their wider family, including loan facilities, accommodation options and services such as child minding to allow one or both parents work (Pickvance and Pickvance, 1994). Borrowing from family can also be problematic, particularly if elderly parents are assisting adult children from savings or pensions (Kempson et al., 2004, Whitfield and Dearden, 2012).

However, the research outlined above has concentrated on the standard statistical indicators of mortgage difficulty (*i.e. arrears and reposessions*) to the detriment of those who have managed to avoid default but are nonetheless struggling to meet their commitments. How these struggling households are responding to challenges such as precarious employment, declining incomes, rising costs and household budget pressures, as well as additional debt commitments are key considerations to understanding the financial practices of households under recessionary conditions. Indeed, it may be the case that such households are only avoiding mortgage default by markedly reducing their living standards and quality of life, and may be placing themselves under severe financial and health pressures. Furthermore, there is a gap in knowledge with regard to the precise actions being taken by mortgagors to address their mortgage difficulties, nor is it clear the degree to which certain strategies are relied upon. To more fully understand the financialization of homeownership, it is necessary to examine how households have responded to the impacts of the financial crisis and highlight any structural or systemic barriers that might impede their ability to ameliorate their circumstances, while also informing how policy interventions might be better tailored to support their efforts. Before elaborating on the methodological approach to address these issues, the following section discusses the Irish experience with neoliberalism and financialization processes.

### **Centring Housing in Ireland’s Political Economy**

Ireland’s experimentation with neoliberal policy and practice is most visible in the triumvirate of policy arenas – *banking, housing and urban planning* - that produced the ‘*Celtic Tiger*’ property bubble. It was following the previous economic recession in the late 1980s that the State became increasingly oriented toward serving capital’s interests through market liberalisation, encouraging entrepreneurial freedoms and establishing *laissez faire* principles (Kitchin et al., 2012). These tendencies occurred initially from central government, with a gradual relaxation of state controls and an increasing emphasis on devising market-based solutions to policy challenges, perhaps best exemplified by the reliance on public-private partnerships to deliver social infrastructures (Hearne, 2014). There was overt facilitation of private capital through the fiscal system, particularly to capture and retain international capital through the adoption of a 10% corporate tax rate on profits (Williams and MaLaran, 2003). This was instrumental in attracting global banks to the International Financial Services Centre (IFSC), which became a key node in the global shadow banking system (Hendrikse, 2013). Over time neoliberal principles were increasingly adopted within local government too, evident in a more corporate ethos with regard to management, operational techniques and by the need to facilitate inward investment to fund local services (MaLaran and Kelly, 2014).

The liberalisation of financial markets and banking are key elements in the broader agenda of neoliberalization, where the State’s role is conceived as removing barriers to financial capital flows, enforcing competition rules and constructing facilitative institutional, legal and tax systems (Kelly, 2014). In line with liberalisation initiatives in the UK and US, and in preparation for European Monetary

Union, the Irish State introduced a series of liberalising steps from the mid-1980s including the cessation of formal guidelines for bank lending (1984), the deregulation of interest rates (1985) and the lowering of reserve requirement ratios (Barham, 2004). During the 2000s there was further emphasis within political and banking circles for less intensive regulatory approaches. In 2003 the Irish Financial Services Regulatory Authority (IFSRA) established a new regulatory framework known as the '*principles based approach*,' which involved establishing desirable regulatory principles in areas such as solvency, consumer protection and governance, and then working with banks to align their corporate objectives to meet the spirit, if not the letter, of such rules (O' Sullivan, 2010). However, in practice this meant Irish banks engaged in a profit maximization strategy by increasing lending to the property sector (Nyberg, 2011). Additionally, the IFSC drew a new financial community of accountants, bankers, lawyers and stockbrokers with expertise in financial innovation and access to international financial markets who could capitalise on this model of light touch regulation (Hendrikse, 2013). This was accompanied by an internationalisation of Ireland's banking sector, which saw the Irish banks borrow heavily from international credit sources to fund their development and mortgage lending (Riain, 2013). Furthermore, the establishment of foreign-sub-sidiaries within Ireland instigated intense competition between lenders for market share as well as financial innovation with regard to mortgage lending (Ross, 2009). Banks began to offer loans with longer amortisation periods as well as markedly increasing loan-to-value ratios, which rose from approximately 70% in 1992 to greater than 90% by 2006 (Lang and O'Leary, 1999, DOECLG, 2016). As Regling and Watson (2010) note, Ireland's property bubble was '*bank led*' through aggressive competition, the fostering of a lending '*sales culture*' and a decline in credit appraisal quality.

The liberalisation of Irish banking, and the '*wall of credit*' it created, was accompanied by sustained State support for the expansion of homeownership (Downey, 2014). Between 1946 and 2002, the share of Irish households who own their home increased from 53% to 77%, before declining somewhat to 70% by 2011 (CSO, various). Norris (2015) has suggested that Ireland's high rate of homeownership has been underpinned by (1) a progressive Catholic social philosophy of distributism rather than by the adoption of neoliberal ideology within Government; and (2) the retrenchment of Government spending on housing was driven by political considerations to reduce the public deficit rather than an attempt to liberalise the private market. However, as Mercille and Murphy (2015) contend, neoliberalization processes do not necessarily require overt political support for associated policies at the State level and are rarely advanced as a planned strategy, but rather emerge out of experimental '*nascent*' phases of restructuring, often in response to economic/ political crises, and these regulatory experiments, to varying degrees, promote the ideas espoused by neoliberal theory, namely deregulation, privatisation and reducing the role of the State.

We contend the Irish State has long supported the expansion of homeownership via the private house building sector and mortgage market and that successive governments have pursued this aim as a political tenure strategy. This has been achieved through mortgage market liberalisation, but also through the preferential treatment of homeowners through the fiscal system (O'Connell, 2007). Firstly, political reluctance to applying property taxes has long been a feature of Irish politics despite its ability to broaden the tax base and act as a counter-weight to house price inflation. In 1977, local property taxes were abolished as part of a populist general election campaign by the Fianna Fáil party, which served to dramatically reduce local authorities funding streams, ensuring their reliance on the central exchequer (ibid). Secondly, exemptions for capital gains tax and untaxed imputed rent benefits are available for homeowners, meaning the appreciation in value of the home is completely realised by the owner (Soaita and Searle, 2016). In 2006, the capital gains tax exemption benefitted 47,340 households at a cost of €2.4bn in tax revenue foregone, a sum equivalent to 4.3% of the total tax take in that year (Collins and Walsh, 2010, 37). Such generous tax advantages concentrate and enhance wealth among those able to access ownership, as well as constrain the role, size and effectiveness of rental tenures as credible alternatives (Downey, 2014).

Housing and homeownership have also been implicated in the neoliberalization of Ireland's urban planning and land use system, where a light-touch regulatory approach was also applied as part of an enabling agenda to promote economic growth. Fox-Rogers et al (2011) chart the neoliberalization of Irish planning legislation and the gradual '*entrepreneurial shift*' in the legal framework of planning which facilitated development interests and indirectly encouraged speculation in the property development sector. These changes included the introduction of fast-track decision making processes, extensive facilitation of pre-application consultation and an increasingly restricted environment for public participation in the planning process. Fox-Rogers et al (2013) specifically examine the informal interactions between local authority management and developers and demonstrate how these connections embedded pro-development agendas within planning departments and led to over-zoning of lands for development. Tellingly, in 2008 some 42,000 hectares of land had been zoned for residential development in Ireland; a figure that could have facilitated a doubling of the Irish population to 8 million (An Taisce, 2012).

The culmination of neoliberal reforms within banking, housing and urban planning created a major property bubble in Ireland from the mid-1990s. Between 1994 and 2006 annual house completions increased by 250% (26,800 to 93,000 units), yet increasing supply did not dampen house price inflation which increased by 346% for new houses in Dublin (DOECLG, 2016). Access to ownership was maintained by lenders' easing of underwriting criteria and expansion of lending volumes. Between 1994 and 2006 the number of mortgages advanced by banks increased 2.4 times from 45,000 to 111,000 (DOECLG, 2016). Households were enabled to borrow larger and more highly leveraged mortgages as per capita mortgage debt increased from €8,620 to €33,810 between 2000 and 2008 and the use of 100% LTV mortgages became more widespread (European Mortgage Federation., 2012, DOECLG, 2016). The extent of this over-lending was to have profound economic and social implications as Ireland's economic fortunes reversed in the wake of the financial crisis. Between 2008 and 2011, per capita GDP and median household incomes declined by 11% and 14% respectively, as the unemployment rate rose to 15% (CSO, 2014). The property market entered a precipitous decline as national house prices declined by 50% between 2007 and 2012, pushing half of all mortgages into negative equity (Duffy, 2014, CSO, 2016). Arrears rates increased to the point by mid-2013 where almost one-in-five residential mortgages were in arrears (n=142,892), owing a combined €2.2bn in missed payments (Central Bank of Ireland, various). Forty percent (n=57,163) of these cases are behind on payments more than one year and are at real risk of losing their homes. Indeed, since 2014 applications for home repossessions have increased dramatically in the Irish courts, and particularly in Dublin's suburban commuter belt (Holland, 2015).

## Methodology

Most studies of the impacts of the financial crisis on mortgagors focus on those experiencing mortgage default, while those who struggle to maintain their financial bearing and avoid arrears/ repossession are often overlooked (Botein, 2013). By failing to adopt a more contextualised definition of mortgage stress and by relying on banks' technical definition (*i.e.* >90 days of arrears), there is a risk of underestimating the extent of mortgage difficulties. Addressing this issue, Waldron (2016, 56-58) developed a more concrete set of indicators to identify and categorise households based on the severity of their mortgage difficulties. He proposed a mix of objective and subjective indicators to differentiate between those '*overt casualties*' of the crash (*i.e.* those that have restructured their mortgage, are in arrears or facing repossession) and those '*unrevealed casualties*' who are struggling with their mortgage commitments but who have not defaulted on their loans. In this approach, households were classified in the '*unrevealed casualties*' group as experiencing one or more of the following:

- Their mortgage represents a '*heavy burden*,' which may have negative implications for health and well-being (Libman et al., 2012)

- Have an *affordability problem* where they spend more than one-third of their net income<sup>2</sup> on the mortgage and have an income below €50,292<sup>3</sup>; and
- Have an *illiquidity problem* where they cannot meet an unexpected expense of €985<sup>4</sup> after their monthly mortgage payment and have an insufficient buffer to withstand financial shocks.

However, in a further refinement of this original classificatory approach, and based on a more granular examination of the data relating to the *'unrevealed casualties,'* we determine that the creation of an additional sub-group of mortgage stress is warranted. In the original classification of the *'unrevealed casualties'* a household experiencing one of the three conditions outlined above was treated the same as a household experiencing two or three conditions, even though the latter are experiencing more difficult conditions. As such, our revised framework, presented in Table 1, further disaggregates the *'unrevealed casualties'* into two groups. The *'low stress'* group is comprised of households experiencing one of the three indicators relating to payment burden, affordability or illiquidity problems, while those in the *'moderate stress'* group experience two or more of these conditions. The *'overt casualties'* remain those who are unable to meet their mortgage commitments and have had to restructure their loan, have entered mortgage arrears or have received bank notification of legal proceedings for home repossession. We utilise this categorisation to firstly examine the socio-economic profile of the mortgage stressed population to highlight differences within the groupings and examine the impact of mortgage stress upon quality of life. Thereafter, we explore the responses the groups employ to cope with mortgage difficulties and detail the precise actions taken. We demonstrate that as mortgage stress levels increase, households become increasingly proactive about managing their financial situation, but often face systemic challenges which can mitigate their efforts.

*Table 1 – Mortgage Stress Categorisations by Indicators and Measurement Thresholds*

Mortgage Stress Level	Indicator	Survey Question	Measurement Threshold
<b>None</b>	Experiences none of the stress indicators		
<b>Unrevealed Casualties</b>  <i>Low mortgage stress</i> (Experiencing one of)  <i>Moderate mortgage stress</i> (Experiencing two or more of)	Payment Burden	If you consider the current mortgage cost, would you say it is:	A Heavy Burden
	Affordability Problem	How much of the household's average After Tax Monthly Income is spent on mortgage payments?	>1/3 net income & net income <€50,292
	Illiquidity problem	If the household was met with an unexpected expense (circa €985) could it meet the expense without borrowing?	No
<b>Overt Casualties</b> (Experiencing one of)	Restructured	Is the household making reduced mortgage payments due to a restructuring of the mortgage with the lender?	Yes
	Arrears	Is the household currently behind on its mortgage payments?	Yes
	Legal Notice of Repossession	Has the household received notice of legal action from the mortgage lender regarding missed payments?	Yes

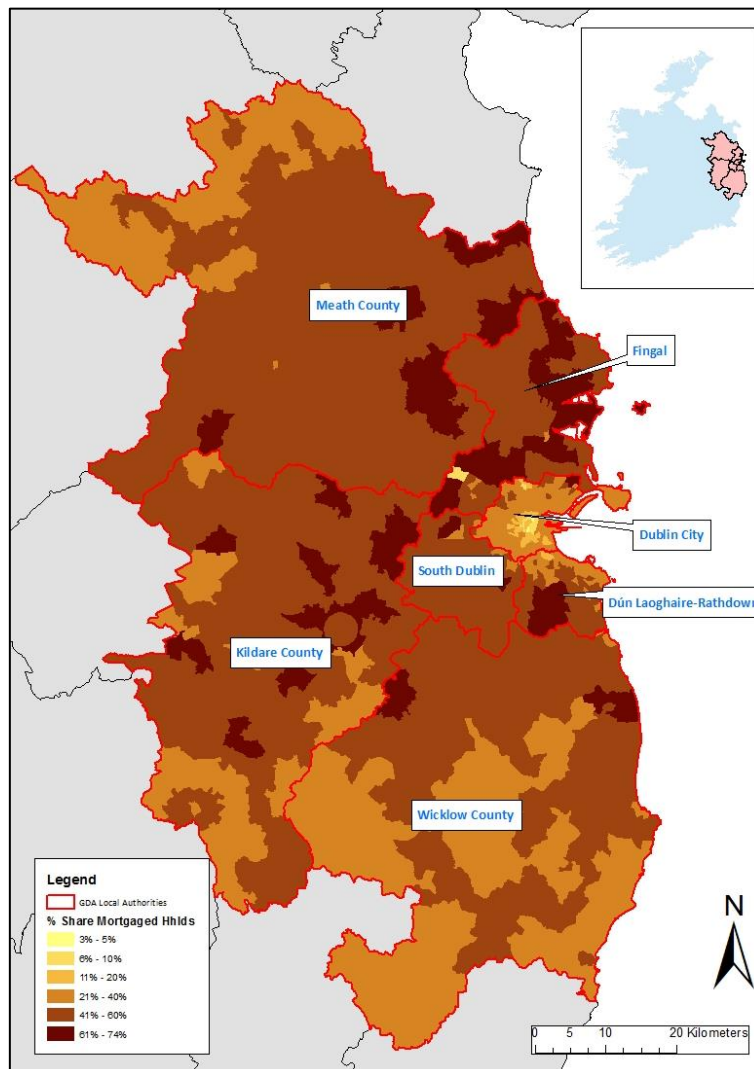
<sup>2</sup> The *'Planning and Development Act 2000'* considers a household to demonstrate an affordability problem if their housing payments exceed one-third of their net income

<sup>3</sup> This is the average net-income for an Irish mortgagor living in an urban area (CSO, 2012b)

<sup>4</sup> As per the guidance of the European Commission (2008), this figure of €985 is calculated from the national at-risk of poverty threshold which is equivalent to 60% of median monthly income.

As outlined elsewhere (Waldron and Redmond, 2015), the data for our analysis is drawn from a large scale, random household survey conducted among a representative sample of suburban Dublin mortgagors in 2012. The local authority of Fingal was chosen as the case-study site given it became the focus of intense land speculation, rezoning, housing construction and mortgage market expansion during the ‘Celtic Tiger’ years. Fingal displays very high concentrations of mortgaged households (Figure 1) and Census 2006 demonstrates some 55% (n=44,412) of Fingal households were mortgaged, compared to a rate of 35% nationally. Almost one-quarter (n=9,709) of these had been added in the preceding four years (CSO, various). This pattern of growth resulted from a spatial deflection of population from Dublin City to the periphery as rising house prices and housing demand interacted with poor housing supply in the City. At the same time, Fingal’s planning department adopted a particularly permissive approach to zoning, with 1,400 hectares of land zoned for housing by 2003, or 42% of all zoned residential land in the Greater Dublin Area (DOECLG, 2016).

Figure 1 – GDA Mortgagors as Percentage Share of Total Households, 2006



Source: (CSO, various)

A random sample of 5,000 households was drawn from the 102,176 Fingal households identified through the GeoDirectory address database. As GeoDirectory does not contain tenure information, the survey questionnaire was constructed to accommodate responses from all tenure

types. To analyse the extent of mortgage difficulties households were asked a series of questions regarding their house purchase, mortgage borrowing and payment history. To better understand the experience of mortgage stress we asked a series of subjective questions regarding households' quality of life in the face of mortgage stress, focusing on issues regarding health, economic vulnerability and life satisfaction as well as their responses to mortgage payment problems. Indeed, the economic and psychological literatures on quality of life have increasingly utilised peoples' subjective assessments of their own well-being to complement more traditional, objective measures, like income, and these have been shown to correlate well (Hicks et al., 2013). The questionnaire was largely designed with closed questions, although participants could elaborate upon their experiences in one open-ended section and these are used to support the quantitative findings. The survey was administered between April and May 2012 and yielded 914 responses, of which 433 were from mortgaged households. Elsewhere, we have demonstrated how this sample of mortgagors is reflective of the population from which it is drawn (Waldron and Redmond, 2015, 7).

The analytical approach employed a series of Chi-Square tests to examine whether statistically significant relationships exist between the mortgage stress categories and a range of financial and non-financial coping strategies to manage mortgage payment stress. We hypothesise that as mortgage stress levels increase, households must respond by (a) adopting a greater number of coping responses; and (b) must implement more punitive measures with greater impacts upon material comfort. Relationships are only considered significant at an alpha level of 0.05, as is standard for inferential testing in the social sciences (Field, 2009). We also provide the results of Cramer's V tests to measure the strength of association between the variables included. Cramer's V takes account of sample size and degrees of freedom and is expressed as a value between 0 (*complete independence*) and 1 (*complete dependence*). Rea and Parker (1997) note that most significant relationships are found to be moderate ( $>0.20$  and  $<0.40$ ) or relatively strong ( $>0.40$  and  $<0.60$ ) and that Cramer's V rarely achieves a value of 0.80 or above.

### **The Concealed Costs of Coping with Mortgage Stress**

Table 2 reveals the extent of mortgage payment difficulties is much larger than has been commonly accepted. Households in the '*overt casualties*' group account for 17% of total respondents (72), which is comprised of 56 respondents who had restructured their loans, as well as 44 respondents who were also in arrears and 4 respondents who have received legal notice of repossession proceedings. This figure compares exactly to the Central Bank's (various) quarterly data for Q3 2012 which demonstrated 17% of Irish mortgages were either in arrears, restructured or both. However, while political debate has focused on the arrears issue, the data reveals the extent of mortgage stress extends well beyond this group. Among the '*unrevealed casualties*,' 21% of respondents are struggling with a combination of pressures arising from affordability (49), illiquidity (81) and/ or mortgage payment burden (73) and are classified as being in '*moderate stress*.' Of the 91 respondents in moderate stress, 22 are experiencing all three stress indicators and 69 are experiencing two indicators. A further 25% of respondents (110) experience '*low mortgage stress*' levels and struggle with a single issue relating to illiquidity (72), affordability (9) or burdensome commitments (29). Indeed, it is quite revealing that only 37% of the full sample do not exhibit any form of mortgage stress based on our indicators and highlights the need to go beyond technical, bank-defined measures of mortgage payment difficulty (O'Neill et al., 2010).

Table 2 – Extent of Mortgage Stress among responding households (n=433)

Mortgage Stress Indicators	None	Unrevealed Casualties		Overt Casualties
		Low Stress	Moderate Stress	
<b>Total Respondents</b>	<b>160 (37%)</b>	<b>110 (25%)</b>	<b>91 (21%)</b>	<b>72 (17%)</b>
↳ Comprised of:				
Heavy Burden	-	29	73	-
Affordability Problem	-	9	49	-
Illiquidity Problem	-	72	81	-
Restructured	-	-	-	56
Arrears	-	-	-	44
Legal Notice Repossession	-	-	-	4

Table 3 presents the distribution of the mortgage stress groupings based on their socio-economic, demographic and mortgage product profiles, as well as chi-square test results to test the significance of these relationships. Firstly, it is interesting that none of the variables relating to the purchase of the property display any statistically significant variation beyond that which would be expected. Households who purchased during the peak of the bubble between 2006 and 2008 are over-represented among the overt (28%) and moderate stress (26%) groups but only slightly so. By property type there is also no statistically significant variation in stress levels, with semi-detached (generally 3 bedroom) houses accounting for the largest proportion of respondents (50%). We speculated that apartments and semi-detached units were more likely to be purchased as ‘starter homes’ by first time buyers (FTBs), who are generally younger purchasers who often leverage their borrowings more highly to get a foot on the property ladder. However, the data reveals that first time buyers and repeat purchasers are generally evenly dispersed among the mortgage stress groups; albeit they account for a greater proportion among the moderate stress group (63%). This is surprising as younger FTBs, who may be in the early growth phase of the family cycle and may not have reached their full earning potential, were considered more likely to be in arrears than older borrowers with more experience of the property market. This may suggest that profligate lending by the Irish banks was not necessarily targeted among certain demographic sectors, but was in fact quite a widespread phenomenon across the population.

The mortgage related variables, however, display clear correlative relationships with the mortgage stress categorisations. As the loan-to-value (LTV) ratio increases from  $\leq 85\%$  to  $\geq 96\%$  and the mortgage as a multiple of income increases, the proportion of households experiencing greater levels of mortgage stress rises sharply and both results are statistically significant. Indeed, among the overt casualties, some 28% display LTVs of 96% or more and 44% borrowed mortgages equivalent to five times their income or more. Conversely, among the no stress group, 50% displayed LTVs of 85% or less and 84% borrowed four times their income or less. High LTVs and debt-to-income ratios result in much higher monthly repayments, due to the higher overall debt burden and higher interest costs. It is unsurprising that those with higher repayments in excess of €1,500 are over-represented among the overt casualties (28%) and the relationship is statistically significant. However, it is notable that many of those in the low (66%) and moderate (70%) stressed groups actually have quite conservative and financially sustainable monthly repayment sums ( $\leq \text{€}1,200$ ). This suggests that the problems experienced by these groups may relate less to the overall size of the mortgage commitment, but may be more closely related to associated pressures arising from diminished incomes, un- or under-employment, increased taxation and high costs of living. From a policy perspective, the results lend support to the Irish Central Bank’s (2015) imposition of new LTV and debt-to-income ratio restrictions and suggests these should be retained as a priority.

Table 3 – Characteristics of mortgage stressed households

Independent Variables	None		Unrevealed Casualties				Overt Casualties		Total		Notes
			Low		Moderate						
	n	%	n	%	n	%	n	%	n	%	
<b>Year Purchase</b>											
2006-2008	26	16%	26	24%	24	26%	20	28%	96	22%	X <sup>2</sup> =5.631 P=0.131 Cramer's V=0.114
All Other Years	134	84%	84	76%	67	74%	52	72%	337	78%	
Total	160	100%	110	100%	91	100%	72	100%	433	100%	
<b>Property Type</b>											
Apartment/ Terrace	43	27%	34	31%	35	38%	17	24%	129	30%	X <sup>2</sup> =9.254 P=0.160 Cramer's V=0.103
Semi-Detached	78	49%	59	54%	43	47%	37	51%	217	50%	
Detached	39	24%	17	15%	13	14%	18	25%	87	20%	
Total	160	100%	110	100%	91	100%	72	100%	433	100%	
<b>Purchaser</b>											
First Time Buyer	80	50%	59	54%	56	62%	33	46%	228	53%	X <sup>2</sup> =4.771 P=0.189 Cramer's V=0.105
Repeat Buyer	80	50%	50	46%	35	38%	39	54%	204	47%	
Total	160	100%	109	100%	91	100%	72	100%	432	100%	
<b>Loan to Value</b>											
≥96%	17	11%	20	19%	15	17%	20	28%	72	17%	X <sup>2</sup> =14.542 P=0.024 Cramer's V=0.131
86% - 95%	61	39%	39	36%	42	47%	26	36%	168	39%	
≤85%	80	51%	48	45%	32	36%	26	36%	186	44%	
Total	158	100%	107	100%	89	100%	72	100%	426	100%	
<b>Mortgage Multiple of Income</b>											
≥5 times income	25	16%	28	27%	42	47%	31	44%	126	30%	X <sup>2</sup> =34.166 P=0.000 Cramer's V=0.285
≤4 times income	132	84%	77	73%	48	53%	39	56%	296	70%	
Total	157	100%	105	100%	90	100%	70	100%	422	100%	
<b>Monthly Mortgage Payment</b>											
>€1,500	27	17%	23	21%	13	14%	20	28%	83	20%	X <sup>2</sup> =15.528 P=0.017 Cramer's V=0.135
€1,201 – €1,500	20	13%	14	13%	14	16%	19	26%	67	16%	
≤€1,200	108	70%	71	66%	62	70%	33	46%	274	64%	
Total	155	100%	108	100%	89	100%	72	100%	424	100%	
<b>Household Income</b>											
≤€30,000	9	6%	9	8%	21	24%	27	39%	66	16%	X <sup>2</sup> =83.779 P=0.000 Cramer's V=0.258
€30,001 - €60,000	61	39%	56	53%	51	59%	32	46%	200	48%	
€60,001 - €100,000	68	43%	35	33%	14	16%	5	7%	122	29%	
>€100,000	19	12%	6	6%	1	1%	6	9%	32	8%	
Total	157	100%	106	100%	87	100%	70	100%	420	100%	
<b>Social Class</b>											
Unskilled & Other	6	4%	7	6%	6	7%	4	6%	23	5%	X <sup>2</sup> =32.615 P=0.000 Cramer's V=0.194
Non-Manual, Skilled & Semi-Skilled	40	25%	41	37%	39	43%	44	61%	164	38%	
Professional & Managerial	114	71%	62	57%	46	50%	24	33%	246	57%	
Total	160	100%	110	100%	91	100%	72	100%	433	100%	
<b>Employment Status (HoH)</b>											
Non Full Time Employed	9	6%	12	11%	11	13%	28	41%	60	14%	X <sup>2</sup> =50.755 P=0.000 Cramer's V=0.347
Full Time Employed	148	94%	96	89%	77	88%	40	59%	361	86%	
Total	157	100%	108	100%	88	100%	68	100%	421	100%	

Table 3 also reveals that mortgagors with weaker socio-economic profiles experience elevated levels of mortgage payment stress, and all results are statistically significant. Households with incomes below €30,000 account for just 16% of the full sample, yet are over-represented among the overt (39%) and moderate (24%) stress groups. Conversely, those without mortgage stress are over-represented among those with incomes in excess of €100,000 (12%). This concentration of mortgage stress among poorer households results from the large expansion in mortgage lending among lower income groups in Ireland and by a distinct decline in mortgage appraisal quality within the banks themselves (Regling and Watson, 2010). Higher mortgage stress levels are also evident among particular social classes, with 61% of those in the overt group and 43% of those in the moderate stress

group found among households from non-manual, skilled and semi-skilled backgrounds. Conversely, the majority of those without any mortgage stress (71%) are found among professional and managerial households. Demonstrating the effect of unemployment and under-employment in Ireland's mortgage crisis, 41% of household heads among the overt casualties are not employed full-time compared to a 14% rate across the full sample. At the time of survey in 2012, Ireland's unemployment rate stood at 15% while a further 7.25% of the labour force were considered under-employed (CSO, 2015). Interestingly, the moderate and low stress groups were slightly under-represented, suggesting their difficulties are not necessarily driven by lack of work but more likely by the fact that average incomes fell by 14.5% (€24,380 to €20,856) between 2008 and 2012 (CSO, 2012a).

### *Mortgage Stress and Quality of Life*

Having established the extent and socio-economic pattern of mortgage stress, Table 4 outlines three key issues with regard to impacts upon respondents' quality of life. Firstly, a significant relationship exists between mortgage stress and income change since the start of the recession. Almost 90% of respondents from both the overt and moderate stress groups indicated their income had declined in the preceding four years compared to 72% among the no stress group. Cutbacks arising from a series of austerity budgets from 2010 were identified by many respondents as impacting their quality of life and their ability to meet their financial obligations. Such measures have included increased income taxes and new taxes on water and property assets, as well as increasing indirect taxes, such as VAT, a new pension levy and Universal Social Charge<sup>5</sup>. Additionally, austerity budgets have led to substantial reductions in the social safety net, particularly through cuts to unemployment benefit, child benefit and disability allowance and in general, these have had more regressive impacts on lower income households (Fraser et al., 2013). Respondents' additional comments also highlighted the impact of reductions in basic pay as well as a less secure labour market. High mortgage interest rates are also identified as problematic, which is pertinent considering the average Irish interest rate charged on a standard variable mortgage is 3.6% compared to a Eurozone average of 2% (Lynch, 2016). Many also reported increased stress at work as a result of managing larger workloads with fewer resources which impacted on their personal lives:

*"With the increase in income taxes, PRSI<sup>6</sup>, tax on pensions, universal social charge, private health care increases, car tax, petrol prices increasing, utility bills increasing, clothes prices increasing, general goods prices remaining high, cost of eating out, car/ home insurance increases, mortgage rate increases...reduction in child benefits....Disposable income has disappeared....we're just existing, not living!" (Respondent 100).*

*"...the economic environment has made me worry about the future...my wife has had huge wage cuts and extra pressures in her job and the kids are suffering as a result..." (Respondent 382)*

Secondly, a significant relationship exists between mortgage stress and the degree to which households feel their lives have been affected by the recession, and the strength of association is moderate. While 78% of respondents indicated their lives had been negatively impacted by the economic crisis, this figure rose to almost 90% for both the overt casualties and moderate stress groups. Many respondents reported feelings of regret regarding their property purchases, and feelings of having let down the family were common. Some worried about how negative equity would constrain their ability to start, or expand, their families and have had to adjust their future life expectations. Others expressed frustration at the extent of over-development which had been

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<sup>5</sup> Universal social charge is a tax payable on gross income with rates varying between 2% and 7%

<sup>6</sup> PRSI is Pay Related Social Insurance and is charged to all employees and some self-employed persons and goes into the Social Insurance Fund which pays for welfare benefits and pensions

enabled by pro-development planning policies, and for those living on ‘ghost estates,’ high levels of vacancy, vandalism and anti-social behaviour had negatively impacted their views of their neighbourhoods. Our findings echo those of Murphy and Scott (2014b) who also find a relationship between overdevelopment and reduced life satisfaction and suggest the lax controls on housing development during the building boom had negative impacts on place quality (e.g. *over-development, inadequate infrastructure*) which are affecting the quality of life of local residents:

“...stuck in a very small two bedroom apartment...and a huge amount of negative equity. We are planning on starting a family....we worry about how this will impact our quality of life...” (Respondent 213)

“...Estate is unfinished and attracts anti-social behaviour from youth...people seem to dread having to live in a ghost estate like ours” (Respondent 218)

Table 4 – Relationship between Mortgage Stress Groups and Quality of Life Measures

Independent Variables	None		Unrevealed Casualties				Overt Casualties		Total		Notes
	n	%	Low		Moderate		n	%	n	%	
			n	%	n	%					
<b>Income Change Since 2008</b>											
Increased	24	15%	8	7%	6	7%	2	3%	40	9%	X <sup>2</sup> =23.542 P=0.001 Cramer's V=0.166
Remained Same	21	13%	7	6%	2	2%	4	6%	34	8%	
Decreased	114	72%	93	86%	81	91%	64	91%	352	83%	
Total	159	100%	108	100%	89	100%	70	100%	426	100%	
<b>Impact on Quality of Life</b>											
Positive	3	2%	6	6%	6	7%	3	4%	18	4%	X <sup>2</sup> =36.697 P=0.000 Cramer's V=0.207
Neutral	49	31%	16	15%	5	6%	5	7%	75	17%	
Negative	107	67%	87	80%	79	88%	63	89%	336	78%	
Total	159	100%	109	100%	90	100%	71	100%	429	100%	
<b>Number of Health Impacts</b>											
No Health Impacts	123	80%	50	46%	9	10%	2	3%	184	43%	X <sup>2</sup> =190.936 P=0.000 Cramer's V=0.387
1 Health Impact	23	15%	32	29%	31	34%	22	31%	108	25%	
2 Health Impacts	4	3%	9	8%	13	14%	13	18%	39	9%	
3 or more Health Impacts	4	3%	18	17%	37	41%	35	49%	94	22%	
Total	154	100%	109	100%	90	100%	72	100%	425	100%	

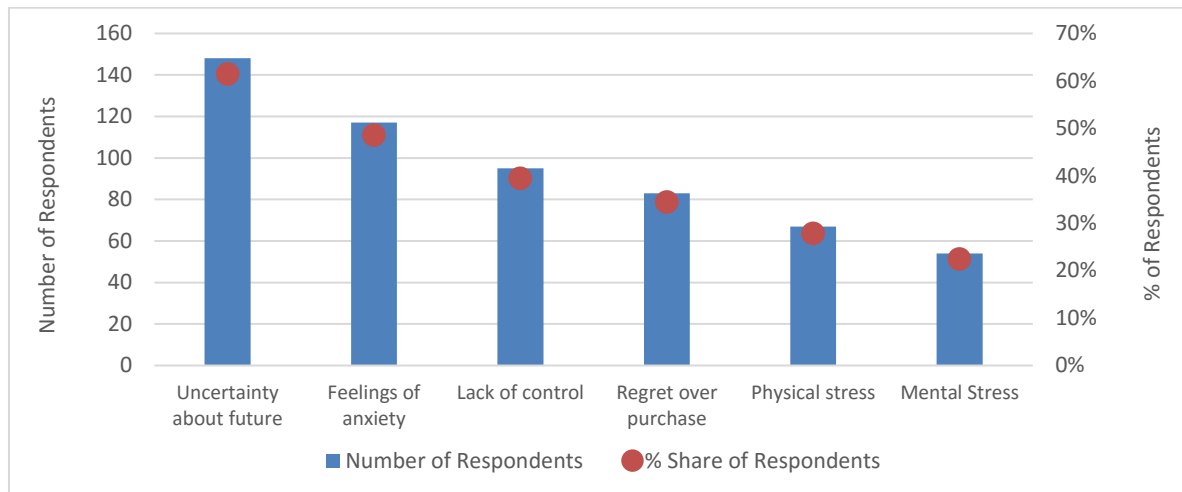
Thirdly, respondents could identify whether mortgage payment difficulties had affected their health from an extensive list informed by the literature (Libman et al., 2012, Ford et al., 2001). Table 3 confirms a significant and relatively strong association between the number of health impacts and mortgage stress. Across the full sample 25% of respondents experienced one health impact, while 9% experienced two health impacts and 22% experienced three or more health impacts. However, those experiencing mortgage stress have clearly been affected to a greater degree. Almost half of those among the overt casualties and 41% of those in the moderate group have experienced three or more health effects as a direct result of their mortgage commitments. Figure 2 demonstrates feelings of ‘*uncertainty about the future*’ (61%), ‘*anxiety*’ (49%) and ‘*lack of control over personal affairs*’ (39%) were the most common health impacts. These could arise from confusion regarding the future intentions of lenders, how future interest rates may adjust or how the household’s employment/ income situation may change. While 34% of respondents reported feelings of regret over their property purchase, approximately one-quarter reported physical (28%) or mental health (22%) problems. The latter is most concerning as the linkage between financial debt and depression, anxiety and, at worst, suicidal ideation is established (Meltzer et al., 2011, 773). Some respondents noted how ill-health and its associated costs had been a primary cause of their mortgage stress, while for others health issues were the outcome of mortgage difficulties.

*"...have a feeling of regret RE the purchase of the property... Have an expanding family...but unable to sell or buy. Just feel stuck!!" (Respondent 211)*

*"Due to physical injury...my husband was unable to continue working...We received a bill of approx. €5,000 hospital fees." (Respondent 353)*

*"...I feel like most people. I did nothing wrong...I ended up very unwell and had a breakdown....I don't deserve to lose my family home..." (Respondent 370)*

Figure 2 – Health Impacts from Mortgage Stress by Type



### Responding to Mortgage Stress

The survey asked a series of questions about household responses to mortgage stress where up to 35 individual measures could be selected relating to expenditure prioritisation, finance-related measures, employment and income maximisation and housing-related responses. The following discussion draws on the data in Table 5, which presents the numbers of households adopting multiple responses across each of the response themes, and Table 6 which provides a more granular view of the kinds of individual measures adopted. The findings suggest households respond to mortgage stress in a variety of ways, and rarely concentrate on a single measure. These responses often involve steep financial and non-financial adjustments, or force the mortgagor into decisions they are unaccustomed to, such as seeking social welfare payments.

Expenditure minimisation is the primary response to managing mortgage difficulties, with 67% of respondents cutting back on expenses and the association is both significant and relatively strong. However, households with greater levels of mortgage stress are enduring deeper cuts to their material comfort. Practically all of those in the overt and moderate stress groups sought to reduce expenditure, with the vast majority restricting spending in three or more ways. Given that the overt casualties exhibit lower incomes, more vulnerable employment situations and the most expensive mortgages it follows that the scale of their 'cutting back' in consumption is more difficult to bear. Table 5 details reduced spending on social activities, household necessities and utilities were the most utilised expenditure reduction measures as they are likely to deliver the largest short-term gains. Interestingly, however, the overt group account for a slightly lower proportion of these responses. This perhaps suggests that these households have reached a threshold that they are unwilling to go below in terms of further reducing their standard of living. However, they are also markedly over-represented among those cutting back by discontinuing health insurance, perhaps seen as a luxury expense in the context

Table 5 – Number of Expenditure Minimising Responses by Mortgage Stress Levels

Intendent Variables	None		Unrevealed Casualties				Overt Casualties		Total		Notes
			Low		Moderate						
	n	%	n	%	n	%	n	%	n	%	
<b>Expenditure Minimising</b>											
No Expense Response	110	71%	28	26%	2	2%	1	1%	141	33%	$\chi^2=215.683$ P=0.000 Cramer's V=0.410
Expense Response	46	29%	81	74%	89	98%	71	99%	287	67%	
Total	156	100%	109	100%	91	100%	72	100%	428	100%	
→ <i>Of which</i>											
1 Expense Response	25	16%	23	21%	17	19%	14	19%	79	18%	
2 Expense Responses	13	8%	22	20%	17	19%	4	6%	56	13%	
≥3 Expense Responses	8	5%	36	33%	55	60%	53	74%	152	36%	
<b>Financial</b>											
No Financial Responses	146	94%	67	61%	25	28%	5	7%	243	57%	$\chi^2=216.809$ P=0.000 Cramer's V=0.412
Financial Response	10	6%	43	39%	65	72%	65	93%	183	43%	
Total	156	100%	110	100%	90	100%	70	100%	426	100%	
→ <i>Of Which</i>											
1 Financial Response	7	4%	32	29%	36	40%	28	40%	103	24%	
2 Financial Responses	3	2%	7	6%	23	26%	19	27%	52	12%	
≥3 Financial Responses	0	0%	4	4%	6	7%	18	26%	28	7%	
<b>Missing Payments on Bills</b>											
No Missed Payments	146	92%	80	75%	47	52%	15	21%	288	68%	$\chi^2=138.434$ P=0.000 Cramer's V=0.329
Missed Payments on Bills	13	8%	27	25%	43	48%	55	79%	138	32%	
Total	159	100%	107	100%	90	100%	70	100%	426	100%	
→ <i>Of Which</i>											
Missed Payments 1 Bill	11	7%	15	14%	17	19%	20	29%	63	15%	
Missed Payments 2 Bills	2	1%	6	6%	17	19%	15	21%	40	9%	
Missed Payments ≥3 Bills	0	0%	6	6%	9	10%	20	29%	35	8%	
<b>Employment/ Income Maximising</b>											
No Employment/ Income Responses	140	90%	66	63%	33	38%	15	22%	254	61%	$\chi^2=125.014$ P=0.000 Cramer's V=0.317
Employment/ Income Responses	15	10%	39	37%	54	62%	53	78%	161	39%	
Total	155	100%	105	100%	87	100%	68	100%	415	100%	
→ <i>Of Which</i>											
1 Employment Response	11	7%	29	28%	37	43%	32	47%	109	26%	
2 Employment Responses	3	2%	9	9%	11	13%	14	21%	37	9%	
≥3 Employment Responses	1	1%	1	1%	6	7%	7	10%	15	4%	
<b>Housing</b>											
No Housing Response	153	99%	94	88%	68	77%	52	75%	367	88%	$\chi^2=35.746$ P=0.000 Cramer's V=0.292
Adopted Housing Response(s)	2	1%	13	12%	20	23%	17	25%	52	12%	
Total	155	100%	107	100%	88	100%	69	100%	419	100%	

Table 6 – Individual Responses by Mortgage Stress Level and Type

Independent Variables	None		Unrevealed Casualties				Overt Casualties		Total	
			Low		Moderate					
	n	%	n	%	n	%	n	%	n	%
<b>Total Expenditure Minimising Responses</b>	<b>77</b>	<b>10%</b>	<b>183</b>	<b>25%</b>	<b>242</b>	<b>33%</b>	<b>233</b>	<b>32%</b>	<b>735</b>	<b>100%</b>
Limit social spending	40	16%	76	30%	78	31%	56	22%	250	100%
Limit household spending	15	9%	49	29%	57	34%	48	28%	169	100%
Use gas/ electricity sparingly	10	8%	28	23%	45	38%	37	31%	120	100%
Discontinue health insurance	2	3%	9	14%	23	37%	29	46%	63	100%
Renegotiate bills	5	8%	10	16%	18	29%	30	48%	63	100%
Family assistance	3	6%	10	20%	13	26%	24	48%	50	100%
Discontinue child care	2	10%	1	5%	8	40%	9	45%	20	100%
<b>Total Financial Responses</b>	<b>13</b>	<b>4%</b>	<b>59</b>	<b>20%</b>	<b>102</b>	<b>34%</b>	<b>125</b>	<b>42%</b>	<b>299</b>	<b>100%</b>
Spend savings	6	5%	20	18%	39	35%	46	41%	111	100%
Borrow family/ friends	3	4%	16	20%	26	32%	37	45%	82	100%
Borrow bank/ credit union	0	0%	17	25%	23	34%	27	40%	67	100%
Sell assets	4	12%	4	12%	13	38%	13	38%	34	100%
Borrow employer	0	0%	2	67%	1	33%	0	0%	3	100%
Borrow moneylender	0	0%	0	0%	0	0%	2	100%	2	100%
<b>Total Missed Payments on Bills</b>	<b>15</b>	<b>5%</b>	<b>49</b>	<b>18%</b>	<b>80</b>	<b>29%</b>	<b>132</b>	<b>48%</b>	<b>276</b>	<b>100%</b>
Credit cards	9	10%	18	21%	30	34%	30	34%	87	100%
Utilities Bills	4	5%	13	17%	24	31%	37	47%	78	100%
Personal loan(s)	1	3%	4	11%	7	19%	24	67%	36	100%
Overdraft	1	4%	5	19%	7	26%	14	52%	27	100%
Loan family/ friends	0	0%	5	19%	10	37%	12	44%	27	100%
Missed payments second mortgage	0	0%	3	23%	2	15%	8	62%	13	100%
Hire purchase	0	0%	1	14%	0	0%	6	86%	7	100%
Loan moneylender	0	0%	0	0%	0	0%	1	100%	1	100%
<b>Total Employment/ Income Responses</b>	<b>20</b>	<b>8%</b>	<b>52</b>	<b>22%</b>	<b>79</b>	<b>33%</b>	<b>85</b>	<b>36%</b>	<b>236</b>	<b>100%</b>
Seek extra income	5	7%	19	27%	27	39%	19	27%	70	100%
Social Welfare	2	4%	10	19%	10	19%	31	58%	53	100%
Seek extra employment	4	8%	6	13%	24	50%	14	29%	48	100%
Spouse seek extra employment	2	7%	7	23%	13	43%	8	27%	30	100%
Spouse seeks extra income	5	21%	7	29%	5	21%	7	29%	24	100%
Move abroad for work	1	14%	2	29%	0	0%	4	57%	7	100%
Spouse moves abroad for work	1	25%	1	25%	0	0%	2	50%	4	100%
<b>Total Housing Responses</b>	<b>2</b>	<b>3%</b>	<b>14</b>	<b>23%</b>	<b>26</b>	<b>42%</b>	<b>20</b>	<b>32%</b>	<b>62</b>	<b>100%</b>
Rent out room and accept lodger	2	5%	13	31%	17	40%	10	24%	42	100%
Move to rental accommodation	0	0%	0	0%	4	67%	2	33%	6	100%
Live with family/ friends	0	0%	1	20%	2	40%	2	40%	5	100%
Purchase cheaper property	0	0%	0	0%	1	25%	3	75%	4	100%
Voluntarily hand property to lender	0	0%	0	0%	1	33%	2	67%	3	100%
Lease property to local authority	0	0%	0	0%	0	0%	1	100%	1	100%
Organise assisted sale	0	0%	0	0%	1	100%	0	0%	1	100%

of recession, and those attempting to renegotiate their bills. The overt casualties are also more likely to turn to their families for support in meeting their household's basic need, which highlights the important role that personal relationships play in coping with financial difficulty. Both the overt and moderate stress groups are also much more likely to discontinue childcare, which was a substantial expense for many and barrier to employment for some households. Indeed, the survey evidence suggests policies designed to support working parents and address the expense of Irish childcare, which is among the most expensive in the OECD (2015), should be supported as a priority:

*"...the high cost of childcare versus my salary, so will be a stay at home mum....I really have no choice but to leave my job" (Respondent 195)*

*"....childcare is €22,000 cash per annum, mortgage is €18,120" (Respondent 160)*

Liquidating savings and assets, borrowing and using credit cards can be strategic responses for overly-indebted households to meet everyday living expenses while attempting to manage heavy mortgage commitments (Thomas, 2013). Table 5 demonstrates a statistically significant and relatively strong association between mortgage stress and the number of finance-related responses adopted. While 43% of respondents across the full sample implemented some form of finance-related coping strategy, this rises to 93% among the overt casualties and of these, more than one-quarter have attempted three or more responses. The usage of financial responses was less among the moderate (72%) and low (39%) stress groups who were also more likely to only adopt one measure. Table 6 outlines the most common response was to spend savings on mortgage payments, to borrow from family and friends and to add to the overall debt burden through additional borrowings from a bank or credit union. The utilisation of savings on mortgage payments is potentially a risky strategy as it erodes the household's financial buffer and their ability to cope with additional economic shocks as revealed in the quote below, while the use of savings may also only stave off repossession pressures for a time. The data again highlights the key role of the wider family in coping with financial difficulties, particularly because households in mortgage stress are likely to have impaired credit ratings and are unable to access market finance and because families and friends are more likely to allow greater flexibility in repayment. However, borrowing from family could potentially expand intergenerational financial difficulties, particularly if elderly parents are assisting adult children from savings or pensions or through equity release from parental homes.

*"...Our savings have dwindled from €15k to €7k in two years and I may lose my job in four weeks... (Respondent 48)*

*"....our day-to-day spending would be reduced and a large bill necessitated borrowing from family on one occasion..." (Respondent 388)*

One-third of respondents indicated they were allowing some household bills to go unpaid in order to meet their mortgage commitments (Table 5) and the relationship is significant and of moderate association. Almost 80% of the overt casualties had missed payments on financial commitments and one-third of these (29%) were behind on three or more commitments. Half of the moderate stress group had also missed payments, though the extent was less in that only 10% had missed payments on three or more bills. The juggling of bills, where in a given month some payments are prioritised and others allowed to lapse, in tandem with the usage of credit cards to smooth household consumption can be a highly risky strategy for indebted households where fees, interest, penalties and arrears charges can quickly accrue. That credit cards were the most common form of financial commitment upon which payments were missed is revealing in this regard (Table 6). Seventy-eight respondents also indicated they missed payments on utilities bills, suggesting many were enduring physical and material discomfort and risking disconnection as a result of financial difficulty. Indeed, at the national level in 2011 some 300,000 gas and electricity customers had fallen into arrears on their utilities bills (Cullen, 2011). Those among the overt casualties also accounted for the largest proportions of those who had missed payments on other personal loans to banks (67%), on their

overdrafts (52%) and on loans to family and friends (44%). This might be explained by the fact that interest rates are much lower on these types of financial products, than say credit cards, while family and friends are also likely to be more sympathetic creditors. In addition, while the mortgage stress categorisation was based solely on mortgage problems associated with respondents' primary dwellings, a number of respondents reported difficulties with making mortgage payments on second properties. Across the full sample some 85 respondents reported having a mortgage on a second property, although it is unclear whether these were second homes or buy-to-let investments. Of these, 13 respondents (or 15%) had missed payments on this second mortgage and the majority of these (n=8) are found within the overt casualties. In some cases, the pressure of paying the second mortgage had impacted on a respondent's ability to pay the mortgage on their primary home with negative implications for their financial and mental well-being:

*"...The second property I bought with my now ex-fiancée.... We bought at the peak (2007) .... The house is in negative equity of €100,000 so it cannot be sold..." (Respondent 375)*

*"...Paying the mortgage on this second property... impacted upon me financially and I continue to struggle to maintain the property..." (Respondent 123)*

During difficult economic periods mortgagors are likely to try and improve their financial incomings by taking additional work, by working longer hours or by switching, where possible, to more highly paid work (Ford et al., 2001). However, such responses are often dependent upon additional considerations, such as the cost of childcare and the benefits of returning to employment relative to the expense of losing welfare entitlements. Table 5 demonstrates a significant and moderate association between increasing levels of mortgage stress and households' attempts to improve employment and income. Again, the overt (78%) and moderate (62%) groups are over-represented, although interestingly most of these households have only attempted one measure. Turning to the more granular data, Table 6 reveals that while the most common responses for those in the moderate stress group were to seek extra income (39%) and employment (50%), those in the overt group were overrepresented among those who sought social welfare entitlements (58%). A key issue here is the availability of adequately remunerated employment and the increasing prevalence of temporary, part-time employment. Some respondents may simply have stopped trying to find additional or alternative work, while others may have been discouraged by lower wages, the availability of only part-time hours or by employers seeking younger labour, while eligibility requirements for welfare entitlements could also be a factor determining whether households seek additional work. Many respondents highlighted these structural impediments to accessing employment, particularly in sectors related to the property bubble like construction, which in 2007 accounted for 13% of national employment (Mercille and Murphy, 2015, 49).

*"The stability of jobs has majorly impacted on our lives. As my husband's job is a lot less secure than mine, I have had to return to work full-time...to pay the mortgage as jobs are just not permanent anymore..." (Respondent 171)*

*"...since 2009 we have both been receiving social welfare payments on and off. We are both from construction related backgrounds and are finding it extremely difficult to secure work... guaranteed employment just isn't there" (Respondent 324)*

Given that half of all Irish mortgages were in negative equity by December 2012 (Duffy, 2014), it is unsurprising that housing-related responses were the least utilised coping strategies. Across the full sample just 12% implemented some form of housing-related response (Table 5). Approximately one-quarter of those in both the overt and moderate groups adopted some form of housing-related response and the result is statistically significant and moderately strong. Table 6 demonstrates that of the 62 individual housing responses adopted across the full sample, the most common action taken was to rent out a room and accept lodgers. Interestingly, this was a more common response among

the moderate group (40%) than the overt casualties (24%). A simple explanation, as revealed in the quote below, may be that mortgagors occupying smaller apartment and semi-detached units may place a greater premium on space, particularly where there is the presence of children. The additional tax burden, which could potentially push a household into a higher tax bracket, and the fact that average Dublin rents had fallen by 20% between 2008 and 2012, when the survey was undertaken, could have dissuaded homeowners from this option. The remaining housing responses, like renting the mortgaged property and moving in with family or friends or attempting to purchase a cheaper home, were not considered viable approaches by many households. Impaired credit ratings and the fact that the Irish banks markedly reduced their mortgage lending levels following the crash would have meant this latter option was likely to be unavailable for many. A further consideration was for mortgage stressed households to have their property voluntarily repossessed by the banks. However, very few attempted this response, particularly considering that in Ireland mortgage debt is considered full recourse lending, meaning that if the property was repossessed and resold at a value less than the outstanding mortgage, the borrower would remain liable for any shortfall. A small number of respondents were quite resentful of this fact, emphasising that lenders were co-responsible for unsustainable mortgage indebtedness:

*"...we are stuck in a very small two bedroom apartment with no balcony, no lift... We are planning on starting a family....we do worry about how this will impact our quality of life..."*  
(Respondent 213)

*"I feel that home repossession should be the end of the debt. I don't agree with owing the balance to the bank....a 50/50 split is the only fair option..."* (Respondent 76).

## Conclusions

Since 2008 an extensive literature has examined the role of financialization as a key explanation for the economic, social and political travails facing society. While there are many conceptual understandings of financialization (van der Zwan, 2014), only more recently has the role of housing been emphasised as a central aspect. This literature has particularly examined the socio-spatial patterns of mortgage defaults and foreclosures that accompanied the financial crisis and the manner by which a more risky, commodified form of homeownership was extended via a series of deregulatory steps and a plethora of financial innovations to stimulate both the demand and supply side of mortgage finance. However, there remains significant gaps in knowledge with regard to the lived experiences of the financialization of housing and particularly the ways in which the risks of an increasingly commodified form of homeownership are impacting upon households' health, material comfort and personal relationships. Furthermore, the manner by which households respond to the financial and non-financial impacts of mortgage stress and the financialization of home have also been overlooked. In this absence, financial sector accounts of the crisis have emphasised the prevalence of moral hazard and strategic default as explaining elevated mortgage arrears levels rather than it being first and foremost related to the reckless expansion of the mortgage market.

The results presented here demonstrate that mortgage stress, in combination with wider recessionary effects, has had a marked impact on mortgagors' quality of life. In support of Fields et al (2010) and Ford et al (2001), we find that mortgage payment difficulties are rarely caused by a single explanatory factor, but by a multitude of inter-relating debt, work, income, health and relationship issues, as well as speculative tendencies in the property market. Unemployment and declining incomes are clearly related to more severe instances of mortgage stress, but labour market restructuring, the increased prevalence of low wage, part time work and the unavailability of "good jobs" are also key explanatory factors. The imposition of additional taxes and the retrenchment in state social spending following the bailing out of national banking systems is also having an effect at the household level and contributing to budgeting pressures and mortgage stress. Indeed, we find

that the crisis of 2008 is experienced not just as a crisis in the housing and mortgage markets, but also as a crisis of employment provision and income security and a crisis in the provision of adequate welfare supports.

The survey evidence suggests respondents are far from passive about their financial difficulties, particularly among the most stressed cases, who undertake exceptional efforts to maintain their homes. Generalising beyond the Irish case, this is an interesting counterpoint to the mainstream economic literature on mortgage default where borrowers are assumed to '*exercise their option*' to default based on a rational comparison of the financial costs and returns involved in continuing or terminating mortgage payments. In these models, which can produce widely varying rates of strategic default, the presence of negative equity is regularly used to demonstrate a troubled borrower has an incentive to strategically default, while the absence of arrears on other credit obligations are often used to demonstrate a borrower has the ability to pay. The problem is that such proxies are used to explain borrower motivations in the absence of more reliable sources of data and a robust definition of strategic default. Furthermore, troubled borrowers are often assumed to be strategically defaulting when they fail to communicate with their lender about their mortgage difficulties. However, the reasons for non-communication can be complex and may not necessarily indicate strategic default (Waldron and Redmond, 2016). While we accept some level of strategic default is likely, there is little evidence to support the contention by some Irish bank chief executives that as many as 25% of arrears cases were driven by strategic defaulters in order to gain debt write-downs from their lenders (The Irish Times, 2012).

Indeed, the evidence presented here suggests a high degree of resourcefulness among stressed mortgagors and emphasises the degree to which they adopt multiple responses to try and maximise employment and income opportunities, while minimising expenditure and tapping resources beyond the home. The overt casualties of the mortgage crisis adopt a far greater number of responses in order to prioritise the mortgage. However, despite their inventiveness, such households often face insurmountable structural factors that impede their ability to remedy their financial difficulties. In 2012 a weak labour market, markedly reduced wages and the increasing prevalence of low wage work, a retraction in spending on social welfare protections were all factors diminishing households' efforts to increase income and employment. A depressed housing market, high levels of housing over-supply and vacancy in some areas, as well as weak consumer confidence, all contribute to negate strategies where stressed borrowers might trade their way out of mortgage stress. In some cases the prevalence of negative equity is restricting mortgagors in homes no longer suitable to their needs, while also reducing the pool of properties available to the market.

Finally, the research findings have a number of policy implications. Firstly, with regard to addressing over-indebtedness, interventions to assist troubled mortgagors such as debt counselling should not be limited to households in default and banks should expand loan modification strategies further '*upstream*' to prevent those struggling with mortgage payments from sliding toward a more severe default scenario. Secondly, our findings support the Central Bank's (2015) efforts to curb the reckless lending activities that fuelled the Irish property bubble. From January 2015 Irish banks have been restricted to lending mortgages with loan-to-value ratios of 80% and mortgage debt-to-income ratios of 3.5. However, these restrictions have been met with opposition from the property sector and were only tacitly endorsed by Government and whether they remain in place is uncertain (Construction Industry Federation, 2015, Department of Finance, 2014). Thirdly, this suggests that the '*ideology of homeownership*' as a means of facilitating capital circulation and promoting individualism remains strong within Ireland despite the Government's (DOECLG, 2011) most recent policy statement recognising the failings of Ireland's market-led system of housing provision and the need for a housing model with greater emphasis on tenure neutral housing policies and affordability (National Economic and Social Council, 2014). The failures of housing policy in Ireland also give rise to more fundamental questions about the viability of using homeownership as a form of asset-based welfare. The sheer

volatility of the housing market, with major oscillations in prices, high levels of mortgage arrears and extensive negative equity, undermines faith in the ability of home ownership to deliver the supposed benefits of asset-based welfare (Koppe, 2015, Ronald et al., 2015). The assumptions, at least of governments and of market agencies, of inevitable capital gains and easy access to equity are not in all cases justified, and this should lead to re-consideration of housing policies. In Ireland specifically, there are a number of questions to be asked about how housing policy is being developed and how likely it is to be implemented and these questions relate to path dependencies, the politics and ideology of property and whether the power of entrenched interests in the property market can be overcome. The danger is that the prospects of radically disrupting failed neo-liberal policies is limited and that the system will reset to the status quo and that Ireland's housing crisis will continue to worsen.

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