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The Business Case for Integrated Retrofit:

How banks, insurers and the government can support healthy, efficient and resilient homes

June 2025

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Authors and acknowledgements

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Executive summary

The UK's housing stock accounts for 12 per cent of the nation's greenhouse gas emissions, and 84 per cent of households still use gas or oil for heating and hot water.[1] Poor energy efficiency and a lack of climate resilience consideration expose households to rising energy bills, health risks and mounting climate threats, ultimately driving up public costs and reducing economic productivity. Most homes that will exist in 2050 have been built already,[2] underscoring the urgency of a national retrofit programme that delivers energy efficiency, low carbon heating and climate adaptation.

Banks are exposed to rising climate and transition risk across their £1.16 trillion mortgage portfolios, as well as their lending to registered providers of social housing, which accounts for approximately 16.3 per cent of England's housing stock.[3] Properties with poor energy performance and lower resilience are more exposed to default and devalue in a changing climate.[4,5] Banks need to embed retrofit into lending processes by developing risk-adjusted pricing that rewards improvement and integrating retrofit finance into home purchases, therefore supporting borrowers to achieve more efficient and resilient homes. By capitalising on the socioeconomic and resilience benefits of retrofit, banks can reduce arrears, stabilise collateral values and open new sustainable finance markets.

Insurers face increasing claims from climate-related damages, with risks to long-term insurability. By ensuring that adaptation measures are recognised and valued as part of underwriting models, developing resilience-focused insurance products, and embedding retrofit into claims handling, insurers can reduce losses and support customer adaptation. As major clients of the repair and construction industry, insurers can also advocate raising standards and expand market capability through investment in skills and service networks.

Energy-efficiency and resilience improvements today reduce fuel poverty, prevent future financial distress and lessen the burden on public systems – all of which have direct implications for the financial sector and the broader economy. Therefore, it is important to reframe retrofit as not only a tool for climate mitigation but also a strategic investment in long-term **financial stability, people's well-being, and economic resilience**. Banks and insurers, alongside the government, need to recognise the materiality of retrofit: how it influences mortgage stability, insurance claims, property values and future growth.

To unlock this potential, **retrofit needs to be reframed as an integrated investment**, one that combines climate mitigation, adaptation, improved public health, well-being and productivity, and financial resilience. There needs to be a shared vision for housing stock that is climate resilient, low carbon and financially secure. This transformation requires a co-ordinated effort across government and the financial sector, underpinned by shared data, common standards and aligned incentives.

The government needs to lead with a joined-up, comprehensive and long-term national strategy, recognising retrofit as a lever for economic growth, financial stability, energy security, reduced inequality, and lower health and welfare spending. Strategic action includes reforming the Energy Performance Certificate (EPC) regime, harmonising building regulations and standards, decoupling electricity and gas prices, and crowding in private investment through guarantees and blended finance. A strategic policy lever needs to be identified for a co-ordinated strategy to be delivered. Public education campaigns and support for local authorities will be critical to stimulating demand, scaling up delivery capacity, and ensuring a just transition that benefits all communities.

To capture the full **socioeconomic and resilience dividend**, banks, insurers and the government need to collaborate to build a shared industry-wide knowledge base. While this study is centred on the UK context, the insights derived from this study may offer transferable value to comparable settings internationally. Retrofit is no longer a niche agenda: it is central to ensuring that homes remain safe, insurable and affordable in a warming world. By working together, the government, banks and insurers can lead a national transformation that delivers for households, the economy and the planet.

Background

The UK needs to decarbonise its housing stock to meet both its 2030 emissions reduction targets and the 2050 net zero goal. The residential buildings sector is currently the second-highest emitting sector in the UK, accounting for 12 per cent of emissions in 2023.[6] This high carbon footprint is largely due to the continued reliance on fossil fuels: 84 per cent of UK homes still use gas or oil for heating and hot water.[7] With 80 per cent of the buildings that will exist in 2050 already standing today,[8] there is a pressing need to decarbonise and improve the quality of existing housing – known as building retrofit.

For financial institutions, cutting the carbon emissions of their mortgage and underwriting portfolios is critical to meeting their net zero pledges. Mortgages represent the largest asset class of 15 banks on the Bank of England's domestically significant systemic institution list.[9] Meanwhile, social housing, a sector which banks often lend to, accounts for approximately 16.3 per cent of England's housing stock.[10] Co-ordinated action from governments, private sector financiers and the wider public is essential to achieve this objective. However, progress is hampered by policy barriers, long payback periods and low public engagement. A recent survey of 250 businesses in the building sector revealed that 65 per cent believe policy is lagging behind industry efforts.[11] Meanwhile, the scale of investment required is significant. The Climate Change Committee – an independent body advising the UK government on climate – estimates that retrofitting UK buildings by 2050 will cost £360 billion,[12] with 900,000 heat pumps needing to be installed annually by 2028.[13]

Beyond carbon savings, retrofit also delivers various social benefits to the occupants, such as improved health and well-being. Houses are not only physical places of habitation and work, but they are also places which should evoke feelings of security and safety, as well as provide a healthy environment.[14]

> Housing constitutes an important part of people's material living conditions and makes a contribution to life chances.[15]

At the same time, rising climate risks – such as floods, overheating and subsidence, as well as water stress in the UK – make it increasingly crucial to integrate the resilience aspect into retrofit to avoid extra costs from increasing damages relating to climate change in the long run. Annually, 14 million people globally are made homeless by weather-related disasters.[16] Frequent and intense storms and flooding increasingly endanger communities, especially in high-risk areas where housing stock has not been initially designed or retrofitted adequately to address changing climate conditions. High-density buildings face heightened overheating risks as temperatures climb,[17] while escalating flood risk could increase the costs and risks to householders, place pressure on the Flood Re scheme (which ends in 2039), and increase the cost to governments of managing this growing risk. The compounding effects of inadequate housing and climate disasters trap vulnerable populations in cycles of poverty, endangering lives and livelihoods.[18]

However, current academic research often overlooks these social dimensions when planning and evaluating retrofits.[19] To drive greater uptake of green infrastructure in England, the Climate Change Committee recommends adopting systems approaches that capture the full suite of benefits, including 'preventative spend' on health outcomes, to unlock new funding streams.[20] Incorporating this broader perspective can become a catalyst for wider engagement and investment. Demonstrating the potential revenue and savings for both the government and private investors not only supports climate goals but also directly improves lives.

Investing in retrofit is an efficient and effective way of reducing vulnerability while allowing people to remain in their homes and communities.[21] However, to date, retrofit approaches have mainly focused on energy-efficiency measures for climate mitigation and overlooked the need for adaptation. This can inadvertently create issues such as increasing the risk of overheating, under evolving climate conditions.[22] Without decisive, forward-looking action, the long-term costs of inaction, both social and economic, will far exceed the investment needed today.

The main contribution of the study is the synthesis of socioeconomic impacts of UK housing retrofit and the emphasis on the integration of resilience into retrofit strategies. The first section (*Reframing retrofit: the bigger picture*) of this report seeks to define 'integrated retrofit' by accounting for resilience and socioeconomic impacts of retrofitting the UK's housing stock. The second section goes on to consider how the business case for integrated retrofit can be established by bringing in the perspectives of banks and insurers. Lastly, the third section aims to provide a synthesised business case and recommended list of actions that can be taken for banks, insurers and the government.

1. Reframing retrofit: the bigger picture

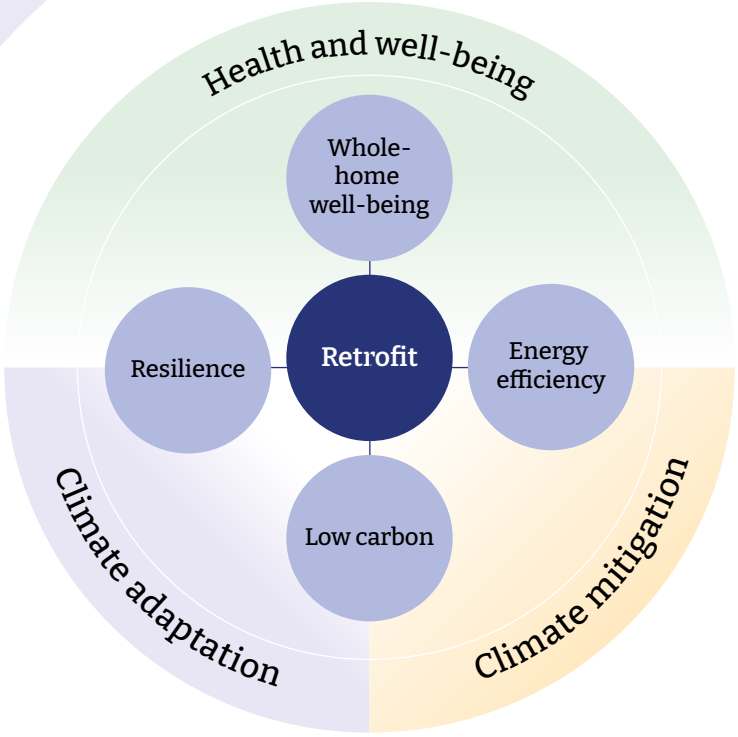

Figure 1: Integrated view of retrofit defined in this study

What is retrofit?

In this report, retrofit refers to building improvements that support:

- **Whole-home well-being:** Promoting physical and mental health by eliminating hazards like damp, cold, and disrepair, and ensuring good indoor air quality, thermal comfort, and ventilation.
- **Energy efficiency:** Reducing energy use through better insulation, efficient appliances, smart meters, and air sealing.
- **Low carbon technologies:** Cutting emissions with solutions like solar photovoltaics (PV) and heat pumps.
- **Resilience:** Strengthening homes against climate risks via improved ventilation, shading, cooling, water-saving systems, and flood protection.

1.1 Link between retrofit, well-being and financial stability

To achieve the UK's net zero target by 2050, the Climate Change Committee estimates that 15 million households in the UK will need at least one main insulation measure (loft, wall, or floor), 8 million will need to install draught-proofing, and almost all uninsulated hot water tanks must be insulated by 2050.[23] This has further significance beyond climate. Making UK homes fit for the future also improves people's socioeconomic situation, well-being and comfort, especially for vulnerable groups and those living in sub-standard housing.

According to the 2022–23 English Housing Survey, 3.5 million households (14 per cent) live in "non-decent" homes, exposed to hazards that exacerbate respiratory illnesses and mental health stresses.[24] Vulnerable groups, including children, individuals with long-term illnesses, and low-income families, suffer the most,[25] deepening cycles of inequality. This is not a problem only for a few: according to a survey by Santander, as many as 44 per cent of UK households needed to ration heating in response to high prices,[26] and the Office for National Statistics (ONS) data for winter 2023/24 reported that 40 per cent of people found it hard or very hard to meet energy costs, with 20 per cent struggling to stay comfortably warm.[27]

The impacts of poor housing extend beyond personal health, affecting national productivity and societal stability. Overcrowded and damp homes have been linked to reduced educational outcomes for children, limiting future opportunities and perpetuating intergenerational poverty.[28] Adults living in poor-quality housing often experience increased workplace absenteeism due to health issues, further exacerbating the UK's productivity challenges. Fuel poverty has a direct impact on physical and mental health, with anxiety and depression manifest as a result of insufficient thermal comfort, and adds to financial distress.[29] Across Europe, 1.7 million school days are missed every year due to illnesses associated with damp and mould. UK rates are 80 per cent higher than the EU average for this type of absence.[30]

A dangerous feedback loop emerges: poor housing leads to adverse health outcomes, which in turn result in reduced productivity, and limit financial capacity to pay mortgages and energy bills, and to improve living conditions. Indeed, 50 per cent of mortgagors in low-quality homes worry about future housing costs.[31] This concern is not unfounded. The Bank of England has found that less energy-efficient properties are strong predictors of mortgage arrears[32] (total mortgage arrears reached £21.9 billion in mid-2024).[33] International research further underscores how poor health can trigger mortgage delinquency and foreclosure – thereby destabilising both households and the broader economy.[34]

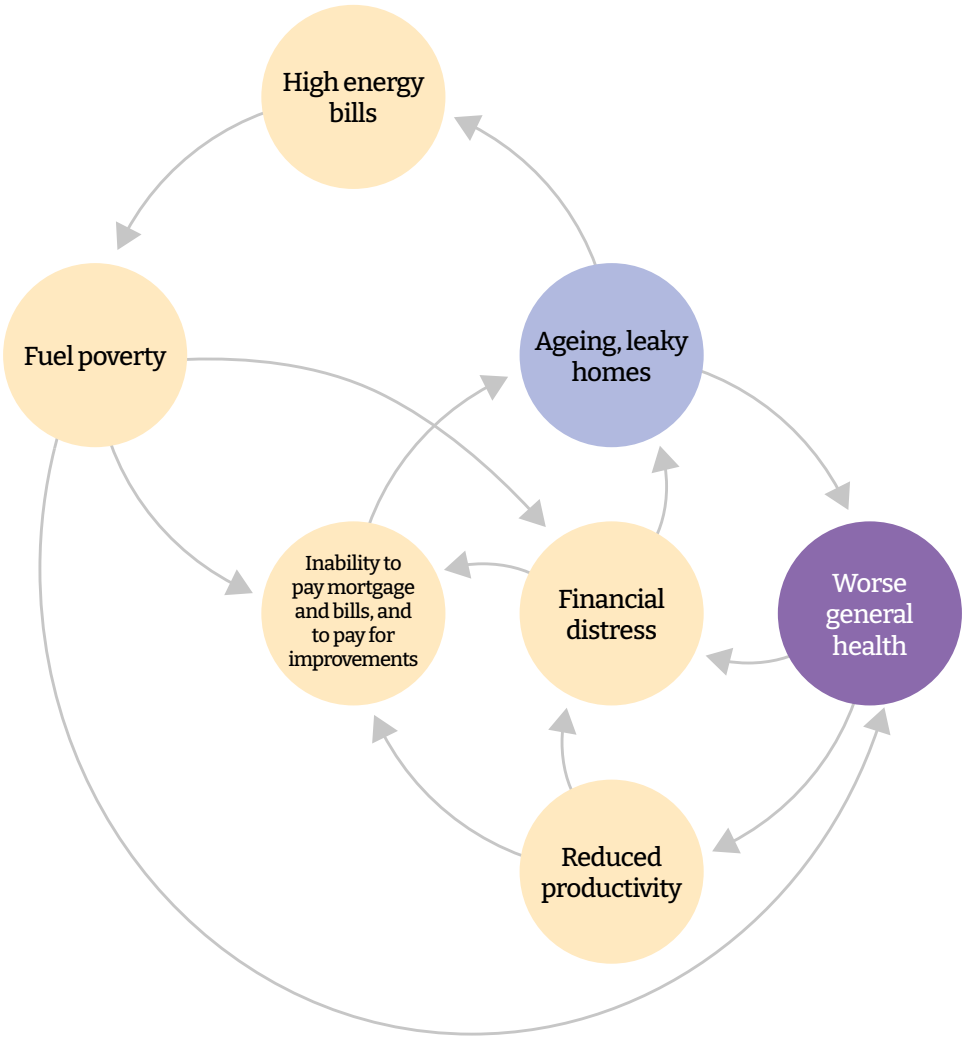

Figure 2: Feedback loop of economic and social instability from poor housing

1.2 Retrofitting for a changing climate

The UK's housing stock is not well adapted to the current climate and the projected more frequent extreme weather events in the future. In 2024, the UK experienced its fourth warmest year on record.[35] The latest UK Climate Projections (UKCP18) warns of hotter summers by 2100.[36] If greenhouse gas emissions continue to rise, extreme rainfall events that cause flash floods could become four times more likely by the 2070s.[37] This increase in temperature is also impacting the risk of subsidence as extreme heat causes soil to dry out and shrink. According to Halifax Home Insurance, during the heatwaves in summer 2022, the number of subsidence cases it received was three times the monthly average, while across 2022, 45 per cent more claims were recorded than the previous year.[38] A further 2.4 million homes are projected to be at risk of subsidence in 2030.[39]

Today, around 20 per cent of English homes overheat even in cool summers.[40] Meanwhile, 6.3 million properties lie in current flood-risk zones, rising to one in four by 2050.[41] Yet cost-effective adaptation measures are not being taken up at anywhere near the levels they can or should be. [42] Vulnerability is also heightened by the low level of awareness. According to a survey by the British Red Cross, nearly half of those who have experienced flooding in their home within the last five years were not aware of any flooding information in their area.[43]

At a systemic level, climate-driven damage threatens mortgage and insurance markets. With £1.16 trillion in outstanding mortgage debt in the UK, ensuring the resilience of this asset pool is crucial. Banks providing new 30-year mortgages today will have increased exposure to risks. Under a 4°C warming scenario, catastrophe modelling suggests the average annual loss caused by UK floods to residential mortgage assets could increase by 130 per cent.[44] Another model evaluates 2.5°C to 3°C degree warming, estimating a 72 per cent increase in residential average annual loss.[45] This also has significant implications for the insurance industry, which faces the prospect of higher claims, charging higher premiums to customers, and questions of long-term uninsurability.

UK property insurance payouts reached a record high of £5.7 billion in 2024, driven by high rebuilding costs and increasingly frequent storms.[46,47] As much as £585 million of those were specifically weather-related claims, which also reached the highest figure since records began.[48] In 2020, insurance claims for flooding following major storms averaged £32,000 per affected household.[49] In 2023, the average flood damage claim on insurance reached £46,677.[50]

While increasing resilience for properties will need to be site-specific, an integrated retrofit approach would enable more strategic outcomes. It accelerates decarbonisation, provides households with year-round thermal comfort, and prevents costly lock-in – where initial design or choices limit future flexibility and force multiple future retrofits.[51] For example, spending £2.4 billion to add flood-resilience measures to just 3 per cent of at-risk homes would slash annual losses due to floods by £350 million, paying for itself in under seven years.[52] Meanwhile, under a high-emission scenario, unmitigated cooling demand could soar from today's level to about 12 TWh by 2100, whereas upgrading building fabric could reduce that increase by one-third.[53]

Therefore, retrofits need to be designed not only to reduce bills and improve comfort but also to improve resilience to climate change. Without such focus, it may inadvertently increase risks. For example, many current retrofit solutions focus solely on energy savings for cold weather conditions, while neglecting the need for year-round comfort and increasing climate risks such as overheating and floods.[54] Adopting a lifecycle approach that considers evolving climate scenarios is essential to ensure that retrofits provide optimal thermal comfort and resilience over time.[55]

1.3 Climate change exacerbates housing-related inequalities

Without intervention, the dual impacts of poor housing and climate change will deepen existing inequalities. Higher summer temperatures increase heat-related illnesses, respiratory problems and mental health stresses. During the 2022 heatwaves, an estimated 2,839 excess deaths among those aged 65 and over were recorded, about a 6 per cent rise over the five-year average.[56] Like poor housing, extreme weather disproportionately affects vulnerable populations, including low-income communities and the elderly, who already face higher health risks.[57]

Flooding also poses significant risks. The UK's Department for Environment, Food & Rural Affairs (Defra) found that residents who experienced severe flooding took an average of an additional 26 days off work.[58] Public Health England also reports heightened rates of anxiety, depression and post-traumatic stress disorder following flood events.[59] As the number of people living in flood-prone areas is expected to grow significantly by mid-century, the risk will only grow.[60]

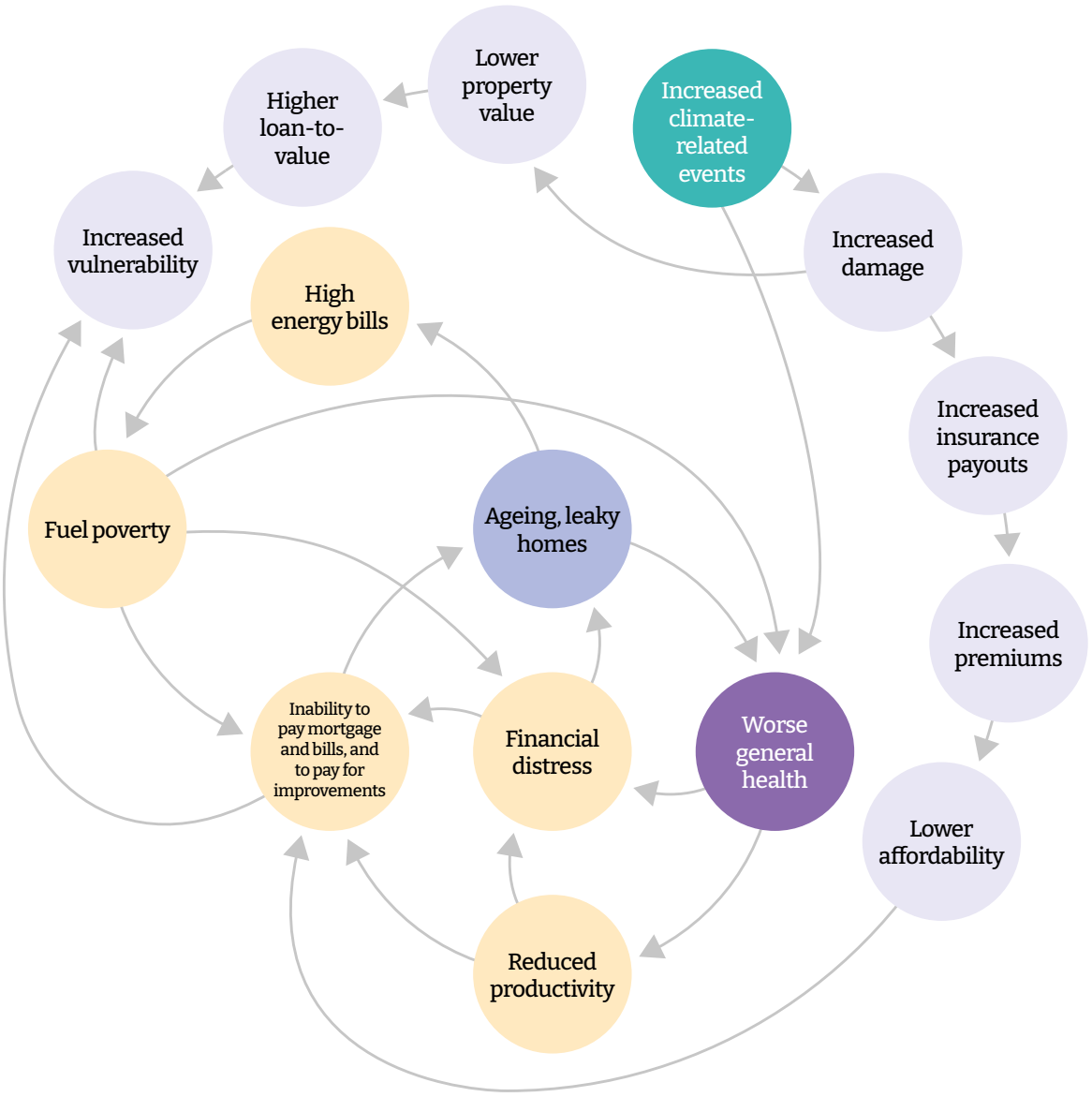

Figure 3: Climate change adds pressure to the feedback loop left unmitigated without retrofit

There is also an emerging issue of a widening protection gap – the gap between insured losses and economic losses. With reinsurance costs up nearly 40 per cent[61] and home insurance premiums rising 16 per cent between 2023 and 2024,[62] at-risk households face mounting bills. Low-income families – often forced into cheaper, flood-prone housing – lack the means to install Property Flood Resilience (PFR) measures without public schemes, and may struggle to secure or afford insurance,[63] which could leave them especially vulnerable to the substantial costs of repairs, replacement, or temporary accommodation following a flood event.[64] The result is perilous financial vulnerability for those least able to cope.

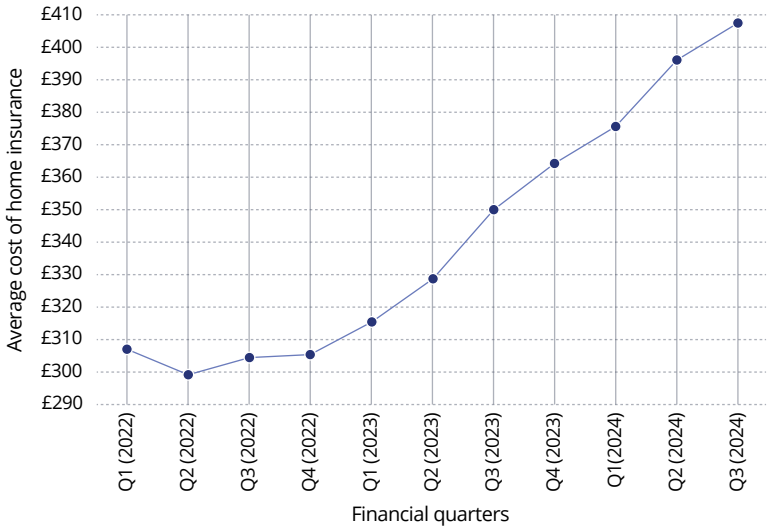

Figure 4: The average cost of a home insurance premium has risen since January 2022 (ABI, 2024)

1.4 Retrofit has a role to break the cycle of inequality with returns that outweigh upfront investments

Retrofit – by improving insulation, ventilation and heating systems – can break the inequality cycle by reducing issues like draughts, dampness and mould growth. Enhanced thermal comfort not only improves well-being but also lowers the risk of fuel poverty. In the UK, more than 6 million households struggle to afford adequate heating.[65] National Energy Action (NEA) analysis indicates that meeting energy-efficiency fuel poverty targets in England could yield total cumulative energy bill savings of an estimated £5 billion for households between 2022 and 2030.[66] Furthermore, Citizens Advice estimates that upgrading 13 million homes in Great Britain to an EPC C level could save consumers £24 billion on energy bills by 2030, providing critical relief for households trapped in fuel poverty.[67]

The benefits extend beyond the individual level. The Building Research Establishment (BRE) estimates that health problems from inadequate housing cost the National Health Service (NHS) more than £1.4 billion annually,[68] straining public health budgets. Retrofit can eliminate Category 1 hazards – such as severe damp and structural instability – removing immediate threats to health and safety. Retrofitting 2.4 million homes to eliminate these hazards is estimated to cost around £9 billion[69] (approximately 0.75 per cent of government spending in 2022–23[70]) and could pay for itself within nine years through NHS savings alone. [71] Over a 30-year period, BRE projects broader savings of up to £136 billion from reduced hospitalisations, fewer GP visits, and improved long-term health outcomes. [72]

Another study by Citizens Advice suggests that upgrading 13 million homes to EPC C – an energy performance band often used as the government's policy target – would prevent 670,000 cases of childhood asthma, avert 6,000 excess winter deaths annually, and save the NHS £2 billion by 2030.[73] Similarly, research by the Institute of Health Equity and Friends of the Earth finds that a one-off ten-year investment of £60 billion in housing insulation, originally proposed in the Labour Party's Green Prosperity Plan, would pay for itself through avoided health and climate costs over time.[74] Meanwhile, according to the latest carbon budget by the Climate Change Committee, energy-saving measures and the installation of heat pumps in buildings are expected to generate operating savings of £1.3 billion in 2025, growing to £5.5 billion in 2050.[75] Beyond savings, upskilling the

construction sector to retrofit historic buildings could support around 290,000 jobs and generate an additional £35 billion of annual economic output.[76] Investments in providing technology and services for increased energy efficiency in buildings have spurred the growth of at least 908 companies in the UK.[77]

However, while these projected savings offer compelling evidence, there remains a question and a mismatch between the parties incurring costs and those realising the upsides. In the absence of any mechanism to commodify or monetise these avoided costs, no existing budgetary provision guarantees their capture. A reframe would be required from within the central government and the Treasury to appropriately acknowledge these savings and potential growth in the budget.

Table 1: Cost–benefit analysis of retrofit from existing studies

Investment area	Upfront investment	Long-term savings/benefits	Payback timeframe
Removal of Category 1 hazards [78]	£9 billion	£136 billion savings over a 30-year period	< 9 years
Upgrading homes to EPC C[79]	£49.4 billion	£40 billion savings in 7 years £70–£100 billion over a 17-year period	7 – 17 years
Adoption of flood resilience measures for 3% of at-risk properties [80]	£2.4 billion	£350 million loss reduction a year	<7 years

1.5. The financial sector's case for retrofit

The financial sector has a clear stake in promoting integrated retrofit measures. Between 2023 and 2024, England experienced its wettest 18-month spell on record, flooding over 7,000 properties.[81] In 2023, property insurers paid out a record £582 million in claims driven by damage from storms such as Babet, Ciaran and Debi.[82] Looking ahead, climate models project an 8 per cent rise in property-level flood risk between 2050 and 2080 – an exposure that could threaten both collateral values and insurer balance sheets.[83]

Flooding events can erode property values in two ways: direct damage and rising insurance costs.[84] Empirical models suggest that each one-percentage-point increase in the probability of flooding depresses property values by 0.11–0.19 per cent, with lower-priced properties suffering most.[85] Extreme weather also contributes to financial market instability, reducing investment as lenders become more cautious during crises. In distressed markets, informed buyers may negotiate lower prices, further depressing property values.[86]

Homeowners' insurance is a precondition for most home loans, and most homeowners are obligated to hold this coverage for the duration of their mortgage. As premiums rise, homeowners face increased pressure to pay their premiums and mortgages.

For banks, heightened climate risk poses a dual threat: reduced insurability and increased default risk, both of which endanger their largest class of secured assets: residential mortgages. Thus far, the increasing risks from climate change have generally not been sufficiently material to impact banks' balance sheets. However, if in future a home becomes uninsurable due to climate-related factors, the mortgage may fall out of compliance with its terms, becoming an impaired asset on the bank's balance sheet. While most mortgages are initially issued with valid insurance, policies are typically renewed annually and may lapse during the loan term, exposing lenders to financial risks. By incentivising retrofits, lenders can enhance the long-term insurability of properties, protect the value of their collateral and reduce default rates.

Insurers similarly depend on a robust housing stock. Those that develop underwriting models recognising retrofit benefits, relating to resilience, all things being equal, are likely to benefit longer-term from fewer and less severe claims and can support a more robust market through risk-based pricing, support clients and gain market share. However, to ensure retrofit measures do not introduce new vulnerabilities, insurers would helpfully be integrated into the planning process to assess and validate that no additional risk is being introduced due to the proposed work. A co-ordinated framework is therefore essential, one that aligns building-resilience standards with insurance requirements and commercial feasibility.

Increasing the resilience of the housing sector has the potential to create a beneficial, reinforcing cycle that benefits the entire economy. It increases lending opportunities, develops a more robust housing sector and sustains insurance capacity, which in turn further supports a resilient housing sector and mortgage market, thereby underpinning overall financial stability. Banks stand to gain from lower credit losses and stronger collateral; insurers can reduce claim costs and maintain broader coverage; homeowners enjoy healthier, insurable, more comfortable, more valuable and more affordable homes; and governments capture economic growth from job creation, lower health-care burdens and enhanced energy security.

In short, aligning retrofit investments with financial performance, through improved asset valuations, reduced default risk and reduced claim costs, creates a business case for banks, insurers and public authorities alike.

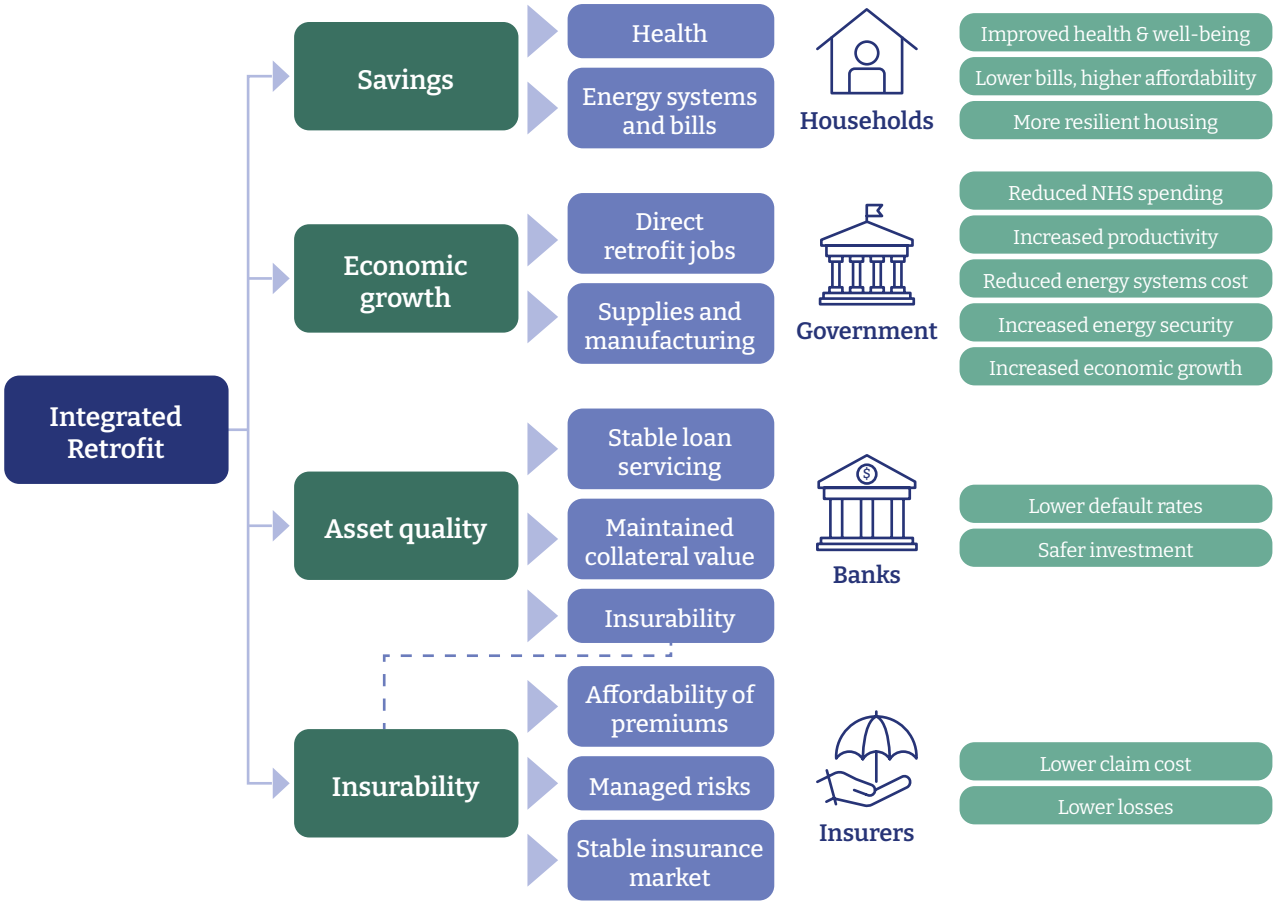

Figure 5: How retrofit benefits different actors in the economy

1.6 Reframing retrofit as a strategic investment

The traditional view of retrofit has often been narrow and seen primarily as a costly compliance exercise or a response to past energy-efficiency concerns. To realise its full value, there is a need to recast retrofit as a forward-looking investment with three intertwined dimensions: socioeconomic impact, financial return and climate resilience, summarised in Figure 6.

First, retrofit is an investment in people and a resilient and sustainable economy. Upgrading insulation, ventilation and heating not only cuts carbon but also delivers healthier, more comfortable homes. By reducing damp, cold-related illnesses and energy bills, retrofit eases pressure on the NHS, boosts productivity and lifts vulnerable households out of fuel poverty. As evidenced by various studies in the previous section, every pound spent today yields multiple pounds in social and health benefits tomorrow. Beyond that, retrofit also has the potential to bring growth. With greater certainty on the supply chain, construction activity associated with retrofit could be added to the government's economic growth projections, in a similar way to new construction (driven by planning reform) was recently accounted for in the Spring Budget 2025.[87] Energy-efficient, climate-resilient homes command higher market values, experience fewer mortgage arrears and generate lower insurance claims. When banks and insurers recognise retrofit's risk-reducing effects, by adjusting lending or underwriting criteria accordingly, they ensure a more robust marketplace, and strengthen the stability of their portfolios. Together, this safeguards the resilience of the economy.

Second, retrofit is essential for climate adaptation as well as mitigation. Homes need to be designed to withstand hotter summers, more intense storms and rising flood risk, without compromising winter comfort. This means integrating future climate considerations into design and policy, ensuring homes remain safe and comfortable in both extreme cold and extreme heat, and insurable in areas prone to flooding.

Moreover, a forward-looking approach to retrofit should not rely solely on past climate and energy trends and security, but should incorporate future climate and socioeconomic benefits. Energy-efficiency and resilience improvements today reduce fuel poverty, prevent future financial distress, and lessen the burden on public systems, which directly impacts the financial sector. The financial sector and government need to recognise this materiality, how retrofit investments influence mortgage stability, insurance claims, property values and long-term economic growth.

Finally, a shift from reactive to proactive measures is essential. Instead of only responding to disasters after they occur, we need to embed preventive and adaptive retrofit strategies that safeguard communities, strengthen infrastructure and mitigate financial risks before crises unfold.

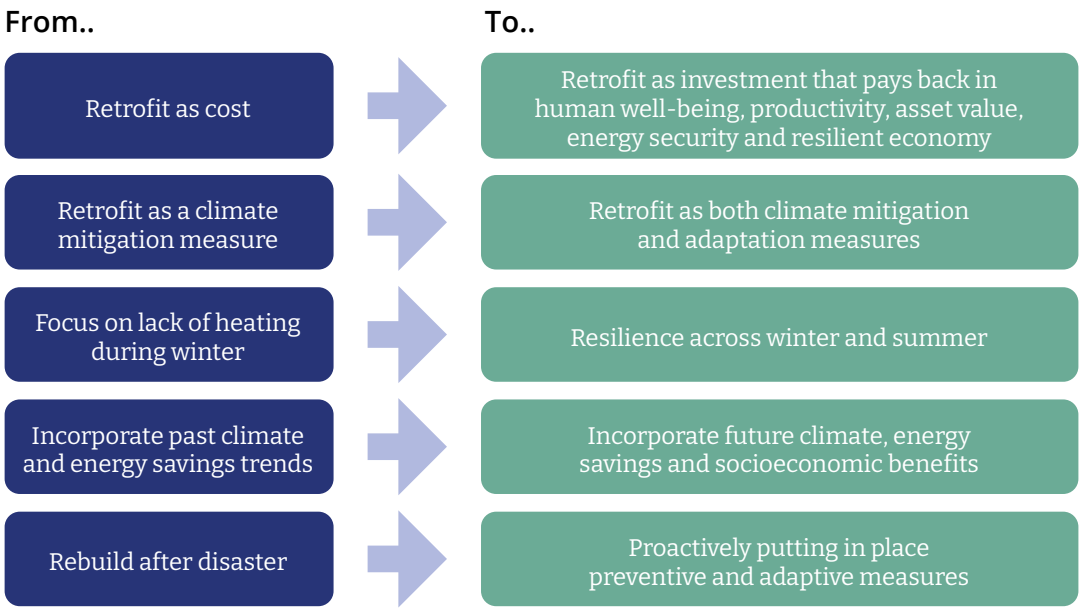

Figure 6: Expanding our view of retrofit

By expanding our understanding of retrofit beyond just energy savings, we build a case for systemic change – one that sees the interconnection between economic stability, social equity and climate resilience, ensuring long-term benefits for households, financial institutions and governments alike.

2. Business case for retrofit – banks' and insurers' perspectives

To explore how the broader socioeconomic and resilience benefits of retrofit affect financial institutions, and how banks and insurers might encourage greater uptake, a series of interviews were conducted (see Annex for methodology). Here, we aim to make the business case for retrofit and demonstrate how it provides a strategic investment opportunity. The findings, supplemented by analysis, are summarised below and will inform the recommendations in the final section.

2.1. Impact of rising climate risks on banks and insurers

Insurance is experiencing increased payouts

The interviews validated that insurers are already facing both increasing frequency and severity of climate-related events. This has caused an increase in the cost of claims, which has been exacerbated by other external factors beyond climate, such as global instability. Flood Re, a joint government–insurer flood-risk scheme due to run until 2039, has seen an increasing number of properties being ceded to it and has increased its loss limit by 150 per cent.[88] Flood Re helps keep home insurance premiums affordable in the UK by allowing insurers to transfer the flood risk to Flood Re, using pooled funds to cover flood-related claims, all behind the scenes from the customers.[89] Another insurer noted the need to increase their natural catastrophe reserve.

This surge in claims not only influences insurers' profitability but also compels them to re-examine their risk appetite. If premiums fail to rise in line with the mounting risks, insurers express that they may become more restrictive, ultimately reducing coverage in high-risk areas. The issue of uninsurability and/or under-insurance is therefore

emerging as a concern. What may happen is that some level of cover may be available, but with exclusions for some higher-cost or higher-impact events (for instance, houses in flood plains may have exclusions for flooding, but be able to get cover for fire). Some respondents emphasised that some high-risk regions are already facing coverage gaps that are now being mitigated only by Flood Re.

However, other physical climate risks, such as overheating and water stress, are not yet considered in comparable detail to flood risk. British Geological Survey, the UK's geoscientific advisor, warns that dry weather and high temperatures are a major factor in the emergence of shrink-swell subsidence, with an expected 10 per cent of properties in Great Britain facing subsidence issues and damage to property from shrink-swell by 2070.[90] Similar to floods, subsidence can cause significant financial losses for property owners and may result in higher insurance premiums and lower house prices, which will impact the value of properties on banks' balance sheets.[91] While one insurance respondent sees this connection between overheating and the increased risk of subsidence, many others feel that overheating and water stress are longer-term issues with different risk profiles, and that the data that they possess is not currently as granular as the available flood-related data.

Increasing insurance premiums

As a result of the increase in risk driven by a changing climate, premiums need to rise to ensure an ongoing robust insurance market. These increased premiums are straining household budgets already under pressure from energy and living-cost increases. Interviewees noted that some homeowners may be forced to drop optional cover (for example, contents insurance) or, in extreme cases, forgo home insurance entirely. Such decisions would widen the protection gap, exposing both families and lenders to uninsured losses when disasters strike.

Banks are preparing for the impact on customers' affordability

Banks are therefore bracing for the downstream effects of rising premiums in two ways: reduced mortgage affordability and people dropping their insurance and going into mortgage technical default.

Mortgages typically require homeowners' insurance, so rising premiums directly affect borrowers' monthly outgoings. In some regions, banks expect significant insurance premium hikes for homeowners, which could adversely affect borrowers by reducing their ability to pay their mortgages. This scenario has the potential to impact asset valuations and prompt negative-equity situations in high-risk locales or outright prevent property sales and remortgages. Over time, this dynamic may prompt banks to reassess their credit risk policy or reduce their willingness to lend in the most exposed regions, impairing overall market liquidity.

> "We expect in some areas that [the premiums] would rise significantly and that would impact both the affordability of our borrowers and their asset valuation. And we are expecting that in the future this could impact our risk appetite and potentially our credit risk policy...

Potentially of greater concern is the possibility of borrowers failing to renew property insurance, either due to increased cost or reduced availability, and placing themselves into technical default. Banks typically do not seek annual confirmation of compliance with terms (such as insurance) from residential borrowers, and would therefore only discover this lack at a later date, leaving them holding a potential loss. Given the regulatory pressure on mortgage lenders to positively engage with, and support, borrowers, this scenario would raise questions around how lenders would deal with assets in such a situation.

Banks are aware that rising insurance premiums and ensuing protection gaps will eventually reverberate throughout the mortgage lending process, even though most respondents feel they are one step removed from the risk. Some banks note a pronounced disconnect in the broader financial ecosystem with insufficient recognition of how escalating insurance costs could compromise mortgage serviceability and asset valuations. If the insurability profile of a property changes, then disasters could mean that the bank's secondary repayment source would have potentially less value. Consequently, banks are calling for improved transparency and a more nuanced understanding of insurance-related risks, urging the insurance sector to bridge the informational gap so they can adjust their credit risk policies accordingly and ensure that mortgage lending remains sustainable in an era of intensifying climate risk.

> "There is a disconnect, and I think there is a lack of recognition around the potential increase in premiums from insurance, which will impact that serviceability, and I think banks, institutions and funders need to do a better job of understanding the insurance risk.

Therefore, a two-way process of collaboration and information sharing that ensures a common approach to managing climate risk needs to take place between banks and insurers.

2.2 Impact of socioeconomic and resilience benefits on banks and insurers

Support customers with their finances

For banks, lending for retrofit directly helps customers to meet their financial needs. Nearly half of UK homeowners see the high initial costs as their biggest barriers, with seven in ten homeowners wanting support from their bank or mortgage lender to get their homes decarbonised and more energy-efficient.[92]

Similarly, insurers stress that retrofit is important to reduce the overall damage that homeowners can face.

> "People don't want to pay really high amounts for home insurance, but what you actually do not want is to have flooding in your home. So I would say strongly, that what we should be focusing on, is reducing the damage caused by flooding and we need to find a way to do that.

Support financial institutions' sustainability targets

Additionally, retrofitting properties within a bank's portfolio through energy performance improvements and decarbonising heating systems help banks decarbonise their mortgage books, supporting institutions' sustainability targets. Banks also use sustainability-linked loans that enable retrofit work with social housing providers by managing key performance indicators (KPIs), including social benefits.

Beyond these drivers, retrofit also helps banks safeguard their reputation. Financing poor-quality housing carries a reputational risk, whereas backing visible improvements in living conditions and environmental performance sends a powerful signal of corporate responsibility.

Regulatory transition risks, especially the risk of stranded assets, add another layer of urgency. New minimum energy-efficiency standards coming into force by 2028 for commercial properties (and by 2030 for private rentals)[93] mean that banks need to understand how their borrowers plan to comply. By supporting retrofit projects, banks can guide clients through these regulatory changes, reducing the likelihood of forced sales or devalued collateral when new standards are enforced.

Insurers share a similarly strategic view, albeit with a stronger focus on climate adaptation. As underwriters seek to decarbonise their portfolios, they are increasingly interested in how retrofit measures, from flood doors to smart air bricks, can blunt the impact of extreme weather. They also see retrofit as key to maintaining the industry's financial sustainability.

> "If the risk just continues to increase and there's no investment in retrofit or adaptation, from a risk appetite perspective, that becomes harder for the industry to support.

Integrating into customers' risk profiles

Banks generally agree that retrofit has the potential to improve customer creditworthiness, in particular if a reduction in energy bills can be demonstrated. However, the level of confidence of this translates to energy bills varies, particularly taking into account:

- electricity prices being structurally higher than gas prices in the UK
- the potential 'rebound effect' from households that were previously unable to heat their homes to an acceptable comfort level, and therefore, understandably, increase their energy usage to reach that comfort level, rather than accrue a cash saving.

Similarly, while the health benefits from retrofit are well documented, embedding these into business and credit decision-making is in its infancy. Most lenders and insurers lack the robust, individual-level data needed to incorporate these social gains into risk models or pricing.

> Improving the energy efficiency of a property and making it more comfortable does derisk your exposure because people are more productive, more capable of retaining an existing job, retaining their income stream.

Moreover, home insurers tend to view retrofit's broader socioeconomic benefits as outside their remit, as they underwrite the physical asset, not the occupant. While reduced hospitalisations and improved well-being are compelling public goods, insurers need to align policies to specific perils, so indirect health effects often go uncaptured. Some respondents suggested that life and health insurers may eventually explore retrofit's relevance, but for now, the focus remains squarely on flood resilience.

The adoption of resilience measures such as flood doors and smart air bricks, has been well evidenced to help reduce future claims. Build Back Better, a programme run by Flood Re whereby the installation of flood resilience measures is being offered to households when repairing their properties after a flood, has proven to be a good commercial investment. For every £1 spent on property flood resilience, it provides a £5 saving on future damages.[94]

> What we've found is if they've had a further claim, it's saved a lot more than that in any subsequent claims. So flood resilience measures that we've put in place have been worth the investment...

In the long run, insurers hope to be able to translate these savings into customers' premium levels, with an acknowledgement that in flood areas, the premium level will at best most likely be maintained, rather than reduced, due to the likelihood of increased costs and multiple claims. In the meantime, most respondents feel more work is needed to better understand the costs and benefits of each of the resilience measures.

Maintaining asset value

Retrofit plays a role in maintaining and enhancing asset value, particularly through the lens of the 'green premium' and 'brown discount', terms that describe the respective increase and decrease in property value based on energy efficiency performance. This concept is supported by various existing studies, with estimates suggesting that energy-efficient properties can command a green premium of between £26,600[95] and £40,000[96] compared to less efficient properties. Improving the EPC of a property from an F to a C is estimated to add as much as £55,786 to the property.[97]

However, one study cautions that green premiums typically only exist in larger new homes,[98] and that observed value increases may partly reflect general refurbishment efforts rather than energy improvements alone, and there are concerns with a lack of consistent data.[99] Similarly, respondents currently see this effect of premium and discount as more pronounced in the commercial real estate sector, where stricter regulations and higher operational costs amplify the financial impact of energy performance, and less so in residential.

While current discussions around retrofit value often focus on energy efficiency, the growing influence of physical climate risks on asset valuation is also emerging. However, the role of resilience measures in mitigating this impact is not yet clear. One interviewee noted that, all else being equal, a climate-resilient home should command a higher price. However, they acknowledged the need for more detailed evidence to determine how specific retrofit actions contribute to preserving or enhancing property value.

Therefore, data needs emerge as a common theme to be able to integrate the socioeconomic and resilience benefits into business decisions. Both sectors call for better modelling and metrics to fully internalise retrofit benefits.

2.3 Integrated narrative of retrofit

An integrated view of retrofit is needed and can help with uptake

While currently retrofit seems to be viewed primarily as a climate-mitigation measure, it is essential for the industry to adopt a truly integrated approach. Focusing solely on today's weather patterns risks a serious under-investment in resilience: one study of Bristol buildings found that retrofit costs could be underestimated by as much as 54.7 per cent if future climate impacts are ignored.[100]

Both the banks and insurers emphasised the need for a consistent sector-wide language and narrative around retrofit. In addition, integrating mitigation, adaptation and the wider socioeconomic benefits into retrofit not only surfaces the full spectrum of risks and opportunities but also makes the value proposition more compelling to households, investors and policymakers alike. For example, coupling insulation upgrades with flood-resilient fittings and health-driven interventions (like improved ventilation) can reduce long-term maintenance costs, enhance comfort and guard against overheating or water damage.

> "...to bring together all the various different standards, bodies and certification schemes into one thing and saying this is what a climate-adapted building would look like..."

At present, however, the interviewees noted that the public discourse and retrofit practice remain heavily weighted towards emissions reduction alone. This is aligned with the literature findings in the previous section.

> "At the moment, the main levels of activity that we're seeing are primarily focused around improving the energy efficiency of assets, and physical risk is not necessarily being considered as much as it should be..."

Embedding clear messages about lower energy bills, healthier indoor environments and future-proofed homes can drive greater interest and engagement.[101,102] Moreover, for property resilience measures that are notably still nascent, embedding their application with a wider, systematic retrofit programme is seen as helpful to increase uptake and

value proposition for households. It is also helpful to consider the customer journey within the retrofit process, where most people would only want to undergo major works in their properties once.

> [Installing resilience measures] do really work better when under a kind of a retrofit model, actually going and systematically assessing what the home needs rather than the unchecked, unfacilitated grants that used to happen.

> People only want to tear up their home once, and that's the time to fix as many of the problems as possible.

A digital building logbook, as proposed by National Retrofit Hub, could bring together various building-specific information (such as its fabric and energy use) as well as contextual information (such as local and future climate data, local health and income data) to help inform integrated retrofit plans.[103]

However, limited awareness and finances surface as barriers

The lack of awareness within the general public and the financial institutions themselves comes as a barrier. There are still very few households that would do an anticipatory retrofit to increase resilience before the event of floods, such as by installing flood resilience measures. Even for those who have experienced flooding, only one in five people have taken steps to adapt their homes to reduce the damage of future floods.[104]

It is also acknowledged that while it is ideal to address all the wider socioeconomic and resilience issues together, it will also become more complicated, time-consuming, and costly.

> ...customers are only going to have a finite pool of funds or access to funds, and that is the question as well, potentially, is that adaptation versus mitigation. There could be a bit of a tension there...

2.4 Incentivising retrofit

Banks and insurance companies are already working on incentivising retrofit

Banks and insurance companies are increasingly working to incentivise retrofit. For example, banks are offering discounted rates on sustainability-linked loans, including to support retrofit projects. These financial institutions view lowering their typical hurdle rates – albeit at a potential cost to their bottom line – as a strategic move to stimulate investment in greener, more resilient infrastructures. This approach not only encourages borrowers to adopt retrofit measures but also helps advance the overall use of sustainable finance solutions.

> We will accept a lower hurdle that's entirely at the cost of the business, effectively, but it is designed to stimulate the investment and the use of sustainable finance.

Banks are also increasingly encouraging their front-line teams to discuss climate-related risks and opportunities with their customers, helping them understand how these can affect their finances, the broader investment landscape, and ensuring there is a transition plan. Insurers can also do this by fostering more discussions with the underwriters, the networks of repairers and builders that they have, and potentially between property and health insurance to further explore the relationship between housing and health.

Simultaneously, insurers have begun to break new ground by integrating retrofit into their core offerings. Initiatives like Flood Re's Build Back Better scheme demonstrate how the insurance sector is expanding beyond traditional coverage by incorporating resilience measures into repair and rebuild processes. This is a departure from the principle of indemnity that insurers have, which states that an insurance policy shall not provide compensation to the policyholder that exceeds their economic loss. Build Back Better, therefore, is showing how fundamental change is possible, and how overcoming such a challenge for a clear, targeted purpose in improving resilience could yield clear benefits to the sector. As of 2025, 12 insurance companies in the UK have signed up to provide Build Back Better,[105] representing over 60 per cent of the UK's residential property insurance market.

Opportunity to build industry knowledge

To move the dial even further and integrate into business, banks and insurers feel the need to increase efforts to deepen industry knowledge regarding low carbon and resilience measures. For the insurance sector, this means thoroughly understanding not only the risks and mitigation strategies associated with low carbon measures but also the opportunities they present.

Insurers raise the fact that, today, where there are questions over the product design or installation, energy-efficiency measures like solar panels and heat pumps could impact the cost of providing insurance. This perceived technology risk is similar to what investors also identified as barriers to mainstream investment.[106] Some respondents see the urgency to review how these changes impact their risk profiles and identify where the real risks are, ways in which they can be mitigated, and where the remaining data gaps are. One respondent calls for a mindset shift from reliance on traditional historic claims data towards a forward-looking approach that better captures emerging risks and opportunities. This would include the need for a transition plan to enable insurers to understand the risk profile of new technologies, in order to decouple genuine risk from a lack of understanding in underwriting.

The insurance industry has spearheaded such an initiative in the automotive industry. Thatcham Research, funded by the insurance industry and in operation since 1969, acts as a non-profit research centre that is dedicated to understanding the opportunities and risks of new vehicle technology and identifying the best strategies for safe adoption.[107] Another example is The Mass Timber Insurance Playbook, written by the insurance and construction industries, that helps stakeholders in both sectors understand each other's priorities and language.[108]

> [Insurers] need to be getting ahead of this, and there's an element of a change of mindset for the industry, from the traditional way, which is to look at historic claims data to use that for underwriting. That's not going to work...

Both banks and insurers see the need for an industry standard for resilience measures that can help standardise risk quantification. This would require collaboration between financial institutions and manufacturers of retrofit measures. Presently, the lack of consistent, reliable information regarding what can be insured creates challenges for both insurers and banks. Establishing clear and robust standards would enable financial providers to specify potential requirements for resilience and ensure that customers understand what constitutes a good standard.

For example, one respondent referred to Allianz in Germany, which is able to offer a 50 per cent discount on the agreed excess – the amount that customers have to pay out of pocket when making a claim before the insurer covers the rest – if the customers can demonstrate that there are flood property measures in place, in this case pressure-tight windows and doors.[109] This was seen as possible due to the strong domestic market with clear industry standards on flood resilience measures.

Therefore, collecting data on property resilience becomes critical not only for individual underwriting but also for shaping broader market practices. Consistent information would enable financial providers to also be clear on the potential requirements and ways they can assess risks and resilience. Flood Re's Flood Performance Certificate could be a vehicle to give insurers and households this standardised language and understanding on homes' risks and mitigations.[110]

> We don't have consistent information, and it is quite frustrating because there might be a way for financial providers to be a bit more specific on the potential requirements.

Building upon that industry knowledge, insurers play a crucial role in raising awareness about prices and risks within the industry. By doing so, insurers can position themselves as market leaders and drive innovation in the sector. A survey of 200 energy producers in the UK and US found that 93 per cent believe it is crucial for insurance companies to offer diverse risk management services for renewable energy and energy transition technologies. This includes visiting operational assets to identify risk reduction strategies, providing safety and technology guidance at design sites, and using their expertise to offer tailored risk advisory services.[111] Facilitating information sharing and promoting collaboration in risk management and technology adoption can further drive market innovation – with 62 per cent of energy producers in the UK viewing the insurance companies' ability to advance progress.[112]

> The insurance industry has a key role to play in terms of indicating price and risk. If the risk increases and the structure becomes uninsurable, all things being equal, the premiums are going to go through the roof. So the industry has an opportunity to provide those indicators whilst helping to build awareness; with this information, our hope is that this will generate action to ensure a robust insurance market.

Integrating within the current practice

Beyond knowledge building, ultimately, financial institutions would need to integrate evolving risk assessments into comprehensive financial models. By factoring the wider benefits of retrofit into pricing and underwriting frameworks, they could offer more equitable and accurate pricing for customers while encouraging sustainable practices within the market. This integrated approach would not only mitigate the risks associated with climate change but also position financial institutions as proactive catalysts for broader environmental and economic resilience. While this would entail stronger building regulations and standards that need support from the wider system, banks and insurers could start by looking at their current portfolio and understanding where the data gaps are. This aligns with the Prudential Regulation Authority's recommendation to work on developing risk management tools that consider decision making, while large data gaps also remain that need to be accounted for and explained.[113]

Banks see the opportunity to leverage existing instruments aimed at commercial clients, such as sustainability-linked loans, and start to embed key performance indicators related to resilience. This not only improves the overall asset's risk profile but also helps raise awareness with customers.

Moreover, for the retail market, mortgage lenders have recently begun incorporating flood risk assessments into their evaluations, offering a powerful lever for banks to enhance transparency and raise customer awareness about potential risks. Further to this, integrating retrofit offers into the mortgage and home purchase process is another potential strategy, as many homeowners are eager to upgrade their properties once they take possession. This would reduce complexity by simplifying the customer journey, and could lead to higher levels of uptake.[114] Homeowners' willingness to retrofit is found at a key juncture in their lives, for instance, when they are moving to a new house; therefore, awareness at this point is likely to trigger actions.[115] Successful retrofit finance mechanisms typically involve funding for wider renovation and enabling works as part of the finance package,[116] enabling broader sources of value that are more highly prized by households. Additionally, the Law Society of England and Wales has issued guidance to inform climate risks to clients in the conveyancing process.[117]

> The most logical time when people want to do retrofit is actually as soon as they get into the property.

For insurers, embedding retrofit options into claims handling can ensure that customers receive comprehensive, long-term solutions rather than just short-term fixes. Additionally, including retrofitting as part of a product offering should increase the value of the

product provided to the customer, offering more value for money. This proactive mindset addresses issues more holistically, offering customers robust options when managing claims and repairs after significant events like major leaks.

> Really thinking about the repairs that they manage and offering customers the best available option when they have a claim... There's no point in having someone in your home to tidy up after a major leak, and then not suggesting that they get other things done at the same time.

Bundling insurance packages with resilience measures can also highlight the mutual benefits of integrating retrofit within both repair and rebuild scenarios. These combined efforts not only improve the overall risk profile of financial institutions but also foster greater consumer confidence through targeted marketing and educational initiatives that raise customer awareness about the benefits of retrofit and sustainable practices.

Insurance companies see that their industry also has an opportunity to incentivise the upskilling of workers in the repair and installation sector, ensuring that the network of professionals is well equipped with the necessary skills. As major customers for many repair service providers, insurers can drive market investments in training and quality improvements, thereby creating a more reliable and efficient service network. Over 90 per cent of construction employers in the sector are small to medium-sized enterprises (SMEs) that often lack awareness of retrofit possibilities and net zero practices.[118] By leveraging insurers' purchasing power to fund upskilling and quality-assurance programmes for installers, insurers can help ensure a robust network of accredited retrofit professionals that could help directly address the lack of skilled workers, which is still a major barrier in the retrofit sector.[119]

> ...creates a market by making sure that the network of repairers, installers, have the skills they need. Insurers are often their biggest customers. So if they start driving that, then there'll be a business case to invest.

Insurance companies can also play a pivotal role by establishing clear standards for what constitutes a climate-adapted home. Their opinions on safety and resilience can offer homeowners valuable guidance on necessary improvements.

The limitations on the role of finance

The low level of customer awareness around retrofit is seen as the biggest barrier across banks and insurance companies. According to a survey by Santander, 67 per cent of UK adults say they do not know the EPC rating of their home, while only 16 per cent of them consider that they know a lot about the potential benefits of retrofit.[120] Such demand and awareness barriers are found both in the literature review and the interviews above. A study by Nationwide, evaluating their zero per cent green additional borrowing product, found that the availability of finance is not necessarily helping those who were not aware of the need to and the benefits of retrofit to begin with.[121]

As highly regulated entities, banks are limited in the advice they can provide regarding retrofit measures. Banks have to act according to the Consumer Duty, which means they need to exercise reasonable care and skill if they give advice.[122] For banking and investment products, this is achievable, but for retrofit measures, it would be difficult for them to prove that they have the skill to do so. Additionally, sections 56 and 75 of the Consumer Credit Act[123] also place liability with finance providers if there is any fault in the installation or breach of contract by the installer.

> We have to be really cautious as financial advisors who are heavily regulated to get involved in advice or being seen to be giving advice on [retrofit] measures.

Additionally, while the potential savings and risk reductions are there, banks are typically not accustomed to accounting for this. Unlike building new homes that will generate additional rent, retrofitting homes does not necessarily bring forward an additional revenue stream.

According to the interviewees, offering direct insurance premium discounts is also not seen as a promising step forward, given that the underlying risk remains high even after retrofit measures are installed. Additionally, the role of reduction in premiums is seen as very limited in relation to the cost of investment for the retrofit and the lack of perceived cross-subsidy. While premium reduction is unlikely, premium containment or managing premiums within a certain level is seen as a potential way to incentivise customers to take up retrofit measures and avoid a significant increase in their premiums. While currently, Flood Re's subsidised coverage to high-risk homes blunts the incentive for homeowners to install flood resilience, properties that are not covered by Flood Re, such as commercial properties, new homes that were built after 2008, and flats in leasehold blocks containing four or more homes, are already left more vulnerable.[124] According to an analysis by Aviva, almost 110,000 new homes have been built in flood zones and are not covered by Flood Re.[125] It is also important to note that properties covered by Flood Re are also only shielded until the scheme's end date in 2039. This raises questions about the insurability of those homes beyond 2039 without those flood resilience measures in place.

Strategies to incentivise improvements should also take into account a fair and just transition, and avoid creating unintended consequences, such as penalising properties with lower EPCs and inadvertently trapping homeowners in a cycle of borrowing known as 'mortgage prisoners'. Balancing the need for substantial loans to cover necessary improvements against the risk of overburdening customers remains a critical policy challenge, one that highlights the need for a just and inclusive transition in the financial sector.

> ...if we all go down a route of competing for high efficiency properties, we won't drive a transition, we'll just drive mortgage prisoners.

2.5. Collaboration

Banks and insurers see that collaboration is important, but a relationship does not currently exist

Collaboration between banks and insurers is seen as important, but today, no formal partnership exists. While some banks express that they do checks and balances to ensure their borrowers hold insurance, others express worry that this is all mostly done on a trust basis, and there is no central database in which they can validate who is insured by whom.

Meanwhile, one insurer respondent sees that currently there is no way for them to know whether properties have been retrofitted or not, and it is not something that homeowners would normally tell them. Even in the case when homeowners improve their energy efficiency, they may not necessarily recertify their EPC. Home insurance as a mass market retail product also benefits from questions determined by price comparison websites, which currently do not collect data about retrofit or energy performance. Insurers express that if banks are financing retrofit measures, sharing this data with insurers would allow both sectors to improve their risk assessments and make more informed decisions.

By developing joint retrofit and risk data platforms shared between banks and insurers, both parties could align their decision-making processes on a common set of risk assessments. Such collaboration would not only standardise the evaluation of risk but also contribute to a more integrated approach in assessing, pricing and managing insurance and financial products linked to retrofit measures.

> “What would be helpful, potentially, is access to the same type of risk data that the insurers look at, because then at least we’ll sing from the same hymn sheet.
> We’re making decisions all on the same basis.

> “If there is a way of better sharing or at least aligning data so that we can understand why insurers say yes and no, and they can understand why lenders may say yes and no...

Additionally, retrofit insurance products can address the limitations banks face in offering advice. When insurance is included as part of the retrofit package, it serves as a first line of protection if problems occur, thereby reinforcing the overall value proposition for homeowners. Currently, insurance-backed guarantee is mandated for those using the government’s funding, such as Energy Company Obligation Grants (ECO4) or the Social Housing Decarbonisation Fund (SHDF). However, they are often limited in scope and do not cover issues at the interfaces between retrofit measures. A broader quality assurance and customer protection scheme is still required.

A central database of home insurance information would further benefit banks by providing real-time access to borrowers’ insurability data, helping to streamline risk assessments and mortgage decisions. This would also enable increased transparency

across the two sectors – particularly regarding property insurability and improvements. A central home insurance database – similar to the already existing Motor Insurance Database (MID), which holds information on vehicles – would increase transparency to homeowners and financial institutions.

> "The most beneficial thing would be having more live access to borrowers' insurability.

However, challenges remain: some respondents feel there is a mismatch with banks and insurers operating on different timelines. Insurers are typically making decisions on a 12-month horizon while banks plan over approximately a four-year period (although mortgage terms typically span 25 or 30 years, most mortgage deals are fixed for much shorter periods, allowing for rate adjustments if the risk profile changes), and there are discrepancies in how decisions are made and how risk data is interpreted.

While communication between banks and insurers at a time of rising risk to insurability is important, more data sharing may also risk banks and insurers opting for only the least-risk properties. Therefore, this needs to be treated with caution, ensuring just transition and not leaving vulnerable populations behind.

Supportive government policy and public awareness campaigns are essential

All respondents agree that government action is critical to accelerating retrofit. Retrofit touches on climate, energy, housing, health and economic agendas, with relevance across the National Adaptation Programme,[126] Warm Homes Plan[127] and Kickstarting Economic Growth.[128] Responsibilities are also spread across multiple government departments (Department for Energy Security and Net Zero (DESNZ), Ministry of Housing, Communities and Local Government (MHCLG), Department of Health and Social Care (DHSC), HM Treasury, Department for Environment, Food & Rural Affairs (Defra)). To drive widespread uptake, the government needs to adopt a unified strategy that combines clear standards, financial incentives and public education.

Support the economic case for households

The economic case for households needs to be bolstered. One key proposal is decoupling electricity and gas prices (such as via Green Power Pools[129] or enhanced Contracts for Difference) to alleviate the economic burden of electrifying homes, and therefore delivering savings to households. Currently, the average price of electricity is almost four times more expensive than gas per kilowatt-hour,[130] penalising those who switch to low carbon electricity. Meanwhile, energy efficiency is increasingly important for household finances. The 6.4 per cent increase in the energy price cap, an extra £111 for an average household per year in 2025,[131] will only exacerbate this burden amid stagnant wages and rising council taxes and water bills.[132] Getting UK homes more energy-efficient and reducing household utility bills is increasingly critical. The government's forthcoming Housing Strategy, Warm Homes Plan and Industrial Strategy present an important opportunity to address these issues in tandem.

Stronger, clear building regulations and standards

A stable, well-understood regulatory framework is the bedrock of market confidence. Identifying the right building regulatory lever that enables more resilience and a robust, functional EPC regime will provide both consumers and financial service providers with clear, understandable standards. By involving the insurance industry in these conversations, the government can ensure that regulations are comprehensive and reflect real-world risks and opportunities.

> "The EPC regime actually has to work, not be broken, be easily understandable from a consumer perspective and something that, as a financial service provider, we can understand and also in the same language...

Getting EPCs right is key as it is an indicator that is widely used by financial institutions to measure their emissions, and therefore, their KPIs when disbursing funding. However, as the interviewees noted above, the EPC is currently problematic with its current metric measures energy cost that incentivises cheaper gas over electricity and conversely, does not incentivise optimum changes to homes that enable low carbon heating, such as fabric upgrades.[133] The ongoing EPC reform, expected to be due in 2026,[134] provides a critical opportunity for change to start thinking about including health and resilience aspects.[135] Similar work is underway by Flood Re and its partners on the evidence base and methodology underpinning the Flood Performance Certificate.

Community engagement and public education campaign

Government support through community engagement and public education campaigns can empower both consumers and businesses. To increase awareness, initiatives should simplify complex information, helping homeowners understand the benefits of increasing energy performance while taking preventive measures against risks such as flooding.

> "The problem is, we can't put those types of [retrofit] products really out there and more innovative thinking products because we haven't got anyone to sell it to right now... If you solve the awareness piece, the banks, the building societies will be more than ready.

Initiatives such as 'My Home Made Better', driven by an independent charity in Southampton and supported by local authorities, offer a good example by delivering clear and straightforward messaging, simplifying technical options into clear, step-by-step plans, and sharing real-life case studies.[136] Similarly, Kingston's Efficient Homes Show brings the community together in a free public exhibition that features local businesses, expert talks, and information on grants, funding and green-sector training, enabling community interactions and guiding homeowners on what they can do.[137]

Effective use of public finance

Acknowledging the significant investment required, the government should leverage public finance more effectively to crowd in private capital. Providing financial guarantee to retrofit loans, such as the National Wealth Fund – backed £500 million retrofit facility launched with NatWest,[138] lowers the cost of capital for lenders and enables more ambitious lending products than grants alone can achieve. This serves as an instructive example of how public funds can support innovative lending models for retrofit. Expanding blended finance vehicles at scale would help the government escape the 'growth and underinvestment' trap, where low performance justifies further underinvestment.[139] Crucially, this feedback trap is also linked with the planning and strategy of new building developments. Previous backtracking and delays in green building standards (such as the zero carbon homes plan[140]) caused a lack of confidence in investing, resulting in delays in investment, which results in persistent low capacity and performance in the supply chain and in turn causes slower demand. Escaping this trap requires a clear, long-term strategy (as discussed above) with a clear financial commitment that enables responding to the markets' and future needs, rather than being dependent on slow past experience.

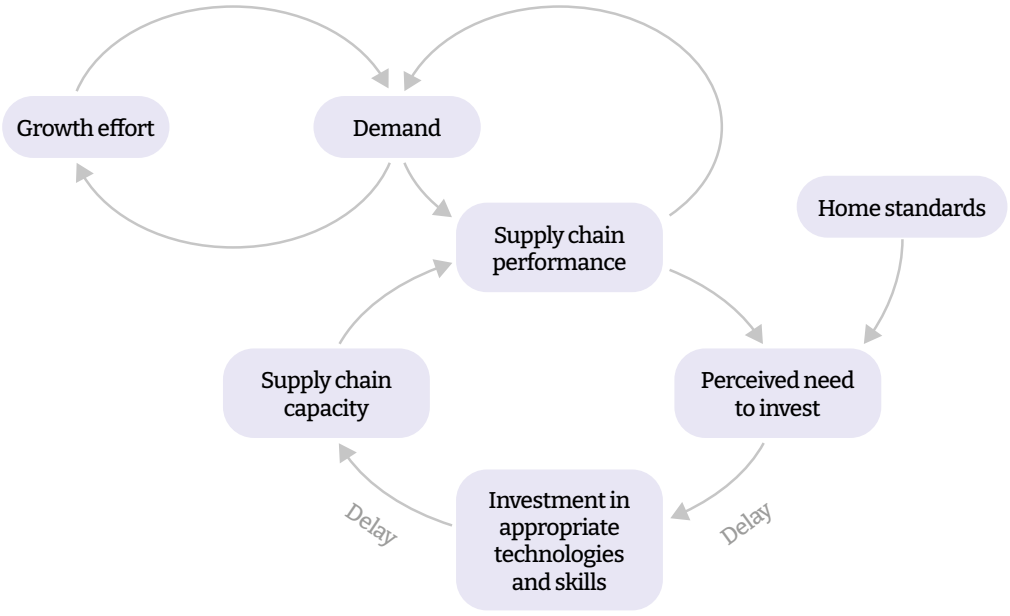

Figure 7: Feedback loop of growth and underinvestment, adapted from Kim (1994)[141]

Ensure just transition

Respondents also raise the issue of just transition, and the government needs to ensure that policy designs and public funds are directed to those who need them the most. For instance, by ensuring grants are available for low-income, high-risk communities. Policies need to ensure that vulnerable communities are not left behind. Electrification incentives should be paired with fuel-poverty safeguards (for example, income-adjusted tariffs and emergency support) to protect those who are potentially unable to decarbonise quickly. Meanwhile, working with Flood Re and the insurance industry, the government needs to continue monitoring the number of households that may find it hard or impossible to access flood insurance when Flood Re exits the market in 2039.[142] Crucially, policy should undergo an equality impact assessment

to identify and correct unintended consequences, such as penalising low-income occupants in high-risk or energy-inefficient homes or creating 'mortgage prisoners', ensuring that no community is left behind.

Support local councils

Local councils, widely regarded by homeowners as trusted sources of guidance,[143] are also central to this collaborative framework; their knowledge of local housing stock and their ability to co-ordinate place-based retrofit strategies make them invaluable partners in delivering a just transition at the community level. Along with their statutory duty to plan for new homes in their local area, councils can also identify retrofit opportunities. Activating and partnering with local governments can engage more citizens and scale up local initiatives, such as area-based retrofit projects or the Property-Level Flood Resilience scheme, and help aggregate bottom-up demand.

The current agenda for devolution could further empower local councils in addressing these issues directly and reduce them from pitting against each other for competitive bidding.[144] For instance, the Trailblazer Devolution Deal between the national government and the West Midlands Combined Authority allows funding for retrofit schemes to devolve to a local level, moving away from competitive bidding to an allocative approach calculated on a fair-share basis. By encouraging place-based and cross-tenure approaches, funding local authorities, housing associations directly are expected to boost confidence within the regional retrofit market and direct investment into local needs.[145]

Partnership and pooling of funds, such as evidenced in London boroughs, offers a possible way forward where more people can benefit by securing greater value, enabling more efficient work, and building aggregated demand in the supply chain.[146] Meanwhile, local councils have also started work to enable more access to low-cost and flexible finance by working with initiatives such as Lendology.[147] Targeted initiatives that helped build understanding from the ground up are also key to helping customers in their retrofit journey. For instance, Suffolk County Council provides energy assessment vouchers for homeowners, which are then linked with 0 per cent financing if they choose to proceed with the retrofit.[148] A collaboration between local charity and action groups, backed by local councils in Hampshire, Southampton and Portsmouth, works to provide free and tailored advice to homeowners, funded by the Energy Industry Voluntary Redress Scheme.[149] This initiative increases homeowners' understanding, trust and reassurance of the retrofit process, helping them to navigate options suitable for their homes, while also reducing upfront costs and enabling access to low-cost finance, ultimately supporting homeowners to make decisions in their retrofit journey. Such a community-driven approach is important to drive uptake, increase trust and ensure that local communities are engaged, and therefore should be encouraged.

Finally, success depends on a truly whole-system effort. Intermediaries such as mortgage brokers and price comparison websites for insurance, energy companies, Repair, Maintenance, and Improvement (RMI) firms, trade bodies and community organisations all have roles in raising awareness, building trust and upskilling the workforce. Other financial providers, including building societies and credit unions, can also help their members in getting access to finance, especially with their local connections and knowledge. Government leadership, through joined-up policy, robust standards and strategic use of public finance, will catalyse this ecosystem, ensuring that retrofit becomes a mainstream, market-driven solution for a healthier, greener, more resilient housing stock.

3. Conclusions and recommendations

Both the overview of existing literature and interview analysis point to the need to reframe retrofit as an integrated investment in climate mitigation, adaptation, socioeconomic improvement and financial resilience. Banks, insurance companies, reinsurers and policy makers are pivotal to this process. To work, each set of actions needs to consider three crosscutting enablers: (1) acknowledging the socioeconomic and resilience benefits of retrofit that reduces risks for financial institutions and generates savings and growth for the government ; (2) developing knowledge and building common language across and within institutions and the public; and (3) a just transition mandate safeguarding vulnerable households from exclusion. While this study is centred on the UK context, the insights derived from this study may offer transferable value to comparable settings internationally. Below, we summarise the business case and recommendations for each of these actors.

Banks

Why?

Protect the £1.16 trillion mortgage book from climate and transition risk.

- Energy efficiency is a demonstrated indicator of mortgage defaults.
- Climate events threaten property values, increasing potential losses on default.

Support customers with their financing needs.

Meet net zero targets and avoid reputational risk.

Avoid stranded-asset losses.

How?

Build internal expertise.

- Train relationship managers, credit risk teams, and frontline staff on climate risks, opportunities and retrofit.
- Incorporate flood risk and other climate-related risks in the mortgage assessment to increase understanding and raise awareness.

Adjust risk-return models.

- Engage with credit risk teams and explore adjusting banks' credit risk models to appropriately reward energy-efficiency and resilience improvements (eg, lower probability of default for retrofit homes).
- Introduce risk-adjusted mortgage pricing: offer reduced rates or enhanced terms for borrowers who retrofit, rather than penalising buyers of less efficient properties.
- Explore how differentiated assumptions about insurability and coverage of losses can be unearthed via stress testing.

Consider new product development or expansion for retrofit.

- To support uptake, finance needs to be integrated within the customer journey. For instance:
  - Integrate dedicated retrofit loans into the home-buying and mortgage application process for seamless customer journeys. Engage mortgage brokers as key actors who reach the mass market directly.
  - Work with local councils or advice providers in integrating financial offerings as a whole package. Partnering with a trusted advisor would be critical to giving homeowners the confidence they need to take action.
- Leverage sustainability-linked loan structures for commercial clients, with KPIs expanded to improve resilience.

Collaborate on data and standards.

- Partner with insurers on shared platforms to access data on retrofit status and property insurability.
- Help define industry standards for 'climate-ready' collateral, ensuring consistency across financing and underwriting.

What will be the benefit?

Lower mortgage arrears and default rates.

Higher, more stable collateral values

New sustainable-finance revenue streams.

Stronger competitive positioning through innovative mortgage products.

Reduced organisation emissions and achievement of sustainability goals.

Insurance companies

Why?	**Manage the potential increase of payouts and losses due to climate change.**
	Decarbonise the underwriting portfolio and maintain insurability.
	Capture emerging risks and opportunities required by the pace of change with new technologies.
How?	**Strengthen the supply chain.** • Leverage insurer purchasing power to fund upskilling and quality-assurance programmes for installers, ensuring a robust network of accredited retrofit professionals.
	Build internal expertise. • Develop metrics to assess resilience impact on payout profile. • Invest in training and research to quantify how efficiency and resilience measures reduce claim frequency and severity.
	Foster data transparency. • Collaborate on a shared retrofit-and-insurance data platform, giving underwriters and banks visibility into property upgrades and coverage status. • Publicly report on retrofit impacts to raise awareness of pricing and risk drivers. • Support Flood Re's work on Flood Performance Certificates as a way to improve transparency of flood risk and household resilience.
	Integrate retrofit into product design. • Embed resilience options into claims handling – offering flood- or subsidence-proofing as part of repair packages to ensure long-term protection. • Pilot bundled 'insurance + retrofit' packages, tailoring coverage and resilience measures (for example, combining home cover with a discounted excess for verified flood defences). • Launch a dedicated insurance product to cover the retrofit process itself, protecting customers and lenders against installation defects or performance shortfalls.
	Set industry standards. • Partner with regulators, manufacturers and trade bodies to define clear benchmarks for a 'climate-ready' home labelling or rating system. Beyond flooding, this should also consider other climate risks such as overheating and water stress. • Support labs or research centres (akin to Thatcham Research) to validate new retrofit technologies and inform underwriting guidelines.
What will be the benefit?	**Sustainable and robust insurance market.**
	Lower and more predictable claims costs.
	Competitive, differentiating premium propositions.
	Expanded or sustained coverage.
	Enhanced customer loyalty through value-added services.
	Reduced systemic risk and improved long-term underwriting profitability.

Government

Why?	**Reduces NHS cost by eliminating cold, damp and unsafe homes.**
	Boosts productivity through healthier, more stable living conditions.
	Strengthens energy security by lowering fossil fuel dependence and grid demand.
	Mitigates financial-stability risks linked to uninsured climate impacts and household debt.
	Creates jobs and stimulates green economic growth.
	Protect housing resilience and ensure long-term market stability.
How?	**Establish a joined-up, long-term, and holistic national retrofit strategy.** • Housing and retrofit span multiple departments and require a joined-up national effort. Calls for a National Retrofit Strategy,[150] Nationwide Retrofit Programme[151] and Office of Climate and Nature Action[152] highlight the need for central leadership to co-ordinate actions across government and regions. The government needs to recognise the role of retrofit in tackling inequality, the housing crisis and ensuring macroeconomic and financial resilience, with related savings and growth reflected in the budget. The Labour Government's Warm Homes Plan could serve as the strategic vehicle for a co-ordinated delivery, integrating grant and support schemes to meet multiple objectives.
	Leverage public finance. • Use guarantees to crowd in private investment, including exploring the viability of expanding National Wealth Fund partnerships with banks in social housing retrofit to other tenures. • Simplify the value-added tax (VAT) relief on energy-saving materials and heating equipment[153] to be more accessible for industry implementation and increase uptake.[154]
	Reform the energy market. • Decouple electricity and gas tariffs to improve affordability and competitiveness.
	Strengthen regulations and standards • Revise EPC to reward health, comfort and resilience and begin to integrate flood risk considerations (eg, via Flood Performance Certificate). Further work to identify the appropriate standards and metrics to assess water stress and overheating risks and impacts should be considered. • Ensure Future Homes Standard[155] includes resilience goals to prevent future retrofitting. • Support development of technical standards , quality assurance framework, training, innovation and research that integrate different areas of retrofit.
	Drive public engagement and workforce growth. • Launch a national awareness campaign on retrofit benefits. • Expand training and accreditation for retrofit professionals. • Local authorities to work with local organisations and ensure a just transition, provide tailored advice to households, and help them navigate the retrofit process.
What will be the benefit?	**Achieve the 2030 emissions reduction target and the 2050 net zero goals.**
	Lower public-sector health spending.
	Build trust and participation in retrofit schemes.
	Create jobs and strengthen domestic supply chains.
	Enhance energy security and national productivity.
	Deliver healthier, more equitable, climate-resilient homes.

Finally, to capture the full socioeconomic and resilience dividend, banks, insurers and the government need to collaborate to build a shared industry-wide knowledge base. Retrofit is no longer a niche agenda: it is central to ensuring that UK homes remain safe, insurable and affordable in a warming world. By working together, the government, banks, and insurers can lead a national transformation that delivers for households, the economy and the planet.

Annex

Methodology

Interview

To further understand the identified broader socioeconomic and resilience benefits of retrofit to banks and insurers, as well as how both actors can incentivise retrofit, a set of interviews was conducted. The respondents to the interview consist of a total of 19 people across nine different institutions, which include banks and building society, insurance and reinsurance companies, and industry association. The interviews were conducted throughout March 2025.

The interview was structured with the topics in Table 2, with questions adjusted between the banks and insurance to obtain relevant insights. The questions were designed to understand how the identified broader socioeconomic and resilience benefits in the literature review are perceived and impact banks and insurers, how both actors can incentivise retrofit, and what mechanisms or broader collaboration pieces are required.

The transcripts of the interviews were then analysed to identify patterns and themes, which were then coded and clustered, using NVivo. The codes that were used are based on the research questions. The insights from the interviews are further triangulated with evidence from the literature to inform the answers to the research questions. A panel of external and internal reviewers then provided input to the draft.

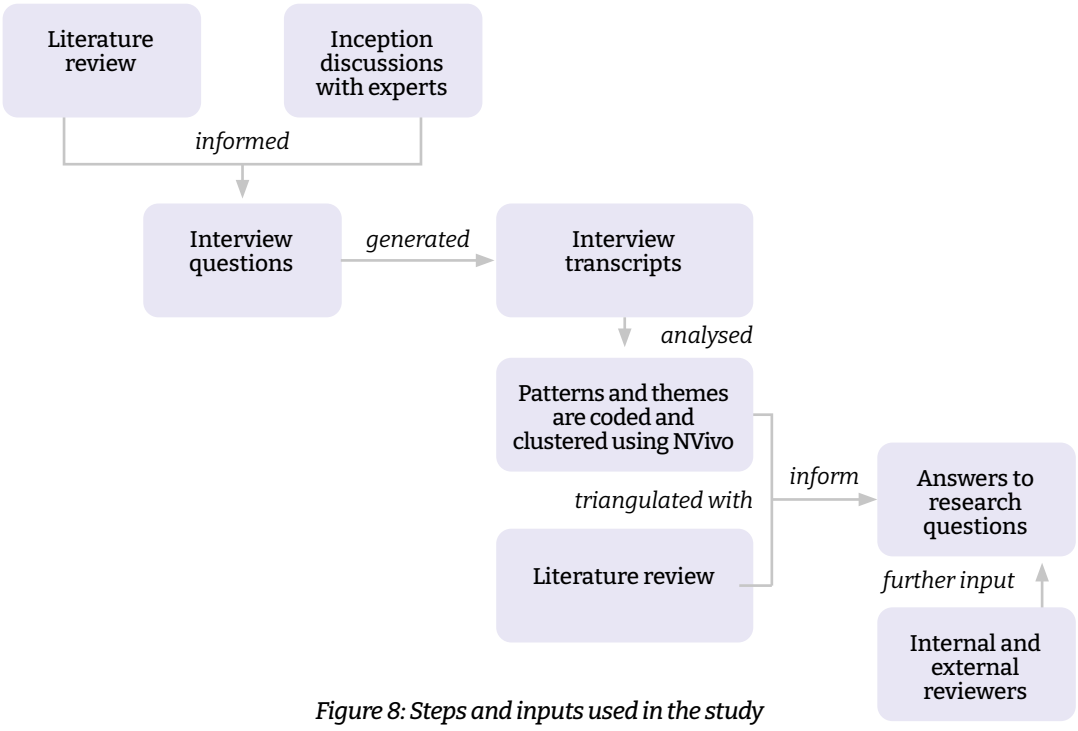

Figure 8: Steps and inputs used in the study

Table 2: Interview questions

Topics	Bank and building society	Insurance and reinsurance
Socioeconomic benefits	• Do you factor in the broader socioeconomic benefits of retrofitting (eg, reduced energy poverty, improved health outcomes, increased employment) into your lending decisions? • Are there any metrics or data that would increase the weighting of the socioeconomic benefits in the lending appraisal? • Acknowledging the link between socioeconomic benefits from retrofit and households' ability to pay, how could this be factored into your lending models to demonstrate a lower risk of non-payment?	• How do you perceive the broader socioeconomic benefits of retrofitting (and the risks of ignoring poor housing) in your investment decisions? • How might improved socioeconomic outcomes from retrofits translate into reduced long-term claims or improved risk profiles? • Acknowledging the link between socioeconomic benefits from retrofit and households' ability to pay, how could this be factored into your risk models to demonstrate a lower risk of non-payment? • How do you see the increasing climate risks impacting the protection gap, especially for people from low-income backgrounds?
Climate risks	• How do rising flood risks, overheating and other climate-related threats affect your current mortgage lending strategy, risk appetite, lending criteria and rates? • How do you see potential reduced insurability impacting your lending decisions in the next five to ten years? • What data do you use to assess how climate risks affect mortgage default rates? • With increasing climate risks and the correlation between property efficiency and borrowers' financial profiles, do you foresee a 'green premium' or 'brown discount' influencing property values in the next five years? • What additional risk metrics or tools would you need to better incorporate retrofit benefits into your credit risk assessments?	• How are increasing climate risks, such as flooding and overheating, affecting your underwriting criteria, risk appetite and premia values for properties? • How do you see the impact of retrofit on future affordability and availability of insurance? • How do you see the increasing climate risks impacting the risks of properties getting uninsurable? How do you see the role of the industry to stay competitive and relevant? • We have heard from the insurance sector that some low carbon measures could inadvertently increase risks: how do you see it can be mitigated?

Topics	Bank and building society	Insurance and reinsurance
Investing in retrofit	• What criteria do you currently use to assess the viability of investing or lending in building retrofits? • What yield or IRR [Internal Rate of Return] expectations (minimum hurdle) do you have for retrofit loans? Are these the same yield or IRR expectations that you have for similar but non-retrofit loans? • How do you originate retrofit loans? For instance, are they mostly customer-initiated or as a result of the bank's marketing efforts? • How do you currently quantify the impact of retrofits on property valuation or borrower creditworthiness? • Do you assess the long-term value appreciation of more energy-efficient and resilient properties compared to those that are less energy-efficient and resilient? If so, how? • What are the barriers you face when financing retrofit projects, for example in terms of credit risk, returns and validity of retrofit actions? • What percentage of potential retrofit-related projects are currently declined based on credit or return considerations?	• What role do energy efficiency and resilience improvements play in determining insurance premiums for retrofitted buildings? • Do you incorporate retrofit-related improvements into your predictive models for claim frequency and severity? If so, how? • How can the insurance sector incentivise property owners to undertake retrofits that enhance resilience and reduce risk exposure? • What types of financial incentives (e.g., premium discounts, bundled insurance products) have you seen as most effective in other sectors that could be adapted here? • Are there innovative insurance products that could support retrofit adoption? • How useful do you see your current predictive models (weather or otherwise) in selecting regions for retrofit investments and pricing insurance for retrofitted properties? • What additional product innovations do you see as having the most potential to drive widespread retrofit adoption?

Topics	Bank and building society	Insurance and reinsurance
Collaboration with government	• Can you share examples of past collaborations with government support programmes for retrofit investments, and explain what worked or did not work? • How could government policies or incentives improve the financial attractiveness of retrofitting for banks? • What opportunities do you see for further collaboration with the government in this area? • What specific policy changes or regulatory frameworks would help you feel more comfortable increasing exposure to retrofit investments?	• Can you share examples of past collaborations with government support programmes for retrofit, and explain what worked or did not work? • In your view, what public–private partnership models have the greatest potential to integrate retrofit benefits into overall risk management and asset valuation frameworks? • What opportunities do you see for further collaboration with the government in this area?
Collaboration with insurers/ banks	• How do you think banks and insurers can work together to incentivise retrofits? • What joint data-sharing or partnership models would be most effective in reducing overall risk and enhancing asset valuations?	• How do you think banks and insurers can work together to incentivise retrofits? • What joint data-sharing or partnership models would be most effective in reducing overall risk and enhancing asset valuations?

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