AT RISK MORTGAGE HOLDERS

An analysis of those impacted by re-mortgaging using data from the HL Savings and Resilience Barometer



EXECUTIVE SUMMARY

In January, the FCA, in its response to the Treasury Select Committee, projected that 750,000 people could be "at risk of defaulting on their mortgage in the next two years". This eyewatering forecast came off the back of modelling by the Bank of England's Financial Stability Committee which projected that around 4 million owner occupier mortgage holders would be exposed to a rate increase over the next 12 months.

In this study, Oxford Economics have used our uniquely detailed forward looking database of UK household finances to explore this topic. Our key findings are as follows:

- On average, we find that households who will refinance their mortgage between 2022 Q4 and 2023 Q4 will experience an increase in their payments worth 3.1% of their net income. For a typically affected household, this would be approximately equivalent to an 80% increase in energy bills.
- According to our forecast, by the end of 2023 mortgage costs will exceed 25% of net income for more than a quarter of mortgage owner occupiers. In common with FCA parlance, we define these households as 'at risk' of default:
- Our analysis reveals the following major insights:
 - By the end of 2023, we expect there to be just over
 2 million 'at risk' households, which would mark an
 18-month increase of approximately 425,000.
 - Regionally, London appears to be more vulnerable.
 By the end of 2023, we expect almost 40% of mortgage holders to be 'at risk' compared to a national average of 25.7%.
 - Those becoming at risk are materially more likely to be younger. Despite accounting for just 46% of the market, our modelling indicates that Millennial and Gen Z mortgage holders will account for 61% of the increase.

- For many of those refinancing, the financial shock will be unpleasant but manageable. A virtue of the Barometer database is that it enables us to drill deeper by considering other aspects of this 'at risk' group's financial position.
 Specifically, we have identified the following:
 - At risk households with inadequate cash savings less than three months of essential spending – we refer to this group as at 'high risk'.
 - At risk households who combine inadequate savings with current unsustainable spending - we refer to this group as at 'critical risk'.
- Our analysis reveals the following key insights about those households who are likely to be most vulnerable to this financial shock:
 - Of those at risk, nearly one-in-three (650,000) are forecast to be classified as at high risk and nearly one-in-six (347,000) are forecast to be classified as at critical risk by the end of 2023.
 - Individuals who are not in relationships are approximately three times more likely than couple households to be 'at high risk' and more than five times likely to be 'at critical risk', all else equal.
- Households where the main earner is self-employed are more than twice as likely to be at high risk and critical risk compared to where the main earner is a full-time employee.

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MAIN REPORT

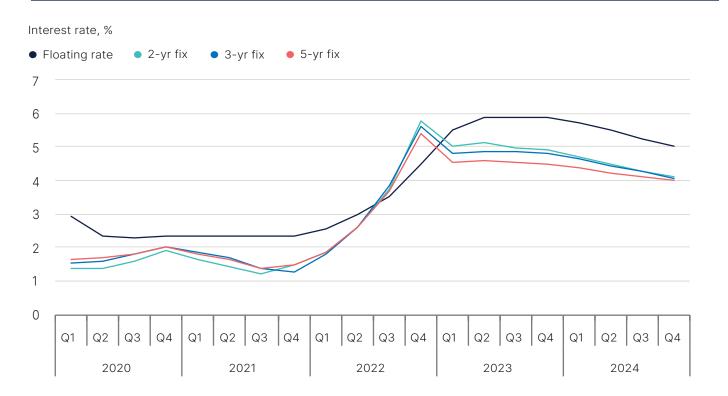
The era of cheap mortgage lending may be over

Since the start of 2022, increased inflation has contributed to a series of interest rate hikes by the Bank of England with mortgage lenders subsequently following. Mortgage interest rates increased sharply during the final quarter of 2022 after the government spooked the gilts market by announcing unfunded tax cuts during September's 'mini-budget'. With heightened uncertainty and rising borrowing costs, many mortgage lenders reduced their product offerings and increased their lending rates further.

The market has since calmed but our forecasts, which are broadly in line with current market expectations, imply that interest rates on mortgage lending will remain considerably above levels seen in 2022 H1 or, indeed, the past decade (Fig. 1). With most mortgage holders having switched to fixed-term contracts, higher mortgage rates will not impact all mortgage holders equally. Homeowners that are required to refinance their mortgages and those on variable-rate mortgages during this period face a sharp rise in mortgage cost compared to those who continue to be within their fixed term. In effect, 2023 will become home to a 'mortgage lottery'



FIG. 1. INFLATIONARY PRESSURE HAS LED TO HIGHER MORTGAGE RATES

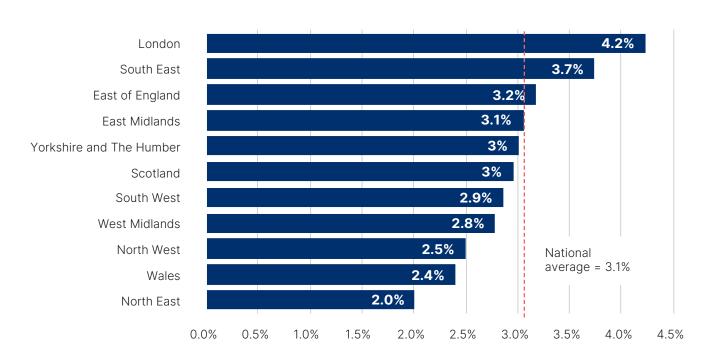


For refinancing households shock to essential spending will not be dissimilar to last year's energy crisis...

Based on our modelling, we expect that mortgage-holding households that refinance between 2022 Q4 and 2023 Q4 will experience an increase in their mortgage payments that is on average equivalent to 3.1% of their net income. For context, for affected households, our calculations suggest that this payment shock would be approximately equivalent to an 80% increase in energy bills.

Fig. 2 displays how this expected expenditure shock varies regionally across the UK, highlighting that mortgage-holding households in London and the South East can expect to suffer proportionately larger hits to their purchasing power. This reflects higher rates of leverage among borrowers in these locations with average loan-to-value (LTV) ratios significantly higher than the rest of the UK, largely due to higher price-to-earnings multipliers. Conversely, we expect proportionately lower hits in the North East and Wales where housing is relatively more affordable and hence mortgage-holding households tend to be less leveraged.

FIG. 2. LONDON WILL SEE THE LARGEST INCREASE IN MORTGAGE REPAYMENTS



Change in mortage payments as a share of net income 2022Q2-2023Q4

...eroding affected households' capacity to rebuild savings rates households' capacity to rebuild savings rates

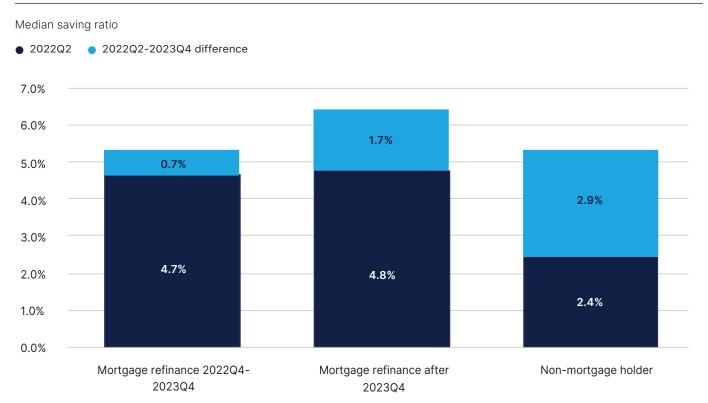
The findings in our January Barometer <u>report</u> highlighted that the expected easing of inflation would enable households to gradually rebuild their savings rates through the course of this year. This view has only been reinforced by the relatively positive set of economic developments that have occurred since then with the likelihood of worst-case scenarios related to energy price inflation having receded.

As shown in Fig. 3, however, mortgage refinancing households' capacity to rebuild their savings rate is expected to be much more constrained. According to our forecasts, the typical savings rate of a refinancing household will be just 0.7 percentage points higher in 2023 Q4 compared to 2022 Q2,

compared to increases of 1.7 percentage points for mortgageholding households that do not require refinancing and 2.9 percentage points for households that do not hold a mortgage.

The discrepancy between the latter two groups clearly highlights that trends in this savings recovery will be driven by other factors. Notably, those in the non-mortgage holder group are primarily renters who tend to spend a higher fraction of their spending on energy bills and, therefore, will disproportionately benefit from the predicted disinflationary trend this year.

FIG. 3. HOUSEHOLDS THAT ARE REFINANCING ARE EXPECTED TO SEE LIMITED IMPROVEMENT IN THEIR SAVING ABILITY UNDERPERFORMING OTHER HOUSEHOLDS



... raising concern regarding households' financial stability

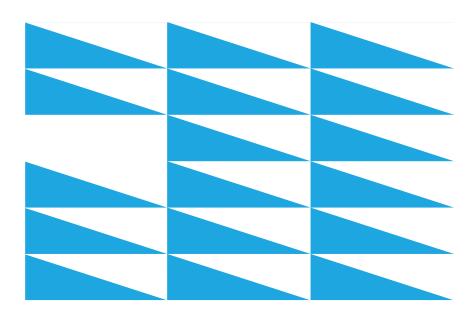
The combination of events has raised concern amongst policymakers. Indeed, in its January submission to the Treasury Select Committee, the Financial Conduct Authority (FCA) made some eye-watering forecasts suggesting that 750,000 people could be "at risk of defaulting on their mortgage in the next two years". This headline came in shortly after the Bank of England's projection that "In total around half of owner occupier mortgages (around 4 million) will be exposed to rate raises over the next year".

The headline prediction by the FCA reflected analysis which suggested that 200,000 households had already fallen behind on their home loans by mid-2022 i.e., before refinancing costs spiked. Those 'at risk' were identified as households where repayments were projected to exceed 30% of gross income with the modelling informed by an assumption that real incomes would fall by 10% during the forecast horizon.

Whilst the FCA's findings were a useful wake up call for the government and mortgage lenders on the potential scale of problems, the analytical framework used is relatively crude. In this research, we seek to develop more granular insights into the number and type of households who can be expected to be most at risk given contextual information on the wider state of their financial position.

- ¹ Information acquired from <u>Financial Times article covering</u> the topic.
- ² Financial Policy Committee of the Bank of England, "Financial Stability Report", December 2022, p.6





Key Findings: Mortgage Holders At Risk Of Default

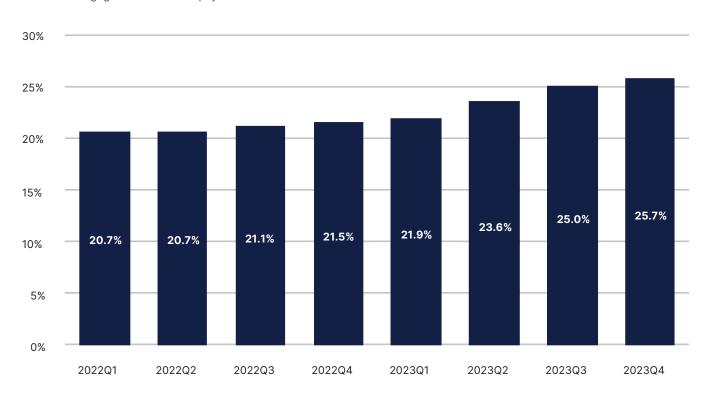
At risk mortgage holders forecast to surge by nearly 20% during 2023 covering an extra 425,000 households

For our analysis, we have defined a mortgage-holding household as 'at risk' when their payments are expected to exceed 25% of the household's net (after tax) income. We think that using net income is more instructive than gross income since it offers a more accurate view of how any expenditure shock will affect their financial position and, for example, how it might influence their ability to save and finance spending.

Fig. 4 lays out the expected trajectory with the share of at risk mortgage-holding households forecast to increase to 25.7% by the end of this year, up by five percentage points or nearly 20% compared to 18 months previous. Based on our database, this increase would amount to 425,000 households bringing the total up to just over 2 million by 2023 Q4.

FIG. 4. HIGHER REFINANCING COSTS PUSHING MORE HOUSEHOLDS OVER THE THRESHOLD

Share of mortgage holders with repayments over 25% of net income



Source: Oxford Economics estimates

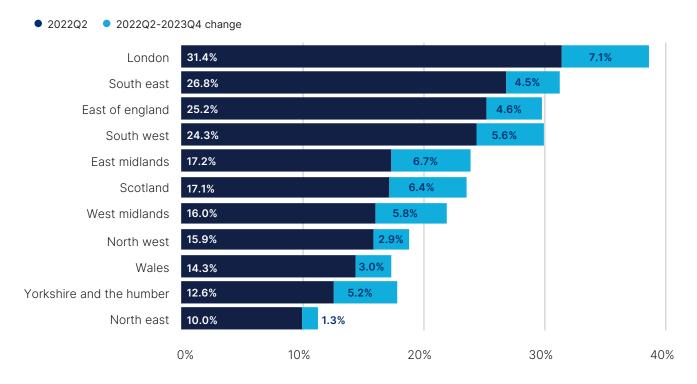
Increase in 'at risk' cohort disproportionately weighted towards younger and London-based homeowners

Starting regionally, we again identify London as the area of the UK where mortgage-holding households will be most vulnerable to higher refinancing rates. As shown in Fig. 5, the share of mortgage-holding households whose repayments will be at least 25% of net income is projected to increase by 7.1 percentage points in London, a rise that is more than 40% higher than the national average rate. Moreover, reflecting greater leverage, London was already home to

proportionately more stretched mortgage holders. Indeed, by the end of 2023, our modelling implies that the at risk share of mortgage-holding households will have reached 38.5% far in excess of that national average figure of 25.7%. Despite a smaller increase, hosueholds in the South East are also disproportionately likely to be classed as at risk according to our definition.

FIG. 5. LONDON HAS THE LARGEST RISE ON TOP OF A HIGH HISTORICALLY HIGH PROPORTION

Share of mortgage holders with repayments over 25% of net income

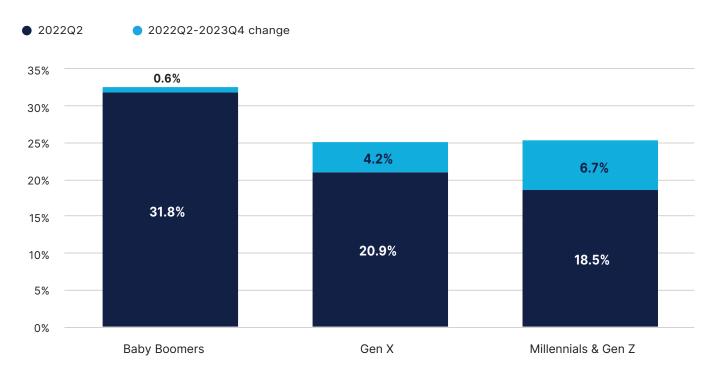


When we review patterns through the lens of age, similar dynamics play out. Households that are expected to become vulnerable due to refinancing are overwhelmingly concentrated amongst younger cohorts (Fig. 6). As dispalyed, our modelling suggests that 6.7% of Millennial or Gen Z mortgage-holding households will see their payments increase above 25% of net income by the end of 2023, compared to a share increase of 4.2 percentage points for Gen X mortgage holders and just 0.6 percentage points for the Boomers.



FIG. 6. YOUNGER MORTGAGE HOLDERS ARE MUCH MORE LIKELY TO BE PUSHED INTO VULNERABLE TERRITORY

Share of mortgage holders with repayments over 25% of net income



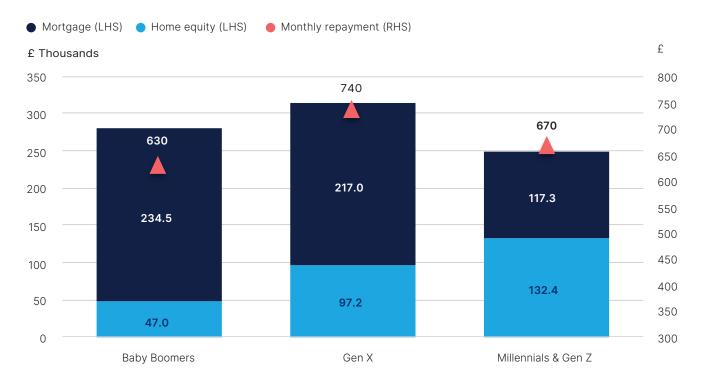
Source: Oxford Economics estimates

From Fig. 6, it is notable that despite some equalization in 2023, the share of Boomer mortgage holders that are classified as 'vulnerable' by our metric will remain significantly higher than among younger cohorts. This trend reflects the generally lower incomes of Boomer mortgage holders with many likely to have passed their peak earnings period. It should also be noted, however, that in absolute terms, the group is relatively small—according to our data Boomer

mortgage-holding households accounted for just 8.0% of the market in 2021. Moreover, despite this, as shown in Fig. 7, younger homeowners typically live in cheaper properties with larger mortgages and relatively high mortgage repayments when compared to older generations.



FIG. 7. THE MEDIAN YOUNG HOMEOWNER OWNS A CHEAPER PROPERTY, HAS A LARGER MORTGAGE, AND HAS HIGH MONTHLY REPAYMENTS



Focusing in on the vulnerable cohort nearly one-third have inadequate cash savings and around one-in-six combine this with unsustainable spending

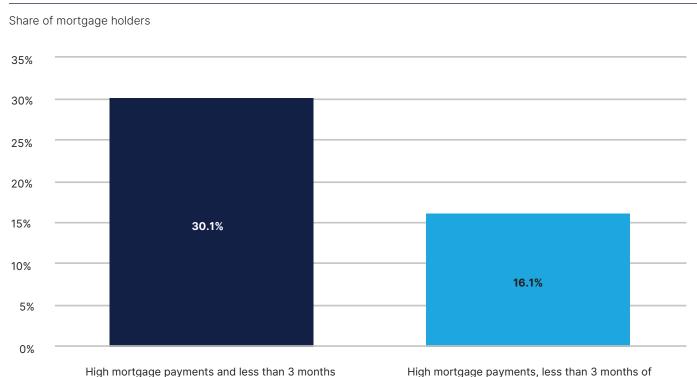
Ultimately, assessing risk through the single lens of net income shares is limited. To drill deeper, we have used the Barometer database to explore related aspects of the financial position of the vulnerable group. Specifically, we have evaluated these households in terms of:

- The adequacy of their cash savings as measured by the number of months of essential spending that would be covered by their accessible savings; and
- The sustainability of their spending as measured by their expected savings rate between 2022 Q4 and 2023 Q4 we identify those households whose spending is projected to exceed their disposable income during this period without adjustment.

These characteristics, particularly in combination, help us to identify households that can be viewed as significantly 'atrisk'. Fig. 8 describes the results from our research, showing that among vulnerable mortgage-holding households, nearly one-in-three (30.1%) have accessible savings that cover less than three months of essential spending whilst one-insix (16.1%) combine inadequate savings with unsustainable spending patterns. In absolute terms, these shares translate into 650,000 and 347,000 households respectively. In the remainder of this section, we explore the composition of these groups in more detail and draw out its implications. We denote households with high mortgage costs and inadequate accessible savings as 'at high risk' and those who combine this with unsustainable spending 'at critical risk'.

essential saving and unsustainable spending

FIG. 8. UNSUSTAINABLE SENDING AND LOWER SAVINGS INCREASE THE VULNERABILITY OF HOUSEHOLDS WITH HIGHER **MORTGAGE PAYMENTS**



Source: Oxford Economics

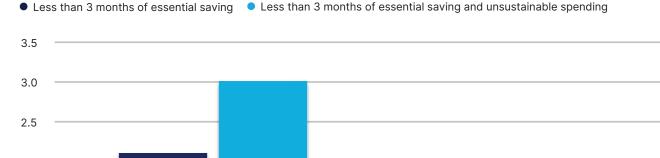
of essential saving

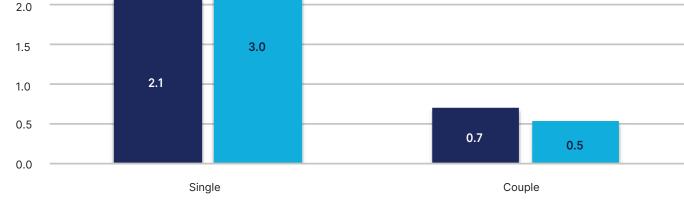
Our analysis shows that single households, part-time employees, self-employed and baby boomers are most at risk

To assess which household groups are relatively more likely to be at high/critical risk we make use of odds ratios. These are calculated by dividing the share of households of respective types that were found to be in these categories by the share of this cohort among all mortgage-holding households. This metric is useful as a gauge of how various socioeconomic characteristics are associated with the relative likelihood that a household is in these categories, accounting for the fact that mortgage holders are an inherently unrepresentative cohort.

Our analysis highlights a very significant and intuitive association with relationship type (Fig. 9). We find that mortgage holders that are not in relationships are approximately three times more likely than couple households to be 'at high risk' and more than five times likely to be 'at critical risk', all else equal. These relationships can be expected to reflect various factors including the lack of a potential joint income, budgeting efficiencies that can be achieved through cohabitation and the possible overextension that might result from separation/divorce.

FIG. 9. SINGLE HOUSEHOLDS ARE THE MOST LIKELY TO BE AT RISK WHEN COMBINE WITH OTHER INDICATORS





Source: Oxford Economics

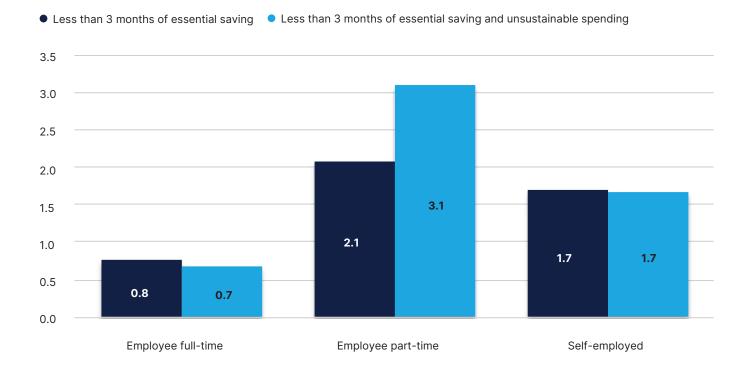
Odds ratio

Disaggregating by employment type (of the main earner) also highlights that both those working part-time and the self-employed are materially more likely to be in our 'at high risk' and 'at critical risk' classifications all else being equal (Fig. 10). Compared to full-time employees, those in part-time employment are nearly three times more likely to be at high risk and more than four times more likely to be at critical risk. In comparison, the self-employed are more than twice as likely to be at high risk and at critical risk.

Clearly, for those working part-time, a means to increase income might be relatively accessible although a potential increase in hours worked might be constrained by other factors e.g., caring responsibilities. The identification of the self-employed as a group that is relatively more at risk among mortgage holders is also notable given that their incomes are likely to be subject to greater volatility enhancing risks related to experiencing a combination of financial shocks e.g., experiencing a period of unemployment.



FIG. 10. SIMILARLY, PART-TIME WORKERS ARE PARTICULARLY OVER-REPRESENTED IN THE VULNERABLE GROUP

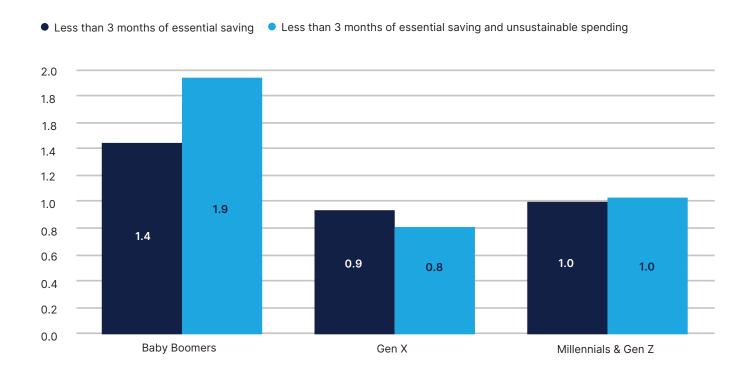


Finally, our analysis also highlights the higher incidence of risk among older homeowners whose mortgage payments account for a higher share of net income. As displayed in Fig. 11, Baby Boomer mortgage-holding households are found to be significantly more likely to be both 'at risk' and 'at critical risk' all else being equal. This insight highlights that although this group, as a collective, enjoy a relatively privileged financial position the plight of those households (a relatively small share) who have mortgage debt outstanding may well intensify in 2023.

Indeed, it is plausible that the financial difficulties of this cohort may be linked to relationship breakdown and the dynamics described in the discussion of differences between single vs couple mortgage-holding households.



FIG. 11. BABY BOOMERS WHO STILL HAVE HIGH MORTGAGE PAYMENTS ARE AT A GREATER RISK OF EXPERIENCING FINANCIAL VULNERABILITY

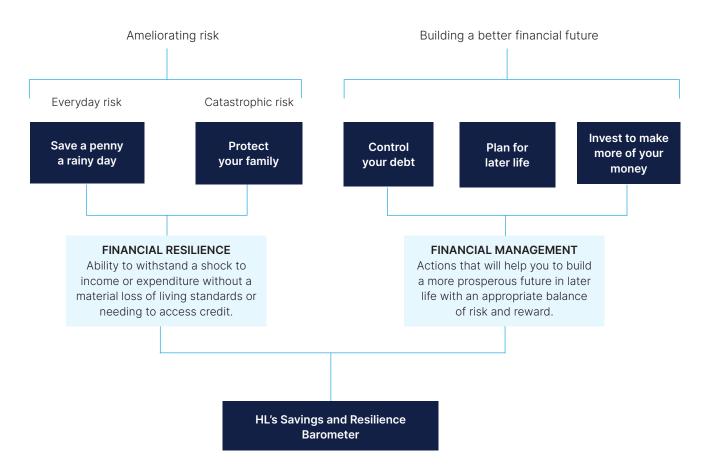


ABOUT THE BAROMETER

The savings and financial resilience barometer is an index measure designed and produced by Oxford Economics. It is based around Hargreaves Lansdown's five building blocks for financial resilience depicted in Fig. 12. The aim of the barometer is to provide a holistic measure of the state of the nation's finances, monitoring to what extent households are prudently balancing current and future demands whilst guarding against alternative types of risk.



FIG. 12. SAVINGS AND RESILIENCE BAROMETER: CONCEPTUAL STRUCTURE



In collaboration with Hargreaves Lansdown, Oxford Economics mapped each of these pillars to a list of 16 individual indicators (Fig. 20). For the January 2023 release, sick pay and income protection have been combined to provide an overall measure of employment income protect for households in the event of sickness.

The data underpinning the indicators is sourced a household panel dataset for a representative group of British households developed by linking together official datasets. The Wealth and Assets Survey (WAS), published by the ONS, has been used as the core dataset due to the breadth of financial data available in the survey. This source does not include every variable required to measure the factors and the latest survey only extends as far as 2020 Q1. Therefore, we have used a range of methods including econometric analysis to build upon the core dataset using data from the Financial Lives Survey (FLS), Living Costs and Food Survey (LCFS) and the Labour Force Survey (LFS).

For each indicator, the data was used to create an index value on a scale of between zero and 100 for households in the panel. In each case, a score of 100 was assigned to households who had reached a specified resilience threshold e.g., holding liquid assets equivalent to at least three months of essential expenditure. Households whose savings are sufficient to cover more than three months of spending are, therefore, not rewarded for this additional level of security. Such a design is appropriate to capture the concept of resilience and the intrinsic trade-offs involved in financial management. Threshold values are defined with reference to benchmark recommendations where available and, where not, using the statistical distribution of values within the dataset and the judgement of the research working group.

FIG. 13. SAVINGS AND RESILIENCE BAROMETER: BAROMETER INDICATORS

Building rainy day savings	Protect your family	Controlling your debt	Plan for later life	Invest to make more of your money
Adequacy of liquid assets	Adequacy of life insurance protection	Affordability of future debt repayments	Value of pension	Investment intensity
Surplus income	Sick pay and income protection coverage	Use debt	Home ownership in retirement	
Eligibility for and generosity of redundancy package	Critical illness coverage	Existence and severity of arrears	Net financial assets	
passage	Balance of earnings	Subjective evaluation of debt position		
		Uncertainty of future repayments	³ https://www.hl.co.uk/fea savings-and-resilience-co	

To bring dataset up to date, values have been extrapolated through to 2022 Q2 using a wide range of macroeconomic and survey data and different modelling techniques. A much more detailed description of the approach can be found in the methodology report available on the project's landing page. Finally, current and future values are projected based on Oxford Economics' baseline forecast for the UK economy from its <u>Global Economic Model</u> (GEM).

ABOUT OXFORD ECONOMICS

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on more than 200 countries, 100 industries, and 7,000 cities and regions. Our best-in-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centres in New York, London, Frankfurt, and Singapore, Oxford Economics has offices across the globe in Belfast, Boston, Cape Town, Chicago, Dubai, Dublin, Hong Kong, Los Angeles, Melbourne, Mexico City, Milan, Paris, Philadelphia, Stockholm, Sydney, Tokyo, and Toronto. We employ 450 staff, including more than 300 professional economists, industry experts, and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities from econometric modelling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics.

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FEBRUARY 2023

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