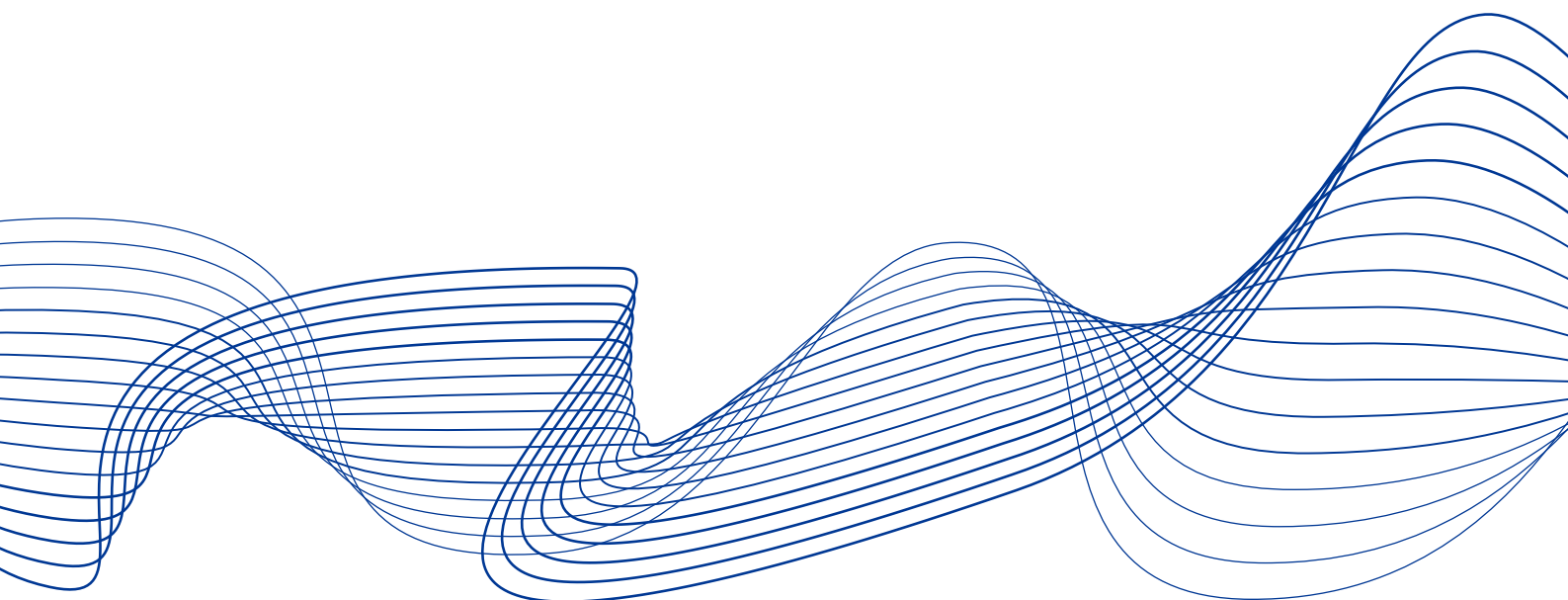


# Occasional Paper Series

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The economics of debt relief during  
a pandemic: lessons from the  
experience in Ireland

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## Executive summary

The coronavirus (COVID-19) macroeconomic shock was different from previous crises in terms of its speed, the severity of the resulting job losses, the fiscal support provided in response and the stability of house prices.

In response to this sudden shock and in line with European Banking Authority guidance, lenders in Ireland offered temporary COVID-19 payment breaks, or moratoria, to homeowners with mortgages.

COVID-19 payment breaks had minimal eligibility criteria, did not require a regulatory risk reclassification of loans and had no impact on borrower credit records. All of this enabled a rapid response that minimised costs to both borrowers and lenders.

As the initial payment breaks have expired, lenders have typically responded to a relatively small number of requests for further arrears support or restructuring by extending moratoria or other temporary arrangements.

Based on the lessons learned from research into the economics of debt relief since the global financial crisis, we view this initial response as appropriate for the specific, temporary economic shock that the Irish economy faced in March 2020.

As the pandemic progresses, the optimal future response of policymakers will depend on how both the labour and housing markets evolve. In circumstances such as those that prevailed in early 2021, when uncertainty and additional temporary liquidity shocks affected some sectors, additional extensions of payment moratoria or other short-term arrangements may be appropriate for some borrowers.

However, should it appear that income shocks were becoming more permanent, perhaps because of structural shifts in demand, or if house prices were to decline, longer-term solutions might be required, similar to those implemented after the global financial crisis.

In light of the successful pandemic response, we also consider the benefits of mortgage contracts that allow households to opt into payment moratoria or reduced payment levels in certain situations. To avoid incentive problems, this optionality would ideally either (i) have to be triggered by the declaration of a national emergency or (ii) perhaps more simply be time-limited or tied to periodic amortisation requirements.

In all cases, a major advantage of such optionality would be the automatic nature of the option. This would mean that there was no need for urgent coordination among policymakers or lenders to avoid issues such as credit records or risk classifications being altered as a result of the widespread requirement for payment relief.



# 1 Introduction

The economic shock resulting from the coronavirus (COVID-19) pandemic has caused exceptional levels of disruption around the world. With more than a year having passed since the onset of the pandemic in Ireland, the depth and uneven nature of the economic shock are now apparent. Although some sectors of the economy are experiencing no effects or even positive demand shocks, in other sectors – particularly service sectors requiring face-to-face interaction with customers – businesses and their employees have had to contend with disruptions to their incomes. Such disruptions risk becoming persistent in some cases as the public health situation evolves.

These developments have curtailed repayment capacity among the borrowers affected, as well as creating elevated levels of uncertainty about their future ability to make payments. In most advanced economies, including Ireland, the immediate effects of these repayment challenges were delayed by the system-wide provision of loan payment breaks, sometimes described as moratoria (or “forbearance” in the United States), which protected borrowers from the initial liquidity effects of the economic shock. In Ireland, COVID-19 moratoria were initially issued for a maximum of six months.

Income shocks experienced by Irish households have been cushioned by state fiscal support through the COVID-19 Pandemic Unemployment Payment and through the Temporary Wage Subsidy Scheme and its successor, the Employment Wage Subsidy Scheme.<sup>1</sup> These policy responses ensured that widespread credit risk events did not materialise in the immediate aftermath of the COVID-19 outbreak as initially feared, and the vast majority of borrowers who initially opted for moratoria have not requested additional support or forbearance at the time of writing.

Since the economic effects of the pandemic in Ireland and its disruption to incomes have outlasted the duration of the envisaged six-month COVID-19 payment moratoria, now is an appropriate time to assess the initial policy response and the ways in which the (currently relatively small) subset of borrowers struggling to meet loan repayments in 2021 could receive further forbearance and loan modifications. In this discussion, we also aim to draw lessons from developments during the pandemic so far, whether in Ireland, Europe as a whole or the rest of the world, to inform future debates about responses to other emergencies, regardless of their source, that may lead to rapid, unexpected and ultimately temporary disturbances to economic activity.

In this paper, we pursue four aims:

1. outline the characteristics of the economic shock to borrower repayment capacity resulting from the COVID-19 pandemic, and the mitigating effects of fiscal supports;

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<sup>1</sup> Central Bank of Ireland research estimates that the effect of these schemes, relative to a counterfactual where all recipients received only the traditional form of unemployment benefit in Ireland, was to reduce mortgage repayment distress rates by more than one half. See the [Central Bank of Ireland Financial Stability Review, 2020:I](#).



2. review the economics of mortgage modifications, highlighting a range of important economic and institutional factors that should be considered when recommending responses to specific instances of widespread borrower payment distress;
3. review the responses of policymakers and mortgage market participants to borrower payment distress during the pandemic so far, particularly in light of points 1 and 2;
4. discuss – in light of the success of the pandemic response – the merits of borrower optionality in mortgage contracts, which could have relevance either for the ongoing renegotiation of pandemic-related distressed loans or for new mortgage contracts.

We start from the observation that much of the prior literature on mortgage modifications relates to the global financial crisis (GFC). The GFC had at its heart a credit-fuelled asset price boom and bust in property markets, which resulted in both borrower income losses and collapses in property values (see, for example, Agarwal et al., 2017; Mayer et al., 2014; Piskorski and Seru, 2018). As a result, many mortgage borrowers in 2009-10 were deep into negative equity and faced long-term damage to their income-generating capacity. This meant in turn that they faced long-term insolvency. In this sense, there are significant differences between the GFC and an initially short-term emergency such as the COVID-19 outbreak. Most importantly, the COVID-19 shock was not credit-fuelled, featured important temporary liquidity shocks rather than widespread negative equity and had sector-specific dimensions that were uncorrelated with previous borrower behaviour.

Given the different nature of the COVID-19 shock, many of the modification tools that were effective in responding to the GFC were not necessarily optimal during the early phases of this current crisis. Based on our analysis of the economics and institutional features of the pandemic, we conclude that the initial policy response in Ireland and the EU was well suited to addressing the initial challenges to mortgage borrowers' repayment capacities. Furthermore, in the face of widespread uncertainty over future income flows for many borrowers in affected sectors, the initial continuation of temporary forbearance measures after the six-month moratoria expired in late 2020 (Kelly et al., 2021) has been in line with economic reasoning.

We finish the paper by discussing the merits of optionality in mortgage contracts. Given that the COVID-19 pandemic has highlighted the unpredictability inherent in our economic system, there are desirable features of flexible mortgage contracts that embed optionality for borrowers. Such optionality can, for example, allow borrowers to move between various levels of repayments in response to aggregate shocks without the need for policy coordination such as that seen in March and April 2020. Such contract alterations, which we explore in more detail in the paper, could potentially be appropriate to consider during renegotiations of existing mortgages for affected borrowers in 2021, or as features of new contracts that may improve resilience to future unexpected shocks.

We present our work as having general appeal beyond the policy response to the COVID-19 pandemic in 2020-21, which has been evolving at a rapid pace during the drafting of this paper. The characteristics of the pandemic imply that the conclusions drawn in this paper will have relevance in future crises with fast-moving shocks to borrower liquidity unrelated to ex ante credit and property market imbalances. While these future crises are of course currently unknowable, one can imagine that a future pandemic, or an emergency emanating from climate disasters or



geopolitical risks, may cause similar issues in the mortgage market to those experienced over the past year.



## 2 The economic effects of the COVID-19 pandemic in Ireland

The COVID-19 pandemic represents the second global economic crisis to hit the Irish economy in two decades. However, the differences between the two shocks are substantial, and as a result there are also critical differences in the appropriateness of the various policy responses.

The 2008 GFC followed a boom-bust cycle in bank lending and asset markets such as housing. This cycle was driven by factors including poor underwriting, weak regulation and exuberant demand. When the economy turned, unemployment rose in all the individual economies affected. Housing market crashes led to widespread negative equity, while income shocks proved to be long-lasting for many households. The debt overhang that followed led to sluggish recovery in many economies, with many homeowners' consumption levels being curtailed through wealth, collateral and wider general equilibrium channels (Mian, Sufi and Verner, 2017). In the case of Ireland, unemployment rose to 16% in 2011-12, with house prices falling by close to 60%.

As in many other jurisdictions, the COVID-19 pandemic in Ireland led to a sharp, unexpected shutdown of non-essential, in-person economic activity in March 2020, which entailed stay-at-home orders being issued and an increase in remote working. The initial effects included a year-on-year reduction in consumer spending of 22% in the second quarter of 2020, while domestic demand fell by 5.4% for 2020 as a whole. The speed of the labour market shock was not comparable to that in the previous crisis: the COVID-19 adjusted unemployment rate hit 30% in April 2020 and then fell to 15% in September, before rising to 25% in January 2021 as a result of public health restrictions associated with Ireland's third wave of the pandemic.<sup>2</sup>

As the year 2020 progressed, initial fears of widespread economic damage were replaced by a focus on the specific pockets of the economy where public health measures have had the most damaging effects. Divergence of economic fortunes across sectors is clearly apparent: income support schemes were initially taken up by more than 95% of all employees in the accommodation and food services sector, 84 per cent% in construction and 63% in wholesale and retail trade, whereas in most other sectors, fewer than 25% of employees received income support (Byrne et al., 2020). Sectors less affected by the COVID-19 pandemic, such as health, education and public administration, tend to have larger shares of mortgage holders.

Survey data from businesses corroborate this pattern of heterogeneity of the impact across industries. For over 70% of businesses in the accommodation and food services and construction sectors, turnover was down by more than half in May 2020 relative to pre-pandemic norms. The same was true for around 25% of businesses in other sectors (Lambert et al., 2020). Similar heterogeneity in business outcomes across sectors also occurred across other countries (see, for example, the discussion in Alekseev et al., 2020, for the United States).

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<sup>2</sup> The COVID-19 adjusted unemployment rate is calculated by the Central Statistics Office based on the number of recipients of Pandemic Unemployment Payment (PUP), who are not necessarily covered by the standard measure of unemployment defined in European Union law, plus recipients of social protection payments related to labour market search.



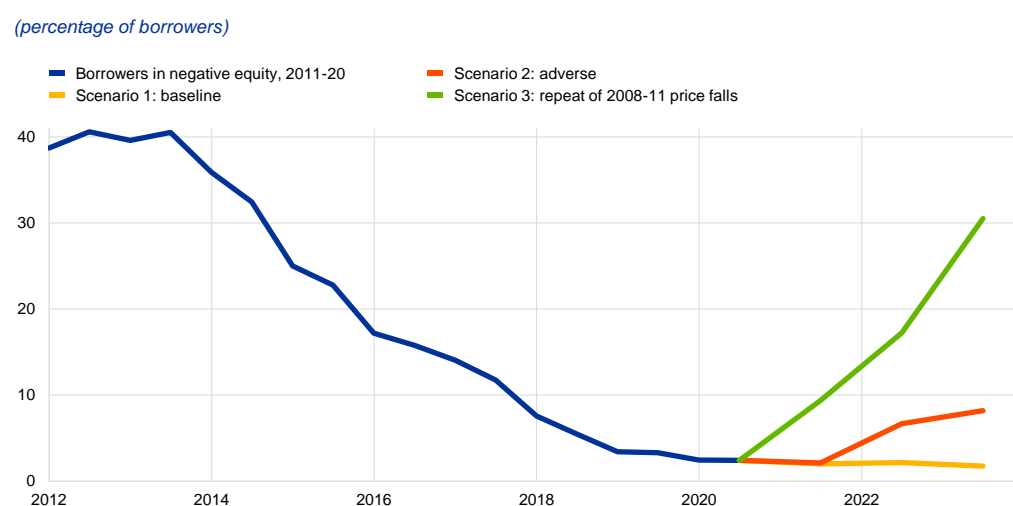


While the speed of the labour shock has been unprecedented, the effect on incomes has been muted relative to the previous crisis. This is due to the nature of fiscal support, both globally and in Ireland. Cahill and Lydon (2021) show that median household incomes fell by only 1.7% year-on-year in the second quarter of 2020, whereas without unemployment support policies, median incomes would have fallen by 20%. Cahill and Lydon estimate that around half of this policy impact is due to COVID-19 income supports and around half to pre-existing supports, which would have been available in the absence of exceptional pandemic policies. By contrast, in the previous crisis, workers losing their jobs could receive unemployment benefits of less than €200 per week, a significant income shock that led to challenges in servicing debts.<sup>3</sup>

An important feature of the shock from the COVID-19 pandemic is that house price declines were initially muted, reversed during the second half of 2020 and have grown rapidly in 2021. This is in contrast with housing market trends in the aftermath of the GFC and is in line with the experience of housing markets in other regions. House prices have been kept high by a combination of (i) weak new supply, driven in part by public health restrictions, (ii) the accommodative and unprecedented fiscal and monetary responses, (iii) forced savings due to public health restrictions and (iv) the relatively strong performance of incomes in sectors with high rates of participation in the mortgage market.

Consistent with house price developments, research by the Central Bank of Ireland suggests that under an adverse scenario, where house prices would fall by 20%, the share of borrowers falling into negative equity would not surpass 10% (Chart 1). This compares with over 40% of borrowers having been in negative equity in 2012. As we discuss below, these housing market trends have important implications for the optimal design of loan modification policies.

**Chart 1**  
**Percentage of borrowers in negative equity, 2012-20 and future scenarios**



Source: Central Bank of Ireland Financial Stability Review 2020:II.

<sup>3</sup> See, for example, McCarthy (2014) and McCann and O'Malley (2020).



Finally, we summarise the key differences between the two economic crises in Table 1.

Table 1

**Key economic developments relevant for debt relief design: the global financial crisis contrasted with the COVID-19 pandemic**

Feature	GFC	COVID-19 pandemic
House prices	Decline of 55%, 2007-13	Flat in 2020, rising in early 2021
Unemployment developments	Increase from 4% to 15%, 2007-13	Increase from 4% to 30%, March-April 2020 (COVID-19 adjusted rate)
Income supports	Unemployment benefits below €200 per week	Pandemic Unemployment Payment up to €350 per week. Wage subsidy for those retained in employment



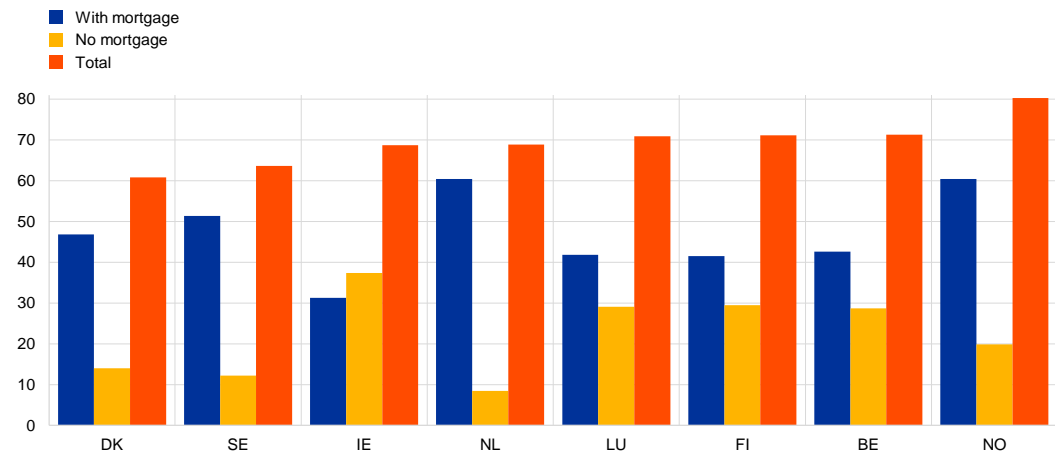
### 3 The Irish residential mortgage market prior to the COVID-19 pandemic

The share of the Irish population who own their homes is similar to the shares of the population owning homes in Ireland's peer group of European countries, although the share of households with mortgages is smaller in Ireland compared with the peer group (Chart 2). Housing credit from banks to households has decreased since 2009 as a result of lower lending volumes since the GFC, sales of distressed mortgage portfolios to non-bank firms and a rise in non-bank lending to households (Chart 3).<sup>4</sup>

Chart 2

#### Shares of population owning homes, with and without a mortgage loan

(percentage of households)



Source: EU Statistics on Income and Living Conditions (EU-SILC), 2019.

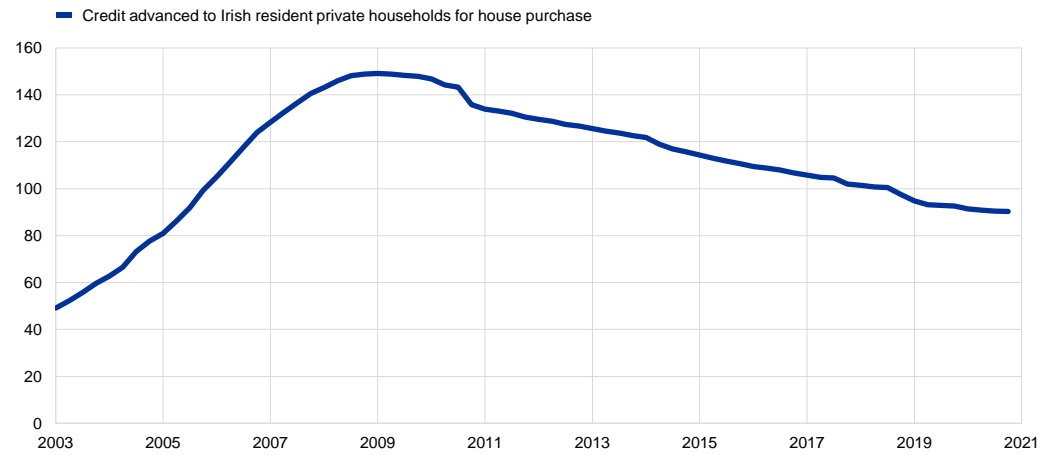
<sup>4</sup> Banks account for approximately 86% of mortgage lending to Irish households according to Central Credit Register data. The remainder is reported by non-bank lenders, credit servicing firms holding legal title to loan books sold by lenders, and local government authorities.



Chart 3

**Outstanding credit for house purchases from banks to Irish resident households**

(EUR billions)



Source: Central Bank of Ireland credit and banking statistics.

Note: Includes off-balance-sheet securitised loans serviced by Irish banks.

Immediately prior to the COVID-19 pandemic, Irish house prices had been relatively stable compared with the recent historical trend (Chart 4). In particular, the residential property price growth of the pre-GFC credit boom was followed by three years of extreme price falls, which in turn led to fast growth during the mid-2010s as the over-correction of prices reversed. These price developments affected all regions and property types.

Chart 4

**Irish residential property price growth, 2006-21**

(percentage change over the previous 12 months)



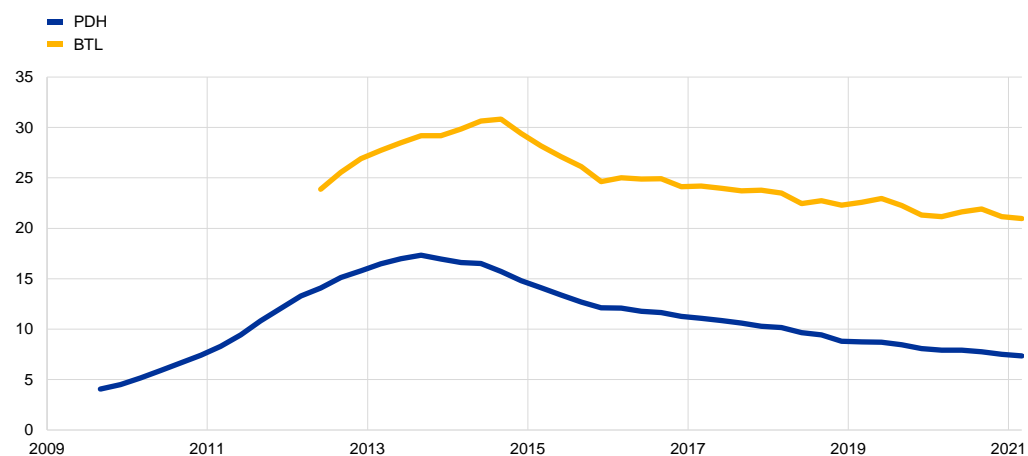
Source: Central Statistics Office Residential Property Price Index.



Residential mortgage arrears rates rose to historically high levels in Ireland after the end of the credit boom (Chart 5). Arrears rates peaked at 16% of owner-occupier lending during 2013, and at 31% of investor lending during 2014. After the peak, arrears fell as a result of the recovery in the Irish economy, new lending to customers not in arrears and mortgage modification policy, which is explained in detail in Section 5 below, which deals with standard mortgage modification tools. However, unlike in other countries, arrears rates in Ireland remain persistently high due to a large proportion of long-term arrears cases, where the owners of loan title have not foreclosed. In March 2021, the majority of lending in arrears over 90 days was in arrears of five years or more.

**Chart 5**  
**Shares of residential mortgage lending in arrears over 90 days past due**

(percentage of loan balances)



Source: Central Bank of Ireland residential mortgage arrears and repossessions statistics.

Note: PDH stands for private dwelling house; owner-occupier. BTL stands for buy-to-let; residential investment for non-occupier purposes.



## 4 The mortgage policy response to the COVID-19 pandemic

The economic shock induced by the COVID-19 pandemic was met with a strong global policy response. Fiscal authorities embarked on large-scale support packages for the real economy, bolstered by the commitment of monetary policymakers to purchasing sovereign debt. Much has been written elsewhere about the breadth and decisiveness of this response.<sup>5</sup> Here, we focus specifically on the mortgage market policy response.

Across Europe, market-wide debt moratoria policies comprised one important dimension of support to borrowers and lenders.<sup>6</sup> In Ireland, lenders responded to the pandemic by offering loan moratoria to households and businesses; these moratoria were referred to locally as “payment breaks”. Subsequent guidance from the European Banking Authority (EBA)<sup>7</sup> ensured that these moratoria did not oblige lenders to reclassify borrowers as having experienced elevated levels of credit risk, which greatly enhanced banks’ initial resilience to the pandemic shock and avoided the capital costs that would have resulted from such a reclassification. This favourable treatment applied to any market-wide moratoria without an individual credit assessment requirement; were banks to assess individual borrowers’ credit quality, this would imply a reclassification trigger for an increase in credit risk.

The Central Bank of Ireland confirmed at an early stage that availing of moratoria provided at the onset of the pandemic, without an assessment of financial distress, would not lead borrowers to obtain a record of “missed payments” or a “restructure event” on the Central Bank of Ireland’s Central Credit Register (CCR). This provided helpful clarification for lenders and borrowers.

In addition, moratoria did not require any change in interest rates. Nonetheless, payment moratoria may have involved other potential costs to the borrower. In order to maintain a constant net present value without principal or interest payments, a payment break required either an increase in monthly repayment value upon the resumption of the regular repayment schedule, or a longer maturity date to maintain the same monthly repayment that applied before the moratorium.

<sup>5</sup> See, for example, the [Central Bank of Ireland Governor’s Blog, 6 May 2020](#), for an overview of the monetary policy response.

<sup>6</sup> In the United States, the Coronavirus Aid, Relief, and Economic Security (CARES) Act, signed on 27 March 2020 and providing an aid package worth USD 2 trillion, also included a mortgage forbearance component (in addition to renter eviction protection and foreclosure moratoria). Specifically, borrowers with federally backed mortgages, who make up the vast majority of US mortgage borrowers, were eligible for a 180-day mortgage forbearance, with the option to extend this by another 180 days. Borrowers qualified if they had experienced medical or financial hardship caused by the COVID-19 pandemic, although no documentation was required to prove eligibility. Servicers were not allowed to assess additional fees or interests in connection with a CARES Act forbearance. Borrowers with federally backed loans covered under the CARES Act were reported as being current on the loan during the forbearance period. By mid-June 2020, about 8.5% of mortgages were estimated to be in forbearance, a number that fell to about 5.5% of mortgages by mid-December 2020. Combined with other forbearance programmes (e.g. related to student debt), this programme contributed to driving household delinquency below pre-pandemic levels, despite a substantial increase in unemployment. There is also some evidence that, despite the broad eligibility, forbearance relief ended up being somewhat targeted at those individuals most affected by the pandemic. For example, forbearance rates were significantly higher in regions with higher infection rates and larger economic declines (Cherry et al, 2021).

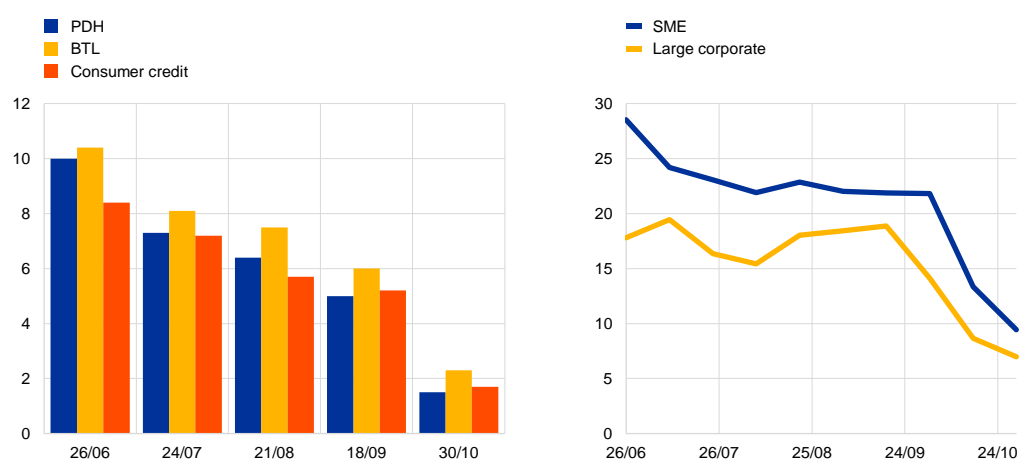
<sup>7</sup> [“Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis”](#), European Banking Authority, 2 April 2020.



Moratoria were available for all borrowers, with the adoption rate in Ireland varying across asset classes, reflecting the extent of the crisis among small and medium-sized enterprises in particular. Chart 6 shows that in June 2020, almost 30% of SME lending was subject to a moratorium, compared with 17% of corporate loan balances and around 10% of mortgage lending. The share of mortgages with a moratorium was around the average level among EU Member States in June 2020 (European Systemic Risk Board, 2021). Moratorium programme durations have varied across the Continent; the Irish programme's length of six months was common, but almost half of all moratorium programmes involved payment breaks with durations longer than six months.

**Chart 6**  
**Take-up of COVID-19 payment breaks by households and businesses in 2020**

(percentage of loan balances)



Source: Central Bank of Ireland supervisory returns.

Notes: PDH stands for private dwelling house; owner-occupier. BTL stands for buy-to-let; residential investment for non-occupier purposes. SME stands for small and medium-sized enterprise.

Gaffney and Greaney (2020) describe the characteristics of Irish mortgages on COVID-19 moratoria at the end of May 2020. About 40% of mortgages on payment breaks had a prior modification, compared with 20% of mortgages overall. Loans originated with high leverage were more likely to have payment breaks, including loans originated during the mid-2000s credit expansion, prior to the GFC. The regions with the largest share of moratoria included regions with large shares of lending originated during the mid-2000s credit expansion and regions with large shares of employment in the accommodation and food services sector, which was significantly affected by business closures due to COVID-19.

## 4.1 What has happened to borrowers as payment moratoria have expired?

A striking feature of Ireland's payment breaks is the relatively small share of the mortgage market that has required continued support following the expiration of the mortgage moratoria. Initially, of



the 10% of all mortgages that were on a moratorium for three months (“payment break 1”), 49% were subsequently extended by a further three months (“payment break 2”). Since the expiration, the Central Bank of Ireland has gathered information on the subsequent repayment situation facing borrowers. In total, 10% of all borrowers taking the initial payment break, or 20% of those requiring a moratorium for six months, had requested further forbearance or restructuring support as of early March 2021. In the SME sector, as of end-2020, close to one-fifth of “payment break 2” loans required further support through engagement with arrears support teams, while a further one-third initially moved back to full repayment, with extensions to the loan’s term to maturity.





## 5 Assessment of the policy response to mortgage repayment challenges

The rapid economic policy response to the COVID-19 shock developed over several weeks of unprecedented uncertainty. For example, the EBA published its first guidelines on COVID-related payment moratoria on 2 April 2020, only a few weeks after stringent public health restrictions became widespread in Europe. In this section, we assess, with the benefit of hindsight, the extent to which the tools implemented during this period were appropriate to the specific nature of the pandemic shock.

Our starting point is the observation that there is no universally optimal approach to loan modification: the best modification in one macroeconomic situation may be inferior in another. In this section, we describe the standard set of mortgage modifications used in Ireland prior to the pandemic. We then discuss economic factors that may affect the design of the optimal modification scheme. In light of these factors, we evaluate the policies actually implemented, concluding that the policy choices were appropriate in the initial stages of the pandemic.

In Ireland, mortgage modifications are generally selected from a relatively narrow suite of potential solutions, which are described in detail by McCann and O'Malley (2020). The process through which borrowers and lenders engage is governed by the Central Bank of Ireland's Code of Conduct on Mortgage Arrears (CCMA). In general, borrowers in financial distress initiate engagement with their lender, many of whom have had specialised arrears support units in place since the 2008 crisis. As specified by the CCMA, all engagement must be supported by the completion of a Standard Financial Statement (SFS), a rich, detailed return with information on income, expenditure, debts, assets and family circumstances at the time of engagement.

Lenders use SFS information to determine (i) whether to issue a modification and (ii) the type and terms of the modification if issued. However, borrowers are not obliged to accept the particular modifications that are offered by lenders. Labonne, McCann and O'Malley (2021) study modification decisions using the SFS returns from 2012 to 2016 and show that Irish banks pinpoint particular levels of repayment cuts based on repayment capacity as measured in the SFS.

Most mortgage modifications over the past decade fall into one of four broad categories.

1. Arrears capitalisation: Arrears balances are added to outstanding loan balances and borrowers resume repayments.
2. Term extension: Monthly payments are reduced by extending maturity dates.
3. Split mortgage: Part of the mortgage principal is parked in a "warehouse", falling due in a lump sum at loan maturity; the interest rate is typically zero. The remaining balance in the "main" note is paid down as a standard amortising mortgage.
4. Temporary arrangements which may involve a moratorium or an interest-only period, which are time-bound in nature, but often offer the most substantial immediate liquidity relief (see Labonne, McCann and O'Malley, 2021).



These options may be combined. For example, arrears capitalisation may be combined with a term extension to mitigate any increase in monthly repayments owing to a larger balance.

The relative use of these modification tools has evolved substantially over time. In 2011, close to 70% of modifications were temporary in nature. McCann and O'Malley (2020) document that by early 2020, the prevalence of temporary modifications had been reversed, with permanent changes of contract being the predominant form of modification.

In Table 2, we summarise modification tools that have been widely available up to now, along with alternatives that are currently uncommon in Ireland, and on which we elaborate later in the paper.

Table 2

**Mortgage modifications: current and potential applications in Ireland**

Modification	Benefits	Challenges
<b>Current, commonly-used modifications</b>		
<b>Payment breaks; moratoria</b>	Reduces monthly repayments; prevents build-up of arrears during a short-term lack of liquidity.	Temporary in nature so may be unsuited to deep distress; may delay a necessary sustainable forbearance; will lead to (a) a loss of net present value to lenders, and/or (b) borrowers having to make higher repayments after the temporary modification period.
<b>Arrears capitalisation</b>	Borrowers can refinance arrears after a short-term lack of liquidity; low cost to lenders.	Borrower must make higher repayments; unsuitable if income shocks are long-lasting.
<b>Term extension</b>	Reduces monthly repayments; low cost to lenders and can even increase net present value, depending on discount rates.	Borrower must continue debt and payments further into the future (e.g. retirement).
<b>Interest rate reduction</b>	Reduces monthly repayments.	Lender possibly foregoes interest income and profitability, depending on credit risk assumptions.
<b>Split mortgages</b>	Can achieve large upfront reductions in monthly repayments for borrowers; all principal is still owed, which may reduce moral hazard concerns.	No clear solution for warehoused debt, leading to possible uncertainty for borrower and/or lender; at retail banks, these products have often been classified as non-performing, requiring larger provisions for warehoused debt.
<b>Potential contract-based modification</b>		
<b>Borrower optionality to move between repayment levels</b>	Borrowers can switch repayment type in the event of a significant, unexpected, temporary shock; removes coordination challenges at institutional level; if the option is pre-agreed and meets regulatory requirements, it removes costs relating to participation and provisioning.	If state-contingent, requires the specification of circumstances in which the option can be triggered, not all of which are known ex ante, so the trigger may not be appropriate ex post; if the triggers are too broad or the option is made available without limit, borrowers may amortise less than expected, increasing indebtedness and the risk of negative equity; may still require a capital repayment solution at maturity.



## 6 Pandemics and the economics of debt relief

Following economic crises, it is often those parts of the economy with the highest levels of debt that have the slowest recoveries (Mian and Sufi, 2009), and the existence of household debt overhang has been cited as the source of slow consumption growth (Dynan, 2012). This is consistent with the predictions of simple models incorporating features such as heterogeneous default costs and asymmetric information, in which the existence of debt can harm economic growth (Eberly and Krishnamurthy, 2014). As a result, policymakers have paid increasing attention over the last decade to levels of household debt, implementing borrower-based macroprudential policies and a variety of debt relief policies that have become part of the economic toolkit for responding to economic crises.

We next describe a number of factors that are important to consider when designing debt relief programmes, with a specific focus on mortgage debt modifications (see also the discussions in Piskorski and Seru, 2018, and Amromin et al., 2020). These factors are likely to differ across countries, as well as within countries over time. This suggests that the appropriate response to economic shocks is also likely to differ over time, be it the existing toolkit described above or the introduction of new tools. In each case, we review the COVID-19 pandemic and policy response in light of these economic factors. We focus on six issues that arise in the economics literature on mortgage modification:

1. liquidity and solvency;
2. the degree of targeting;
3. the cost of default to borrowers;
4. the cost of default to mortgage loan owners;
5. interest rates and frictions to refinancing;
6. mortgage loan ownership structure.

### 6.1 Liquidity and solvency

In the case of mortgage loans, perhaps the most important criterion to consider when designing debt relief programmes is whether mortgage borrowers are primarily facing short-term liquidity problems, longer-term solvency problems, or both.

During the GFC, collapsing house prices meant that many individuals were in negative equity: the outstanding debt balance on the mortgage exceeded the value of the house. Economists investigated whether subsequent defaults and foreclosures were primarily driven by liquidity shocks, by the negative equity leading to purely “strategic” defaults by individuals who could afford



to make mortgage payments, or by a “double trigger” shock consisting of both liquidity declines and negative equity (Indarte, 2020; Ganong and Noel, 2020; Artavanis and Spyridopoulos, 2020). The relative importance of these types of defaults is likely to differ across countries, in part depending on the borrowers’ cost of default. In the Irish setting, O’Malley (2021) highlights the non-trivial role played by strategic defaults in response to a particular and temporary legal feature following the GFC. McCann and O’Malley (2020) have highlighted that liquidity shocks appear to have been deep and widespread among borrowers in mortgage default in Ireland during the last decade.

Understanding whether struggling borrowers primarily face a short-term liquidity crisis or a long-term solvency crisis is central to designing optimal policy responses. The relative relief to borrowers will need to be traded off against the fact that principal reduction programmes involve more upfront costs to lenders than forbearance programmes in which the missed payments are repaid later.

In the presence of large temporary liquidity shocks, mortgage forbearance policies such as those implemented in response to the COVID-19 pandemic could prevent most defaults. However, if there were substantial numbers of households in negative equity, permanent income damage and scarring effects, programmes that involved principal forbearance and potentially debt forgiveness should also be considered.<sup>8</sup>

When long-run repayment capacity challenges exist but lenders misdiagnose the situation as a temporary event, the use of temporary forbearance measures can lead to damaging long-term effects for borrowers, lenders and the wider financial system. This was the motivation behind the Central Bank of Ireland’s programme, initiated in 2013, to incentivise lenders to offer long-term, sustainable modifications to borrowers (Donnery et al., 2018).

Whether a particular crisis is primarily one of liquidity or solvency, and whether liquidity shocks are temporary or permanent, may be revealed over the duration of a crisis. For example, initial liquidity shocks due to COVID-19 lockdowns may turn into longer-term problems in households’ mortgage repayment capacity, particularly in sectors of the economy where global consumption patterns may be undergoing longer-term changes, such as tourism. Similarly, although house prices did not decline in European countries during the initial months of the pandemic, downside risks to house prices due to a tapering of policy support, a resurgence of the virus or a longer-than-expected path to recovery would require a change of focus.

## 6.2 The degree of targeting

One important decision in designing debt relief programmes is whether the programmes should be targeted narrowly towards individuals who most need them, or whether the programmes should be accessible to a wide range of individuals, including those with a less immediate need, which could increase the costs of debt relief while delivering less obvious improvements in welfare.

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<sup>8</sup> By “principal forbearance”, we mean cases where some mortgage balances are moved into the future, such as in the case of the warehouse component of a split mortgage in Ireland. All mortgage balances remain due, but monthly obligations in the short run are determined only by the size of the non-warehoused component.



One appeal of broader eligibility is that such debt relief programmes can be administered more quickly. More targeted programmes, in particular those requiring extensive documentation to verify eligibility, may slow down debt relief or discourage applications while borrowers' circumstances are deteriorating. At the same time, broader programmes are likely to be more extensive and costly since they can generate take-up from people without an immediate need.<sup>9</sup> The implications of wider take-up for the financial sector are more serious when assessing programmes that involve some principal and/or interest forgiveness, as opposed to a moratorium programme, which primarily involves the rescheduling of borrowers' obligations.<sup>10</sup>

While more generally accessible schemes may potentially lead to greater upfront costs for lenders, one must acknowledge that these costs are partial equilibrium in nature. In general equilibrium, it may be the case that a more rapidly deployed scheme with widespread eligibility may draw a line under wider economic problems more quickly, making it advantageous to the balance sheet health of lenders overall through macroeconomic channels, as well as offering potential benefits to other firms serving households.

A number of additional factors influence the extent of optimal targeting of loan modification policies. One practical consideration is the capacity of loan officers at lenders or loan servicers to process eligibility verifications. With limited capacity, the cost of increased targeting in terms of speed of disbursement becomes higher.<sup>11</sup>

A second factor determining the extent of precise targeting of the policy is the degree to which the effects of a particular shock are heterogeneous in a clearly identifiable way. The more heterogeneous the shock, the larger the benefits of targeting and the more concentrated the shocks are in clearly identifiable groups, the easier the designation and verification of eligibility of targeted policies will be.

### 6.3 The cost of default to borrowers

One benefit of debt relief programmes is that they can avoid certain direct costs of default, and in particular repossession, to borrowers and lenders. The extent of these costs plays an important role in considerations of how broad and generous debt relief programmes ought to be. Higher costs generally favour a more generous debt relief policy.

The relevant factors include economic costs of default to borrowers, such as lower credit scores or credit records marked by missed payments or forbearance (which will arise even if defaulted loans are modified and avoid repossession) or the costs involved in losing a house due to foreclosure, as

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<sup>9</sup> See Mayer et al. (2014) for evidence of the increase in default rates that followed the widespread announcement of modification eligibility in a specific case of bank failure in the United States.

<sup>10</sup> In the United States, which had a very broad forbearance programme in response to the pandemic, there is evidence that a number of borrowers in forbearance programmes continued to make their mortgage payments, suggesting that they viewed these programmes primarily as an option to reduce payments in response to possible future negative shocks, rather than being attractive even for people who can continue to make their payments.

<sup>11</sup> Agarwal et al. (2017) show that modification levels during the US Home Affordable Modification Program (HAMP) were driven by lenders' ex ante level of experience with modification issuance. Lower levels of participation in HAMP by lenders are then shown in the research to lead to a weaker regional economic recovery.



well as losses that may be more social or psychological in nature (see Guiso, Sapienza and Zingales, 2013, and Kuchler and Stroebel, 2020). The extent of these depends partly on whether mortgage default leads to an eventual foreclosure, which usually entails substantial personal and social costs.

## 6.4 The cost of default to mortgage loan owners

It is equally important to understand the costs of both default and debt relief to the ultimate owners of the mortgage loans, whether they are banks holding the mortgages on their balance sheets, non-bank investors who have purchased (and in some cases directly service) distressed portfolios, or investors in mortgage-backed securities.

Banks, in particular, may face regulatory capital implications from debt relief programmes. Once an adverse shock has occurred, and banks acknowledge the risk inherent in loans that are being modified, provisioning requirements will rise for these loans, as will risk-weighted asset densities, because forbearance is often used as a trigger in probability of default models that underpin risk weight calculations.<sup>12</sup> The macro-finance literature makes the case that, when banks suffer shocks to profitability and capital from loan impairment, they are more likely to curtail their lending supply, which may exacerbate economic downturns (Bernanke, 1983; Chodorow-Reich, 2014).

## 6.5 Interest rates and frictions to refinancing

During many economic crises, central banks reduce interest rates to stimulate the economy (Agarwal et al., 2018). If mortgage interest rates respond rapidly to a decline in benchmark interest rates, monetary policy can lead to an automatic reduction in borrowers' monthly payment obligations (Di Maggio et al., 2017). Unlike the payment obligations associated with forbearance policies, these interest rate reductions lead to a permanent decline in the overall payment obligations. However, borrowers may have fixed rate mortgages, or variable rate mortgages which do not respond rapidly to changes in the policy rate.

For fixed rate mortgages in particular, the extent to which declining interest rates help reduce monthly debt service expenses depends in part on the ease with which borrowers themselves can refinance their mortgages. This, in turn, affects the need for relief among borrowers facing liquidity constraints, potentially including debt relief.

During periods of declining house prices and economic distress, it may not be feasible for homeowners with negative equity or without documented income to refinance their mortgages, even if such a refinancing could help both the borrower and the lender by reducing the probability of default (Beraja et al., 2019; DeFusco and Mondragon, 2020). Therefore, programmes to reduce

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<sup>12</sup> The IFRS 9 accounting regime implies that, where a loan is modified and is not in default, it is classified as a "Stage 2" asset, which implies that it is performing but at heightened risk. Stage 2 exposures face provision coverage ratios that are significantly larger than Stage 1 exposures (those that are performing and are not at heightened risk).



frictions in refinancing can complement debt relief policies by permanently reducing the monthly payment obligations of some borrowers.

The effectiveness of these policies depends on (i) the shares of fixed rate and indexed mortgages, which vary across countries and over time; (ii) the distribution of interest rates; (iii) the extent of monetary policy reaction to the shock, along with the degree of constraint imposed on monetary policy and pass-through to borrowers by the zero lower bound; and (iv) the ease of mortgage refinancing.

## 6.6 Ownership of mortgage loans

Even in the absence of government mandates, lenders and borrowers can agree to mortgage modifications. These private market adjustments would usually involve mutually beneficial transactions, whereby borrowers gain from the reduced payments or reduced principal, and lenders benefit from the associated reduction in the probability of default.

The extent of such private debt relief will depend on a number of factors. The first is the extent to which the incentives of the mortgage servicers, who are often the party directly interacting with borrowers, deviate from those of the ultimate owners of the cash flows. For example, the ultimate owners of the mortgage loans may have an incentive to offer debt relief to borrowers, but mortgage servicers may not benefit from such relief, leading to too few modifications being agreed by the parties involved.

Since borrowers would almost always benefit from debt relief, low rates of private debt relief are usually the result of insufficiently strong incentives among lenders, or an overemphasis on short-termism. In systems with widespread government guarantees, such as the mortgage market in the United States, authorities can focus on debt relief for the government-backed sector. Alternatively, they can subsidise lenders to engage in debt relief negotiations, even though such offers tend to finance an element of debt relief that would have been agreed in the absence of public subsidy.

A related consideration is the geographical concentration of mortgage loan ownership. Researchers have documented substantial negative price spillovers from mortgage default and foreclosure. Foreclosure can cause nearby property prices to decline, which may push neighbouring borrowers deeper into negative equity. Lenders with geographically concentrated mortgage portfolios should thus be more willing to engage in private market debt relief programmes, since they are more likely to internalise the negative externalities from foreclosures. By contrast, lenders with more diverse portfolios may need more incentives to achieve the social optimum.



## 7 An assessment of the immediate policy response to the COVID-19 pandemic in Ireland's mortgage market

In light of the six economic factors of importance for mortgage modification policies outlined above, we now review the policy response to the pandemic in the Irish mortgage market.

### 7.1 Liquidity and solvency

In many ways, the early stages of the pandemic were a textbook example of a liquidity shock, where longer-term questions of solvency of borrowers were not pertinent, and the hope for a quick “V-shaped recovery” was widespread. There were no general declines in house prices or immediate indications of a permanent reduction in households’ ability to make payments. From this standpoint, the focus on payment moratoria rather than loan write-offs or longer-term relief was well suited to a crisis that appeared likely to lead to substantial, albeit temporary, liquidity shocks for individuals.

### 7.2 The degree of targeting

The initial policy response in Ireland was highly non-targeted, in that the simple declaration by the borrower of a need for relief was sufficient to qualify for a moratorium. The benefits of more restrictive eligibility criteria would probably have been small, and it is likely that they would have been outweighed by the costs of reaching fewer individuals facing temporary liquidity shocks and of offering moratoria more slowly. In this sense, the EU-wide moratorium guidelines issued in April 2020, and implemented in almost all Member States, represent a particularly well-designed policy response, with few implementation frictions and a rapid offer of relief in response to an exceptional shock, available to all who required it.

The larger-than-expected roll-off after the first three months of payment moratoria in Ireland described above suggests that many borrowers may have initially requested relief as a precautionary response to unprecedented levels of uncertainty. The roll-off was accompanied by modest changes to mortgage terms or monthly repayments for those borrowers, with minimal cost for either lender or borrower, and with no substantial moral hazard issues arising.

It is likely that targeting would have led to substantial implementation delays. By way of context, Labonne, McCann and O'Malley (2021) estimate that between 50,000 and 60,000 SFS files were completed per year at the height of the mortgage arrears crisis in 2011-13. Given that around 80,000 borrowers availed of payment moratoria, mostly during one to two months in the second quarter of 2020, the likelihood is that any additional reporting requirements to improve targeting would have overwhelmed the capacity of lenders to administer the moratorium scheme.





Looking beyond the initial pandemic response, the existence of a detailed mortgage arrears framework in Ireland, which was a necessary response to the previous crisis, ensures that targeting will be a natural consequence of engagement between lenders and borrowers for post-moratorium additional support. This framework, which ensures that lenders are provided with a rich information set as part of the renegotiation process, is outlined in detail by Donnery et al. (2018) and McCann and O'Malley (2020).

### 7.3 The cost of default to borrowers

In Ireland, moratoria did not lead to a change in borrowers' credit records on the CCR, meaning the policy response did not entail a missed-payment classification for borrowers, which is likely to have greatly increased the attractiveness of the scheme. While monthly repayments rose for borrowers who did not or could not extend their mortgage term, the design was such that the net present value of loan repayments remained constant.

From a moral hazard standpoint, there are two broad issues to consider: (i) whether the scheme's design means that those not requiring relief are likely to avail of it, as discussed in Mayer et al. (2014) in the US mortgage market; and (ii) whether the scheme leads to ex post changes in risk-taking behaviour, due to the relief offered or the expectation of further similar relief.

On (i), the fact that all principal and interest payments continued to fall due, with only a change in the scheduling of payments, suggests that the scheme was not a cause for concern over moral hazard, in particular given that in the prevailing low interest rate environment, delaying payments into the future had little effect on their present values.

On (ii), it must be acknowledged that any protective policy may raise moral hazard concerns by mitigating the worst outcomes of overborrowing. In the case of the Irish mortgage moratoria, for example, Gaffney and Greaney (2020) show that borrowers with higher origination loan-to-income and loan-to-value ratios were more likely to access a moratorium. The availability of such relief, combined with greater take-up among those taking greater risks ex ante, does suggest some marginal increase in the likelihood of future risk-taking due to incentive effects. Our assessment is that, given the nature of the shock, and the fact that the relief offered during moratoria was small in the context of a typical 25 to 30-year mortgage, it is likely that these effects are small.

Moving beyond these initial moratoria, the Irish system seems well equipped to mitigate moral hazard concerns arising from modification design. This is due to the existence of regular repayment requirements, the absence of debt write-offs, the requirement to fill out complete SFS forms and to undergo rigorous assessment before mortgage renegotiation, and the private nature of the negotiation without any public or third-party subsidy. The major moral hazard concern that remains in Ireland, and which pre-dates the pandemic, is the existence of an outside option to disengage from the renegotiation process completely, and to accumulate arrears without foreclosure through the courts system. While not widespread, this feature of Irish mortgage lending has led to levels of long-term mortgage arrears that are not seen in other markets (McCann, 2017; Duignan et al., 2020).



## 7.4 The cost of default to mortgage loan owners

Since EBA-compliant moratoria did not require risk reclassification, they imposed no impairment costs on banks. This capital preservation greatly lowered the cost of offering moratoria to borrowers, relative to a counterfactual where all borrowers availing of various forms of forbearance would have been reclassified as higher-risk, with resulting increases in provisioning. Along with a strong starting position due to a decade of increasing capital requirements under Basel III, macroprudential buffers, and strengthened liquidity positions, the EBA-compliant moratoria acted to bolster capital ratios in the banking system during a time of financial stress. In so doing, the moratoria performed an important macroprudential function, helping to avoid the credit supply crunches that were a common feature of the GFC.<sup>13</sup>

Over time, of course, it has become appropriate for borrowers requiring further post-moratorium support from lenders to be reclassified as having experienced increases in credit risk. These changes will result in capital charges for banks and affect their profits. For Irish banks, even in 2020 in the presence of moratoria, increased loan loss impairments were incurred in Ireland, mostly related to borrower risk reclassifications. These were the highest in Europe and amounted to 2.4% of the retail banking system's overall risk-weighted assets. Higher provision charges that related to elements of the IFRS 9 accounting reforms did not lead to reductions in bank capital ratios, due to the Capital Requirements Regulation (CRR)<sup>14</sup> "quick fix" package that elongated the transition period over which banks must take capital charges as a result of these reforms. This policy tweak at European level was another important lever with macroprudential features, which again contributed countercyclically to avoiding the risk of a bank capital shock leading to an amplifying credit supply shock during the crisis.

## 7.5 Interest rates and frictions to refinancing

While not a direct policy lever, it is useful to note the interest rate fixation situation in Ireland and its relevance to post-moratorium outcomes. The growth of mortgage interest rate fixation in Ireland during the 2010s has lowered the immediate effectiveness of mortgage refinancing as a crisis response tool, because lenders tend to charge fixed rate borrowers for early redemptions.<sup>15</sup> However, most fixed rate mortgage offers revert to variable rates after an introductory period of five years or less. After this period, which is relatively early in the lifetime of the mortgage, most borrowers will enjoy improved refinancing options upon moving to variable rates, suggesting that frictions due to interest rate fixation will be relatively minor.

With regard to the literature on borrowers becoming endogenously less able to refinance due to the nature of the crisis (e.g. through entering negative equity or unemployment), the Irish experience in 2020 is instructive. Numerous reports have highlighted that borrowers continuing in employment,

<sup>13</sup> Reductions in regulatory minimum capital ratios by European banking supervision and releases of the countercyclical capital buffer played a complementary role in reducing the risk of credit supply amplifications of the downturn.

<sup>14</sup> Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176, 27.6.2013, p. 1).

<sup>15</sup> In December 2020, fixed rate mortgages accounted for over 40% of outstanding mortgage credit and 80% of new mortgage agreements (Central Bank of Ireland retail interest rate statistics).



but working for companies availing of state wage subsidies, had their access to mortgages restricted during the early phase of the pandemic, suggesting a credit supply shock. For these borrowers, this type of credit supply tightening is precisely the type of barrier to refinancing that has been identified in the US literature in recent years, and, all else being equal, reduces the capacity of the household sector to respond to economic shocks by availing of competitive mortgage pricing.

## 7.6 Ownership of mortgage loans

In the case of Ireland prior to the pandemic, the ownership of mortgage loans, and in particular performing loans, was concentrated in five retail banks, which meant that the coordination of dispersed mortgage loan owners was not a significant impediment to the initial response to the COVID-19 pandemic.<sup>16</sup>

Looking forward, dispersed mortgage loan ownership could create more substantial challenges in cases where pre-pandemic distressed debt remains outstanding in 2021. In Ireland, loans with pre-pandemic arrears were much more likely to have been transferred to the non-bank sector through loan portfolio sales and securitisations. For example, 57% of loans with arrears balances above two years are held outside the retail banking system.<sup>17</sup> Among these, there are separate owning and servicing entities in many cases, which may lead to coordination frictions similar to those identified in the US literature after 2008 (e.g. Adelino et al., 2013). This may in turn lower the likelihood of successful debt relief programmes being issued.

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<sup>16</sup> Performing loans constituted the majority of COVID-19 payment breaks, whereas non-performing loans were treated on a case-by-case basis by many lenders, with more rigorous eligibility criteria applied than in the case of performing loans.

<sup>17</sup> Central Bank of Ireland residential mortgage arrears and repossessions statistics, December 2020.



## 8 Mortgage contract features in light of the experience of the pandemic: a role for increased borrower optionality

While we assess through our six-point framework that the initial policy response appears to have been well designed, one may wonder whether some of the responses implemented in a rapid and unprecedented fashion as a response to the pandemic could be effectively incorporated into mortgage markets in the future. In particular, the ability to transition rapidly and at low cost to a low-repayment or no-repayment period was crucial to the success of the policy response. These features of the COVID-19 response, if embedded more predictably into the mortgage market, could ensure that future temporary liquidity shocks do not cause permanent defaults and capital crunches even in environments where implementation frictions may slow down a formal system-wide response.

We approach this topic from the perspective that it may be beneficial to avoid any risks that come from future governments, lenders or regulatory agencies being less able or willing to respond as rapidly to future unexpected temporary shocks. In particular, we are investigating whether mortgage contracts can be adjusted so that, in the event of a widespread, rapid, unexpected event that hampers repayment capacity immediately but temporarily, some of the beneficial features of the pandemic response can be replicated so that:

1. the response occurs automatically upon the decision of a borrower, with the option being specified ex ante;
2. implementation frictions such as lenders' requirement to carry out eligibility assessments are minimised or removed;
3. lenders' costs such as those arising from the requirement for risk reclassification are minimised or removed;
4. borrowers' costs related to the existence of markings of the event on credit records are minimised or removed.

Many of the above features could be achieved by adding optionality components into standard mortgage contracts. Under such a contract, borrowers could, for a limited period, choose among several payment options each month. The options could include:

- several choices of traditional payments of principal and interest, corresponding to full amortisation over various horizons;
- an interest-only payment, which keeps the outstanding mortgage balance fixed;
- a minimum (or zero) payment, which is often less than the interest, and which will lead to negative amortisation, i.e. an increase in the outstanding loan balance.



From a financial stability and prudential standpoint, it is imperative that payment variation in this contract is temporary, and normal functioning of banking systems and risk management practices around forbearance must eventually be resumed, as has happened in Europe as payment moratoria have expired in 2020 and early 2021. This includes the need for lenders and borrowers to find sustainable solutions to prolonged challenges to repayment capacity. We also note that, in order to avoid a stigma effect associated with issuing more moratoria, the payment optionality discussed in this section would be most effective in cases where it is implemented market-wide, similarly to COVID-19 payment moratoria in Europe in 2020.

One benefit of this type of optionality is that mortgage borrowers, upon experiencing a liquidity shock, can temporarily reduce their monthly payment obligations, before returning to making larger payments once the liquidity shock subsides, as an option embedded in the initial mortgage contract. This means that, if borrowers switch to a lower-repayment option, this does not give rise to concerns regarding credit records or impairment costs for lenders. Perhaps even more importantly in the context of widespread shocks, there is no onerous eligibility assessment – the option would be available to the borrower automatically. Under these circumstances, potential implementation frictions during emergencies and other unexpected fast-moving events are reduced. However, it is not clear that these requirements for a proposal are compatible with supervisory requirements.

There are some clear concerns about providing borrowers with this optionality on a permanent basis, as is the case in certain contracts issued in the United States, such as the option adjustable rate mortgage (option ARM) that featured prominently in many narratives of the run-up to the GFC. For example, the permanent availability of low-payment or no-payment options raises concerns that borrowers might always choose the lowest payment option and thus fail to amortise loan balances. In other words, the lower-repayment options would not be used as a temporary response to liquidity shocks but would instead become many borrowers' standard repayment choice. Amromin et al. (2018), for example, show that in the United States, interest-only and reverse-amortisation mortgages were twice as likely to become delinquent as traditional contracts.

To address such concerns, we propose three potential avenues to explore when considering increased borrower optionality in mortgage contracts:

5. optionality triggered by an emergency-type event;
6. optionality for temporary repayment changes at borrowers' discretion, as standard within many contracts, but accompanied by mitigating clauses to lower incentive risks;
7. express assurance that, in future events, regulators have the capacity and willingness to issue guidance similar to that provided in March-April 2020.

On (1), optionality to move to a moratorium or low-payment option could be made dependent upon the declaration of a national or regional emergency by a government, or some other signal of a large, system-wide shock. The key economic characteristics of these events are that they are unexpected, aggregate and exogenous to borrowers, and that they result in widespread shocks to repayment capacity. These events should probably not include shocks that are idiosyncratic to borrowers or that occur regularly at turning points in the business cycle.



One concern related to a contingency on governments announcing an emergency is that the existence of a trigger in mortgage contracts may enter the decision-making calculus when future health, climate or other events emerge. If the opportunity to allow a large group of mortgage borrowers to avail of a payment moratorium were available, there is a risk that the responsible body might declare emergencies in order to activate the trigger, perhaps for political reasons, which could create financial stability risks. The extent of this risk may depend on the situation in individual jurisdictions. To mitigate any materialisation of this type of risk, we highlight that even where an emergency has been declared, the automatic moratorium should only ever be time-bound in nature. After the expiry, normally functioning credit risk assessment and impairment provisioning ought to resume, as has occurred in Europe in recent months among borrowers who continued to face challenges after moratoria expired.

A further concern relates to the theoretical risk of a panic. In principle, the declaration of a national emergency might trigger a general panic within society. Since banks are involved in maturity transformation, and are permanently exposed to the risk of runs, in extreme cases there is a risk that the announcement of emergencies to activate a trigger might lead to run-like events. However, it is likely that this type of emergency declaration would take place under extreme circumstances during which all stakeholders were fully aware of the severity of the situation, as occurred in early 2020. In such circumstances, it appears unlikely that the simple declaration of an emergency would lead to a change in perceptions of banking sector liquidity.

Another challenge in designing these contracts is that, in order to be beneficial in terms of reducing implementation frictions, the range of event types under which the optionality would be triggered, and the way in which these events would be legally designated, would need to be agreed ex ante and be clear to borrowers.

An alternative approach is to follow the literature on “state-contingent” contracts (see for example Piskorski and Seru, 2018) and make the transition to a low-payment or moratorium option contingent on a particular threshold value for a macroeconomic indicator, such as unemployment or house prices. Given that we are presently discussing unexpected, rapid, emergency-type events, one could consider linking the trigger not just to the level, but to the (short-term) growth rate in a key economic indicator. However, such contracts pose other challenges, including complexities that emerged in the measurement of unemployment in an environment with wage subsidies and exceptional income supports. In addition, they could possibly become an expected cyclical element of the credit market, and not a response to unexpected emergency events. Therefore, the longer-term usefulness of this approach may be limited in practice.

Finally, there are regulatory considerations concerning an emergency-type trigger that would also need to be fully understood before moving towards implementation of such a contract. For example, the existence of a clause relating to the declaration of an emergency, if triggered, may in practice require the invocation of “unlikely to pay” assessments, which would lead to impairments and capital shocks for banks. It would need to be determined whether an ex ante contingency such as that laid out above could ever be guaranteed to avoid these assessments, thereby meeting one of our key criteria: that the option does not lead to increases in impairment charges for lenders.

Option (2) above perhaps represents a simpler approach, whereby the right to move to a payment moratorium is embedded in standard mortgage contracts, with clauses to mitigate incentive-related



risks. Currently, some Irish mortgage lenders offer “payment holidays” on a case-by-case basis to borrowers not in distress, in general for reasons such as the arrival of a child and associated temporary reductions in earnings, or other increases in living costs. Importantly, payment holidays are only available to borrowers who declare that their repayment capacity has not changed permanently.

To avoid the market-wide costs and risks associated with option ARM contracts in the United States, an automatic right to a payment moratorium option would need to be accompanied by mitigating clauses. First, a maximum number of months over the lifetime of the loan could be specified, as is the case in some payment holiday options currently. Second, the contract could specify minimum amortisation requirements, perhaps over an annual or multi-annual assessment period. In addition, the initial underwriting should be based on households’ ability to repay on the largest repayment options (i.e. full amortisation over the planned term). This would ensure that, in the absence of prolonged unexpected developments, borrowers have the ability to pay off their mortgage over standard amortisation periods.

Crucially, in order for a payment moratorium option to be beneficial in responding to unexpected aggregate shocks, it would need to be the case that a borrower could opt into the moratorium in the first months of an unexpected shock without triggering “Stage 2” or “unlikely to pay” assessments at that time. If such classifications were required immediately upon exercising the moratorium or low-payment option, three key criteria in our framework would not be met: the lowering of participation costs for borrowers, the lowering of such costs for lenders, and the minimisation of eligibility criteria. It would need to be expressly understood that it is acceptable for a borrower’s repayment capacity to deteriorate temporarily, but that for the duration of the initial moratorium, this need not imply a risk reclassification of the longer-term credit obligation. It is not clear that this type of forbearance is generally possible under the existing regulatory framework.

A final consideration about options (1) and (2) is the potential interaction with macroprudential borrower-based measures to control system-wide leverage, such as limits on loan-to-income or debt service-to-income ratios. Macroprudential regulators may consider that the potential impact of such options would be reflected in the calculation of lending criteria at origination.

Option (3) would rely on the existence of assurances from financial regulators that similar guidance to that provided in March-April 2020 would be issued after similar events in the future. It opens up the prospect of such guidance becoming a feature of the mortgage market. This approach leaves the system open to implementation risk, such as the capacity to repeat recent policy achievements amid future market structures. Market participants would need to be certain that the future leadership of any agency would be amenable to issuing guidance that could meet the criteria for rapid crisis response laid out in this paper. This would be comparable to the challenge that embedding moratorium capacity in mortgage contracts would face: to achieve the combination of flexibility and commitment that would allow these different options to be rapidly and effectively deployed in future emergency events.

In sum, while the exact implementation of this type of contingent optionality would require further investigation, we believe that the benefits of a pre-agreed and correctly priced process for providing fast payment breaks in response to aggregate shocks are potentially large and are worthy of further investigation to identify the benefits and costs more fully. Such research could involve a full



consideration of the costs of moving to a market in which mortgage payments were more contingent.





## 9 Conclusion

The COVID-19 pandemic and restrictions caused a short-term liquidity shock among many households. We assessed the main policy response in the residential mortgage market in Ireland, namely the offer of a payment moratorium to affected households for up to six months as an immediate form of relief. In our assessment, the response in the household mortgage market in Ireland worked well based on several important economic factors, in particular given the expected short-term nature of shocks to household liquidity and the relatively resilient asset position of homeowners. Furthermore, the policy efforts to reduce participation costs and frictions for both borrowers and lenders increased the speed of response and provided macroprudential benefits by lowering the risk of an amplifying credit supply shock during a downturn.

However, looking ahead, a significant extension of liquidity shocks, or the development of solvency problems among households, would require a broader range of policy options to be considered, including longer-term mortgage modifications. We offer suggestions that would allow the high speed of the policy response to the pandemic to be repeated in future, by incorporating these options into the mortgage market more permanently.

Beyond the impact of the pandemic on households through increased unemployment, the pandemic has also negatively affected many small businesses trying to make loan payments and support economic growth, such as hospitality and tourism enterprises. When considering commercial credit policy, it is important to note the differences compared with household mortgages, including (i) the high prevalence of unsecured credit and personal guarantees; (ii) the range of corporate and non-corporate structures (including limited liability); and (iii) shorter maturities, leading to more frequent renegotiations between borrowers and lenders. These differences may in turn lead to recommendations that are different from those applicable to the more homogenous, collateralised and longer-term credit market for household mortgages.



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