

HOUSING FINANCE INTERNATIONAL

The Quarterly Journal of the International Union for Housing Finance



- ➔ **Housing policy and the limits of political coalition-building: Hungary under and after Orbán**
- ➔ **The missing principle in housing finance: diversifiable idiosyncratic risk in owner-occupied residential real estate and the architecture of a special purpose vehicle solution**
- ➔ **Innovation in housing decarbonisation, part 2**
- ➔ **Housing decarbonisation in Spain 2026; what is the progress?**
- ➔ **The Israeli mortgage: one loan, many tracks**

International Union for Housing Finance

Housing Finance International

Housing Finance International is published four times a year by the International Union for Housing Finance (IUHF). The views expressed by authors are their own and do not necessarily represent those of the Editor or of the International Union.

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→ Publisher:

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→ Editor:

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ISSN: 2078-6328

Vol. XLII No. 1

→ Subscriptions:

Regular Annual Rate €250

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Not such a long run?

“In the long run we are all dead”. So said the economist John Maynard Keynes in 1923.¹ Wise words intended to foster a balanced view of long-term risk. It would seem however, that our time horizons may be significantly foreshortened according to recent prognostications by prominent Artificial intelligence workers and bosses who have effectively condemned their own product as being capable of causing a modern Armageddon within as little as ten years. This raises some profound issues; if AI is so dangerous to humanity why continue the race to develop it and why would consumers encourage that race by using AI? Has the prospect of greatly enhanced wealth in the short term trumped our (rational) instincts for survival? Answers on a postcard please.

If those in the housing finance industry were to accept the possibility that there could indeed be a 10% chance that none of us will be here in ten years' time, would it be worth planning for the longer term at all? Why not maximise short-term products and “make hay while the sun shines” to quote an old English saying. The 30-year mortgage would become a high-risk unviable relic of stability and rationality.

On the cautious and somewhat hopeful belief that someone in authority will check out the risks of AI and actually do something to head-off Armageddon we could be forgiven for thinking that even without the dire potential consequences of AI development being actualised, the global community (and that includes us all) has been making rather a lot of hay recently with little regard for the long term future of any of us.

The weather has been catastrophic in many parts of the world during the past few months. Heat waves and the attendant wildfires have hit France, the UK and Germany to name just three countries. The USA was similarly hit in 2025 and Australia before that. Most recently the abnormal weather patterns have culminated in the dreadful floods that have wounded Nepal and led to calls for those countries that have created the climate emergency to compensate those (like Nepal) who are victims rather than perpetrators.

We are a very long way from achieving Net Zero in housing let alone across human activity as a totality, yet climate change is already affecting the housing finance industry. Would-be borrowers in the US who find themselves in California or other

wildfire hotspots are increasingly encountering a lack of choice in identifying household and building insurance on their homes as insurance companies tighten their own risk assessments. In the UK, in significant postcode areas that have been subject to flooding the UK government has, since 2016, had to share the risk of future flooding with insurers via the Flood Re scheme, in order to ensure that a swathe of homes remain insurable and hence mortgageable and saleable. Recent UK research has shown what many predicted some time ago; homes with better than average eco performance achieve a price advantage while, conversely those that perform poorly are at a disadvantage². A raft of other examples of market changes of failures due to climate change could be cited from around the globe.

We have to tackle climate change across the board but also in the housing sector, given the importance of homes in terms of total carbon emissions. The alternative is to contemplate a disaster that could rival anything AI can throw up and do so with a much higher probability that such a disaster will actually occur- as far as we know.

HFI will continue to play its part in raising awareness of the climate issues in the housing and housing finance markets. Five years ago, we commissioned a series of articles from around the world assessing the strength of commitments in a number of countries towards achieving Net Zero by 2050. Five years on we are revisiting some of those countries over the next few issues to investigate the degree of progress in each country since the earlier article and whether that country is on course to reach Net Zero across the housing sector by 2050. The first two of those articles appear in this issue- see below.

However, the first article in this issue focusses on Hungary. Viktor Orbán was a controversial figure internally and externally throughout both his periods as Prime Minister, not least for his ongoing support of Vladimir Putin's Russia. Orbán's housing policies were also controversial however, partly due to the apparent mix of housing and partisan political objectives which eventually unravelled. There is a fascinating story here, expertly told by József Hegedűs and Bence Örkény in their article *Housing policy and the limits of political coalition-building: Hungary under and after Orbán*.

Our second article is *The missing principle in housing finance: diversifiable idiosyncratic risk in owner-occupied residential real estate and the architecture of a special purpose vehicle solution*, by Marc Biron and Steven Siegel. As readers may gather from the title this probably isn't your go-to for holiday reading but it is in fact a cogent and scholarly assessment of the possibilities for reducing the risks for homeowners and lenders due to the concentration of financial risk in a single asset in the form of a single property in a particular location. This is an issue that has been raised before but this article offers a very useful analysis of the current state of play and the possibilities.

Our third article in this issue is the first of two which assess the progress towards Net Zero by 2050 in the housing field over the past five years. At a governmental level the UK presents rather a mixed picture with the Conservative Party rowing back on its commitment to Net Zero and Reform UK with its scepticism about action to address the climate crisis, achieving much higher political prominence. Nevertheless, as Andy Sutton shows in his article *Innovation in housing decarbonisation part two*, there has been progress, notably in the area of monitoring and assessing the performance of the housing stock.

We shift to Spain for our fourth article. Corné Koppelaar offers us an excellent analysis of how the situation has changed since 2021 in his article *Housing decarbonisation in Spain 2026; what is the progress?* Koppelaar provides a comprehensive overview and among other matters draws attention to the new 2026-2030 State Housing Plan, which makes energy-efficient renovation a strategic priority and which sets ambitious targets for improvement.

Our final article provides a clear and helpful overview of mortgage finance in Israel. Eran Peter, in his article *The Israeli mortgage: one loan, many tracks*, offers an account of the specific features of a mortgage in Israel along with data on the shape and scale of the market.

We hope you enjoy this issue and have a peaceful Autumn (the AI gremlins notwithstanding!)

Andrew Heywood

September 2026

¹ *A Tract on Monetary Reform*, JM Keynes 1923.

² See the article by Andy Sutton in this issue.

Contributors' biographies

Marc Biron is chief executive of Home Diversified Solutions Corp. and co-author of research applying special-purpose vehicle diversification to owner-occupied home-price risk, published in *Real Estate Finance Journal* (2022).

Thandiwe Dhlamini is the AUHF Coordinator within the Centre for Affordable Housing Finance in Africa. She holds a BA in History and Development Studies and completed the Housing Finance Course for Sub-Saharan Africa in 2018. She has experience in project management which she has gained through working with local and International Non-Governmental Organisations. She is passionate about community development and curbing injustices and inequalities affecting the underprivileged.

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Claudia Magalhães Eloy holds a PhD (USP), an MBA on Construction Economics and Real Estate Financing (OEB) and a Master's Degree in City Planning (UPenn). After having worked as housing program manager at Bahia's Housing Company and as planning manager for the Development Agency of Bahia, she has been working as an independent consultant, specialized in housing finance, funding, policy and subsidies. Clients have included the IADB, the World Bank, GIZ and CAF, as well local research foundations and homebuilders' associations in Brazil. She was the finance lead specialist in the elaboration of Brazil's National Housing Plan (Planhab, 2008/2009) and for Planhab's ExPost Analysis (2023). Claudia has published several articles as well as chapters of books on housing finance and is a member of the Board of Directors of a non-profit organization – Santa Fé – which assists homeless children and adolescents in São Paulo.

József Hegedüs, PhD, co-founded the Metropolitan Research Institute (Budapest, 1989). He researches comparative housing regimes in post-socialist Europe and advises the EIB, CEB, EBRD and governments on housing policy.

Andrew Heywood is an independent consultant specialising in research and analysis of housing and mortgage markets, regulation and policy with both a UK and international focus. He was a visiting fellow of the Cambridge Centre for Housing and Planning Research [CCHPR] and a research fellow with the Smith Institute. He is also Editor of the journal *Housing Finance International*. Andrew writes for a number of publications on housing and lending issues and publishes reports commissioned by a wide range of clients.

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Corneille Koppelaar is an experienced international housing consultant. Throughout the last decades energy efficiency has become increasingly important for housing providers and he has been involved in various international projects to improve energy efficiency that were supported by the EC. Housing still needs to undergo an important transition in order to achieve the internationally agreed objective to become near Zero Carbon by the year 2050.

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Bence Örkény holds a Master's degree in Philosophy and has collaborated with József Hegedüs for three years on social housing research, including country-profile analyses, housing-credit research, and policy recommendations.

Eran Peter is co-founder and CFO of Takara, a U.S. company adapting international mortgage

concepts to help unlock housing affordability and mobility.

Alex J. Pollock is a senior fellow at the Mises Institute, a past-President of the IUHF, the author of *Finance and Philosophy – Why We're Always Surprised*, and co-author of *Surprised Again! The Covid Crisis and the New Market Bubble*.

Zaigham M. Rizvi is currently serving as Secretary General of the Asia-Pacific Union of Housing Finance and is an expert consultant on housing and housing finance to international agencies including the World Bank/IFC. He is a career development finance banker with extensive experience in the field of housing and housing finance spread over more than 25 countries in Africa, the Middle East, South-Asia, East-Asia and the Pacific. He has a passion for low-cost housing.

Steven Siegel, DBA, serves in an independent advisory capacity, contributing expertise in financial analysis, business strategy, and housing-finance innovation, and co-authored this article with Marc Biron.

Andy Sutton provides strategic advice to property owners as the strategic lead for ... as architecture, and is Co-founder of Sero. He has worked in decarbonisation of the built environment for nearly 30 years, spanning the architectural practice, government advisory & policy, international research, and various board/leadership roles.

Mark Weinrich holds graduate degrees in political science and economics from the University of Freiburg, Germany. He is the General Secretary of the International Union for Housing Finance and the manager for international public affairs at the Association of Private German Bausparkassen.

African Union for Housing Finance (AUHF)

↳ By Thandiwe Dhlamini

Across Africa, housing-finance institutions are responding to a common challenge, how to mobilise more long-term capital, translate it into affordable housing finance, and ensure that housing is accessible, sustainable and resilient. Recent developments among AUHF members show this agenda taking shape across capital markets, mortgage refinancing, alternative lending models, housing delivery partnerships and climate finance. From new bond issuances and sustainable-finance frameworks to SACCO-based mortgage products, rent-to-own models and energy-resilient housing, members are demonstrating different approaches to expanding the housing-finance ecosystem and closing the gap between housing demand, finance and delivery.

ShafDB mobilises sustainable capital through local-currency bond markets

AUHF member, Shelter Afrique Development Bank (ShafDB), is expanding its sustainable finance mobilisation through a planned US\$500 million (approximately Sh65 billion) sustainability-linked bond targeting East African markets in the first quarter of 2027. The bond is expected to be issued across Kenya, Uganda, Tanzania and Rwanda, with proceeds supporting housing projects and investments in mortgage-refinance institutions. The planned issuance builds on ShafDB's newly established Sustainable Finance Framework, which provides a basis for raising Green, Social and Sustainability financing for affordable, inclusive and climate-resilient housing. ShafDB's leadership has emphasised the importance of local-currency financing to reduce foreign-exchange risks for housing projects and borrowers, with the institution seeking to deepen domestic capital markets as a source of long-term housing finance. The planned East African issuance follows ShafDB's earlier mobilisation of approximately CFA 60 billion (approx. US\$ 105million) in West African markets, highlighting the bank's growing focus on using

regional capital markets to address Africa's housing-finance gap.

Find out more about ShafDB: <http://www.auhf.co.za/shelter-afrique/>

Source: https://www.newvision.co.ug/category/business/shafdb-sustainability-finance-framework-meet-NV_238402_092026

<https://x.com/AmbokoJH/status/2104654086654296107/photo/1>

<https://www.businessdailyafrica.com/bd/markets/capital-markets/shelter-afrique-to-float-sh65billion-bond-in-q1-2027-5612012>

TMRC's Nyumba bond attracts strong investor demand to support housing Finance in Tanzania

AUHF member Tanzania Mortgage Refinance Company (TMRC) has successfully completed the first tranche of its TZS 100 billion (approx. US\$ 37.7million) five-year Medium-Term Note Programme, with its TZS 20 billion Nyumba Bond attracting applications worth TZS 30.235 billion (approx. US\$11.40million), representing 151.18% subscription. Following approval from the Capital Markets and Securities Authority (CMSA), TMRC accepted all valid applications, enabling the full TZS 30.235 billion (approx. US\$ \$11.40 million) to be allocated to investors. The five-year bond, issued on 12 June 2026 and maturing in 2031, carries a fixed 11% annual coupon, payable semi-annually, and was subsequently listed on the Dar es Salaam Stock Exchange. The strong investor response highlights growing market confidence in housing-finance instruments and supports TMRC's role in mobilising long-term capital to strengthen mortgage and housing finance in Tanzania.

Find out more about TMRC here: <http://www.auhf.co.za/tanzania-mortgage-refinance-company-ltd/>

Source: <https://www.tmrc.co.tz/resources/view/tmrc-nyumba-bond-results-announcement>

CBZ mobilises long-term capital for Zimbabwe's infrastructure and housing

CBZ Holdings is seeking to deepen Zimbabwe's long-term financing market through a planned US\$600 million bond programme to be listed on the Victoria Falls Stock Exchange (VFEX). The phased programme will begin with a US\$100 million tranche, of which US\$75 million has already been secured, before progressing towards the larger issuance. CBZ intends to use the funding to support major infrastructure projects, including road rehabilitation, while also creating capacity to finance water, housing, property development and other strategic investments. The initiative represents a significant expansion of CBZ's role from conventional banking towards mobilising long-term capital for development, while providing investors with US-dollar-denominated fixed-income opportunities through VFEX. CBZ says it plans to engage regional and international investors through roadshows in financial centres including Johannesburg, Cape Town, London and New York, with the broader objective of attracting capital into Zimbabwe's infrastructure pipeline. The bond also comes as Zimbabwe seeks to deepen its relatively underdeveloped debt market and channel domestic savings, pension funds and institutional capital towards productive, long-duration assets.

Find out more about CBZ here: <http://www.auhf.co.za/cbz-bank/>

Source: <https://www.heraldonline.co.zw/cbz-bond-tests-zimbabwes-appetite-for-long-term-debt-2/>

Standard Bank and Java connecting real estate with diverse sources of capital

AUHF member Standard Bank CIB and Java Capital are establishing an integrated platform to connect real estate, infrastructure and other real-asset opportunities with a broader range of funding sources. The partnership combines Standard Bank's balance sheet,

African footprint and financing capabilities with Java Capital's corporate finance, merges and acquisitions M&A and equity capital-markets expertise. The platform will support investors, developers and listed companies through debt and equity origination, structured and mezzanine finance, capital raising, private capital and selected co-investment, providing a more integrated route from identifying an opportunity and structuring a transaction to securing funding and execution. The initiative comes as South Africa's property market shows signs of renewed activity, with stabilising financing conditions, stronger property-company balance sheets and renewed M&A and investment interest. For the wider African housing and property-finance sector, the partnership illustrates the growing importance of diversifying the capital stack beyond traditional bank lending and combining balance-sheet finance, capital markets, private capital and structured funding to unlock investment in real estate and infrastructure.

Find out more about Standard bank: <https://www.auhf.co.za/standard-bank/>

Source: <https://corporateandinvestment.standardbank.com/cib/global/who-we-are/about-us/news/Standard-Bank-and-Java-Capital-partner-to-build-an-integrated-real-estate-advisory-and-co%E2%80%9393investment-platform>

Expanding homeownership beyond traditional credit assessment in Kenya

August 2026, AUHF member Kenya Mortgage Refinance Company (KMRC) held its 5th Kenya Affordable Housing Conference (KAHC 2026) under the theme "Scaling the Base: Unlocking Inclusive and Sustainable Housing Solutions." Discussions focused on expanding access to housing finance through innovative and blended finance, alternative credit assessment, public-private partnerships, green and climate-resilient housing, digital solutions and private capital mobilisation. Principal Secretary Charles Hinga called on banks, SACCOs and other financiers to support the programme, including by looking beyond conventional payslips to mobile-money transactions, SACCO savings, rental payments and business records when assessing borrowers. The Government reaffirmed its target to make 45,000 units available to the market by December 2026. This was reinforced by Shelter Afrique Development Bank (ShafDB) MD and CEO Thierno-Habib Hann, who highlighted the limitations of conventional mortgage models for Africa's largely informal workforce and called for finance systems that reflect how households earn and save. SACCOs were

also recognised as an important channel for alternative credit data and longer-term mortgage finance, reinforcing the need for stronger collaboration among government, financiers, SACCOs, developers and investors. The discussions align with KMRC's role in expanding mortgage liquidity and longer-term lending, supporting Kenya's ambition to translate more than 280,000 units under construction into broader, sustainable homeownership.

Find out more about KMRC: <https://www.auhf.co.za/kenya-mortgage-refinance-company/>

Sources: <https://www.kenyanews.go.ke/government-targets-completion-of-45000-affordable-housing-units-by-december/>

<https://africasciencenews.org/kenya-looks-beyond-payslips-to-open-mortgages-to-more-homebuyers/>

KMRC partnership expands affordable mortgage access through SACCOs in Kenya

AUHF member Kenya Mortgage Refinance Company (KMRC) is expanding affordable, longer-term mortgage finance through partnerships with SACCOs, using their established savings and repayment records to reach households often underserved by conventional mortgage lending. Through its partnership with Kimisitu DT SACCO, KMRC supported the launch of a mortgage product offering eligible members up to KSh10.5 million (approx. US\$80,000) at 9% per annum, with repayment periods of up to 25 years and financing of up to 105% of the property's value, potentially covering the purchase price as well as certain associated cost. The initiative combines access to mortgage finance with financial literacy and guidance on applications and eligibility, while demonstrating how SACCOs can serve as an important bridge into the formal mortgage market. With regulated SACCO lending reaching KSh948.7 billion (approx. US\$7.3 billion) in 2025, including KSh157.2 billion (approx. US\$1.2 billion) for land and housing, their detailed records of savings, contributions and loan repayments offer valuable alternative credit information for households without conventional payslips or extensive bank credit histories. Deeper integration between KMRC, SACCOs and mortgage lenders could therefore help convert existing housing-finance activity into a broader pipeline of affordable, longer-term mortgage lending and advance financial inclusion in Kenya.

Find out more about KMRC here: <https://www.auhf.co.za/kenya-mortgage-refinance-company/>

Sources: <https://www.the-star.co.ke/news/2026-08-01-kimisitu-unveils-9-mortgage-product-to-boost-affordable-homeownership>

<https://saccoreview.co.ke/sacco-records-could-unlock-housing-loans-for-kenyans/>

NMRC: extending mortgage tenors to expand homeownership in Nigeria

FirstTrust Mortgage Bank has expanded its mortgage offering with an NMRC-backed Outright Purchase Mortgage, providing individual homebuyers with financing of up to ₦50 million (approx. US\$35,000) and repayment periods of up to 20 years. The product forms part of a broader suite of purchase, construction and equity-release solutions introduced by FirstTrust to widen access to property finance, with the NMRC-backed facility specifically extending repayment periods beyond the bank's standard mortgage offering. For AUHF member NMRC, the development illustrates the role of mortgage refinancing in enabling lenders to provide longer-term funding and more accessible home-finance products. NMRC, which mobilises capital-market funding to refinance eligible mortgage portfolios, raised ₦1.5 billion (approx. US\$8.1 million) through a 10-year bond in May 2026 to strengthen liquidity in Nigeria's mortgage market. Through refinancing and capital-market mobilisation, NMRC continues to play a catalytic role in expanding the availability, affordability and tenor of mortgage finance in Nigeria.

Find out more NMRC here: <http://www.auhf.co.za/nigeria-mortgage-refinance-company/>

Source: <https://www.brandiconimage.com/2026/09/firsttrust-rolls-out-new-mortgage.html>

FMBN brings housing finance partners together to expand homeownership for Nigerian workers

AUHF member, Federal Mortgage Bank of Nigeria (FMBN) is supporting homeownership for Nigerian workers through the Renewed Hope Cities and Estates Programme. The programme includes 197 National Housing Fund (NHF) mortgage applications valued at approximately ₦8.3 billion (approx. US\$ 6.26million) being processed for staff of the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA). The initiative brings together the Federal Ministry of Housing and Urban Development, FMBN, Family Homes Funds Limited (FHFL), NMDPRA Staff Cooperative Society, CityCode

Mortgage Bank and private developers, creating an integrated platform linking housing development, project finance, mortgage lending and eligible off takers. FMBN is playing a central financing role through a ₦100 billion (US\$75.5 million) off-taker guarantee for the Karsana project, alongside ₦19.9 billion (approx. US\$14.96)) indirect funding, helping provide developers with greater certainty while connecting completed homes to NHF-backed mortgage finance. The partnership illustrates how coordinated action across government, housing-finance institutions, cooperatives, mortgage banks and private developers can translate housing supply into accessible, financeable homeownership opportunities for Nigerian workers.

Find out more about FMBN here: <http://www.auhf.co.za/federal-mortgage-bank-of-nigeria/>

Source: <https://businessday.ng/companies/article/nmdpra-workers-tap-n8-3bn-fmbn-mortgage-pipeline-for-homes/?amp>

SHMFF expanding affordable housing

through rental and rent-to-own models in Egypt Egypt is expanding affordable housing options through a combined rental and rent-to-own programme offering 25,000 housing units across various governorates and new cities. The initiative brings together the New Urban Communities Authority and the Social Housing and Mortgage Finance Fund, with 10,000 units offered through a rent-to-own model including 5,000 completed units and a further 5,000 to be delivered over three years across approximately 26 new cities. A further 15,000 units are being made available under the *Housing for All Egyptians 9* initiative, targeting low-income households. The programme reflects a shift towards expanding tenure options beyond conventional homeownership, using rental and rent-to-own arrangements to improve access to formal housing for households that may not immediately qualify for or afford traditional mortgage finance.

Find out more about SHMFF here: <http://www.auhf.co.za/social-housing-and-mortgage-finance-fund/>

Source: <https://www.cairo.gov.eg/en/news/2026/september/21/b5f875ae96c74a2d8d4d852c9aea34f>

TAF Africa Global' s 10,000-home affordable housing investment in Liberia

AUHF member TAF Africa Global is positioning Liberia's significant coastline, available land and relatively low levels of development

as opportunities for long-term investment. In a recent Liberian Diaspora Conference in Alexandria, Virginia, CEO Mustapha Njie described the country's potential for transformation through strategic real estate and infrastructure development. TAF Africa Global is partnering with the Government of Liberia to build 10,000 unit affordable housing programme, beginning with approximately 500 homes across 25 hectares in Bentol City, about 20 miles from Monrovia. The development is intended to go beyond housing provision by creating a planned, mixed-use urban community incorporating roads, electricity, water, security and estate management, while helping to decongest the capital. Housing prices range from approximately US\$56,650 to US\$213,000, highlighting both the opportunities and affordability challenges in Liberia's housing market. Access to mortgage finance is therefore central to the model, with TAF engaging financial institutions, including Ecobank, around longer-term mortgage products reportedly targeting approximately 10 years at 10% interest. The initiative forms part of TAF Africa Global's wider ambition to develop one million affordable homes across sub-Saharan Africa by 2063, demonstrating how public-private partnerships, new urban development and housing finance can work together to address Africa's growing housing demand.

Find out more about TAF Africa Global here: <https://www.auhf.co.za/taf-africa-global-company-limited/>

Source: https://www.liberianobserver.com/business/liberia-has-potential-to-become-next-dubai/article_cf0a8769-726e-474a-afcc-67c3c2d3c24f.html

FHFL and REA partner to build affordable, energy-resilient housing in Nigeria

AUHF member, Family Homes Funds Limited (FHFL) is strengthening the sustainability and resilience of affordable housing in Nigeria through a new five-year partnership with the Rural Electrification Agency (REA). The partnership will integrate energy planning and renewable-energy solutions into FHFL-supported housing projects from feasibility and design through construction and post-occupancy, helping to improve energy affordability and resilience for residents. FHFL will incorporate energy planning into project approvals, budgets and financing structures, while requiring developers to prepare energy-readiness plans as part of its financing requirements. REA will provide energy-access data, technical expertise and planning support,

with potential solutions including rooftop solar, mini-grids, hybrid systems and solar-powered water infrastructure. The collaboration positions FHFL to deliver affordable homes that are not only accessible to purchase, but more affordable and sustainable to live in over their lifetime, while demonstrating a more integrated approach to housing, energy access and climate resilience in Nigeria.

Find out more about FHFL here: <http://www.auhf.co.za/nigeria-mortgage-refinance-company/>

Source: <https://rea.gov.ng/news/REA-x-FHFL/REA-X-FHFL.html>

TMRC embeds climate and sustainability into Tanzania's housing finance System

TMRC has developed a Climate & Sustainability Strategy for 2025–2029 to integrate climate and sustainability considerations into its operations and contribution to Tanzania's housing-finance sector. The strategy provides a framework for strengthening climate resilience, supporting sustainable housing finance and embedding environmental, social and governance considerations across TMRC's business and stakeholder activities. It reflects TMRC's broader role in strengthening the mortgage market by enabling financial institutions to expand mortgage lending while responding to emerging climate-related risks and opportunities in the housing sector.

See the detailed strategy here: <https://www.tmrc.co.tz/resources/view/tmrc-climate-sustainability-strategy-extract-2025-2029>

ZEP-RE: turning climate risk into insurable protection

AUHF member ZEP-RE (PTA Reinsurance Company) a specialised COMESA institution is positioning reinsurance and risk transfer as tools for strengthening Africa's financial resilience to climate and disaster shocks. Its work demonstrates a shift from viewing vulnerable households, businesses and public assets as "uninsurable" towards creating the conditions for insurability through better data, innovative products, regional risk pooling and partnerships. Through the World Bank-funded DRIVE programme implemented by ZEP-RE has reached more than 3.5 million beneficiaries and their dependants in the Horn of Africa. ZEP-RE is also supporting a proposed Regional Insurance Risk Pool for Public Assets and Critical Infrastructure, which would help governments pre-arrange financing for climate and disaster-related damage rather than relying

on emergency public expenditure aftershocks occur. Its 2024 sustainability reporting further highlights the connection to housing finance: through its Collateral Replacement Indemnity product, ZEP-RE helped more than 6,100 lower-income families unlock US\$58 million in affordable housing finance. These initiatives illustrate how insurance and reinsurance can complement housing finance, infrastructure investment and development finance by reducing risk, protecting assets and strengthening the capacity of households and governments to withstand shocks.

Find out more about ZEP-Re here: <https://www.auhf.co.za/zep-re-pta-reinsurance-company/>

Source: <https://africa.com/business/from-protection-gap-to-insurability-building-africas-next-generation-of-resilience>

NHFC's next phase: scaling housing finance and partnerships

AUHF member National Home Finance Corporation (NHFC) marked 30 years of expanding access to housing finance, with a renewed focus on mobilising investment for affordable housing. Established in 1996, NHFC has facilitated more than R13 billion (approx. US\$793.35 million) in housing finance and supported over 800,000 households. Its First Home Finance programme, targeting households earning R3,501-R22,000 (approx. US\$213-US\$1,342) per month, has recorded more than 32,000 subsidy approvals since 2019, with close to R2 billion (approx. US\$122 million) disbursed and R10.9 billion (approx. US\$665 million) in private-sector investment leveraged. Looking ahead, Human Settlements Minister Thembi Simelane identified innovation in housing finance, integrated and sustainable settlements, and stronger partnerships as priorities, while highlighting the proposed transition to a Human Settlements Development Bank as an opportunity to increase NHFC's scale and autonomy. With housing demand continuing to outstrip supply, NHFC's next phase will focus on leveraging innovative finance, partnerships and private capital to support the delivery of 140,000 housing opportunities under the 2024–2029 Medium Term Development Plan.

Find out more about NHFC here: <http://www.auhf.co.za/national-housing-finance-corporation-nhfc/>

Source: <https://www.gov.za/news/media-advisories/conferences-summits-seminars-and-workshops/minister-thembi-simelane-1>

Atenu Developments turns local resources into social infrastructure in Namibia

In Namibia's Zambezi Region, AUHF member Atenu Developments is partnering with the Palms for Life Fund to transform a long-standing community initiative into a new early childhood development (ECD) centre at Kyeracan. The project incorporates 15,000 bricks moulded by community members three years ago, demonstrating how local participation and materials can contribute to affordable social infrastructure. Following a structural assessment, Atenu confirmed that the bricks are suitable for construction of the centre's kitchen, while community members are also participating in site preparation. Once completed, the centre will accommodate 60 children, providing early education and nutritious meals in a safe environment, while local teachers receive additional early-childhood training. The project illustrates Atenu Developments' approach to working with communities and development partners to convert locally generated resources into durable infrastructure, while supporting broader objectives around inclusive development and improved living conditions in underserved communities.

Find out about Atenu Development here: <http://www.auhf.co.za/atenu-developments/>

Source: <https://www.namibian.com.na/15-000-bricks-build-kyeracans-future/>

FNB data highlights women's growing role in repeat home buying

New FNB data highlights a notable shift in South Africa's residential property market, with women accounting for 51% of repeat home buyers for the first time in a decade. The finding points to women's increasing participation not only as first-time homeowners but also as repeat purchasers, potentially reflecting a growing role in property investment and household wealth accumulation. The trend is particularly significant against broader affordability pressures in the residential

market, where FNB's latest data shows first-time buyer participation has fallen to 26%, from 32% in May 2026. FNB's findings add to wider evidence of women's growing position in the property market: Lightstone reported in July that women accounted for 52% of properties registered to single individuals in South Africa. The data point to an evolving housing-finance market in which women are becoming an increasingly important segment of both homeownership and property investment.

Find out more about FNB here: <https://www.auhf.co.za/first-national-bank-home-finance/>

Source: <https://novuspressbulletin.co.za/blog/fnb-data-reveals-women-account-for-51-of-repeat-home-buyers-for-the-first-time-in-10-years>

Taken together, these developments demonstrate that expanding Africa's housing markets requires more than increasing the supply of mortgages or housing units alone. It requires deeper capital markets, stronger refinancing institutions, innovative approaches to credit assessment and tenure, effective partnerships between financiers and developers, and greater attention to climate and operational resilience. Across these areas, AUHF members are playing an increasingly important role in connecting capital with households, projects and markets. Their diverse initiatives point to a housing-finance ecosystem that is becoming more innovative, interconnected and responsive to the realities of African households and cities.

Upcoming events:

AUHF 42nd AGM and Annual Conference, 10-13 November 2026, Raddison Blu Hotel, Lusaka -Zambia,

Theme: Transforming Africa's housing future: innovation, technology, and value chain synergies.

- 10 November: AUHF State and City round table
- 11 November: AUHF Masterclass | Site visit
- 12 November: Day 1 AUHF Conference | Innovation Exhibition
- 13 November: Day 2 AUHF Conference | AUHF Capital Sprint
AUHF Gala Dinner and Awards | Innovation Exhibition

Find out more here: <https://www.auhf.co.za/>

Asia-Pacific Region

↪ By Zaigham Mahmood Rizvi

Australia

Home ownership dives to the lowest level in decades in major Aussie city

Sydney's home ownership rate has fallen to 59.9 per cent – its lowest level since 1954 – as soaring property prices shut out prospective buyers, according to new KPMG analysis. The 2025 figure, down from 61.1 per cent in 2021, marks the first sub-60 per cent reading in more than half a century. KPMG urban economist Terry Rawnsley said the decline underscores the severe deterioration in housing affordability for owner-occupiers.

Nationally, ownership edged down to 65.9 per cent, driven almost entirely by NSW. Excluding that state, national figures remain unchanged, with nearly 600,000 households entering ownership since 2021.

A stark geographic divide has emerged: Queensland and Western Australia posted gains to 64.9 per cent and 69.9 per cent, respectively, attributed to affordability and remote work flexibility. Victoria held steady at 68.7 per cent.

While national home prices dipped 0.3 per cent in June amid rate hikes and tax changes, they remain up 5.8 per cent year-on-year. However, record dwelling construction and a rise in first-home buyer loans to 120,500 signal new pathways, with Rawnsley noting the ownership dream is “far from dead.”

Source: [Home ownership dives to the lowest level in decades in major Aussie city: 'Not seen since the 1950s'](#)

Housing policy changes risk creating market chaos and punishing owners, expert warns

Recent housing policy changes risk creating market chaos and unfairly penalizing long-term homeowners, an expert warns. Following an article on government efforts to ease first-home buyer struggles, numerous baby boomer readers expressed deep frustration, feeling their past financial sacrifices are being disregarded.

Under new policy considerations, this property would lose its pre-1985 capital gains tax (CGT) exemption, subjecting it to significant new taxes. When the author attempted to explain the potential tax implications, the homeowner firmly

rejected the rationale. The proposed change is viewed as a direct penalty on homeowners' lifelong hard work and resilience.

This growing backlash highlights a critical challenge for policymakers: balancing the urgent need for housing affordability for new buyers without destabilizing the market or punishing older Australians who built their wealth through decades of dedication and sacrifice.

Source: [Property market needs consistency, not extremes: Haesley Cush | news.com.au](#)

Australia's property market slows, but strong fundamentals prevent collapse

Despite rising interest rates and falling consumer confidence, Australia's property market is avoiding a major crash. Experts agree that the market's “fundamentals remain strong,” supported by four key pillars.

First, a chronic housing shortage persists. Recent data shows housing construction starts fell by 11.2%. Property expert David Cummins warns Australia has a “delivery problem”, emphasizing the urgent need for modern construction methodologies to build smarter, faster, and more efficiently.

Second, robust population growth continues to fuel demand. States like Queensland are seeing record interstate migration as buyers seek better value and lifestyle opportunities.

Third, massive infrastructure investments, such as the new Western Sydney International Airport and its surrounding employment hub, are generating long-term local jobs and sustained housing demand.

Finally, the labour market remains highly resilient. Historically low unemployment and steady wage growth provide buyers with the financial security needed to purchase homes.

Source: [Are Australia's housing fundamentals strong enough to prevent a property price crash? - latest residential news - API Magazine](#)

Bangladesh

Bangladesh real estate seeks emergency support amid crisis

Bangladesh's real estate industry urged the government for immediate financial and policy intervention to survive a severe economic crisis. Meeting with city development authority RAJUK, the Real Estate and Housing Association of Bangladesh (REHAB) warned the sector is under extreme strain.

REHAB President Dr. Ali Afzal noted apartment sales plummeted 62%, while construction costs surged 44% due to global pressures and new taxes. With bank lending rates at 17–18%, the industry's viability is threatened, risking a sector contributing 15% to national GDP and supporting five million livelihoods.

To revive the market, REHAB demanded a Tk100 billion refinancing fund, long-term low-interest housing loans, and tax incentives. The association pushed for decentralized urban development in smaller towns and urgent revisions to the Detailed Area Plan (DAP)-2025 and Dhaka Metropolitan Building Rules-2025. They cited confusing regulations on floor area ratios, green buildings, and parking as major hurdles. Lastly, REHAB requested stricter legal frameworks to regulate shared-equity housing businesses outside the tax system.

Source: [REHAB seeks policy support to overcome housing sector crisis](#)

Bangladesh faces severe housing crisis as mortgage access lags behind region

Bangladesh's housing market is struggling under a massive urban shortage and scarce mortgage funding. Currently, mortgage credit makes up just 1.9% of the country's GDP, falling far behind regional neighbors like India (10–12%) and Malaysia (53.4%). Without long-term lending frameworks, local banks cannot offer affordable 20- to 25-year home loans.

Consequently, the urban housing deficit has surged to 8.5 million units. In Dhaka, formal developers build only 25,000 homes yearly against a demand of 120,000. This severe shortfall leaves lower-income families completely priced out. Over the last two decades, Dhaka apartment prices have jumped four to five times. Today, an entry-level 1,000-square-foot apartment costs around 60 lakh BDT, making formal housing far too expensive for average

households, well beyond standard affordability limits.

Although the construction sector drives 9.3% of GDP and employs roughly 4 million workers, most remain informal, uninsured, and outside safety regulations. Adding to this crisis is a severe lack of reliable property data. Mapping tools identify only about 80,000 residential structures among nearly 11 million buildings across the country, highlighting how little of the nation's-built environment is officially documented and tracked. This critical data gap leaves lenders and planners without the basic records needed to build a modern, accessible mortgage market.

Source: [Bangladesh Real Estate & Construction Analysis - BDPolicyLab](#)

Bangladesh real estate slumps as high interest rates and uncertainty hit sales

Bangladesh's real estate sector is facing a severe downturn in 2025, driven by soaring borrowing costs and economic uncertainty. Home loan interest rates jumped to 17% in early 2024, up from 9% in 2022. This makes monthly repayments unaffordable for mid-market buyers, who usually rely on bank loans for 70% of a home's cost.

As a result, industry-wide sales have dropped by at least 30%. Developers are struggling with squeezed profit margins, as construction costs rise while apartment prices fall. Many wealthy buyers are moving their money abroad, causing a spike in project cancellations. Luxury apartment sales in prime Dhaka areas have plunged by up to 70%.

Regulatory hurdles have made things worse. Delays in city planning approvals and strict registration rules have stalled new projects and discouraged land purchases. Monthly industry sales have fallen from 1,000 units to about 700, and property values are staying flat or dropping.

However, there is hope. Recent measures, like raising the maximum home loan limit to Tk 4 crore, along with a newly elected government, are expected to gradually restore buyer confidence and stabilize the market.

Source: [Real Estate Market Slowdown Bangladesh | Rising borrowing costs stall mid-segment housing market | The Daily Star](#)

Cambodia

Government takes steps to solve Cambodian real estate supply issues and targets affordable housing

The Ministry of Economy and Finance (MEF) confirmed the 2025 tax incentives for first-time

homebuyers and established a Technical Working Group to support the implementation of affordable housing development projects. The Ministry of Land Management, Urban Planning and Construction (MLUPC) and the National Bank of Cambodia (NBC) also discussed ways to transfer debt from real estate buyers to banks.

The MEF established a Technical Working Group to promote affordable housing for low- and middle-income citizens, particularly civil servants.

According to the MEF, the working group will coordinate tax exemptions and reductions, assess the fiscal impact on state revenue, and expedite approval processes for these exemptions. Additionally, the group will monitor the implementation of tax relief measures to ensure transparency and accountability.

The working group will also evaluate requests for infrastructure support such as roads, utilities, and public services from development companies. It will oversee the construction of these state-funded facilities and explore financial strategies to support affordable housing initiatives, ensuring accessibility for low- and middle-income families.

Source: [The Government Takes Steps To Solve Cambodian Real Estate Supply Issues And Targets Affordable Housing | B2B](#)

Cambodia enhances affordable housing policy with four new strategic pillars

The Royal Government of Cambodia is moving to significantly bolster its housing sector by introducing four key strategic pillars into the draft "Policy on the Development of Social and Affordable Housing". This initiative, led by the Ministry of Economy and Finance, aims to ensure that national housing initiatives are both effective and sustainable in meeting the needs of the population.

The changes in the policy were discussed in a high-level meeting chaired by Deputy Prime Minister, and participated by the Minister of Economy and Finance, and the Chairman of the Economic and Financial Policy Committee.

The "New Policy" serves as a critical update to the existing policy framework regarding incentives and national programs for affordable housing.

Source: [Cambodia Enhances Affordable Housing Policy with Four New Strategic Pillars - Construction & Property News](#)

Cambodia plugs affordable housing gap from several directions

Despite a recent fifteen percent drop in average property prices, Cambodia currently

faces a severe affordable housing crisis. This ongoing crisis stems from multiple complex, interconnected factors.

High urban land costs and reliance on imported construction materials force developers to build expensive units. Furthermore, foreign buyers with much greater purchasing power accelerate gentrification, pricing out locals in a vicious feedback loop. Unintended consequences of building regulations also exacerbate the issue; strict minimum plot size requirements legally prevent the construction of smaller, more affordable homes, effectively legislating lower-income households out of the market.

Potential remedies include implementing robust rent and price controls, levying foreign property taxes, and incentivizing developers to include affordable units. The government could also directly develop social housing. Crucially, authorities must revise rigid building codes to allow smaller plot sizes and mandate mixed-income residential zones in master land-use plans. Ultimately, resolving Cambodia's housing unaffordability requires coordinated efforts among urban planners, policymakers, private developers, and everyday citizens to ensure sustainable, inclusive economic growth across the Kingdom.

Source: [Affordable housing – Cambodia plugs affordable housing gap from several directions](#)

Tighter credit and more choices stretch Cambodia's property selling time to 120–180 days

As of 2026, Cambodia's residential resale market has noticeably cooled, with the average property remaining on the market for 120 to 180 days. While well-located condominiums in central Phnom Penh continue to attract relatively quick sales, typical residential listings generally linger for three to seven months. The slowdown is even more pronounced for overpriced or visually unfinished projects in coastal areas like Sihanoukville and the outer districts of the capital, where units can remain unsold for six to twelve months. This market deceleration marks a clear shift from the faster-paced environment of previous years. Today, Cambodian homebuyers benefit from a much wider selection of available properties, while simultaneously facing tighter bank credit conditions. Consequently, the market has firmly shifted in favour of buyers, compelling many sellers to accept significant price reductions before finally securing a serious purchase offer.

Source: [Cambodia Real Estate Market Analysis \(2026\) – Bamboo Routes](#)

China

China's property slump deepens – and threatens the housing sector

China's real estate slump is in its fifth year, with no end in sight. Key indicators – sales, prices, construction starts and completions – continue to slide, while an estimated eighty million unsold or vacant homes clog the market. Many of the country's largest private developers have defaulted on debts, and one of the largest state-backed firms, China Vanke Co., has been struggling for months to stave off a similar fate. One Chinese economist estimates that as many as 80 percent of developers and construction firms could "exit the market" in the coming years as the industry permanently contracts.

After leaning on regulatory changes and fiscal measures in a largely ineffective effort to put a bottom under the market, China's leaders now appear to be shrugging their shoulders and moving on. Beijing has declared that the "traditional real estate model" of "high debt, high leverage, high turnover" has "reached its end" and instead is seeking to create a "new model of real estate development," based on what one foreign bank has called "planned property supply." In the future, China's Minister of Housing, Ni Hong, recently wrote, the industry will be characterized by "affordable housing," improved services, and "basically stable prices." This marks the virtual abandonment of an industry that once accounted for about one-quarter of China's gross domestic product and roughly 15 percent of the nonfarm workforce.

Source: [China's property slump deepens – and threatens more than the housing sector – Atlantic Council](#)

China to focus on stabilizing real estate sector

China has recalibrated its policy stance toward the country's embattled property sector this year, shifting the emphasis from halting the market's slide and restoring stability to a focus on stabilizing it.

This year's Government Work Report uses the wording "focusing on stabilizing the real estate market," replacing last year's language of "continuously exerting efforts to push the real estate market to stop falling and stabilize." The formulation is consistent with guidance set at the Central Economic Work Conference in December.

Premier Li Qing delivered the key policy document at the opening of the annual National People's Congress, China's legislature, in Beijing today. The Government Work Report

also revealed major development targets for the five years through 2030.

The policy shift signals a move away from clearing existing risks and ensuring project delivery to a new phase guided by the principles of "good housing and new models," said Yan Yuejin, deputy director of Shanghai-based E-House China Research and Development Institute.

Source: [China to Focus on Stabilizing Real Estate Sector in 2026](#)

Fiji

New housing initiatives set to transform affordable living

The Fijian Ministry of Housing, through the Housing Authority, has introduced three major initiatives aimed at improving affordable housing options within the country. These programs include the Housing Authority Model Homes, the Village Housing Loan Scheme, and reduced lending interest rates for eligible families.

The Housing Authority Model Homes initiative is set to launch a construction project for 150 homes specifically within the Nepani subdivision. On the other hand, the Village Housing Loan Scheme has been revived after more than a decade, targeting support for families in rural and maritime regions by facilitating the construction of new homes, renovations of existing properties, and the improvement of community halls and evacuation centers.

Source: [Fiji's Game-Changer: New Housing Initiatives Set to Transform Affordable Living](#)

Government begins relocation of Veidogo and Kilikali settlers

Work is underway to relocate residents living at the Veidogo, Muslim League and Kilikali informal settlements.

The promise was made after the Ministry of Housing and Local Government was allocated more than \$1.3million for these projects.

During debate on the 2026–2027 Budget, Minister for Housing and Local Government Maciu Nalumisa said a 30-acre site at Lokia would be capable of accommodating 400 to 500 families.

Source: [Government begins relocation of Veidogo, Muslim League and Kilikali settlers | Fiji Sun](#)

India

Household incomes to outpace property prices: Report

Indian housing affordability is set to stabilize this year as household income growth is projected to outpace property price appreciation for the first time since 2021. According to the CBRE Housing Affordability Index, the EMI-to-income ratio is expected to plateau through 2028, easing the financial burden on homebuyers across major urban centres.

The report suggests the sector could witness a divergence in sales value-over-volume dynamics throughout 2026. The index tracked affordability across Mumbai, Delhi-NCR, Bengaluru, Hyderabad, Chennai, and Pune, focusing on three annual household income brackets ranging from ₹40 lakh to ₹1 crore.

While property prices rose faster than incomes between 2021 and 2024, the current trajectory signals a measurable stabilisation through the forecast period. This trend aligns with India's broader transition toward upper-middle-income status by 2030.

Source: [Household income growth expected to outpace property price appreciation as housing affordability stabilises: Report - The HinduBusinessLine](#)

Institutional investment in India's realty sector jumps 50% To \$4.5 billion In H1 2026, says report

India's real estate sector receives \$2.9 billion from institutional investors in April-June 2026, which is a 70% year-on-year growth, according to a report by Colliers India.

India's real estate sector remained resilient, receiving \$2.9 billion from institutional investors in April-June 2026, which is a 70% year-on-year growth. According to a report by Colliers India, institutional investments in the real estate sector touched \$4.5 billion during H1 2026, marking a 50% rise compared to the corresponding period of 2025.

"This strong performance was underpinned by growing confidence of domestic investors, opportunistic deployment of foreign capital and surge in investments within alternative & mixed-use assets", the report said.

Source: [Real Estate: Institutional Investment In India's Realty Sector Jumps 50% To \\$4.5 Billion In H1 2026, Says Report | Real Estate News - News18](#)

India's homebuyers were going premium as residential launches hit record high in Q1 2026

India's residential real estate market started 2026 on a strong note, with record housing launches across the top seven cities, led by robust demand in the premium segment. Rising incomes, better infrastructure and changing lifestyle aspirations prompted homebuyers to

increasingly opt for homes priced above INR crore.

According to the JLL report, the strongest demand came from homes priced above INR crore, with sales in this segment rising 30% year-on-year during the January-March quarter.

India's residential real estate market kicked off 2026 on a strong note, with developers launching a record 90,023 housing units across the country's top seven cities during the first quarter, according to a report by property consultancy JLL. The figure marks a 13% year-on-year increase, reflecting robust developer confidence amid sustained demand.

However, the numbers also point to a broader shift in the housing market. Rather than being driven by affordable or mid-income housing, the latest supply is increasingly skewed towards premium and luxury homes as affluent urban buyers seek larger homes, better amenities and lifestyle-focused communities.

Source: [India's homebuyers are going premium as residential launches hit record high in Q1 2026: Report - BusinessToday](#)

Indonesia

Housing Ministry requests \$5B extra to accelerate 3 million homes plan

Indonesia's Ministry of Housing and Settlement Areas intends to renovate two million homes with state support. According to the ministry, there were more than 26 million uninhabitable residential properties in the country.

Earlier, Finance Minister Sri Mulyani Indrawati reported that state spending on the subsidised housing programme under the Housing Financing Liquidity Facility (FLPP) scheme reached 18.8 trillion rupiah (approximately US\$1.18 billion). These funds enabled the construction of nearly 116,000 homes for low-income families. The total funding for housing programmes in the 2025 budget amounted to 29.1 trillion rupiah (approximately US\$1.82 billion).

Source: [Indonesian government to build 500,000 subsidised housing units](#)

Global donors and private titans back Indonesia's housing push initiative

Deputy Housing Minister Fahri Hamzah and industry leaders inspected a newly renovated home in Jakarta, symbolizing robust public and private partnerships in nationwide urban renewal efforts recently.

Indonesia is poised for a massive urban transformation as international financial institutions and domestic conglomerates pledge

unprecedented support for the government's ambitious 3 million houses program this year. Deputy Minister of Housing Fahri Hamzah recently announced that major donor agencies, including the World Bank, Asian Development Bank, and Islamic Development Bank, are fully prepared to finance the nationwide renovation of uninhabitable homes based on strict environmentally friendly standards.

The World Bank alone has committed a minimum of one billion US dollars (approximately 16 trillion rupiah) annually for environmentally friendly housing upgrades. This massive influx of foreign capital is absolutely critical, as the government's current Self Help Housing Stimulant Assistance budget sits at a mere 900 billion rupiah, starkly overshadowed by the 28.8 trillion rupiah allocated for housing liquidity facilities. Fahri emphasized that significantly expanded funds are vital not only for eradicating urban slums but also for comprehensively revitalizing vulnerable coastal and riverside communities across the archipelago.

Source: [International financial institutions and domestic conglomerates pledge unprecedented support | en.tempo.co](#)

Japan

Japan's housing finance market pivots toward digital lending

Japan's housing finance market is undergoing a significant transformation as lenders race to roll out digital mortgage platforms and flexible loan products amid shifting demographics and sustained low interest rates, industry analysts say.

The market, anchored by major banks and the government-backed Japan Housing Finance Agency (JHF), has seen steady growth fuelled by ultra-low borrowing costs and rising housing demand. Fixed-rate mortgages remain dominant, though lenders are increasingly offering variable-rate options, extended loan terms, and reduced down payments to court younger buyers priced out of urban markets.

To counter these challenges, the government has reinforced subsidies, tax incentives, and low-interest loan programmes for first-time buyers, while tightening consumer-protection regulations.

Source: [Japan Housing Finance Market \(2025-2031\) | Trends, Outlook & Forecast](#)

Tokyo launches fund of 20 billion yen for affordable rental housing

Japan's housing market is hitting unprecedented heights, sparking urgent calls for government

and industry action to ease the financial burden on households.

Land prices have climbed for a fourth straight year through July, fuelled by economic recovery and surging construction costs that have jumped roughly 30% over the past five years. In the Tokyo metropolitan area, new condominiums now average over ¥100 million (\$675,000), while family apartment rents in the capital's 23 wards reached a record ¥250,000 (\$1,700) in July – putting central city living increasingly out of reach.

Low interest rates and a weak yen have attracted affluent buyers and foreign investors, many purchasing properties for investment rather than residence, further tightening supply. With limited urban development space compounding the crunch, some municipalities are pushing back: Tokyo's Chiyoda Ward has asked the industry to ban resale for five years, while Kobe is weighing a vacancy tax on empty high-rise units.

The crisis mirrors global trends, as Western nations also grapple with post-pandemic inflation and labour shortages. Yet experts warn that heavy-handed intervention risks distorting markets. The Tokyo Metropolitan Government is launching a ¥20 billion (\$135 million) public-private fund for affordable rental housing, though critics say the amount falls far short of demand. As prices defy Japan's shrinking population, policymakers and developers face mounting pressure to prioritize accessible housing over speculative gains.

Source: [Japan needs policies to correct housing market distortions amid distortion - The Mainichi](#)

Kazakhstan

Kazakhstan Housing Company launches analytics platform as housing sector reforms advance

The Kazakhstan Housing Company (KHC), a subsidiary of the Baiterek national management holding,

has officially launched KHC.Analytics, a brand-new digital platform offering unprecedented insights into the nation's housing and shared-equity construction markets. Released on July 27, the beta version consolidates fragmented data, including property prices, developer activity, and macroeconomic indicators, into interactive public dashboards for the very first time.

While basic access is free, advanced tools require a paid subscription. KHC Chair Altai Kuzdibayev stated the platform aims to become the industry's standard reference for investors,

analysts, and homebuyers, fostering greater transparency.

The launch aligns with Kazakhstan's sweeping construction sector reforms, anchored by the new Construction Code signed by President Tokayev. The legislation mandates digital oversight via the unified Qportal.kz system, enhances seismic safety, and extends building warranties up to a full decade.

These regulatory upgrades support a booming sector. Last year alone, Kazakhstan commissioned a record 20 million square meters of housing. Momentum continues, with construction output surging 13.4 percent year-on-year to 2.4 trillion tenge (5 billion dollars) between January and May. As construction remains a vital economic driver, KHC Analytics and the new code promise to modernize urban planning and strengthen consumer protections across the booming Central Asian real estate market today.

Source: [Kazakhstan Housing Company Launches Analytics Platform as Housing Sector Reforms Advance - The Astana Times](#)

Kazakhstan housing market shows signs of cooling after record 2025 surge

Kazakhstan's red-hot housing market, which saw mortgage approvals jump 16.7% to nearly \$5 billion and property prices surge over 20% in major cities in 2025, is showing clear signs of deceleration. While new-build prices continued climbing in March 2026 – up 16.6% year-on-year, with Astana and Almaty posting 20.7% and 20.2% gains respectively – analysts warn that shifting conditions are dampening momentum.

State lender Otbas Bank drove much of last year's growth, boosting loan issuance by 27.5% to 420,000 new mortgages. Government schemes like the 7-20-25 initiative also fuelled demand, pushing new mortgages' share of total lending from 69% to 85% in early 2026.

However, stricter borrowing rules, higher pension withdrawal thresholds, and falling household incomes – down 1.7% last year and 2.3% in Q1 2026 – are weighing on the market. Property sales fell 4.6% year-on-year in April, with the decline continuing into 2026.

"We're seeing a slowdown in growth rather than a sharp drop," said Halyk Finance analyst Arslan Aronov. While Almaty's quality housing shortage may prevent significant price declines, some agencies report sellers already compromising 5-15% on asking prices. Meanwhile, a proposed 20% mortgage rate cap could further constrain bank lending, potentially phasing out commercial mortgage products.

Source: [Has Kazakhstan's Housing Market Reached Its Peak](#)

Kazakhstan commissions 8.5 million sq. metres of housing in H1 2026

Kazakhstan's construction sector recorded strong growth in the first half of the year 2026, with total work volume reaching 4.1 trillion tenge, up 15.2% compared to the same period in 2025, Qazinform News Agency quotes Industry and Construction Minister Yerssayin Nagasspayev.

He said most of the regions recorded positive dynamics with the highest housing construction growth rates seen in Ulytau, Kyzylorda and Pavlodar regions.

8.5 million square meters of housing were commissioned in January – June 2026 against 7.9 million square meters in the same period last year. Growth was recorded across all regions, with the largest increases in Zhetisu and Almaty regions.

Earlier, Prime Minister Olzhas Bektenov instructed the government to maintain the pace of housing construction and ensure affordability of housing for citizens throughout the current year.

Source: [Kazakhstan commissions 8.5 mln sq m of housing in H1 2026](#)

Korea

Korea to raise Housing Finance Corporation project financing guarantee cap to 8 trillion won

Financial authorities are reviewing a plan to expand the Korea Housing Finance Corporation's public guarantee ceiling for real estate project financing (PF) to more than 8 trillion won this year, in a bid to support housing supply. Authorities are also weighing measures to ease the household loan volume cap to increase capacity for collective loan supply, while supporting the revitalization of real estate PF, which has been cited as a bottleneck in housing supply.

According to the financial industry, financial authorities are examining a plan to expand the Korea Housing Finance Corporation's real estate PF-related guarantee ceiling this year from the current 6 trillion won to more than 8 trillion won. The corporation's real estate PF-related guarantee supply target for this year is 6 trillion won, of which about 3.2 trillion won was executed through the first half.

Source: [Korea to Raise Housing Finance Corp. PF Guarantee Cap to 8 Trillion Won - Seoul Economic Daily](#)

Korea's mortgage rules morph into maze of exceptions, loopholes, and unintended fallout

The government's drive to curb home prices and household debt through a series of tighter lending rules is creating growing confusion in the financial sector, with regulatory loopholes and unintended consequences emerging at every turn.

The government is now scrambling to address the fallout, but its repeated reliance on adding exceptions whenever problems arise is turning housing finance regulations into an increasingly complicated patchwork.

The Lee Jae Myung administration has rolled out four rounds of tighter lending rules since June 27, 2025, when it unveiled a sweeping package of measures aimed at cooling overheated home prices in the Seoul metropolitan area and curbing a surge in household debt. The latest came in its April 1 household debt management plan.

Source: [Korea's housing loan rules become patchwork of regulations, side effects, exceptions - The Korea Times](#)

Laos

Lao People's Democratic Republic advances urban development agenda despite challenges

The Lao People's Democratic Republic has made significant progress in sustainable urban development since 2021, according to the Second National Progress Report on the New Urban Agenda released February 2025.

Urban population growth has reached 4.9% annually, with projections showing urban residents increasing from 37% in 2020 to 47% by 2025. The government reports poverty reduction from 24.6% to 18.3%, while aiming for 13.9% by 2025. Access to housing and basic services has improved, with 97% of urban residents now accessing safe water and sanitation.

The nation launched a National Smart City Strategy and strengthened urban planning through digital platforms. However, challenges persist including rural-urban inequality, with poverty rates at 24% in rural areas versus 7% in urban centres. Climate change adaptation remains critical, with implementation of multi-hazard early warning systems and nature-based solutions.

The report highlights the government's commitment to achieving Sustainable Development Goals through multi-stakeholder

engagement, decentralized governance, and international partnerships. The Department of Housing and Urban Planning prepared the document with UN-Habitat support.

Source: [Lao People's Democratic Republic National Report](#)

Malaysia

Laws to reshape Malaysia's housing sector under new policy

The Housing and Local Government Ministry is set to overhaul Malaysia's housing landscape with four new and amended laws under the newly launched National Housing Policy 2026-2035.

Its minister Nga Kor Ming said the legislative reforms were aimed at modernising oversight of property development, strata living and the rental market to ensure long-term stability.

The four legislative measures are an expanded Property Development Act, a new Building Managers Act, a new Residential Tenancy Act and amendments to the Strata Management Act 2013.

Speaking at a press conference after the launch of the National Housing Policy today, Nga said the existing Housing Development (Control and Licensing) Act 1966 (Act 118) was no longer sufficient as its scope was limited to residential properties.

With Malaysia's urbanisation rate projected to reach 85 per cent by 2040, he said a "progressive legal framework" was needed to manage the complexities of high-density living.

Source: [Four laws to reshape Malaysia's housing sector under new policy](#)

Housing ministry working to make internationally recognised green rating tools

The housing and local government ministry is collaborating with the University of Cambridge to develop a globally recognised green assessment, tools minister Nga Kor Ming revealed.

Currently, there are several green rating tools widely used by the industry players for buildings in Malaysia, such as the Green Building Index and others to promote sustainability.

"We're committed to a strategic partnership with the University of Cambridge so as to make this framework happen," Nga said during a press conference at the Architecture and Building Exhibition opening ceremony here today.

Source: [Housing ministry working green rating tools](#) | FMT

Malaysia's housing crossroads: affordability crisis persists despite policy push

Malaysia's property market has undergone a seismic shift over the last quarter-century, marked by soaring prices and widening affordability gaps. Between 2000 and 2025, rapid urbanization and population growth fuelled demand, yet incomes failed to keep pace. By 2016, house prices had skyrocketed to 2.4 times their 2000 levels, while income growth lagged significantly, contributing to volatile homeownership rates.

In response, the government introduced the National Housing Policy (2018-2025) and schemes like Rent-to-Own to aid low-income groups. However, challenges endure. As of mid-2023, demand for affordable housing in Selangor outstripped supply by over 33,000 units, while a staggering 25,000 completed homes remained unsold – many priced beyond the reach of average buyers.

While transactions rebounded to 399,000 units in recent years, the average price of RM467,144 remains prohibitive. Economic shocks from the pandemic have further strained purchasing power, complicating recovery. Looking ahead, the market is pivoting toward sustainability and green developments. Yet, experts urge that without strategic partnerships to repurpose surplus stock and expand financial aid, the dream of homeownership will remain elusive for many Malaysians.

Source: [Malaysia's Housing Challenges and Progress Towards Affordability](#) – UTM NewsHub

Maldives

Maldives Cabinet approves National Housing Affordability and Accessibility Project

The Government of the Maldives has taken a major step toward addressing the nation's long-standing housing challenges. In a recent meeting, the Cabinet of Ministers approved the National Housing Affordability and Accessibility Project, a landmark initiative aimed at improving access to affordable homes and strengthening the housing market across the country.

According to a statement from the President's Office, the project seeks to create a sustainable and long-term solution to the Maldives' housing shortage, while ensuring that housing remains accessible and affordable for citizens of all income levels. The plan emphasizes both private sector participation and government-led policy support, marking a new era in national housing development.

Source: [Maldives Cabinet Approves National Housing Affordability and Accessibility Project](#)

Government spends MVR 231 million on housing projects during first half of 2026

The Maldives government has spent MVR 231 million on housing-related projects so far this year, according to the latest expenditure figures released by the Ministry of Finance.

The spending forms part of the government's broader Public Sector Investment Programme (PSIP), which continues to finance housing, infrastructure, transport, and energy projects across the country.

The approved PSIP budget for the year stands at MVR 8.3 billion, indicating that a significant portion of planned development projects is still scheduled for implementation during the remainder of the year.

Source: [Government Spends MVR 231 Million on Housing Projects During First Half of 2026](#) | News Maldives Matters

Mongolia

Mongolia to implement affordable housing program with World Bank

Mongolian Prime Minister Zandanshatar expressed his gratitude to the World Bank for its valuable contribution to Mongolia's social, economic, and infrastructure development over the past 34 years, since 1991. He acknowledged the Bank's consistent partnership through the financing of numerous projects and programs. During the meeting, the Prime Minister also outlined the Government's key policy priorities and strategic objectives. He emphasized that human development lies at the core of Mongolia's policy agenda, alongside goals such as green transition, digital transformation, public sector productivity, and tax reform. He further highlighted the Government's efforts to reduce the country's dependence on the mining sector by diversifying the economy, including targeted support for the private sector and expanding the range of exportable products.

Source: [Mongolia to Implement Affordable Housing Program with World Bank](#)

U.S. International Development Corporation approves \$150M mortgage deal to boost housing in Mongolia

The U.S. International Development Finance Corporation (DFC) has approved a landmark \$150 million financing for the Mongolian Mortgage Corporation (MIK), advised by global advisory firm Delphos. The deal, the largest Mongolian financing in DFC history, involves the acquisition of mortgage-backed securities

to enable local banks to offer affordable home loans.

Targeting low- and middle-income families, the initiative aims to transition thousands of households from informal settlements into formal housing. With nearly 60% of Ulaanbaatar's residents lacking basic infrastructure, the financing addresses critical urban challenges while advancing UN Sustainable Development Goal 11 for sustainable cities.

"MIK is a systemically important institution. We are proud to support this transformative impact," said Delphos CEO Bart Turtelboom. MIK CEO Gantulga Badamkhatan added, "This innovative structure will catalyse private capital into Mongolia's mortgage market."

Source: [Delphos Advises on a Landmark \\$150M Deal for Mongolian Mortgage Corporation | Arabian Post](#)

Pakistan

SECP eases rules for Apna Ghar loans

The Securities and Exchange Commission of Pakistan has relaxed certain regulatory requirements to facilitate the participation of Non-Banking Microfinance Companies (NBMFCs) and Housing Finance Companies (HFCs) in the Prime Minister's Apna Ghar Programme (PM-APG).

The relaxation, issued through a Circular dated July 1, 2026, has been issued in exercise of powers conferred under Section 282B (3) of the Companies Ordinance, 1984 read with Regulation 67A of the Non-Banking Finance Companies and Notified Entities Regulations, 2008.

Under the circular, the requirements prescribed under Regulation 17(3)(a) of the Regulations for non-banking microfinance companies, NBMFCs, and Regulations 28(e)(ii), 28(e)(iv) and 28(e)(vii) for HFCs, have been relaxed.

The relaxation applies exclusively to loans provided under the PM-APG Programme.

The development follows SECP's broader move to open up housing finance under the PM-APG scheme to non-banking companies, under which non-banking housing finance and investment finance companies will be able to provide loans of up to Rs10m, while microfinance companies will be able to extend loans of up to Rs5m.

Citizens without conventional bank accounts will also be able to access housing finance on easy terms, with loans available at a profit rate of 5% for the first 10 years.

SECP has noted that NBFCs' network extends to digital and remote, underserved areas, and that these companies will also be able to provide loans in partnership with banks and other financial institutions.

Source: <https://mettisglobal.news/SECP-eases-rules-for-Apna-Ghar-loans-61581>

Consortium hired for House Building Finance Corporation limited privatisation

The Privatisation Commission on Sunday signed a Financial Advisory Services Agreement (FASA) with a consortium led by accounting firm KPMG for the privatisation of the House Building Finance Corporation Limited (HBFCL).

HBFCL (House Building Finance Company Limited) is Pakistan's oldest and largest specialized housing finance institution, established in 1952 and owned by the Government of Pakistan through the State Bank. It has been providing affordable financing for the construction and purchase of homes, particularly targeting low- and middle-income households.

Source: [KPMG-led consortium hired for House Building Finance Corporation Limited privatisation - Pakistan - DAWN.COM](#)

New Govt-backed housing finance initiative aims to revitalize real estate

The federal government is set to launch a subsidized housing finance initiative in fiscal year 2025–26, targeting low- and middle-income families while revitalizing the real estate sector. With a Rs5 billion subsidy allocated in the proposed budget, the program will reduce markup rates to make borrowing more affordable. The State Bank will administer the scheme, replacing the discontinued Mera Pakistan Mera Ghar initiative.

Officials confirm final details, including eligibility and naming, are under discussion. While declining policy rates favour the launch, experts stress success depends on strong institutional frameworks, tax reforms, and public awareness.

Pakistan's mortgage-to-GDP ratio remains below 1% – among the region's lowest – highlighting infrastructure gaps. Realtors believe the scheme could absorb unsold inventory and create jobs, especially if paired with tax incentives to attract overseas Pakistanis. Reflecting on the 2019 program, which saw only Rs235 billion disbursed of Rs514 billion in applications, a realtor noted it built essential institutional capacity.

With a housing deficit of 1.2 million units, industry voices urge tax relief and regulatory

backing to promote urban high-density projects and enable first-time buyers to enter the market.

Source: [New Govt-Backed Housing Finance Initiative Aims to Revitalize Real Estate | Graana.com](#)

Singapore

Public housing gets a wider net: Income ceilings for BTO and EC flats hike by S\$2,000 each,

In a move to keep public housing within reach for more young couples, the monthly income ceiling for Build-to-Order (BTO) flats will be raised from S\$14,000 to S\$16,000, Prime Minister Lawrence Wong announced. The threshold for executive condominiums (ECs) will also rise, from S\$16,000 to S\$18,000.

The adjustment – the first since 2019 – comes as the government cites a stabilised resale market, shorter waiting times, and higher booking success rates. "These improvements give us confidence to do more," said PM Wong.

Noting that Singaporeans are marrying later and often earning more by the time they start a family, he stressed the need to ensure broad access to subsidised housing. "More young couples are crossing the current income ceilings. We want to ensure that the vast majority of Singaporean couples can continue to have access to subsidised public housing," he added.

The revised caps are set to take effect from the upcoming BTO and EC sales exercises, offering relief to aspiring homeowners who have been priced out of eligibility amid rising household incomes.

Source: [NDR 2026: BTO income ceiling to go up to S\\$16,000; Executive condos ceiling to S\\$18,000 - The Business Times](#)

Sri Lanka

Housing affordability in Sri Lanka: the looming crisis

Sri Lanka faces a mounting housing affordability crisis, with a significant disconnect between surging demand and sluggish supply growth demanding urgent policy intervention. Recent data reveals a stark reality: housing demand has climbed nearly 12% to over 5.87 million units, while supply has expanded by only 9.5%, falling short by approximately 190,000 homes.

The pressure is most acute in urban centres like Colombo, where demand jumped 10% but supply rose just 7.4%, creating a deficit of nearly 27,000 units. This shortfall is driving up property prices and putting homeownership out of reach for broad swathes of the population.

At the core of the challenge are rapid urbanisation, population growth, and shifting societal needs that consistently outpace development. Compounding the issue is a legacy of outdated housing policies, limited private-sector involvement, and a cumbersome regulatory environment that stalls new projects. With the government carrying the primary burden of delivery, the absence of streamlined approvals and a modern framework continues to impede progress. This perfect storm of constraints has created a national housing deficit that affects citizens across all income levels, signalling an urgent need for comprehensive, coordinated reform.

Source: [Housing affordability in Sri Lanka: The looming crisis and need for multifaceted approach | Daily FT](#)

India hands over 165 title deeds in Sri Lanka's Phase III housing drive

Sri Lankan President Anura Kumara Dissanayake officially distributed 165 title deeds to beneficiaries under Phase III of the Indian Housing Project, marking a significant milestone in bilateral development cooperation.

Phase III of the project has delivered 4,000 houses for families in Sri Lanka's plantation community, with the final units inaugurated earlier this year. The overall Indian Housing Project, funded through approximately INR 18.35 billion in Indian grants, has already constructed 46,000 homes across Northern and Eastern provinces under its first two phases.

Phase IV, announced earlier, aims to build another 10,000 plantation homes, with the first 1,300 units nearing completion. India's total development partnership with Sri Lanka now exceeds USD 7.5 billion, including USD 880 million in grants, spanning all 25 districts.

Source: [India's Housing Commitment to Sri Lanka Tops INR 18 Billion; 165 Title Deeds Handed Over - Newswire](#)

Ministry eyes 2027 budget relief for stalled housing schemes across Sri Lanka

The Ministry of Housing, Construction and Water Supply is pushing for dedicated funds in Sri Lanka's 2027 national budget to revive stalled housing projects that have left thousands of families waiting for years.

Officials acknowledge that past budget allocations fell short, with delays blamed on funding gaps, supply chain issues, and economic turmoil. By securing ring-fenced budget lines, the ministry aims to give contractors the financial certainty needed

to restart and complete long-abandoned construction.

The move responds to growing public frustration over incomplete state-assisted housing schemes, particularly affecting lower-income families who applied under affordable-housing programmes. If approved, the funds would enable renewed contractor agreements, revised timelines, and stronger oversight to prevent future bottlenecks.

Thousands of Sri Lankans could finally take occupancy of homes promised years ago. With budget debates looming, housing advocates and affected communities will watch closely to see if the ministry's plea gains traction. The government's response will signal how seriously it tackles one of the nation's most pressing social infrastructure failures.

Source: [Ministry Eyes 2027 Budget Relief for Stalled Housing Schemes Across Sri Lanka - Lanka Newspapers](#)

Turkey

Turkey's housing drive opens window for foreign investors

Turkey's new social housing campaign, unveiled by President Erdoğan and Vice President Yılmaz, aims to make homeownership accessible for low-income families, young couples, and retirees across all 81 provinces by summer 2025. Tied to the "Year of the Family" designation, the initiative includes financial aid and priority for first-time buyers.

While the program intends to cool inflated sales and rental markets, experts caution that limited existing stock and slow development timelines mean widespread price stabilization remains distant. Major cities like Istanbul and Ankara continue to face housing shortages, with demand already tightening further.

For international investors, this creates a compelling opportunity. Competitive USD-denominated prices, soaring rental yields, and Turkey's \$400,000 citizenship-by-investment program enhance the market's allure. Favourable exchange rates further boost foreign purchasing power. With prices expected to rise amid constrained supply, acting now allows buyers to secure assets before values escalate. As Turkey reinforces its housing sector, overseas investors stand to gain from both immediate returns and long-term resilience in this strategically located gateway between Europe and Asia.

Source: [How Turkey's New Social Housing Campaign Will Impact Real Estate Prices and Why Now Is the Perfect Time for International Investors - Turkey Real Estate](#)

Turkey's housing finance sector shows resilience amid economic volatility

Turkey's housing finance market remains a dynamic pillar of the national economy, underpinned by rapid urbanization, demographic expansion, and proactive state-backed homeownership schemes. Despite headwinds from high inflation and currency depreciation, the sector has demonstrated notable resilience, with banks and financial institutions aggressively competing to offer attractive mortgage products.

Digital innovation is reshaping the lending landscape, as fintech disruptors introduce user-friendly online mortgage platforms that enhance consumer accessibility. Concurrently, a pronounced shift toward green housing is gaining traction, with lenders rolling out incentives for energy-efficient property purchases. Flexible borrowing options – including adjustable-rate mortgages and extended loan tenures – are increasingly popular, reflecting diverse buyer needs.

However, structural challenges persist. Stringent lending criteria and elevated interest rates continue to marginalize first-time and lower-income buyers, while economic instability and limited fixed-rate long-term offerings constrain broader market participation. The government is responding through subsidy programs and the Mortgage Finance Fund, aimed at easing affordability.

Looking ahead, the outlook remains cautiously optimistic. Sustained state support, ongoing digitalization, and resilient investor appetite – particularly in mortgage-backed securities and real estate crowdfunding – position the market for measured growth, offering strategic entry points for domestic and international capital seeking exposure to Turkey's expanding property sector.

Source: [Turkey Housing Finance Market \(2025-2031\) | Trends, Outlook & Forecast](#)

Uzbekistan

Uzbek mortgage uptake surges as housing market heats up

Uzbekistan is witnessing a dramatic shift toward credit-fuelled homeownership, with mortgage-financed purchases reaching 22% of all transactions in 2025, the Central Bank reports. A record 319,500 housing deals were sealed – a 15.8% annual jump – including 70,300 bought on credit. Mortgage issuance soared 29% to UZS 21.2 trillion (\$1.7bn), pushing outstanding debt to \$6.5bn by March 2026. Regional hotspots Bukhara and Syrdarya

led sales growth, while Tashkent saw moderate gains. Prices climbed sharply in Q4, with secondary homes up 7.9% and rents 8.3% higher, though land values dipped 9.4%. With 54% of citizens expecting to seek new loans – mainly for repairs, education, and cars – the trend accelerated into 2026, as February home sales jumped 32% year-on-year, signalling no respite in demand.

Source: [Loans finance 22% of housing purchases in Uzbekistan](#)

Uzbekistan's housing boom: fivefold construction surge reshapes mortgage market

Uzbekistan has radically transformed its housing sector, with annual residential construction skyrocketing more than fivefold since 2017 – from 15,000–20,000 apartments to over 100,000 last year, with 140,000 units targeted for 2026, according to First Deputy Minister of Economy and Finance Ilkhom Norkulov.

To address affordability, the government has overhauled its mortgage system, shifting from a state-directed funding model to a market-driven framework backed by international financial institutions and commercial banks. Under the new system, the state provides long-term liquidity at rates tied to the Central Bank's

key policy rate, with banks adding commercial margins. Down-payment subsidies and targeted support for lower-income households have also been introduced.

With \$1 billion in annual state liquidity injections, private banking resources now account for roughly 50% of the mortgage market. Loan maturities have been extended from 10 to 20 years to ease monthly burdens. "These reforms have fostered a competitive environment among builders while giving citizens the freedom to choose housing using a balanced mix of subsidies and market-rate instruments," Norkulov concluded.

Source: [Uzbekistan doubles housing construction pace and reforms mortgage market - deputy minister](#)

Vietnam

Vietnam prioritises long-term rentals as homeownership slips out of reach

Vietnam is pivoting its social welfare strategy toward long-term rental housing through 2030, as soaring property prices and supply imbalances price many workers out of homeownership. The shift was announced by Deputy Director Ha Quang Hung at a June 18 press briefing.

Alongside the target of 1 million social housing units, authorities aim to develop a state-private rental market to meet real demand. Hung noted that while social housing shows progress, supply remains skewed to high-end properties, with affordable options scarce and rental housing underdeveloped. Rising urban prices increasingly burden workers, civil servants, and youth, while current incentives fail to attract investors.

The new strategy places commercial, social, and rental housing on an equal footing. Future projects will prioritise transit-oriented zones, industrial parks, and economic corridors. The State will facilitate planning and credit policies to encourage private participation. Legal amendments to the Housing and Real Estate Business laws are expected by October 2026.

Meanwhile, the social housing drive is gaining traction: over 103,000 units were completed in 2025, with 720,000 currently under development – 72% of the 2030 goal. Officials say this dual approach will build a more sustainable, diversified housing ecosystem.

Source: [Vietnam advances long-term rental housing to meet growing housing demand](#)

Europe: The housing supply puzzle; why are we still not building enough homes?

↪ By Mark Weinrich

Europe has a housing problem that is increasingly difficult to explain. Demand for homes is strong, affordability has become a major political issue, and governments across the continent agree that more housing needs to be built. Financing conditions have also improved compared with the peak of the interest-rate shock. Yet new housing supply remains stubbornly weak.

The European Commission estimates that the EU needs more than two million new homes per year to meet current demand. At the same time, the number of dwellings receiving building permits has fallen sharply. After reaching almost two million in 2021, permits declined to around 1.5 million in both 2023 and 2024.¹

The question is therefore no longer simply whether Europe needs more homes. It is why, despite strong demand and growing political attention, Europe is still struggling to build them.

Financing is only part of the problem

The sharp rise in interest rates from 2022 onwards undoubtedly played a major role in the residential construction downturn. Higher financing costs reduced household purchasing power, increased developers' cost of capital and made many projects economically unviable.

But financing alone no longer provides a sufficient explanation. Interest rates have moved down from their peaks, while housing shortages and demand remain substantial. Nevertheless, the recovery in residential construction has been slow.

Germany illustrates the problem particularly clearly. EUROCONSTRUCT expects only around 175,000 dwellings to be completed in Germany in 2026, including approximately

145,000 units in new residential buildings. At the same time, more than 300,000 permitted dwellings had not yet been started.²

This points to a broader problem of project viability. A housing project can be urgently needed and fully permitted and still not be economically feasible. Developers must reconcile land prices, construction costs, financing costs, regulatory requirements and expected sales prices or rents. Increasingly, these numbers simply do not add up.

In other words, the price households can afford and the price at which developers can profitably deliver new housing are increasingly diverging.

The construction cost problem

Construction and renovation costs have risen substantially over the past decade. According to the European Commission, they have increased faster than general inflation, while productivity in the construction sector has largely stagnated. Labour shortages add further pressure. The Commission estimates that more than four million job openings will need to be filled in the European construction sector by 2035.³

At the same time, new buildings are expected to meet increasingly demanding standards regarding energy efficiency, sustainability and accessibility. These requirements generate important long-term benefits, but they usually also increase initial development costs.

The challenge for policymakers is therefore delicate. Lowering standards is unlikely to be a sustainable solution, particularly given Europe's climate objectives. But adding requirements without considering their cumulative impact on development costs risks making precisely the housing Europe needs increasingly difficult to finance.

Europe has a permit problem

Regulation and administrative procedures are another part of the puzzle. Planning and permitting can take years in some European cities, creating uncertainty and tying up capital before construction even begins.

The issue has now reached the European level. In July 2026, the European Commission launched work on a Housing Simplification Package, scheduled for 2027. The initiative aims to identify unnecessary costs, delays and administrative burdens affecting housing supply and to make existing procedures more efficient.⁴

This is significant. Housing policy has traditionally been a national, regional and local responsibility, but Brussels increasingly regards inadequate housing supply as an economic problem requiring coordinated structural reforms. In the 2026 European Semester, housing was extensively analysed in every Member State country report for the first time. Recommendations include simplifying permitting and planning procedures, mobilising public land and increasing investment in social and affordable housing.⁵

Yet simplification alone will not solve the problem. Faster permits are of limited value if the projects receiving them remain economically unviable.

Land – the forgotten constraint

Another critical factor is land. In many high-demand metropolitan areas, suitable land is scarce and expensive. Planning restrictions can further constrain the amount of developable land, while rising land values absorb a significant part of the economics of new housing development.

¹ Eurostat, Housing in Europe – 2025 edition: approximately 1.5 million dwellings received building permits in the EU in 2024, compared with almost 2 million in 2021.

² EUROCONSTRUCT / ifo Institute, The German cost problem prevents medium-term recovery in residential construction, forecast for 2026.

³ European Commission, European Affordable Housing Plan / European Strategy for Housing Construction, 2025.

⁴ European Commission, How can we simplify rules governing housing supply in Europe?, 1 July 2026.

⁵ European Commission, European Semester 2026: Housing in the spotlight, 3 June 2026.

Public authorities therefore have more influence over housing supply than financing subsidies alone might suggest. Releasing public land, increasing density around transport infrastructure, converting underused commercial areas and accelerating brownfield redevelopment can all expand the effective supply of development sites.

The Commission has explicitly identified mobilisation of public land and better use of the existing housing stock as part of its housing strategy.⁶ This also highlights an important distinction: solving Europe's housing shortage does not necessarily mean building exclusively on new land. Converting vacant buildings, repurposing obsolete offices and increasing density in existing urban areas may sometimes deliver housing more quickly and at lower infrastructure cost.

Can Europe industrialise housing construction?

Perhaps the most structural question concerns productivity. Housing remains unusually dependent on local labour, individual project design and fragmented supply chains. Compared with many other industries, productivity improvements have been limited.

The European Strategy for Housing Construction therefore places considerable emphasis on digitalisation, innovative materials, prefabrication, modular and offsite construction. The objective is to reduce costs and construction times while increasing the capacity of the industry.⁷

Spain, for example, is pursuing a ten-year €1.3 billion programme for industrialised construction aimed at supporting 15,000

affordable and energy-efficient homes annually. The Commission expects each euro of public investment to mobilise approximately €1.40 of private capital.⁸

Whether such approaches can be scaled across Europe remains an open question. Modular construction and prefabrication have been discussed for decades without fundamentally transforming the sector. Different national building codes, local planning requirements and consumer preferences continue to make standardisation difficult.

Nevertheless, if Europe genuinely needs more than two million additional homes each year, improving construction productivity will have to become part of the solution.

Not just more homes, but the right homes

There is also a danger in treating Europe as a single housing market.

Housing shortages are particularly severe in growing metropolitan areas, university cities and economically successful regions. Other areas face population decline and vacant housing. Even within individual countries, it is not uncommon to find severe housing shortages in high-demand urban areas alongside housing surpluses in declining regions.

The objective therefore cannot simply be to maximise the number of units constructed. Europe needs the right housing in the right locations – connected to employment, transport and public services.

This makes the supply challenge considerably more complex. Housing cannot easily

be moved from a shrinking region to a growing city. Nor can construction respond immediately to demographic or migration-driven changes in demand.

From housing policy to housing delivery

Europe has made housing a much higher political priority. The European Affordable Housing Plan, the European Housing Alliance, the new investment platform, reforms of State aid rules and the forthcoming Housing Simplification Package all demonstrate that policymakers recognise the scale of the problem. The Commission estimates that the housing investment gap alone amounts to around €150 billion per year.⁹

But additional financing will only translate into additional homes if projects can actually be delivered. This is perhaps the central lesson of Europe's current housing shortage. Lower financing costs can support demand and improve project economics, but they cannot by themselves provide land, shorten planning procedures, supply skilled workers or raise construction productivity.

The housing supply puzzle is therefore not primarily a financing problem, a regulatory problem or a construction problem. It is all three at the same time.

Solving it will require better coordination between financial institutions, developers, municipalities and governments – and a greater focus on whether housing projects remain viable from planning through to completion.

Europe has spent the past years developing a housing policy. The next challenge is turning that policy into homes.

⁶ *ibid.*

⁷ European Commission, *European Affordable Housing Plan / European Strategy for Housing Construction*, 2025.

⁸ *ibid.*

⁹ European Commission, *Pan-European Housing Investment Platform*, 2026.

Diversifying financial product matrices across the LAC housing and income continuum

↪ By Claudia Magalhães Eloy¹

Throughout 2026, our LAC quarterly columns have explored the core pillars of an inclusive housing finance architecture. The first article (Spring Edition) established that financial inclusion fundamentally begins on the liability side of the balance sheet, arguing that expanding access requires securing truly affordable funding. In a region historically defined by volatile inflation and elevated interest rates, the funding matrix must incorporate blended finance, catalytic and philanthropic capital, Revolving Loan Funds (RLFs), credit cooperatives, land value-capture instruments, and social and green bonds. It warned that “affordability artifices”, such as stretched Loan-to-Value (LTV) ratios or over-extended amortization tenors designed to bypass high funding costs, inevitably exacerbate household debt overburden and foreclosure risks.

The second article (Summer Edition) delved into Data Infrastructure and Underwriting as a foundational market infrastructure to surface financially capable households. In a regional landscape where vast segments of the population are comprised of informal and gig-economy workers, thin-file applicants,

and first-time borrowers, legacy underwriting leaves too many structurally underserved. Modernizing this informational architecture requires leveraging Open Finance/Open Banking architectures, cash-flow velocity analytics, trended data, alternative metrics, and AI/ML underwriting while cautioning against algorithmically born bias and regulatory uncertainty.

Once regional systems assemble affordable funding schemes and accurately underwrite previously excluded segments, the next imperative is deploying a diversified portfolio of financial products to address heterogeneous housing needs and finance capabilities. That is precisely what this current issue addresses: **Housing finance product delivery across the income continuum.**

While the income distribution is no longer a wide-based pyramid, rather a ‘diamond’ or ‘bottle’ shape, the figure below is an attempt to illustrate the continuum of incomes and financial capabilities. Each group demands different housing policy approaches and distinguishing clearly between them is essential

for designing inclusive, comprehensive and sustainable Housing Finance systems.

Mortgages: the single-product policy trap

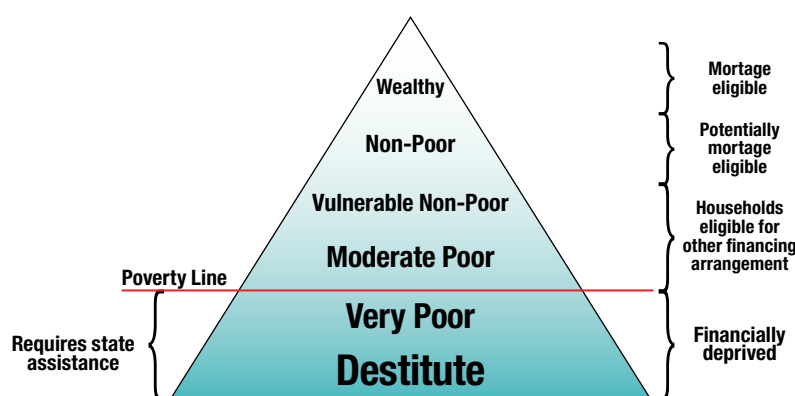
Mortgages are undeniably a powerful financial tool. By converting a massive lump-sum purchase into manageable monthly payments, they enable households to build equity over time. Moreover, by securing debt against real estate collateral through Security Rights over Immovable Property (SRIP), mortgage loans significantly reduce credit risk for lenders, yielding lower interest rates than unsecured borrowing¹.

However, a critical policy trap arises when standard 20-to-30-year mortgages for formal homeownership are treated as the primary or sole pathway to adequate housing – as remains widespread across Latin America and the Caribbean. By design, mortgages cannot serve all market segments, even when backed by substantial public subsidies. Qualifying requires far more than a household’s monthly income matching the loan installment; it demands a documented credit history, acceptable debt-to-income ratios, income verification, and a fully titled, standardized property. Consequently, when a regional housing finance system relies almost exclusively on conventional mortgages, it structurally excludes the vast majority of households.

Even when lower-to-middle-income families manage to qualify, households with limited financial buffers remain highly vulnerable to life-cycle economic shocks, chronic illness, divorce, or macro-financial volatility over a multi-decade loan tenor, escalating debt overburden and foreclosure risks.

A rapidly worsening constraint is the surge in property insurance premiums – or the complete withdrawal of coverage altogether – driven by climate risk re-evaluations in vulnerable territories. Because mortgage

Income segments and housing finance eligibility



Source: Author, adapted from Goldberg, 2009, for the World Cities Report

¹ Hoek-Smit, 2020

originations strictly require property insurance to protect collateral, growing “uninsurability” tends to shut down credit access in high-risk zones across the region.

Understanding these structural boundaries is essential to moving toward more comprehensive, inclusionary frameworks. Only by moving beyond monolithic mortgage models toward a diversified product matrix can Latin American and Caribbean nations tailor their housing finance ecosystems to the region’s varied income profiles, tenure types, and urban realities. To bridge this gap, an effective **housing finance system must operate as an inclusive continuum**, deploying a versatile matrix of finance products capable of matching the varied income profiles, tenure types, and diverse access pathways, such as incremental self-managed construction, rental arrangements, rent-to-own schemes, collective tenure models, renovation and retrofitting of existing structures.

Incremental housing & micro-mortgages

Incremental housing is the predominant mechanism through which low-income families build their homes across Latin America and the Caribbean. Rather than acquiring a finished house through a single, large-ticket debt transaction, households build progressively over time, aligning construction stages with their evolving financial capacity. While this process offers crucial flexibility for informal and volatile income earners, executing it without structured and affordable financial support often leads to prolonged construction timelines, higher material costs, structural inefficiencies, and persistent qualitative housing deficits.

Unlike standard mortgages, this modality relies on special credit lines of smaller, incremental ticket sizes, shorter repayment tenors (typically 1 to 5 years), and flexible, tranche-based disbursements linked to specific construction milestones. Crucially, these financial products must bridge the gap between high-cost, short-term consumer credit and inaccessible long-term mortgages. This finance product could be made viable by second-tier revolving facilities. An example is FONAVIPO, El Salvador’s state-owned Low-Income Housing Fund that acts as a second-tier lender to channel public and private funds to microfinance institutions, creating sustainable financial flows that

enable local lenders to supply progressive building credit.

■ **Quinta Monroy, Chile:** A world-renowned benchmark, this 2003 project in Iquique was designed by the architecture firm ELEMENTAL, led by Pritzker laureate Alejandro Aravena, to solve in-situ replacement of an informal settlement. The construction of a high-quality, fully habitable, affordable and expandable 36 m² home provided essential structural foundations, plumbing, and roofing, while allowing units to be safely completed incrementally by each family, according to their resources and needs.

19 years later, the strategy led to resident-driven expansions in 92 out of 93 homes, and many even built additional spaces beyond those predicted by the designers, raising community issues.

■ **BF Casa³, Brazil** – consists of a credit line by Banco da Família, designed to support progressive home construction or purchase of modular homes. Low delinquency and NPL rates show the robustness of the underwriting model.

■ **Micasa/Mibanco⁴, Peru** – Mibanco has a long-standing experience in housing microfinance, with its *MiCasa* product,

launched in 2000, supporting progressive, incremental home construction amongst lower-income households. Currently offered housing construction loans can finance up to 100% of construction or remodeling costs, subject to credit assessment, with terms of up to 60 months. By adapting microfinance credit assessment methodologies to households that have variable or informal income streams and cannot meet the documentation and collateral requirements associated with conventional mortgage lending, this model caters to households (particularly entrepreneurs and self-employed workers) whose housing is often produced progressively rather than by the outright purchase of completed formal dwellings. Furthermore it can accommodate diverse forms of tenure documentation, including proof of possession “This case provides a relevant example of how financial institutions can support incremental housing processes through non-traditional yet sound housing finance”.

These cases indicate that incremental housing can be a viable, value-accruing pathway to formal housing, transforming an informal



Photographs: ArchDaily (above) & Revista Focus LatinoAmerica, 2025 (right)²

² <https://habitato.com/vivienda-incremental-latam/>; <https://www.revistalatinafocus.com/c%C3%B3mo-una-casa-a-medias-cambi%C3%B3-la-vida-de-100-familias-conjunto-quinta-monroy-de-elemental>

³ <https://bf.org.br/bfcasa/>

⁴ Interview with Francisco Caro.

survival strategy into a safe, bankable, and asset-building process when supported by aligned financial products.

However, scaling this model requires combining tranche-based loan disbursements with progressive land titling. It also requires addressing regulatory constraints – such as excessive minimum plot sizes, restrictive floor-area ratios, and rigid height limits – which often represent the greatest impediments to affordable housing upgrades and credit access.

Integrating technical oversight within a simplified architectural or engineering guidance framework would be ideal. Additional institutional and planning support may be advisable, depending on the context of the project, as the Quinta Monroy case suggests⁵. Marinovic⁶, based on another Chilean project – Las Higueras –, recommends a template for incremental building that guides families into critically examining and selecting one customization strategy that corresponds to households' needs. Noorloos et al (2020)⁷ argue for “assessing the flows and systems of cities within which incremental housing takes place, in a systematic and interconnected way”.

Micro finance for home improvements

HMF loans consist of a small, short-term unsecured credit to families that “neither want nor can afford a large long-term traditional mortgage to purchase a developer-built complete unit” so they can expand or remodel their informally built house (Ferguson, 2008)⁹. Tickets are small, generally not exceeding USD 3,000, with terms ranging from 1 to 5 years and loans tend to be offered in succession once the first is repaid. HMF can fund a wide array of targeted investments crucial to unlocking housing access for low-income households, such as land acquisition, title regularization, the installation of individual (sewage connectivity) or communal infrastructure, as well as backyard rental units or adding rooms to develop business activities (barber or bakery shop, hair salon, etc.).

- **Programa Reforma Casa Brasil:** Launched in late 2025, this program leverages resources from the Social Fund¹⁰ to offer



Villa Verde housing, 2013, also designed by Aravena/Elemental, in Constitución, Chile. Photograph: Elemental⁸

subsidized financing for the renovation, expansion, and structural retrofitting of substandard housing. This normative shift explicitly acknowledges that addressing Brazil's qualitative housing deficit requires faster, more cost-effective solutions than solely building new homes. Benefiting from an exceptionally low funding cost of 0.17% per month (2.06% p.a.) – which translates into a powerful implicit public subsidy against the high SELIC benchmark rate – the program aims to execute 1.5 million credit contracts through CAIXA, a high mark for a sole operating agent and one specialized in mortgages. Financing of up to BRL 30,000, offered to households across income tiers up to moderate and middle levels, including occupants of un-titled, rented, or ceded properties (excluding non-regularizable and high-risk areas). Funds can be used for building materials, labor, and professional technical assistance, which becomes compulsory for structural alterations and demolitions.

- **Habitat for Humanity & microfinance institutions¹¹, The Dominican Republic:**

Hábitat para la Humanidad and its network of microfinance partners (including Banco ADEMI, Banco ADOPEM, Banco BHD, CoopAspire, Esperanza Internacional, and VisiónFund), provide a compelling regional benchmark for market-enabling housing microfinance tailored to climate-vulnerable, low-income households excluded from conventional banking. By blending small-ticket, short-tenor loans with Technical Construction Assistance (TCA) and financial education modules, the ecosystem enables progressive self-construction – ranging from concrete flooring and roof slab installations to structural climate fortifications against frequent Caribbean storms and hurricanes. This model demonstrates how international social impact investors can crowd-in catalytic funding into retail lenders: in 2024 Oikocredit extended a DOP 550 million (~EUR 8.55 million) facility to Banco ADEMI, the country's specialized microfinance bank, earmarking 20% of the portfolio specifically for climate-resilient housing retrofits and upgrades in underserved communities. Ultimately, the Dominican experience underscores

⁵ Carrasco, S., & O'Brien, D. (2021). Beyond the freedom to build: Long-term outcomes of Elemental's incremental housing in Quinta Monroy. *Revista Brasileira De Gestão Urbana*, 13(4). <https://scielo.br/j/urbe/a/ZCgQWz9QtCjQhSdxvXQQY6a/?lang=en&ilang=es>

⁶ <https://revistainvi.uchile.cl/index.php/INV/article/view/63328/68243>

⁷ van Noorloos, F, Cirolia, L R, Friendly, A, Jukur, S, Schramm, S, Steel, G & Valenzuela, L 2020, 'Incremental housing as a node for intersecting flows of city-making : rethinking the housing shortage in the global South', *Environment and Urbanization*, vol. 32, no. 1, pp. 37–54. <https://doi.org/10.1177/0956247819887679>

⁸ <https://www.theguardian.com/artanddesign/2016/apr/10/architect-alejandro-aravena-pritzker-prize-elemental-housing-iqueque-constitucion-tsunami-defences>

⁹ <https://www.globalurban.org/GUDMag08Vol4Iss2/FergusonHousingMicrofinance.htm>

¹⁰ A new fund created from deep sea petroleum (pre-salt) revenues.

¹¹ <https://habitatdominicana.org/micro-financiamiento-para-vivienda/>

that scaling housing microfinance requires pairing specialized retail distribution networks with blended impact capital to ensure that progressive building yields safe, bankable assets.

Rental housing

For decades, as Blanco et al. (2014)¹² argued, housing policies across LAC have treated housing primarily as a capital good and homeownership as the single acceptable outcome, largely disregarding alternative tenure models and housing services, even though the ideal housing solution depends on multiple factors that evolve across household life-stages and changing family structures.

Driven by stagnating wages, real estate price inflation, rising urban land costs, and public fiscal constraints, rent overburden now represents a rapidly growing component of the qualitative housing deficit across LAC metropolitan areas while a major share of regional rental growth has occurred informally. Despite offering immediate flexibility, informal leases deprive landlords of credit-backed income streams while exposing low-income tenants to arbitrary evictions, tenure insecurity, and housing instability across their life cycles.

Limited formal rental supply allows landlords to command disproportionate pricing power, driving rent overburden. Furthermore, the rapid expansion of short-term vacation rental platforms has converted long-term housing stock into tourism accommodations in urban cores, contracting long-term rental supplies and accelerating price inflation.

In this context, rental housing has emerged as a new and crucial pathway for housing policy. Yet commercial lenders across the region rarely offer specialized, long-term debt products tailored for Build-to-Rent (BTR) or social rental portfolios. On the capital market side, institutional investors face regulatory ambiguity, difficulties in evaluating social impact alongside financial performance, and a scarce pipeline of bankable, high-quality projects. Unlocking formal rental supply requires deploying blended construction debt with extended grace periods to support low-yield rental portfolios, alongside regulatory reforms that reduce formalization burdens

and high capital costs. A pioneering regional proof-of-concept has emerged in downtown São Paulo:

- **SOMA¹³, Brazil:** A consortium formed by a real estate developer, a securitization company and an impact-investment consultancy overcame the lack of financing lines and secured affordable funding by designing a financing structure through the issuance of certified RMBS and attracting impact investors even at below-market rates. Project returns are generated directly through rental income, while a custom-created non-profit entity (SOMA) manages the property under dual mandates of social impact and long-term financial sustainability.

By pairing catalytic capital market structures for Build-to-Rent developments regional housing finance systems can establish rental housing as a bankable, secure, and dignified tenure choice. Alternatively, rent-to-own mechanisms can provide a viable entry point to property ownership by allowing prospective buyers to build equity and enhance their financial profile during a trial tenancy period. This structure serves as an effective bridge for households needing time to accumulate necessary down-payment capital or elevate their credit scores to secure optimal mortgage financing terms.

- **FNA¹⁴, Colombia:** The National Savings Fund (Fondo Nacional de Ahorro) offers a residential leasing product where the property remains under the ownership of the FNA during the term of the contract and the downpayment is reduced compared to regular mortgages, with financing up to 90% of the property value. Interest rates are also reduced (by 5 bps) when compared similar currency-denominated mortgages. Yet this product is not available to social housing (VIS).
- **Semillero de Propietarios¹⁵, Colombia:** provides a clear regional example of an innovative financial product tailored to the diverse needs of underserved populations, including low-income and migrant households. Designed as a social rental-to-ownership bridge, the product combines a monthly state rental subsidy – administered by the National Housing Fund (*FONVIVIENDA*) – with a

voluntary, structured savings mechanism of up to 24 months. Crucially, by requiring participating financial institutions to generate monthly reports on rental payments and savings deposits, the product transforms routine lease compliance into a verifiable bank history. This enables thin-file or informal households to establish creditworthiness, qualify for mortgages, and seamlessly transition into ownership schemes like *Mi Casa Ya*. To reach vulnerable migrant populations across border zones, the product features territorial targeting and flexible lease-to-own structures. However, as Galíndez (2024)¹⁶ notes, the program's practical reach highlights key operational lessons: rigid requirements, such as restricting subsidies to new housing units, expecting regular income verification from informal workers, and relying on over-burdened real estate managers, can restrict supply and undermine market alignment. Ultimately, *Semillero de Propietarios* illustrates both the high potential of rental-to-ownership financial products in servicing credit-capable households and the absolute necessity of aligning underwriting, labor formalization, and stock eligibility with complex regional socioeconomic realities.

As with micro loans, guarantee funds can be set up to absorb initial credit risks for lenders entering non-mortgage segments.

Collective financing arrangements

In Latin America and the Caribbean (LAC), housing finance products that integrate collective arrangements have emerged as a vital response to high rates of informal employment and exclusionary traditional mortgage criteria. These frameworks mitigate individual credit risk by pooling or credit-enhancing debt exposure through community, cooperative, or institutional structures.

Wholesale or Umbrella credit lines are found in Uruguay, under FUCVAM¹⁷ (a model spread out in other countries such as Guatemala, El Salvador and Bolivia)¹⁸ and in Brazil's PMCMV-Entidades¹⁹, where an intermediary – a cooperative or housing association – sub-lends or manages collectively the production

¹² Andrés G. Blanco, Vicente Fretes Cibils, Andrés F. Muñoz. (2014) Rental Housing Wanted Policy Options for Latin America and the Caribbean. Inter-American Development Bank. <https://publications.iadb.org/es/se-busca-vivienda-en-alquiler-opciones-de-politica-en-america-latina-y-el-caribe>

¹³ <https://www2.gerdau.com.br/noticias/grupo-gaia-din4mo-e-magikjc-lancam-soma-projeto-imobiliario-com-retorno-financeiro-e-impacto-socioambiental-gerdau-e-investidora/>

¹⁴ <https://www.fna.gov.co/en/personas/vivienda/leasing-habitacional>

¹⁵ As modified by Decreto 057/2021.

¹⁶ Galíndez, Zaida. (2024) Programa semillero de propietarios: un enfoque territorial para la integración socioeconómica de los migrantes venezolanos en Arauca. <https://bdigital.uextornado.edu.co/server/api/core/bitstreams/5798dd2e-2447-44c9-86fa-9a2cd0583c00/content>

¹⁷ Federación Uruguaya de Cooperativas de Vivienda por Ayuda Mutua: <https://www.fucvam.org.uy/>

of housing: land acquisition, project design, construction, or sometimes purchase of properties for retrofitting. By shifting underwriting from isolated individuals to self-organized community entities, these group-lending schemes enable informal and thin-file households that would otherwise fail standard bank screening to access structured housing finance.

Other more innovative products are emerging: a) Real Estate Crowdfunding Platforms, which manage to pool capital from multiple retail investors to collectively finance affordable housing developments and cooperative projects, bypassing traditional banking intermediation costs and democratizing capital origination; b) Collaborative Housing Schemes (Cohousing / Coliving) are being spearheaded by self-organized groups that pool private savings (such as pension capital) combining them with joint financing structures to design and construct customized developments that pair compact private living spaces with shared, collectively owned services and community areas. Although primarily targeted at middle-income segments and urban youth, emerging collective financing models are gaining regulatory traction and institutional funding interest across countries such as Brazil, Chile, Colombia, and Mexico.

Shared-ownership schemes – wherein borrowers buy just a share of a home (typically incrementally between 25-75%) and pay subsidized rent on the rest have not been found across LAC, perhaps due to cultural characteristics favoring full homeownership, despite the reduced deposit required. Shared equity, though, is found in Brazil, where loans initially extended directly by developers are increasingly being securitized, as a means of bridging the down-payment savings gap for low-to-moderate-income segments.

Climate resilient financing

While the housing sector in Latin America and the Caribbean does not contribute substantially to global greenhouse gas emissions compared to the Global North, the region is bound to suffer disproportionately from the escalating impacts of climate change. Systemic climate risk depends not only on physical hazard events, but fundamentally on the structural vulnerability of exposed

populations – a vulnerability acutely amplified across LAC by deep qualitative housing deficits, unmitigated urban expansion, and precarious informal settlement patterns.

Indeed, many regional nations consistently rank among the most climate-impacted globally²⁰. The devastating impact of Hurricane Beryl in July 2024 – a Category 4 storm fueled by record-warm sea surface temperatures – exemplified this exposure when it struck Grenada, Saint Vincent and the Grenadines, and Jamaica. As the strongest early-season hurricane on record, Beryl left over 90% of homes heavily damaged or destroyed on Union Island and Canouan, leaving ongoing challenges surrounding the pace of housing reconstruction²¹. Similarly, in El Salvador, 88.7% of the national territory accommodating 95.4% of the population is classified as a risk zone. With projected local temperature increases of up to 1.5 °C by 2041 and increasingly severe precipitation events, heightened flooding and landslide risks threaten to further destabilize vulnerable communities²².

To safeguard the housing stock and mitigate physical climate risk across the region, financial institutions must deploy specialized green and climate-resilient financial products. However, in a region where most low-to-moderate-income families struggle to qualify for standard mortgages and/or secure standard housing, financing sustainability upgrades presents a clear market challenge.

By aligning financial product architectures with verifiable sustainability metrics, financial institutions can tap into green bond proceeds, ESG capital markets, and concessional climate funds. These international capital flows enable lenders to pass on interest rate markdowns, cash-back rebates, or grant-equivalent subsidies to retail borrowers. Utilizing blended, cheaper funding, financial entities can offer “affordable resilience top-up” facilities linked to existing housing loans, empowering households to install rooftop solar systems, rainwater harvesting infrastructure, graywater recycling, and structural retrofits against extreme weather.

■ **Fondo Mivivienda Verde²³, Peru:** a housing financing initiative managed by Fondo MIVIVIENDA that provides non-repayable grants combined with a preferential financing rate, for the

acquisition of homes in certified sustainable housing developments. Initially focused on eco-efficiency measures such as water and energy savings, the program has evolved toward broader sustainability and decarbonization standards. With international certification from the Climate Bonds Initiative (CBI), it aligns local eligible residential projects with internationally recognized low-carbon building criteria, strengthening their potential connection to sustainable finance and impact investors.

Final remarks

The financial products examined throughout this analysis are not inherently novel; rather, their underlying structures have long existed and are already actively deployed across various Latin American and Caribbean nations. The advancement of financial technology increasingly enables both diversity and reduction in transactions and origination costs. The financial ecosystem is also more diverse, with FinTechs enhancing distribution channels.

The fundamental challenge facing regional housing systems remains therefore not product conceptualization, but institutional **scale and integration. To effectively serve the housing continuum** – composed of households with diverse financial capacities, evolving tenure preferences, and shifting life cycle needs – **housing finance systems must move beyond fragmented, small-scale initiatives towards comprehensive, integrated ecosystems.**

Ultimately, unlocking the full potential of these financial instruments requires systematically layering tailored product designs alongside affordable, long-term funding sources and inclusive, non-traditional underwriting frameworks. Nonetheless, a fourth pillar must also be in place. Introducing a diversified finance product matrix is insufficient if financial institutions cannot manage systemic and credit risks. The following and final edition of the series will examine **Credit Enhancers, First-Loss Guarantees, and Risk-Sharing Mechanisms** to crowd in private commercial capital into this expanded and integrated product ecosystem. **Stay tuned!**

¹⁸ <https://bredenoordhousingresearch.com/wp-content/uploads/2022/02/Cooperativas-de-vivienda-en-América-Latina-conforme-el-Modelo-CVAM>

¹⁹ <https://www.gov.br/cidades/pt-br/assuntos/minha-casa-minha-vida-selecoes/mcmv-entidades-1>

²⁰ Climate Risk Index 2025, p.27. Available at: <https://www.germanwatch.org/sites/default/files/2025-11/CRI%2026%20full%20report.pdf>

²¹ <https://thevincentian.com/james-raises-concerns-over-slow-pace-of-beryl-housing-repairs-p33815-1.htm>

²² Inter American Development Banks CLIPP ES-00009

²³ Also known as the Bono Buen Pagador Sostenible or BBP Sostenible. Information provided by Francisco Caro.

Adam, Eve, the snake and the fall of Fannie Mae and Freddie Mac

↪ By Alex J. Pollock

September 6, 2026, marks the 18th anniversary of the failure of the U.S. housing finance giants, Fannie Mae and Freddie Mac, the government-sponsored enterprises that had previously characterized their own role as “the envy of the world.” On September 6, 2008, they were both put into conservatorship by the U.S. government. How could this have happened to two such prominent, powerful and politically-connected mortgage companies? The Book of Genesis helps us understand this instructive event: Running up the leverage is the snake in the housing finance Garden of Eden. It is a constant set of alluring temptations to enjoy the fruit of increased risk in the medium term, while setting ourselves up for the inevitable fall.

Let us begin with this famous painting by Lucas Cranach:



The woman is Fannie Mae. The man is Freddie Mac. The snake is whispering, “If you just run up the leverage of the whole U.S. housing finance system, you will become powerful and rich.” Fannie and Freddie are about to eat the apple of risk, which will indeed make them very powerful and very rich for a time, after which they will be shamed, humiliated and punished.

Fannie and Freddie were at the centre of the great American house price bubble and its subsequent collapse played out during the first decade of the 21st century. Bubbles in housing finance have occurred in many countries and times. They always end painfully, yet they keep happening. As the prophet said (slightly amended), “There is nothing new under the financial sun. The cycle that hath been, it is that which shall be.” Why is this?

In this context, consider this quotation: “The banking failures for the current year have been numerous, greatly aggravated by the collapse of unwise speculation in real estate.” What year was that? It could have been 2008, to be sure, but it is actually from 1891, as the then-U.S. Comptroller of the Currency looked sadly at the wreck of many of the banks of his day.

Some people say the problem is that housing lenders who go broke need to be personally punished, to get their incentives right. Economists are big, not without reason, on worrying about economic incentives. But a bigger problem is that it is so hard to know the future. Housing lenders don’t create housing finance collapses on purpose, but by mistake.

The city of Barcelona in the 14th century decided to manage the incentives of bankers by decreeing that those who defaulted on their deposits would be subject to capital punishment. And as one financial history tells us, “In 1360, Francesch Castello, a failed banker, was beheaded in front of his bank.” But this did not stop banks from failing.

One of the most important reasons that housing finance bubbles are so hard to control is that they make nearly everyone happy while they last. Who is making money from a housing finance bubble? Almost everybody. This is why the experience of a housing bubble is so insidious.

For example, take the experiences of Americans in the new 21st century. For a long time; the seven years of 2000-2006, the housing finance bubble generated profits and wealth. A lot of profits and wealth turned

out to be illusory in the end, but at the time much of it was real and all of it seemed real. As house prices rose, borrowers made more money if they bought more expensive houses with the maximum amount of leverage. Property flippers bought and sold condominiums for quick and repetitive profits, even if no one was living in them. Housing lenders had big volumes and profits. Their officers and employees got big bonuses. Numerous officers of Fannie Mae and Freddie Mac made more than \$1 million a year each. Real estate brokers had high volumes and big commissions. Equity investors saw the value of their housing-related stocks go up. Fixed income investors all over the world enjoyed the returns from subprime mortgage-backed securities which had investment grade ratings, and from Fannie Mae and Freddie Mac securities which seemed to be, and actually were, guaranteed by the U.S. government.

Most importantly, the 75 million households that were homeowners saw the market price of their houses keep rising. This felt like, and was discussed by economists as, increased wealth. Of course, this was politically popular. The new equity in their houses at then-market prices allowed many consumers to borrow on second mortgages and home equity loans, so they could spend money they had not had to earn by working. The Federal Reserve Chairman of the time, Alan Greenspan, smiled approvingly on this housing “wealth effect,” which was offsetting the recessionary effects of the collapse of the previous bubble in technology stocks, which had turned into bust in 2000.

Home builders profited by a boom in new building. Local governments got higher real estate transactions taxes and greater property taxes, which reflected the increased tax valuations of their citizens’ houses. They could increase their spending with the new tax receipts. The investment banks which pooled mortgages, packaged them into ever more complex mortgage-backed securities, and sold and traded them, made a lot of money and paid big bonuses to the members of their mortgage operations, including the

former physicists and mathematicians who built the models of how the securities were supposed to work. Bond rating agencies were paid to rate the expanding volumes of mortgage-backed securities and were highly profitable. Bank regulators happily noted that bank capital ratios were good, and that zero banks failed in the U.S. in the years 2005 and 2006 – the very top of the bubble. In the next six years, 468 U.S. banks would fail.

The politicians trumpeted and took credit for the increasing home ownership rate, which the housing finance bubble temporarily carried to 69%, before it fell back to its historical level of 64%. The politicians pushed for easier credit and more leverage for riskier borrowers, which they praised as “increasing access” to borrowing. The snake had been whispering to the politicians, too.

The bubble was highly profitable for everybody involved – as long as the house prices kept going up. As long as house prices rise, the more everybody borrows, the more money everybody makes. This general happiness creates a vast temptation to keep the leverage increasing at all levels. But in 2006, the national average prices started going down, kept going down through the crisis of 2007-2009, and did not bottom until 2012.

This brings us to two essential questions.

The first is: What is the collateral for a mortgage loan?

Most people answer, “That’s easy – the house.” But that is not the correct answer.

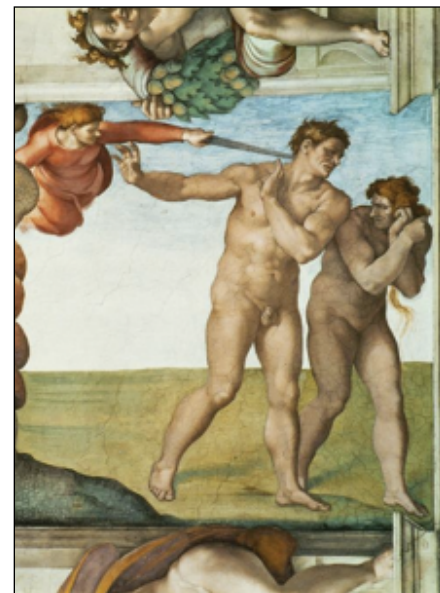
The correct answer is: Not the house, but the *price* of the house. The only way a housing lender can recover from the property is by selling it at some price.

The second key question is: How much can a price change?

To this question the answer is: A lot more than you think. It can go up a lot more than you expected, and it can then go down a lot more than you thought possible. It can go down a lot more than your worst- case planning scenario dared to contemplate.

So, the temptations of housing finance bubbles generate mistaken beliefs about how much prices can go down. American housing experts knew that house prices could fall on a regional basis, but most were convinced that house prices would not fall on a national average basis. Of course, now we know they were wrong, and that national average house prices fell by 30%. And they fell for six years.

By then, Fannie Mae and Freddie Mac had been banished from their pleasant housing finance Garden of Eden. Here they are, being sent into government conservatorship, as depicted by Michelangelo:



In conservatorship they remain to this very day, 18 years later. Having played a key role in running up the leverage of the whole system, they had suffered a fall they never thought possible, although it was well deserved.

Housing policy and the limits of political coalition-building: Hungary under and after Orbán

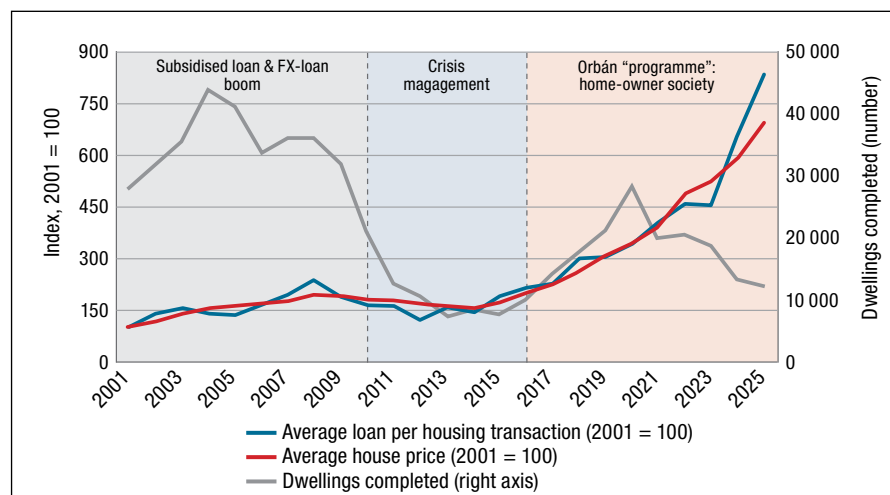
↪ By József Hegedüs, Bence Örkény

1. Introduction

Housing affordability has become one of the defining public policy challenges across Europe. Rising prices, construction costs and interest rates have placed homeownership beyond the reach of growing numbers of young and middle-income households. In much of Central and Eastern Europe the dominant response has remained demand-side subsidies for owner occupation, resting on a simple assumption: grants, subsidised mortgages and tax incentives should widen access to ownership, spread housing wealth and stimulate construction.

Hungary represents perhaps the most comprehensive example of this approach. Viktor Orbán, leader of the FIDESZ party, first served as Prime Minister from 1998 to 2002, then returned to power in 2010 and governed continuously until the defeat of the FIDESZ-KDNP alliance in the 2026 elections. The 2010 elections gave FIDESZ-KDNP a two-thirds parliamentary majority, a constitutional supermajority that allowed the government to rewrite the constitution and pass major legislation without requiring opposition support. It was during this second, sixteen-year period of FIDESZ government that an extensive housing subsidy regime had been developed. The country entered the 2010s with one of the highest homeownership rates in Europe, a residual public rental sector and a weak institutional rental market – a structure inherited from the post-socialist transition, which the post-2010 regime did not create but reinforced (Hegedüs, 2023b). Since 2010, successive governments built an exceptionally extensive subsidy system centred on owner occupation: family housing allowances (CSOK), reduced VAT on new dwellings, the Baby Expecting Loan, Village CSOK, CSOK Plus, Housing Capital Programme and, finally, the Otthon Start programme. Taken together, these programmes mobilised close to HUF 5,750 billion in public resources (See

FIGURE 1 AVERAGE HOUSE PRICES, AVERAGE HOUSING LOAN PER TRANSACTION (2001 = 100) AND DWELLINGS COMPLETED IN HUNGARY, 2001-2025



Source: Authors' elaboration based on KSH STADAT tables 18.1.1.16 (housing loans; average loan per lending-financed transaction calculated as new market housing-loan volume divided by the number of loan transactions), 18.1.1.14 (average dwelling prices) and 18.1.1.7 (dwellings built). Note: both indices are nominal.

Figure and Appendix 1). Behind continual adjustment, the orientation remained consistent: increasing household purchasing power while leaving supply largely to private market actors. Figure 1 places the post-2010 regime in a longer perspective, comparing average house prices, the average housing loan taken out per transaction and the number of dwellings completed since 2001 – that is, across both subsidy-driven expansions.

The episodes differ in exactly the dimension that matters. In the period of 2001–2004, subsidised credit raised prices but supply also responded: completions rose from 28,000 to nearly 44,000 a year. In the second, prices and especially loan sizes escalated far more steeply – by 2025 the average loan per transaction stood at more than eight times, and average prices at nearly seven times, their 2001 level – yet completions peaked in 2020 at barely the 2001 level and had fallen to some 12,000 by 2025. The same demand-side

stimulus that once fed construction was now feeding prices and leverage alone; that the loan index outpaced the price index after 2015 indicates that purchases were carried by ever larger borrowing on top of ever-larger family contributions. This contrast between the two cycles – one with a supply response, one without – is the empirical core of the argument developed below.

The argument developed in this paper is that Hungarian housing policy after 2010 is best understood not as a sectoral social policy but as an instrument of a broader project of illiberal state-building, serving four functions simultaneously: managing the foreign-currency mortgage crisis – and using crisis management to subordinate the banking sector politically – building a property-owning middle class, pursuing demographic objectives, and consolidating political legitimacy. During its first decade the model largely delivered; thereafter weak targeting, supply inelasticity

and tenure monoculture gradually turned the system against its own objectives. The recurring question is therefore twofold: how did each intervention serve the objectives of the illiberal state, and why did it eventually stop doing so?

Previous studies have mostly evaluated individual programmes – whether a specific subsidy increased fertility, stimulated construction or expanded lending. The political transition following the 2026 elections provides the first opportunity to evaluate this housing model as a complete policy regime rather than a succession of separate interventions. Section 2 reconstructs the regime's housing policy historically; Section 3 explains characteristics – including both the advantages and limits of the system – while Section 4 outlines a proposed agenda for post-Orbán housing policy. We conclude the article by summarising the 2002–2026 housing system and its broader lessons.

2. Housing policy during the Orbán era

2.1 The baseline: the first Orbán government and the 2002 pattern

The post-2010 model had a clear precedent. The first Orbán government (1998–2002) pursued a two-track housing policy: a closed-ended social rental construction programme – 712 successful municipal tenders producing 12,823 dwellings for HUF 63.3 billion between 2000 and 2005, better targeted towards lower-income strata than any subsequent programme – alongside an open-ended, interest-subsidised mortgage scheme (Hegedüs, 2006). It was the open-ended track that escalated: total housing expenditure rose from HUF 59 billion (1998) to HUF 239 billion (2005), with the share of credit subsidies within it jumping from 12 to 73 per cent between 2001 and 2004 – an escalation that the incoming socialist government initially maintained rather than reversed. The loosening of loan conditions in spring 2002, unambiguously election-motivated, rendered the scheme fiscally unsustainable, and more than 60 per cent of the subsidies accrued to the top income quintile (Hegedüs, 2006); designed around the incumbent mortgage banks, the scheme was described by contemporaries as vote-buying (Várhegyi, 2023).

Two features anticipate the post-2010 dynamics: open-ended demand subsidies escalate before elections and flow upward in the income distribution; and – the pattern to which the conclusion returns – even dramatic pre-election

escalation did not decide the 2002 election, nor would it that of 2026.

2.2 2010–2015: crisis management and the subordination of the banking sector

By 2010, Hungary had one of the highest shares of foreign-currency mortgages in Central Europe; the forint's depreciation dramatically increased debt burdens and confidence in housing finance collapsed. Crisis management became an immediate necessity – and simultaneously the terrain on which the banking sector was politically subordinated (Hegedüs, 2023a; Csizmady, Hegedüs and Vonnák, 2019; Johnson and Barnes, 2015). The 2011 early repayment scheme allowed foreign-currency mortgages to be repaid at preferential exchange rates: about 170,000 loans – roughly 18 per cent of contracts – were repaid, imposing losses of HUF 260–300 billion on the banks, with the principal beneficiaries being wealthier debtors able to mobilise savings – part of a broader redistribution favouring the upper middle class (Várhegyi, 2023; Csizmady et al., 2019). There followed the exchange-rate cap, a sectoral bank levy, the forced conversion into forint in 2015, the retail interest-rate freeze (2021) and windfall taxes – all under a declared target of raising domestic ownership in banking above 50 per cent (Várhegyi, 2023). The path is distinctive in regional comparison: Estonia relied on market-based workouts, Latvia on a creditor-protecting, IMF-guided resolution; Hungary's novelty was to impose the losses of resolution on the banks (Bohle, 2014; 2018; Erbenova, Liu and Saxegaard, 2011). Housing finance thereby became an instrument of clientele-building, with state-favoured banking groups gaining leading positions in subsidised loan markets. At the same time, these measures did re-establish a functioning mortgage market under far more conservative rules: loan-to-value and payment-to-income caps from 2015 and a shift towards fixed-rate lending.

2.3 The NET and the Ócsa experiment

The self-declared “country of homeowners” produced, paradoxically, the largest state rental programme of the post-transition period. The National Asset Management Agency (NET) purchased the dwellings of defaulted mortgage debtors – ultimately some 36,000 dwellings for roughly HUF 150 billion, seven times the planned volume – allowing the families to remain in their homes as tenants (Csizmady et al., 2019; Habitat for Humanity Hungary, 2024). Yet the stock was not retained: from 2019 it was reprivatised, with about 90 per cent sold back to occupants by 2022, and the residual

4,000 tenancies transferred to a charity-run housing fund operating with negative cash flow (Habitat for Humanity Hungary, 2024).

The Ócsa estate was planned at 500 rental houses; 80 were built at unit costs of roughly HUF 500,000 per square metre against a local average of 155,000, only 42 were occupied at the end of 2013, and the programme decree was repealed in 2016, the estate drifting towards market renting (Neuberger, 2020). Taken together, the NET and Ócsa episodes show that the regime could manage crisis through ownership-preserving instruments, but proved unwilling to retain – and unable to build – a durable public rental stock.

2.4 After 2015: housing policy under the dramaturgy of family policy

From 2015 onwards, housing policy was subordinated to the dramaturgy of family policy: open-ended, demand-driven transfers to the middle class. The Family Housing Allowance (CSOK, 2015) offered up to HUF 10 million for families undertaking to raise three children, under conditions – continuous social security records, absence of public debts, bank underwriting – that de facto excluded the lowest income groups (Elek and Szikra, 2018; Szikra, 2018). The VAT rate on new dwellings was cut from 27 to 5 per cent; the Baby Expecting Loan (2019) provided a general-purpose subsidised loan of HUF 10 million, with HUF 472 billion disbursed in its first year and most of it channelled into housing (MNB, 2026a); Village CSOK (2019) extended the grants to small settlements; and CSOK Plus (2024) replaced urban CSOK with subsidised loans of HUF 15–50 million. The targeting asymmetry was not new – in 2011 the bottom income decile received 8.1 per cent of housing loans against 14.1 per cent for the top decile (Csizmady et al., 2019) – but, as Section 3 shows, it widened by an order of magnitude. These demand-side schemes – including the Baby Expecting Loan and Village CSOK – were delivered through commercial banks: applicants filed at a retail bank, which verified eligibility, contracted and disbursed the funds, reimbursed by the Treasury from the central budget.

Village CSOK illustrates the evaluation problem: modest improvements in migration and fertility indicators appear in eligible settlements, but the effects cannot be identified with confidence (Uhljár et al., 2023) – individual programmes may have met specific objectives even while cumulative reliance on demand subsidies failed at the system level.

The only programme explicitly targeted at the poor was not financed from the domestic

budget: FETE, funded from the EU Recovery and Resilience Facility with HUF 50.9 billion, is closed-ended, outsourced to a charity, and committed to some 2,000 social rental dwellings in 300 settlements under a social rental agency model with rents adjusted to ability to pay. Implementation was slow – roughly one hundred move-ins in the first eighteen months – and, tellingly, the programme was undermined by the government's own housing policy: Village CSOK drove up housing and construction costs in the very settlements FETE targeted, and with the RRF budget fixed, the construction component was ultimately transferred to a nationally financed scheme with substantially lower targets (Habitat for Humanity Hungary, 2024).

2.5 The utility price cap: a quasi-housing programme

No account of the period is complete without the utility price cap (“rezsicsökkentés”, 2013), by fiscal weight the largest implicit housing subsidy of the entire era. The universal freezing of household energy prices served three functions: highly visible cost-of-living relief central to political legitimacy; control over the renationalised utilities; and the replacement of means-tested support with a universal price subsidy. The contrast with what it replaced is instructive: the 2007 gas-price support had been means-tested, with about 60 per cent of it reaching the bottom income quintile, whereas the price cap was accompanied in 2015 by the abolition of the central housing-maintenance allowance – roughly HUF 30 billion per year for some 400,000 predominantly bottom-quintile claimants (MEKH, 2016).

The distributional consequences were regressive: of the HUF 242 billion in household savings in 2015, the top two income quintiles received 34 per cent more than the bottom two – the subsidy being proportional to consumption and hence dwelling size – while the poorest households heating with firewood were largely excluded (KSH, 2015; own calculation). After the 2021–22 energy crisis the fiscal burden became enormous: HUF 1,458 billion in 2023 and HUF 917 billion in 2024 – an order of magnitude larger than any explicit housing programme (Habitat for Humanity Hungary, 2024). The partial reform of 2022, introducing market prices above average consumption levels, constitutes a natural experiment for future research. The cap also distorted renovation incentives: a representative survey found that a third of condominium owners saw no need for energy retrofitting and only one in ten was willing to pay for it, while an estimated 98 per cent of Budapest's condominium buildings fail current energy performance requirements

(Rehousing Project, 2024): by muting the price signal, the cap operated as an energy-efficiency lock-in, freezing the principal channel for upgrading the existing stock.

In housing policy terms, the price cap was a quasi-housing subsidy distributed in proportion to housing consumption, favouring larger, owner-occupied dwellings. Together with the demand-side subsidies it constituted the era's two largest redistributive programmes: both relied on price distortions rather than targeted income support and disproportionately benefited higher-income households – illustrating a broader risk of politically driven decommodification, which tends to produce costly, politically controlled transfer systems rather than more equitable welfare arrangements.

2.6 Savings institutions: the abolition of the LTP and the NOK

The same political logic reorganised housing-related savings. The contract savings scheme (LTP, 1996) had grown into a mass institution – 1.3–1.5 million contracts by 2018, a 30 per cent state premium capped at HUF 72,000 per year, predominantly middle-class uptake and a modest lending role (Hegedüs, 2006; Habitat for Humanity Hungary, 2024). The premium was abolished within two days in 2018, with the explicit aim of redirecting household savings towards government bonds – in effect an indirect bank tax combined with savings rechanneling, at a time when a state-favoured banking group was being consolidated into the country's second largest bank. Meanwhile the government's own alternative failed: the National Home Communities (NOK, 2016), announced with the promise of doubling annual homebuilding, produced two communities with some 300 members and a supported contract stock of about HUF 6 billion (Mfor, 2021). The contrast condenses a central feature of the regime: demand-side financial incentives could be introduced quickly and at scale, but durable supply-side or savings institutions could not be built, while functioning ones could be destroyed when rent channels were redirected.

2.7 Otthon Start: the culmination of the demand-side model

The final years of the Orbán government brought two further demand-side instruments. The Workers' Loan (2025) extended subsidised general-purpose credit to young workers, disbursing HUF 168 billion in its first year; the flagship, however, was the Otthon Start programme, announced in mid-2025 and launched on 1 September 2025. The scheme provides first-time homebuyers with a state-supported mortgage carrying a fixed 3 per

cent interest rate throughout the loan period, substantially below prevailing market rates. Eligible households may borrow up to HUF 50 million with a maximum 25-year maturity, subject to standard prudential lending rules, including debt-service-to-income and loan-to-value limits. Unlike earlier family-oriented programmes such as CSOK and CSOK Plus, eligibility is not conditional on marriage or childbearing but on first-home buyer status and property value limits. The programme therefore represented a shift from explicitly demographic housing policy towards a broader first-home ownership subsidy while maintaining the government's preference for demand-side interventions.

The original scale of the programme was unprecedented. According to the Magyar Nemzeti Bank, 27,371 Otthon Start loan contracts were concluded during the programme's first six months (September 2025 – February 2026), and approximately HUF 597 billion had been disbursed by the end of 2025 alone (MNB, 2026a). The median loan amounted to HUF 36 million, considerably exceeding the median value of newly originated market mortgages (HUF 13.2 million), while the median loan-to-value ratio reached 77 per cent, indicating that borrowers typically financed a large share of the purchase price through subsidised credit (MNB, 2026a). Otthon Start was introduced into an already buoyant housing market characterised by strong price growth, limited new construction and increasing investment demand. In this sense, Otthon Start did not represent a departure from the post-2010 housing strategy but its culmination: one of the broadest and least demographically targeted demand-side housing subsidies introduced during the Orbán era.

2.8 Municipal capacity and local politics of housing

Besides the demand-side character of the post-2010 regime it is also important to mention a parallel and largely overlooked, process: the fiscal and functional recentralisation of local government. The 2011 Local Government Act and the accompanying 2011–2014 municipal debt consolidation transferred core public functions – most consequentially education and large parts of healthcare – to central state administration and reorganised municipal financing around task-based central transfers, sharply narrowing municipalities' discretionary revenue base: having led Europe in municipal decentralisation in 1990, Hungary had become one of its most centralised systems by the 2020s (Finta et al, 2021). This mattered specifically for housing because the one genuinely supply-side achievement of the

pre-2010 period – the closed-ended municipal tender scheme of 2000-2005 described in Section 2.1 – had depended precisely on the kind of central co-financing that recentralisation eliminated. After 2010 no comparable mechanism replaced it, and local governments were left to fund any rental-housing initiative almost entirely from their own, structurally reduced resources, regardless of political orientation.

The residual municipal rental stock illustrates the same problem from a different angle. What remains in municipal hands today is largely what has survived the 1990s privatisation wave, in which sitting tenants could buy their flats at discounts of 70-90 per cent of market value, leaving local authorities with a stock that is disproportionately old and low-quality (Habitat for Humanity Hungary, 2025). Municipalities have received little to no central operating or capital subsidy for this stock, and letting it at rents low-income tenants can afford routinely produces a deficit once maintenance

is factored in – a structural mismatch that leaves municipalities managing social housing under, in one assessment, “severe financial disincentives” (Jelinek, Czirfusz and Pósfai, 2025). The result is a self-selecting system: only municipalities with an independent fiscal surplus can sustain a social rental stock at all, and even they tend to expand it only as far as they can absorb the running deficit – not as far as local housing need would justify. This remains one of the more sensitive unresolved questions in the Hungarian housing system: no financing formula has yet made expanding, rather than merely tolerating, a municipal rental stock rational for an average local authority.

The constraint became politically visible after the October 2019 municipal elections, when opposition candidates won the Budapest mayoralty and control of a majority of county-seat cities, several of them campaigning in part on housing and urban-liveability platforms. In office, however, rental-housing construction

remained marginal even in opposition-led municipalities: without central co-financing or a supportive regulatory framework and facing the same fiscal constraints as their government-aligned counterparts, most newly elected administrations had neither the resources nor – housing being only one of many competing priorities – the practical means to make it one. The exception illustrates the constraint rather than contradicting it: the 13th district of Budapest, governed by the same municipal administration since 2002 across changing national and local political cycles, financed a continuous rental-construction programme almost entirely from its own resources – twelve buildings and 667 dwellings between 2002 and 2022, more than HUF 18 billion invested, housing some 1,500 families in total. Over broadly the same two decades all Hungarian local governments together built some 1,544 dwellings, at an estimated HUF 27 billion of new-build spending (KSH, Tables 18.1.1.9 and 18.1.1.12): a single Budapest district accounted for a substantial share of

TABLE 1 PRINCIPAL HOUSING-POLICY INSTRUMENTS IN HUNGARY, 2010-2026

Instrument (year)	Type	Target / conditions	Scale	Outcome
FX early repayment (2011)	Crisis mgmt.	FX debtors with savings	~170,000 loans; HUF 260-300 bn bank losses	Regressive relief; losses imposed on banks
Exchange-rate cap; forced conversion (2012-15)	Crisis mgmt.	FX debtors	Costs borne by banks	FX risk eliminated
NET asset management (2012-2020)	De facto state rental	Defaulted debtors	~36,000 dwellings; ~HUF 150 bn	~90% reprivated by 2022
Ócsa estate (2012-13)	State-built rental	Foreclosed families	80 of 500 planned houses; HUF 2.7 bn	Failed supply experiment
Utility price cap (2013-)	Universal price subsidy	All households	HUF 917-1,458 bn/yr (2023-24)	Regressive; partial reform 2022
CSOK (2015-2023/24)	Grant + subsidised loan	Families with children; strict conditions	Conditions changed nine times	Upper-middle-class friendly
VAT 27→5% (2016-19; 2021-)	Tax incentive	New-build	—	~60% absorbed by prices (MNB)
NOK (2016)	Collective savings	Prospective builders	2 communities; ~HUF 6 bn	Failed
LTP premium abolition (2018)	Subsidy withdrawal	1.3-1.5 m contracts	Premium 30%, cap HUF 72k/yr	Savings redirected to gov. bonds
Baby Expecting Loan (2019-)	General-purpose subsidised loan	Married couples (childbearing)	HUF 472 bn in first year	Largely spent on housing
Village CSOK (2019-)	Rural grant	Small settlements	—	Modest migration/fertility effects
CSOK Plus (2024-)	Subsidised loan	Families	HUF 15-50 m; 3% cap	Replaced urban CSOK
FETE (2022-2026)	EU-funded social rental	Poorest households	HUF 50.9 bn; ~2,000 dwellings	Only central poverty-targeted programme, but failed as an RRF program
Workers' Loan (2025)	Subsidised loan	Young workers (under 25 years)	HUF 168 bn in first year	—
Housing Capital Programme (2025)	Supply side subsidy	Support for real-estate funds	Just started (700 new units)	As a rental program failed
Otthon Start (2025-)	3% first-home loan	First-time buyers	27,371 contracts / 6 months; HUF 597 bn (2025)	Top-quintile concentration; price inflation

Sources: Csizmady et al. (2019); Habitat for Humanity Hungary (2024); MNB (2026); press sources as cited in text.

everything the municipal sector as a whole managed to build. That sustaining even a few hundred dwellings required two decades of uninterrupted local political continuity and an unusually favourable municipal tax base underscores how narrow the room for local initiative had become elsewhere.

2.9 A late supply-side experiment: the Housing Capital Programme

A partial shift towards supply-side intervention came only at the end of the Orbán era. Launched in 2025, the Housing Capital Programme committed HUF 300 billion of public investment capital to real-estate funds managed by nineteen private asset managers. The government estimated that, together with private equity and bank lending, the programme could mobilise up to HUF 1,000 billion of development and contribute to the construction of around 30,000 dwellings, rental units and student-accommodation places over six years. By October 2025, ten asset managers had been authorised to begin investments, backed by HUF 160 billion in state commitments, while approximately 700 planned dwellings in Budapest and Debrecen had already entered the sales market. The bulk of physical completions was not expected before 2027.

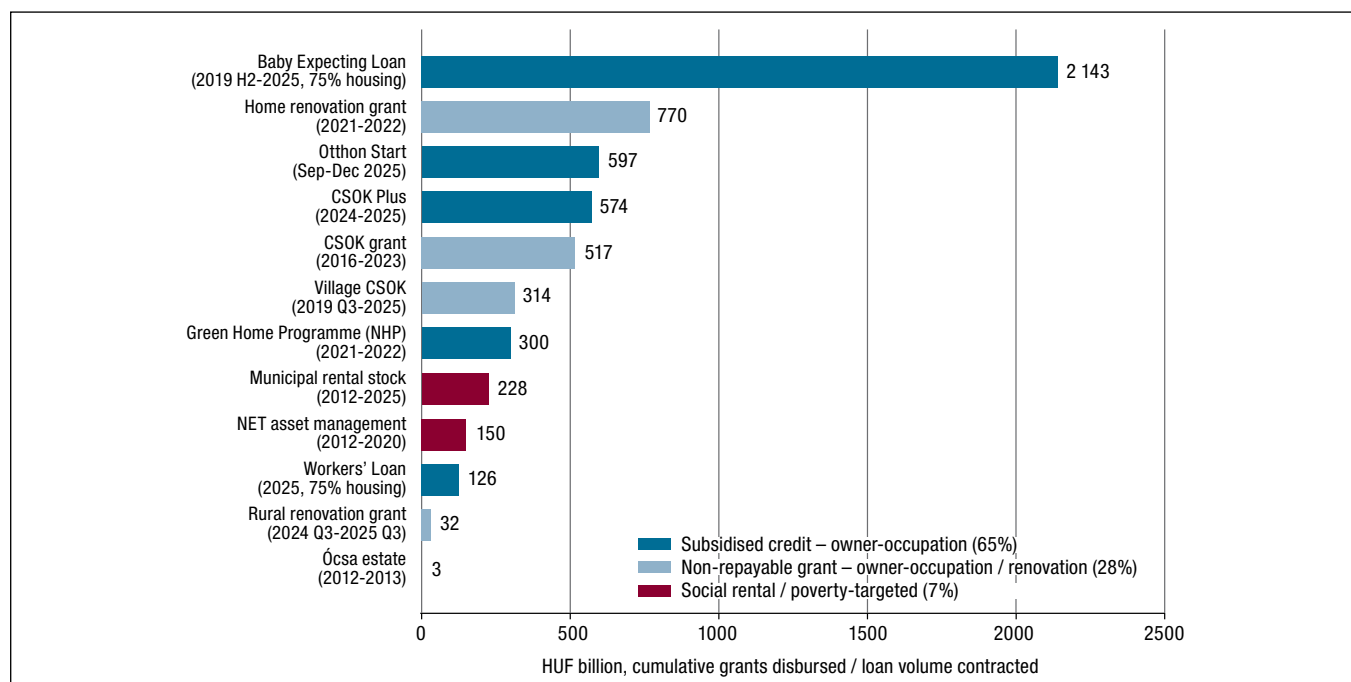
The programme represented an exceptional attempt to address the supply constraints that had reduced the effectiveness of earlier demand-side subsidies. Nevertheless, it did not constitute an affordable-housing programme in a social-policy sense. Although rental housing and student accommodation were formally eligible, the programme predominantly supported market-oriented development and the production of dwellings for sale, thereby reinforcing private homeownership rather than contributing to a lasting affordable rental sector. Nor did it include meaningful targeting by household income, housing need, age or first-time-buyer status. Private investors were required to contribute at least 30 per cent of the equity, while the state expected a market-level annual return of around 10 per cent. No binding affordability, allocation or long-term rental requirements were attached to most of the resulting housing. Its effect on affordability was therefore indirect and depended almost entirely on whether the increase in market supply would moderate prices.

The programme also reproduced the regime's characteristic intertwining of public policy and politically connected private capital. Investigative reporting found that several participating fund managers were linked to

business circles associated with prominent figures of the NER, including István Tiborcz and Lőrinc Mészáros. Limited disclosure concerning individual allocations, underlying fund ownership and project selection raised concerns about transparency and the distribution of public investment opportunities. These concerns do not establish that the entire HUF 300 billion was misappropriated; rather, they illustrate how even a potentially justified supply-side intervention was implemented through an institutional structure vulnerable to clientelism and conflicts of interest. The Housing Capital Programme is not included in Figure 2: it committed investment capital to fund managers rather than disbursing subsidy to households, and of the HUF 300 billion announced only HUF 160 billion had been backed by state commitments when the programme collapsed. The coincidence of magnitude with the Green Home Programme, a central-bank refinanced mortgage facility of the same headline size, is accidental.

The aggregate composition of these instruments is as revealing as their individual design (Figure 2). Between 2012 and early 2026 the programmes listed above channelled roughly HUF 6,300 billion of grants and subsidised credit into housing. Two features stand out.

FIGURE 2 CUMULATIVE RESOURCES CHANNELLED THROUGH HUNGARIAN HOUSING PROGRAMMES, 2012-2026 (HUF BILLION)



Note: grants at amounts disbursed, credit at contracted loan volume, municipal rental at own expenditure; these are not fiscal-cost equivalents. The Baby Expecting Loan and the Workers' Loan are general-purpose loans, entered at an assumed 75 per cent housing-related share. For the former this follows an MNB borrower survey in which three quarters of borrowers used the loan at least partly for house purchase or renovation; for the latter it is our own assumption, supported by the lender's report that housing purposes – renovation and topping up the deposit – are the most frequent use, and by the rule allowing 75 per cent of the loan to count as own funds alongside an Otthon Start mortgage. Both are upper bounds, since the survey shares refer to borrowers rather than to amounts. Municipal new construction is estimated as dwellings built by local governments $\times$ 60 m² $\times$ the KSH unit construction cost for local-government builders; unlike every other row, municipal spending is financed by local governments themselves. Source: authors' elaboration; programme-by-programme sources are given in Appendix 1.

First, the balance shifted decisively from non-repayable grants towards subsidised credit: the principal instruments introduced after 2019 – the Baby Expecting Loan, CSOK Plus, the Workers' Loan and Otthon Start – were loans, delivering comparable purchasing power at a fraction of the immediate budgetary cost while transferring repayment risk to households and origination revenue to the banking sector. Second, the distribution across tenures is extreme. Instruments supporting owner occupation and the renovation of the owner-occupied stock account for some 93 per cent of the total, whereas social rental and explicitly poverty-targeted provision – the NET scheme, municipal rental investment, and the Ócsa estate combined – account for 7 per cent, and for 4 per cent once the largely reprivatized NET stock is excluded, barely 3 per cent, and for less than 1 per cent once the largely reprivatized NET stock is excluded. These magnitudes moreover exclude the utility price cap, whose annual cost in 2023-24 exceeded the entire disbursement of CSOK grants between 2016 and 2023 (HUF 517 billion). The scale of the effort was therefore never in question; what was never attempted was a comparable effort outside owner occupation.

3. Characteristics of the Orbán housing policy

3.1 Achievements of the housing policy

A credible assessment requires acknowledging what worked. Financial stability was

restored on a durable basis: foreign-currency mortgages were eliminated, and the post-2015 credit expansion took place under a strict prudential regime. New household lending, which peaked at 13.8 per cent of disposable income in 2008 and collapsed to 2.3 per cent by 2013, recovered to 9.8 per cent by 2025 Q4 – approaching pre-crisis volumes but in a far healthier structure (MNB, 2026a, Chart 21). Construction also recovered, if only partially: annual completions rose from fewer than 8,000 dwellings in 2013 to more than 28,000 in 2020 – though this barely matched the 2001 level and fell well short of what a subsidy effort of this scale was expected to deliver, and completions had fallen back to some 12,000 by 2025. The model cannot be dismissed as ineffective; many of its short-term objectives were achieved. The problem lay elsewhere: an architecture that succeeded during recovery proved progressively incapable of addressing a fundamentally changed housing market. Table 1 summarises the principal instruments of the period.

3.2 Limits of the housing model

The system has also had several limitations which have counteracted the objectives it was trying to achieve, summarised in Figure 3. The unpredictability of the housing policies has created uncertainty for households, investors and developers. Demand-side subsidies expanded purchasing power in a market whose supply could not respond. This results in price inflation which has fed a self-reinforcing investment spiral while raising entry thresholds that

excluded precisely the low-income and younger households the subsidies were nominally meant to serve – generating political pressure for ever larger subsidies. At the end of this section, we describe the Otthon Start program as an example to describe these limits of the system.

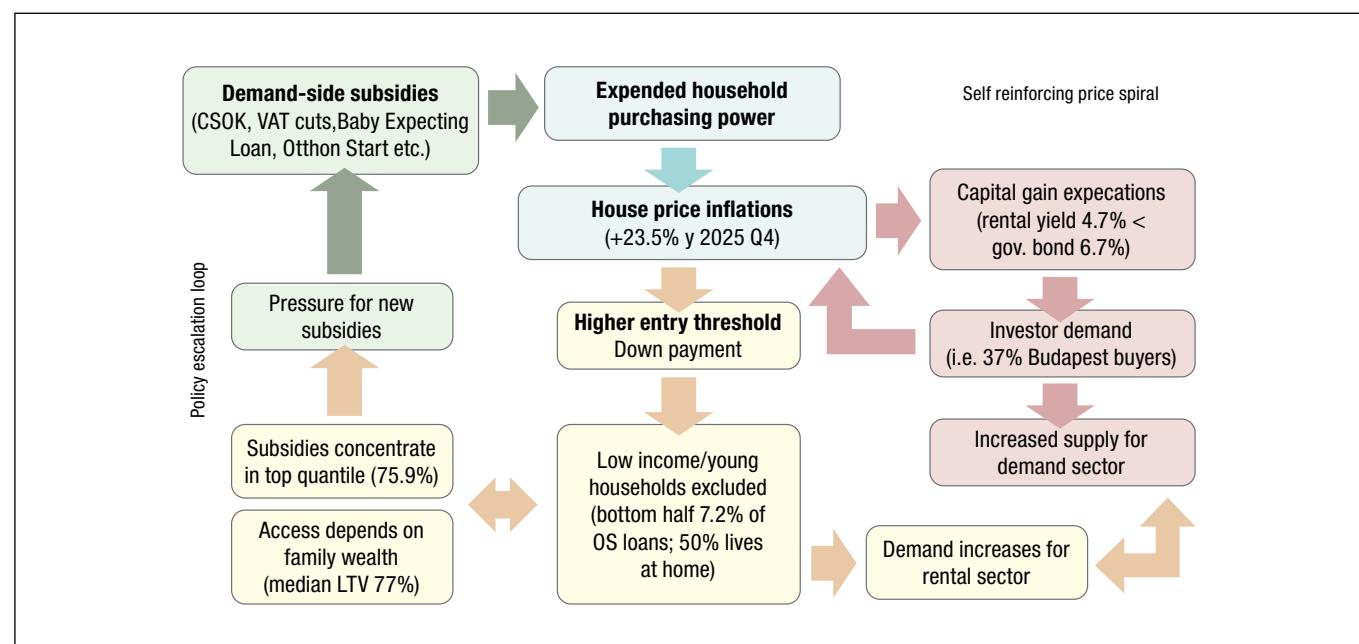
3.2.1 Unpredictability as a mode of operation

The system's hallmark was constant recalibration. CSOK conditions were modified nine times between 2015 and 2019 alone; the 2009 consumer credit act was amended more than twenty times; the macroprudential debt-brake rules were changed eight times between 2014 and 2024 (Csizmadý et al., 2019; Hegedüs et al., 2025). Repeated ad hoc modification gave the government flexibility but generated chronic uncertainty for households, developers and financial institutions, leading households to postpone decisions. It also negatively affected investment rates and market stability. Unpredictability therefore left a deep mark on the housing system and greatly influenced the overall housing model (Hegedüs et al., 2025).

3.2.2 Supply inelasticity and the capitalisation of subsidies

Demand-side subsidies operated throughout the period without any comparable supply-side reform. Annual completions have averaged around 0.3 per cent of the existing stock since 2010, peaking at roughly 0.6 per cent in 2020 before falling back; in 2024 the renewal rate of 0.29 per cent was the lowest

FIGURE 3 THE CAPITALISATION-EXCLUSION MECHANISM OF DEMAND-SIDE HOUSING SUBSIDIES



Source: Authors' elaboration; data points from MNB (2025; 2026).

among the twenty-four European countries surveyed by the central bank (EMF, 2022; MNB, 2025, Chart 28), and only 14 dwellings were completed per 10,000 inhabitants, against 57 in Ireland, 55 in Poland and 51 in Austria (Eurostat, 2025; EMF, 2022). The consequence is textbook housing economics: where supply is inelastic, demand subsidies become capitalised into land values and house prices rather than improving affordability. By 2021 the Hungarian nominal house price index stood at 169 (2015=100), the highest in the regional comparison, while housing loans amounted to only 9.5 per cent of GDP – the regional minimum: the boom was driven by subsidies and cash, not leverage (EMF, 2022) – a pattern that held until Otthon Start shifted the balance back towards subsidised credit from late 2025.

The VAT also quantifies the leakage. The reduced rate redirected demand towards newly built dwellings and improved developer profitability, but the central bank estimated that roughly 60 per cent of the tax reduction was absorbed by higher prices rather than passed on to buyers (MNB, 2019). The mechanism itself had been identified long before (Hegedüs, 2006; see Section 3.2.3). Ócsa and the NOK were the regime's only deliberate, domestically financed attempts to depart from the demand-driven mainstream – the NET became a rental programme only as a by-product of crisis management, and FETE was externally funded – and both failed, leaving capitalisation without a counterweight.

A further, admittedly conjectural, explanation is market structure. New housing supply is dominated by a small number of large developers, several with close ties to the NER clientele, whose position was reinforced by discretionary state instruments such as priority-investment designations and state land sales. For an oligopolistic developer holding a land bank, building fewer, more expensive units beats building more, cheaper ones – a mechanism documented for concentrated housing markets elsewhere (Cosman and Quintero, 2019). Direct empirical evidence is lacking for Hungary, but the pattern is consistent with a supply that remained low and price-inelastic even when developer margins improved.

The model implicitly relied on filtering: subsidising new housing would release older stock for lower-income groups. Filtering proved too slow and too weak. The price–rent divergence provides direct evidence: between 2015 and 2024 real house prices more than doubled, while rents rose by only around 19 per cent – a gap that signals not downward filtering but the mass entry of upper-middle-class investment demand (Gagyí, Jelinek, Pósfai and Vigvári, 2019). The failure is the more striking because the constraint is not the size of the stock: the 2022 census recorded more than 570,000 statistically vacant dwellings alongside roughly three million people affected by some form of housing poverty, in a country whose dwelling stock had grown by 19 per cent since 1990 while its population declined by 7.5 per cent (KSH, 2023; Habitat for Humanity

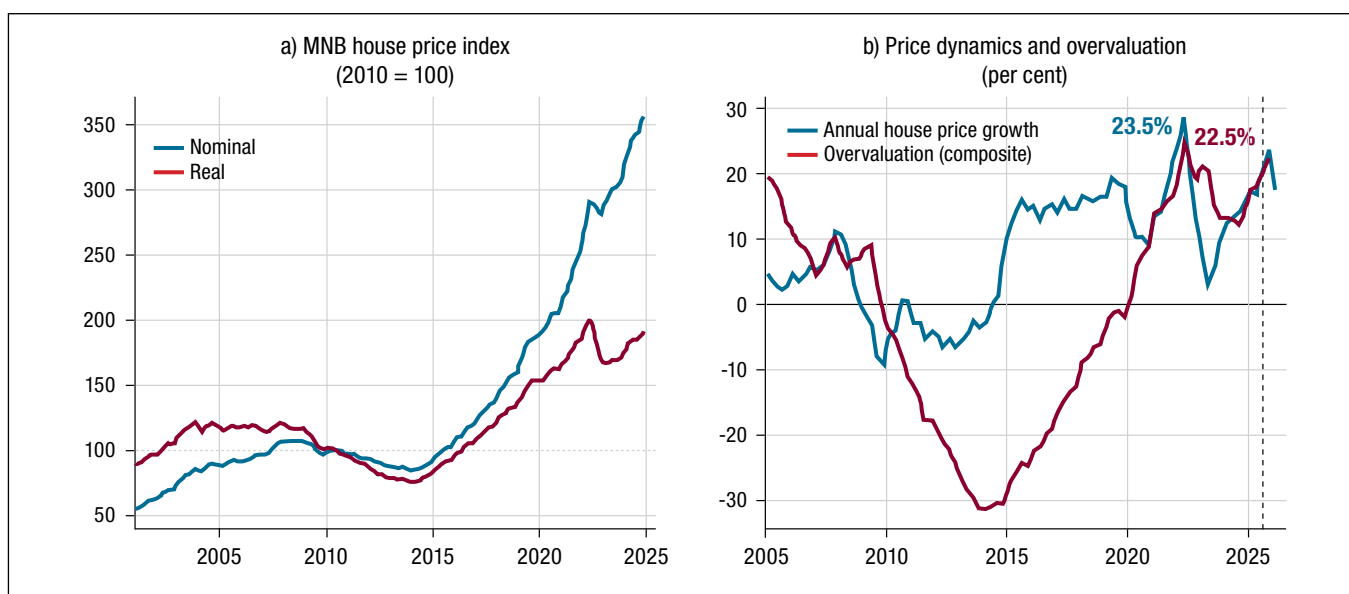
Hungary, 2024). The binding constraints are quality, location, affordability and distribution – dimensions that demand-side transfers leave untouched.

3.2.3 Price escalation and the narrowing of beneficiaries

Prices have duly escalated. Real house prices, having bottomed out in late 2013, rose two-and-a-half-fold by the end of 2024 (MNB, 2025, Chart A2), and the dynamics then accelerated: annual growth reached 21.0 per cent in the third and 23.5 per cent in the fourth quarter of 2025, while the central bank's composite overvaluation indicator rose from 12.2 per cent in late 2024 to 22.5 per cent by the end of 2025 – the fastest increase recorded in the two quarters following the launch of Otthon Start (MNB, 2026a, Chart 8; see Figure 4).

Sustained price growth transformed the structure of demand itself. By the first quarter of 2025, investors accounted for 37 per cent of buyers and 35 per cent of sellers in Budapest, and in December 2024 a temporary net investor excess demand emerged (MNB, 2025). Critically, investment demand no longer rested on rental income: Budapest gross rental yields had fallen to 4.7 per cent by March 2025, against a weighted 6.7 per cent on retail government securities. Such a spread should redirect investment towards financial assets; instead, demand remained strong because investors expected capital gains to compensate – a self-reinforcing spiral in which buying

FIGURE 4 HOUSE PRICES IN HUNGARY: (A) NOMINAL AND REAL MNB HOUSE PRICE INDEX, 2001-2024 (2010 = 100); (B) ANNUAL PRICE DYNAMICS AND THE ESTIMATED OVERVALUATION OF HOUSE PRICES, 2005-2026



Source: Authors' elaboration based on MNB (2025), Chart A2 and MNB (2026), Chart 8.

raises prices and rising prices attract buyers (MNB, 2025).

The savings channel amplified the dynamic: in the first quarter of 2025, HUF 703 billion flowed out of the retail government bond market on interest resets, while the contracted volume of new-build purchases jumped to HUF 361 billion, nearly double the 2024 average – and this occurred before the launch of Otthon Start, which thus arrived on top of an already investment-driven dynamic (MNB, 2025).

The social distribution of subsidised credit narrowed dramatically. Between September 2025 and February 2026, the bottom five income deciles received 7.2 per cent of new Otthon Start loans – the bottom decile 0.2 per cent – while the top quintile received 75.9 per cent. For unsubsidised market loans the corresponding figures were 19.1 and 65.8 per cent; for CSOK Plus, 22.5 and 57.5 (MNB, 2026a, Box 3; Table 2). The first-home programme is thus more concentrated at the top of the income distribution than market lending itself: a subsidy nominally aimed at first-time buyers operates de facto as a top-quintile programme, with a

median contract of HUF 36 million (against 13.2 million for market loans) and a median loan-to-value ratio of 77 per cent (MNB, 2026a).

This is not a matter of preference but of constraint: in the absence of an affordable rental sector, lower-income households have no institutional alternative and are simply priced out of the only supported tenure. Against the 2011 baseline, the bottom decile's share collapsed by more than an order of magnitude (from 8.1 to 0.2 per cent), while the top decile's share quadrupled (from 14.1 to 59.2 per cent) (Csizmady et al., 2019; MNB, 2026a).

The theoretical anchor predates the regime: housing subsidies “leak away” before reaching households, through four channels – land prices, the credit costs set by a price-making dominant bank, the construction lobby, and the informal economy, which in the mid-2000s was estimated to leave 44 per cent of construction revenues unbilled (Hegedüs, 2006). After 2015 the mechanism persisted, but its political economy changed: with production concentrated among a small number of large, politically connected firms, the rents extracted from demand

subsidies ceased to be diffuse industry gains and became clientele-specific transfers. The result is observable in the data: construction costs and house prices rose in tandem – annual construction cost growth peaked at 22.8 per cent in late 2022, and labour costs were still rising by around 13 per cent at the end of 2024 (MNB, 2025, Chart 25) – while output stagnated at the region's lowest renewal rate (MNB, 2025, Chart 28).

3.2.4 An example signifying the limits of the system: Otthon Start

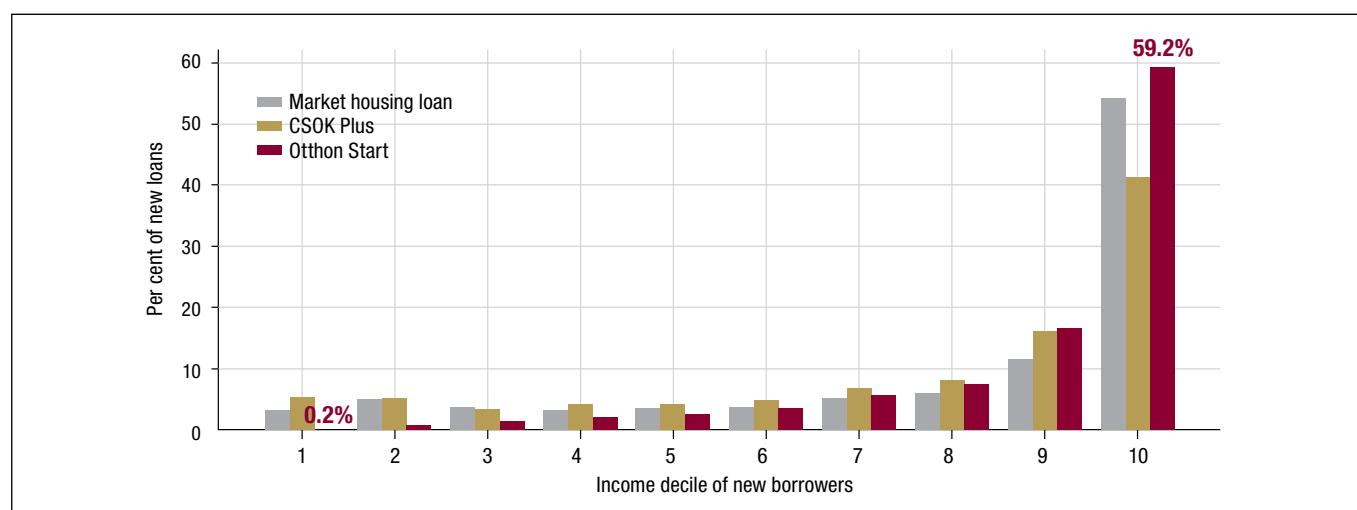
The final programme of the Orbán era reproduced the 2002 pattern with remarkable precision. *Otthon Start* illustrates how the structural weaknesses of the post-2010 housing model could no longer be overcome through additional demand-side subsidies. Although 27,371 contracts were concluded during the programme's first six months, much of the new lending substituted for existing mortgage products rather than generating additional housing transactions. At the same time, the share of credit-financed purchases increased sharply, and average loan sizes rose substantially, injecting further purchasing power into

TABLE 2 DISTRIBUTION OF NEW BORROWERS BY INCOME POSITION AND LOAN TYPE, SEPTEMBER 2025 – FEBRUARY 2026

Loan type	Bottom 5 deciles (%)	Top quintile (%)	Top decile (%)	Median contract (HUF m) / median LTV (%)
Otthon Start	7.2	75.9	59.2	36.0 / 77.0
Market housing loan	19.1	65.8	54.2	13.2 / 54.1
CSOK Plus	22.5	57.5	41.4	15.0 / 67.7

Sources: Authors' calculation based on MNB (2026), *Financial Stability Report*, June 2026, Box 3 (Chart 3 and Table 1). Contracts concluded September 2025 – February 2026: Otthon Start 27,371; market loans 13,771; CSOK Plus 6,230. Bottom decile share of Otthon Start loans: 0.2%.

FIGURE 5 INCOME DISTRIBUTION OF NEW HOUSING-LOAN BORROWERS BY LOAN TYPE, SEPTEMBER 2025 – FEBRUARY 2026



Source: Authors' elaboration based on MNB (2026), Box 3, Chart 3.

an already supply-constrained market (MNB, 2026a). House prices continued to accelerate following the programme's introduction, while the MNB's estimated housing market overvaluation increased markedly during the same period (MNB, 2026a).

Perhaps most revealing is the distribution of beneficiaries shown in Table 2 and Figure 5. Although 59.5 per cent of borrowers were aged 18-35 (compared to 29.6 per cent for market loans), three-quarters belonged to the top income quintile and borrowed at a median loan-to-value ratio of 77 per cent (MNB, 2026a, Box 3). Young first-time buyers without either high incomes or accumulated family wealth simply do not appear in the data. Survey evidence points in the same direction: around half of Hungarian homeowners aged 18-35 reported receiving parental or family support – through cash transfers, housing gifts or inheritance – when purchasing their current dwelling. (Varga, 2026)

Herein lies the political economy of the model's failure. A programme designed to support first-time buyers proved even more concentrated among high-income households than unsubsidised market mortgages, while a regime built to strengthen a property-owning middle class ended up raising the barriers facing the younger cohorts of that same middle class. Access to homeownership increasingly depends on intergenerational wealth transfers, leaving young adults without parental financial support excluded from owner occupation and pushed into the rental sector. This shift is visible in tenure patterns: the share of renters among 18-35-year-olds rose from 25 per cent in 2015 to 38 per cent in 2021, while the share of owner-occupiers declined from 48 to 44 per cent (Varga, 2026).

Otthon Start therefore encapsulates the broader trajectory of the Orbán housing model. As long as supply remained inelastic, successive increases in purchasing power were capitalised into higher prices rather than broader affordability. Rather than correcting the shortcomings of the existing system, the programme reinforced them: access to homeownership became increasingly dependent on inherited family resources, demonstrating that the model had reached the limits of its own internal logic.

4. Housing policy after Orbán: towards a tenure-neutral housing system

If the principal weakness of the Hungarian model lay not in individual programmes

but in its institutional architecture, reform should likewise focus on institutions rather than replacing one subsidy with another. The central lesson is that housing policy should become tenure-neutral: instead of treating owner occupation as the dominant or preferred outcome, public policy should maximise access to affordable housing through complementary tenure forms.

Owner occupation will remain important, and targeted support for first-time buyers should continue – but selectively, confined to households with sustainable borrowing capacity and integrated with supply-side measures. Equally important is an affordable rental sector: moving beyond the dichotomy of municipal social housing and the private market towards cost-rental housing, non-profit providers and below-market-rent partnerships, whose domestic precedents (the NET stock, the charity-run housing fund, the FETE social rental agency model) already exist, however constrained. The vacant private stock offers an immediately mobilisable resource: the social rental agency model elaborated as early as 2013 – an intermediary leasing private dwellings and subletting them below market rent, with guarantees for owner and tenant alike – could draw an estimated 100,000 vacant urban dwellings into the affordable segment, and functioning municipal precedents already operate in Budapest and Szombathely (Habitat for Humanity Hungary and Városkutatás, 2013). In Budapest alone, roughly 290,000 adults would opt for an affordable rental sector if one existed, while only an estimated 70-80,000 of the roughly 100,000 remaining municipal dwellings still serve genuinely social purposes (Jelinek, Czirfusz and Pósfai, 2025). A third pillar should consist of intermediate tenures – shared ownership and limited-equity models – for which a domestic institutional blueprint exists, aligned with the EU's affordable housing agenda (Hegedüs, Horváth and Somogyi, 2016). Multiple models of shared ownership exist internationally, with mixed success depending on design but several variants – such as in the Netherlands or in Malta – could provide promising examples for Hungary.

Two design principles follow from the period's failures. First, public resources should build revolving, retained community assets rather than being individually privatised – the NET reprivatization is the cautionary precedent. Second, demand subsidies alone cannot overcome structural supply constraints: faster planning procedures, greater competition in residential development, improved land assembly and stronger municipal capacity are likely

to yield larger long-term affordability gains than any further expansion of demand-side transfers. The question is no longer how many households can become owners immediately, but how different institutional arrangements can provide affordable, secure and financially sustainable housing across the life course.

5. Conclusion

Hungary offers one of the most informative examples of European housing policy experiments of the past two decades. Between 2010 and 2026, successive governments developed an ambitious regime centred on owner occupation, mortgage expansion and demand-side subsidies, serving simultaneously as crisis management, economic stimulus, demographic policy and an instrument of political coalition-building. Individual programmes changed repeatedly; the underlying strategic logic did not. During its first decade the model restored financial stability after the foreign-currency crisis, rebuilt mortgage lending under prudent regulation and stimulated residential investment. But conditions changed fundamentally: supply constraints, rising construction costs and investor demand progressively reversed its effects – public expenditure translated into higher property values rather than broader access, culminating in a first-home programme in which three-quarters of new borrowers belonged to the top income quintile.

The symmetry of 2002 and 2026 frames the period. On both occasions an open-ended, election-motivated escalation of demand subsidies preceded a change of government; on neither occasion did housing policy decide the election, and in the second case the regime could no longer even preserve the social coalition that housing policy had been designed to build. This is the deeper lesson: public policy is a limited instrument of coalition-building, and housing policy – precisely because its benefits capitalise into asset prices – is a particularly treacherous one. Twenty years ago, it was already argued that without a social housing sector there can be no European housing policy in Hungary; two decades of policy moved in the opposite direction, and the diagnosis has remained valid. The principal lesson is not that demand-side subsidies are inherently ineffective; their performance depends on the institutional environment in which they operate. Without adequate supply, diversified tenure structures and affordable rental alternatives, expanding purchasing power cannot ensure lasting improvements in affordability. The post-2026 period provides an opportunity to redesign housing policy around targeted

APPENDIX 1 HUNGARIAN HOUSING SUPPORT INSTRUMENTS, 2010-2026

Instrument	Type	Period	HUF bn	Source
Non-repayable grants				
Home renovation grant	Grant	2021-2022	770	MNB (2023)
CSOK grant	Grant	2015 Q3-2023	517	KINCS (2024), Table 3
Village CSOK	Grant	2019 Q3-2025	301	KINCS (2024), MNB (2026b) Chart 11
Rural home renovation	Grant	2024 Q3-2025 Q3	32	[source]
Subsidised credit				
Baby Expecting Loan	General-purpose loan	2019 Q3-2025	2,143*	MNB (2026a), Chart 21; Fellner & Marosi (2020)
CSOK interest-subsidised loan	Mortgage	2016-2023	769	KINCS (2024), Table 3
Otthon Start	Mortgage, 3% fixed	2025 Q3-	597	MNB (2026a), Chart 21 and Box 3
CSOK Plus	Mortgage	2024-2025	574	MNB (2026b), Chart 11
Green Home Programme (NHP)	Mortgage, CB-refinanced	2021-2022	300	Portfolio (2022), MNB data
Woerker's Loan	General-purpose loan	2025-	126*	MNB (2026a), Chart 21; K&H (2026)
Home renovation loan	Mortgage	2021-2022	85	MNB (2023)
Social rental				
Municipal rental stock	New build and renovation	2010-2025	253	KSH, Tables 18.1.1.4, 18.1.1.9, 18.1.1.12
Net asset management	Acquisition and rental	2012-2020	150	Csizmady et al. (2019)
Ócsa estate	Social housing new build	2012-2013	3	Csizmady et al. (2019)

Note: grants at amounts disbursed, credit at contracted loan volume, municipal rental at own expenditure; these are not fiscal-cost equivalents, and the total is not comparable with budgetary estimates of housing subsidy expenditure. * General-purpose loans entered at an assumed 75 per cent housing-related share; full contracted volumes are HUF 2,857 bn and HUF 168 bn respectively. Municipal new construction estimated as dwellings built by local governments x 60 m² x the KSH unit construction cost for local-government builders; at 2024 prices the municipal total is HUF 471 bn. The Housing Capital Programme (HUF 300 bn announced, HUF 160 bn committed) is excluded: it pledged investment capital rather than disbursing subsidy.

ownership support, affordable rental housing and intermediate tenures – and to recognise that good housing policy is not only about access to housing, but also about ensuring that people do not lose their homes.

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The missing principle in housing finance: diversifiable idiosyncratic risk in owner-occupied residential real estate and the architecture of a special purpose vehicle solution

↳ By Marc Biron and Steven L. Siegel

1. Introduction

Harry Markowitz demonstrated in 1952 that a portfolio's expected return is a linear function of its constituent assets' returns, while its variance is determined not merely by individual asset volatilities but by their pairwise covariances (Markowitz, 1952). The practical implication – that diversification reduces risk without sacrificing expected return – is among the most rigorously established results in the history of financial economics. It earned Markowitz the Nobel Memorial Prize in Economic Sciences in 1990 (Markowitz, 1990) and has since been embedded in virtually every corner of modern finance: institutional investment policy, bank loan portfolio construction, insurance underwriting, pension fund allocation, and consumer retirement planning.

There is, however, a striking and consequential exception. For the majority of American households, the single largest financial asset they will ever hold is an owner-occupied home – and that asset is, almost without exception, entirely undiversified. The typical homeowner owns one property in one neighbourhood in one metropolitan area, bearing the full idiosyncratic price risk of that specific asset with no mechanism for offsetting local losses through gains elsewhere in a broader pool. The result is a portfolio construction that Markowitz's own framework identifies as inefficient: maximum concentration, zero diversification benefit, and substantial idiosyncratic risk that is both uncompensated and, as this paper argues, potentially avoidable.

This is not a marginal observation. The Federal Reserve's Survey of Consumer Finances consistently documents that housing equity

constitutes between 60 and 70 percent of net worth for the median American household (Federal Reserve Board, 2022) – a proportion that rises substantially for lower-income and first-time homebuyers, precisely the groups for whom the financial consequences of undiversified homeownership are most severe. By any standard of professional portfolio management, a single undiversified asset representing 65 percent of net worth is not an allocation. It is a concentrated position.

This paper extends Biron and Seiler (2022), which first proposed a Special Purpose Vehicle (SPV) architecture for embedding diversification inside residential mortgage origination, in three respects. First, we situate the proposal within a broader literature on idiosyncratic housing risk, prior housing-derivative attempts, and shared appreciation mortgage precedent than the original practitioner-oriented treatment allowed. Second, we describe the data construction and modelling approach underlying the credit-loss comparison in more explicit terms, so that the assumptions are visible and contestable rather than presented as settled fact. Third – and most consequential for how this paper should be read – we depart from prior treatments of this material by stating plainly what has not yet been established: the credit-loss figures reported here are self-modelled and have not been subjected to independent actuarial replication; the regulatory classification of the underlying instrument has not been the subject of a formal legal opinion; and no revealed-preference consumer demand data yet exists. Section VIII addresses each of these limitations directly. Readers whose interest is in the validated state of this research program, rather than its theoretical or modelled state, should begin there.

2. Literature review and theoretical foundation

2.1 Modern portfolio theory and the housing exception

The application of diversification principles to housing is conceptually straightforward. Just as an investor holding the equity of a single firm bears both the systematic risk of the broad market and the idiosyncratic risk of that specific company, a homeowner bears both the systematic risk of national housing markets and the idiosyncratic risk of a single property in a single location. In equity markets, index funds and exchange-traded funds eliminate idiosyncratic risk at near-zero marginal cost to the investor. No equivalent instrument has ever been made available to homeowners at scale.

The consumption dimension of homeownership is frequently invoked in the housing-finance literature to explain why this diversification gap persists. Families buy homes to live in, not primarily to optimize portfolio construction; the utility of occupancy is not separable from the asset in the way that a shareholding is separable from the business that issued it. This is a genuine feature of housing as an asset class, but it is not, on its own, a sufficient explanation for the absence of any diversification mechanism whatsoever. The consumption value of owner-occupancy is analytically consistent with a financial structure in which the price-appreciation risk of the owned asset is shared with a diversified pool while occupancy rights are fully retained – that is, separating the occupancy right from the price risk, rather than treating them as inseparable. Whether such separation is achievable in practice, and on what terms, is

the design question this paper's later sections address.

2.2 Idiosyncratic risk in individual home price returns

The distinction between systematic and idiosyncratic risk is not merely conceptual in the housing context – it is quantitatively material and has been documented across multiple independent studies. Shiller and Weiss (1999) documented substantial heterogeneity in city-level and ZIP-code-level home price appreciation rates relative to national averages, and proposed home equity insurance as a partial remedy. According to Zillow Research, home prices have appreciated nationally at an average annual rate of between 3 and 5 percent over the long run, depending on the index and time period used (Zillow Research, 2014; Zillow Research, 2024) – but this national average masks substantial geographic dispersion. Analysis of Zillow Home Price Index data comparing seven-year rolling volatility across ZIP codes against the national index, as reported in Biron and Seiler (2022), finds that local home price volatility is approximately twice the volatility of the national index over the same horizon, implying that a homeowner accessing a nationally diversified pool would reduce the effective volatility of the housing position by approximately 47 percent at the ZIP-code level of aggregation.

Because ZIP-code averaging already partially smooths property-specific factors – localized condition, micro-neighbourhood dynamics, individual improvement history – the diversification benefit at the individual property level would plausibly be larger still. This inference is directionally supported by subsequent, methodologically distinct research: Giacoletti (2021), studying individual house transactions in Los Angeles, San Diego, and San Francisco using a repeat-sales framework, finds that the idiosyncratic component of individual-home capital gains is large – accounting for the majority of the variance of individual house returns – and that homeowners may rationally be willing to make significant payments to insure against idiosyncratic housing risk.¹

2.3 Prior attempts at housing risk transfer

Robert Shiller identified housing as the largest unhedged risk in the typical household's

portfolio in his 1993 book *Macro Markets* (Shiller, 1993), and later in *The Subprime Solution*, (Shiller, 2008) argued that the absence of hedging instruments for home price risk contributed to the severity of the 2007–2012 crisis. Case-Shiller futures and options, launched on the Chicago Mercantile Exchange in 2006, were the most architecturally sophisticated prior attempt to apply capital-market discipline to residential real estate price risk. They achieved negligible trading volume and effectively ceased active trading within a few years.

The failure was multi-causal rather than conceptual. First, the parties most motivated to hedge idiosyncratic home-price risk – individual homeowners with concentrated positions – lacked both the financial sophistication and the capital markets access to participate in futures markets. Second, institutional investors, the natural liquidity providers for derivative hedging instruments, had no standardized offsetting exposure to residential real estate at the individual property level, limiting their incentive to make markets. Third, the basis risk between city-level Case-Shiller index returns and any individual property's return was sufficiently large that the effective hedge ratio was highly uncertain for any individual homeowner attempting to use the instrument – a structural deterrent to both retail participation and institutional market-making. Fourth, liquidity was concentrated in near-dated contracts; long-dated contracts, the horizon relevant to homeowners with multi-year holding periods, were illiquid and expensive to maintain. The instrument was architecturally sound by the standards of financial engineering but commercially disconnected from the population whose risk it was designed to address, and the resulting market microstructure was insufficient to attract institutional liquidity as a substitute for direct retail participation.

The relevance of this history to the present paper is architectural rather than merely historical: any proposed solution to the housing diversification gap must be evaluated not only on its financial-engineering merits, but on whether its distribution mechanism reaches the population whose risk it addresses. Section V returns to this question directly.

2.4 Shared appreciation mortgages and legal precedent

Shared Appreciation Mortgage (SAM) structures – instruments in which a lender or counterparty holds a contingent claim on a portion of a property's future appreciation in exchange for more favorable financing terms – are not a novel legal category. Such structures carry established statutory precedent in multiple U.S. jurisdictions, including California (Civil Code Chapter 3.5, Sections 1917–1917.006) and New York (Banking Law Part 83, Section 83.1), both of which explicitly authorize contingent-repayment instruments of this general type.²

The academic and legal literature on SAMs is comparatively thin relative to their theoretical significance, and this paper does not attempt a comprehensive doctrinal review of that literature; it notes the precedent's existence and its relevance as an analytical anchor for the classification argument developed in Section VI, while explicitly declining to characterize that argument as legally settled.

2.5 Diversification efficiency at modest pool sizes

Kong, Gunukula, Dai, and Lu (2019) demonstrate, using simulation methods, that a randomly selected pool of as few as 100 mortgage loans provides a reasonable approximation of the national Home Value Index – establishing that meaningful diversification benefit does not require national scale to become operative from inception, though larger and more geographically representative pools will more precisely track the national index and more fully eliminate idiosyncratic concentration risk. This result is analytically important to the present paper because it implies that the adverse-selection and pool-seeding problems discussed in Section VII do not require years of accumulated scale before the diversification mechanism begins to function, even though full efficiency is only achieved asymptotically as participation grows.

3. Data and methodology

The empirical foundation for the credit-loss comparison in this paper is drawn from Biron and Seiler (2022), which models mortgage credit performance using the Freddie Mac

¹ Giacoletti's estimates are derived from three California metropolitan markets using a different empirical methodology than the ZIP-code volatility comparison in Biron and Seiler (2022); the two results are complementary rather than directly additive, and a formal synthesis of property-level versus ZIP-code-level idiosyncratic risk shares remains an open item for future work.

² The statutory citations above have been independently verified against primary state-code sources. Their applicability to the mutualized, pool-based structure proposed in this paper – as opposed to a traditional bilateral SAM between a single borrower and a single lender – is a

distinct legal question addressed in Section VI and is not resolved by the existence of SAM statutory precedent alone. A pool-based structure introduces a bilateral payment flow (the pool may owe the homeowner, not only the reverse) that departs from the traditional unilateral SAM structure contemplated by existing statute, and formal determination by qualified structured finance counsel – not yet obtained – is required before any classification claim in this paper should be treated as legally established.

Parameter	Value / Source
Underlying dataset	Freddie Mac Single-Family Loan Performance Dataset
Sample period	1999-2020 (loan-level originations and performance)
Sample size	More than 1,000,000 mortgage originations
Stress-period coverage	Full Global Financial Crisis window (2007-2012) included in sample
Conventional benchmark	~29 bps average annual charge-off rate, prime conventional mortgages (Fannie Mae annual reports, 1995–2020)
Comparison structures modelled	0%, 3%, and 20% down payment, under both base-case and GFC-stress scenarios
Primary source study	Biron and Seiler (2022), Real Estate Finance, 38(3), 163–168
Independent third-party validation status	Not yet completed – see Section VIII, Limitations

Single-Family Loan Performance Dataset, covering more than one million loan originations over the period 1999 through 2020 – a window that includes the full stress period of the Global Financial Crisis. Table 2 summarizes the sample construction parameters as documented in the source study.

The conventional-mortgage benchmark of approximately 29 basis points in average annual charge-offs is drawn from Fannie Mae annual reports over 1995–2020 and is used as the baseline against which the price-diversified structure is compared. The price-diversified structure is modelled under six combinations of down payment (0%, 3%, 20%) and macroeconomic scenario (base case; Global Financial Crisis stress replay), with foreclosure rate and loss severity as the two underlying components of the reported annual loss rate in basis points. The full comparison is reported in Table 1.

As Table 1 indicates, the modelled through-the-cycle expected annual credit loss for a zero-down-payment, price-diversified mortgage is approximately 5 basis points in the base case and 25 basis points under a full GFC-stress replay, against a conventional benchmark of approximately 29 basis points. The direction and general magnitude of this result – that pooling idiosyncratic geographic

price risk should reduce credit losses relative to a structure that concentrates that risk in the individual borrower – follows directly from the mechanics described in Section VI and is not, on its face, an implausible result. Its precise magnitude, however, is a function of modelling choices (counterfactual construction, treatment of correlated regional shocks, the specific mapping from mark-to-market loan-to-value ratio to default probability, and severity assumptions) that have not yet been subjected to replication by a party independent of the original authors.

This paper adopts the figures in Table 1 as the best currently available modelled estimate, consistent with their treatment in Biron and Seiler (2022) and in subsequent practitioner materials associated with this research program, while explicitly flagging – see Section VIII – that they should be understood as a modelled proposition pending independent actuarial validation, not as an established empirical result in the sense that, for example, the Case-Shiller peak-to-trough decline reported in Section IV is an established empirical result. The distinction matters for how a reader, reviewer, or institutional counterparty should weight the claims made in this paper, and we return to it explicitly rather than allowing it to remain implicit, as is

common in practitioner treatments of modelled financial results.

4. Empirical consequences: the global financial crisis as case study

The empirical consequences of the diversification gap in housing finance were made visible with unusual clarity during the Global Financial Crisis of 2007 through 2012. The S&P/Case-Shiller U.S. National Home Price Index declined 27.4 percent from its peak of 184.62 in July 2006 to its trough of 134.01 in February 2012 (S&P Dow Jones Indices, 2023). This national figure is well established and independently verifiable through the Federal Reserve Bank of St. Louis FRED database (series CSUSHPINSA); it is treated in this paper as an established empirical fact rather than a modelled estimate. But the national average obscures a geographic dispersion of outcomes that is, from a portfolio theory perspective, the central empirical observation of the crisis period.

The distribution of price declines across metropolitan areas was not uniform. Markets in California's Inland Empire, metropolitan Phoenix, Las Vegas, and parts of South Florida experienced peak-to-trough declines exceeding 50 percent. Markets in Texas, the

Mortgage Structure	Down Payment	Foreclosure Rate	Loss Severity	Annual Loss Rate (bps)
Price-Diversified – Base Case	0%	0.23%	21.75%	5
Price-Diversified – Base Case	3%	0.16%	18.79%	3
Price-Diversified – Base Case	20%	0.02%	8.52%	0
Price-Diversified – GFC Stress	0%	0.71%	34.72%	25
Price-Diversified – GFC Stress	3%	0.58%	33.02%	19
Price-Diversified – GFC Stress	20%	0.06%	14.91%	1
Conventional (Non-Diversified)	Avg	1.01%	—	29

Carolinas, and the upper Midwest experienced declines measured in single digits or, in several cases, modest nominal appreciation. Two homeowners experiencing the same national macroeconomic shock – rising unemployment, tightening credit, and a recession of historic severity – could meet materially different fates in their housing wealth depending on which of these two categories of market they happened to occupy, despite comparable underwriting standards and mortgage insurance at origination. The difference in outcomes was driven substantially by geographic concentration – a risk that a diversification mechanism could, in principle, have absorbed.

The credit loss consequences were material at the system level. Analysis of the Freddie Mac single-family loan performance database documents through-the-cycle average annual charge-off rates of approximately 29 basis points for conventionally structured prime mortgages over the 1999–2020 period. These losses were not primarily a function of borrower credit-quality failures at origination; they were, in substantial part, a structural consequence of idiosyncratic geographic price risk for which no diversification mechanism existed. This structural interpretation is further supported by evidence on the distributional consequences of the crisis: research by Bayer, Ferreira, and Ross (2016) documents that Black and Hispanic homeowners had significantly higher rates of delinquency and default during the downturn than white homeowners with equivalent credit scores and loan attributes, with these differences especially pronounced for loans originated near the peak of the housing boom.³

This distributional finding raises a question this paper does not attempt to resolve empirically but flags as directly relevant to the equity implications discussed in Section VII: if minority and lower-income borrowers were disproportionately exposed to the consequences of geographic price-risk concentration during the crisis period, a mechanism that diversifies that risk should, in principle, provide disproportionate benefit to the same population – a hypothesis that is testable in future work but is not tested here.

5. A Diversification architecture: The SPV-based solution

The structural solution proposed in Biron and Seiler (2022), and extended here, embeds the

diversification mechanism inside the mortgage origination process rather than offering it as a standalone derivative instrument accessible only to sophisticated market participants – directly addressing the distributional failure mode identified in Section 2.3.

At mortgage origination, the borrower executes both a standard first-lien mortgage and a subordinated second-lien home-price diversification contract. The second lien creates a bilateral relationship between the homeowner and the SPV pool: if the individual home appreciates at a rate exceeding the pool's weighted average return over the holding period, the homeowner pays the excess into the pool at settlement; if the home underperforms the pool, the pool transfers the difference to the homeowner. The net effect is that each homeowner's realized return on the housing position approximates the pool's weighted average return rather than the idiosyncratic return of the individual property. The homeowner retains full occupancy rights, continues to service the first-lien mortgage obligation, and participates in the pool's collective appreciation or depreciation.

The second-lien contract, as designed, is secured by a real property interest, non-tradable between parties, and settled at the time of home sale rather than marked to market against a cash-settled reference index – design choices intended to distinguish the instrument from a conventional derivative and to anchor the SAM-based classification argument discussed in Section 2.4. and Section 6. Whether these design choices are sufficient to achieve that classification outcome under Section 1a(47) of the Commodity Exchange Act as amended by the Dodd-Frank Act of 2010 is, as stated above, an open legal question pending formal opinion, not a conclusion this paper reaches.

The mark-to-market loan-to-value ratio of any individual borrower under this structure is intended to be adjusted periodically to reflect the pool's weighted average home price index performance rather than the local index of the specific property, on the theory that a borrower whose ZIP code underperforms the national index would receive a credit to the pool account that reduces effective mark-to-market LTV, thereby reducing the incidence of negative-equity-triggered strategic default that concentrated geographic exposure otherwise produces. This is the mechanism underlying

the modelled credit-loss reduction reported in Table 1, and its empirical validity is the central open question flagged in Section VIII.

6. Regulatory classification: analytical framework and open questions

A full doctrinal treatment of the regulatory classification question is beyond the scope of this paper and, in any case, is not a question an academic finance paper can resolve; regulatory classification is ultimately a legal determination requiring formal opinion from qualified structured finance counsel, engagement with the Commodity Futures Trading Commission, and, in all likelihood, engagement with state insurance regulators in multiple jurisdictions. This section limits itself to summarizing the analytical framework and the principal open questions, consistent with academic convention of identifying rather than resolving questions outside the authors' professional competence.

The central classification question is whether the second-lien diversification contract constitutes a “swap” under Section 1a(47) of the Commodity Exchange Act as amended by the Dodd-Frank Act of 2010. The strongest arguments against swap classification rest on the instrument's non-tradable character, its real property nexus, its physical rather than cash settlement, and the pre-existing (rather than speculative) nature of participants' exposure. Each of these arguments carries a corresponding counterargument grounded in the principle that regulators and courts generally look through structural form to economic substance, and none of the four arguments is individually dispositive. A parallel and analytically related question concerns Qualified Mortgage treatment under Consumer Financial Protection Bureau rules – specifically, whether the contingent second-lien settlement obligation must be counted as debt for debt-to-income calculation purposes, a question that is potentially dispositive for the zero-down-payment borrower population that is the mechanism's primary intended beneficiary.

We note this framework here, rather than in the empirical sections above, precisely because it is separable from the credit-risk modelling question: the modelled credit-loss reduction reported in Table 1 would hold as a matter of financial-engineering logic regardless of how the instrument is ultimately classified,

³ A corrigendum to the original Bayer, Ferreira, and Ross study was subsequently published: Bayer, Patrick, Fernando Ferreira, and Stephen L. Ross, “The Vulnerability of Minority Homeowners in the Housing Boom and Bust: Corrigendum,” *American Economic Journal: Economic Policy* 9(1): 344–345 (2017). The corrigendum does not alter the paper's central finding regarding

differential delinquency and default rates among borrowers with equivalent credit attributes, but readers relying on the original 2016 figures should consult the corrigendum for the corrected statistical detail.

but the instrument's viability as a distributable financial product is entirely contingent on that classification question being resolved favourably. A reader evaluating this paper's contribution should therefore separate the theoretical and modelled contribution (Sections I–V, VII) from the open regulatory question (this section), since resolution of the latter is a legal rather than academic determination and lies outside what this paper can establish.

7. Affordability, equity, and the systemic dimension

The credit risk reduction modelled in Table 1 has implications that extend beyond individual household balance sheets, if the modelled figures are borne out under independent review. Conventional mortgage underwriting standards – minimum down payment requirements, private mortgage insurance mandates, and FICO score thresholds – exist substantially as compensation for the credit risk created by geographic concentration in individual home prices. If that idiosyncratic risk component is materially reduced through diversification, the underwriting logic supporting those requirements would be correspondingly weakened, at least for the diversified structure.

Biron and Seiler (2022) model zero-down-payment, no-PMI mortgages with minimum FICO scores of 500 under the diversified structure and estimate annual expected losses of approximately 5 basis points – a modelled figure that, if validated, would compare favourably to the conventional prime mortgage loss rate even under substantially more permissive underwriting standards and no down payment. As discussed in Section III, this figure is modelled rather than independently validated, and the equity implications discussed below should be read as conditional on that validation. Subject to that caveat, the distributional finding discussed in Section IV – that minority and lower-income homebuyers were systematically more vulnerable to adverse economic shocks during the GFC (Bayer, Ferreira, and Ross, 2016) – suggests that a diversification mechanism of this kind, if it performs as modelled, would provide its greatest proportional benefit precisely to the households most exposed to idiosyncratic geographic price risk, a hypothesis for future empirical testing rather than an established finding of this paper.

The systemic dimension merits brief note and has received comparatively little attention in the housing policy literature to date. The amplification mechanism of the GFC – in which geographic concentration of negative equity created correlated foreclosure pressure

that further depressed local prices, generating additional negative equity in a self-reinforcing cycle – was, at least in part, a structural consequence of the absence of a diversification mechanism at the household level. A mortgage market in which idiosyncratic geographic price risk is systematically pooled would, by construction, be expected to exhibit lower correlation of credit losses across the system during regional shocks, though quantifying that systemic effect is beyond the scope of the loan-level modelling underlying Table 1 and would require a separate, macro-level analysis that has not yet been undertaken.

8. Limitations and directions for future research

This section is deliberately more extensive than is typical of practitioner treatments of this material, because the intended audience of an academic submission requires an explicit accounting of what has and has not been established. We identify five specific limitations.

8.1 Independent actuarial validation

The credit-loss figures reported in Table 1 – approximately 5 basis points for the base-case zero-down-payment diversified structure, against approximately 29 basis points for the conventional benchmark – are self-modelled by the original authors and have not been independently replicated or validated by a third-party actuarial or econometric team. This is, in our judgment, the single most important limitation of the research program to date. Until an independent actuarial firm has validated the methodology, the loan-level counterfactual construction, and the stress-scenario assumptions underlying these figures, they should be treated by readers, reviewers, and institutional counterparties as a modelled proposition rather than an established empirical result.

8.2 Regulatory classification is unresolved

As discussed in Section VI, no formal legal opinion on the instrument's classification under the Commodity Exchange Act, applicable securities law, or state insurance law has been obtained. The analytical arguments favouring mortgage-instrument classification over swap classification are, in the authors' assessment, reasonably strong, but this assessment does not substitute for formal legal opinion and should not be relied upon as such.

8.3 Absence of consumer demand validation

No revealed-preference consumer demand data currently exists for this mechanism. Prior

stated-preference survey estimates associated with this research program should not be treated as validated demand evidence; stated preference in a survey context is not equivalent to revealed preference under actual enrolment conditions, and the authors regard revealed-preference validation – for example, through a landing-page enrolment funnel measuring actual take-up at disclosed pricing – as a necessary complement to, not a substitute for, the theoretical and modelled analysis presented in this paper.

8.4 Pool governance is not yet operationally specified

The modelled results in Table 1 assume, implicitly, a pool governance structure – geographic concentration limits, adverse-selection controls, mark-to-market methodology under home price index reporting lag, and appraisal protocol – that has not yet been reduced to an operational specification. Kong et al. (2019) establish that modest pool sizes can approximate national index performance, which is analytically supportive of the mechanism's feasibility, but does not substitute for a fully specified governance framework.

8.5 Single-study dependence

The empirical core of this paper rests on a single underlying study (Biron and Seiler, 2022) and its associated dataset. While the Freddie Mac Single-Family Loan Performance Dataset is a large and well-regarded source, the absence of a second, independently constructed empirical analysis using a different dataset or modelling team is a limitation common to early-stage research programs of this kind, and one this paper does not resolve.

Taken together, these limitations define a research agenda rather than a set of caveats appended after the fact. The theoretical case for housing-price diversification, developed across Sections 1, 2, 5, and 7 of this paper, is in our assessment well established. The modelled empirical case, developed in Sections 3 and 4, is substantial but provisional. The path from modelled proposition to validated result runs through the five items above, and we regard independent actuarial validation, in particular, as the item on which the remaining four are substantially dependent.

9. The question of scale and architectural design

A further design question, separate from the validation agenda in Section 8, concerns whether the optimal long-term structure for this mechanism is a lender-by-lender

implementation model or a centralized national pool administrator operating as financial market infrastructure. A centralized model – a single national pool, a unified legal framework, and a distribution model in which individual lenders function as referral channels rather than implementation partners – would have materially superior diversification properties relative to fragmented independent pools, would reduce the adverse-selection sequencing problem discussed in Section 8, and would create network effects that drive pool composition toward the national home price index asymptote more rapidly as participation scales. Kong et al. (2019) is directly relevant here: if 100 randomly selected loans reasonably approximate national index performance, a national pool aggregating originations across all distribution channels would achieve and sustain that threshold from an early stage of operation.

The centralized model is also, as a consequence of its systemic significance, the more heavily regulated one. An entity administering national financial market infrastructure for residential real estate – managing settlement obligations, pool accounting, and guarantee structures across potentially millions of participating households – would attract regulatory scrutiny commensurate with that systemic significance, an additional consideration for the classification analysis discussed in Section 6. These architectural questions are tractable engineering and governance problems rather than conceptual obstacles, but they remain, alongside the items in Section 8, unresolved as of this writing.

10. Conclusion

For more than seven decades, modern portfolio theory has provided the intellectual foundation for how financial institutions manage risk. Its central prescription – that idiosyncratic risk should be diversified rather than concentrated – has been applied to equity portfolios, bond portfolios, loan books, insurance underwriting, and pension fund allocation across every major asset class. It has not been applied, at scale and in a structurally accessible form, to the single largest financial asset held by the majority of American households.

This paper has argued that the absence of a home-price diversification mechanism is not the result of theoretical impossibility – Markowitz's mean-variance framework applies to housing as clearly as it applies to equities – and has situated a proposed SPV-based mechanism (Biron and Seiler, 2022) within the broader literature on idiosyncratic housing risk and prior

housing-derivative attempts. The mechanism's modelled credit-risk implications are substantial. But this paper has also sought to depart from prior, practitioner-oriented treatments of this material by stating explicitly what remains unvalidated: the credit-loss figures are self-modelled pending independent actuarial review; the regulatory classification is unresolved pending formal legal opinion; and no revealed-preference demand data yet exists. We regard this candour as a contribution in its own right, not a weakness of the paper. The theoretical case for housing-price diversification is, in our assessment, well established. Whether the specific mechanism proposed here delivers the credit-risk and welfare benefits it is modelled to deliver, and whether it can be lawfully distributed to the population whose risk it addresses, are empirical and legal questions that this paper identifies but does not resolve – and that we regard as the appropriate next stage of this research program.

Disclosure statement

Marc Biron is Chief Executive Officer of Home Diversification Corp. and a co-author of Biron and Seiler (2022), the peer-reviewed study whose credit-loss modelling this paper extends and discusses. Steven L. Siegel serves Home Diversification Corp. in an independent advisory capacity. The views expressed herein are the authors' own and do not constitute legal, regulatory, investment, or actuarial advice, and nothing in this paper should be construed as such. The authors have a financial and professional interest in the commercial success of the mechanism described in this paper, a fact the authors disclose here consistent with standard academic conflict-of-interest practice.

Portions of this manuscript, including literature synthesis and drafting assistance, were prepared with the assistance of an AI language model (Claude, Anthropic) under the authors' direction and subject to the authors' review and verification of all factual claims, citations, and data. The authors take full responsibility for the content of this paper.

Michael J. Seiler, co-author of Biron and Seiler (2022), is not an author of this paper and has not reviewed or endorsed its content. Any resemblance between the credit-loss figures reported here and those in the original 2022 study reflects this paper's explicit extension of that prior published work, cited throughout.

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Innovation in housing decarbonisation, part 2

↪ By Andy Sutton

1. Introduction

In the second pandemic summer of five years ago I wrote a piece around decarbonising homes in the UK. Half a decade on, many of us across Europe have sweltered with successive heatwaves arriving like the proverbial buses¹. The scientific evidence of anthropogenic climate change is irrefutable² (if not yet unquestionable by some fringes), and so is UK housing and finance now playing its part in mitigating the worst excesses?

The UK has around 30 million homes³, with an average age understood to be in the region of 125 years, making it the oldest housing stock in Europe⁴. At today's rate of replacement, a home will need to last closer to 1,000 years⁵. Nationally, new homes are built at a rate approaching 200,000 per year⁶, though successive governments of all colours try to push this figure to 300,000 (a figure last reached in 1969-70, on the back of mass public housing programmes)⁷. As a nation, housing demand outstrips supply, driven mostly by an ageing population living in smaller households, with net migration accounting for roughly a third of projected growth.⁸

Of the homes already built, these can be split into two pairs of tenure types: Around

two-thirds are owner-occupied, nearly 20 million homes. A little over half of those are owned outright without a mortgage, whilst around 8.5 million carry secured lending. People living in rented accommodation account for the remaining 11 million or so homes, split roughly 55:45 between private landlords and social landlords providing 'public' housing in some shape or form.⁹ You can further split private landlords into "amateurs" – those renting out a second home as a secondary economic activity (perhaps the 'spare' house after a couple moved in together), and "professionals", those running a business as a primary activity (nearly half of English landlords own a single property, yet the 17% with five or more hold half of all tenancies)¹⁰. Overall, those four tenures make up the UK's homes.

Since June 2019, when the Conservative government of the day amended the prior Labour government's target for carbon reduction from 80% to 100%, the UK has had a legal obligation to achieve "Net Zero" enshrined in statute¹¹. The UK's housing is responsible for between 14% and 20% of the UK's greenhouse gas emissions, depending on where you draw the line around what's included¹², and therefore transitioning current and new homes to Net Zero carbon is legally required to hit the national target.

The largest single component of emissions from the UK's homes is the burning of gas for heating and hot water. Roughly 23 million homes, more than four in five, use this as their primary heating source, generating in the order of 50 million tonnes of CO₂ equivalent every year – around 1.5 times the amount generated by all UK flights.¹³ Remaining emissions are driven by the homes' use of electricity; from those using it for heating and hot water, as well as every home using electricity for TVs, lights, fans and the myriad of devices most of us take for granted as part of our lives in the 21st century.¹⁴

Whilst a few of those numbers have shifted since 'part 1' of this study five years ago, the picture above is broadly the same as it was then – four tenure types, roughly two-thirds owned and one-third rented, long-life homes once built, a build rate lower than the demand for housing, and homes forming a material part of the UK's climate emissions.

So, let's look at what's changed.

2. Climate

I won't labour the point that global emissions are continuing to rise, with current policies putting the world on a middle-of-the-road

¹ UKHSA, *Heat mortality monitoring report, England: 2025*; UKHSA, *2,877 excess deaths in the May and June 2026 heatwaves*; Met Office / RMetS, *State of the UK Climate 2024*.

² IPCC, *AR6 Working Group I Summary for Policymakers (2021)*: human influence 'unequivocal'.

³ England 25.8m (31 March 2025), Wales 1.48m (31 March 2024), Scotland 2.73m (31 March 2024), Northern Ireland 0.84m (April 2024); MHCLG dwelling stock estimates; Welsh Government; Scottish Government; Department of Finance NI.

⁴ Around 38% of UK homes pre-date 1946, the highest share in Europe; about 20% pre-date 1919: *The Health Foundation*; *Rentokil Property Care* (citing Eurostat).

⁵ BRE Trust calculation, via *University of the Built Environment* and *Local Government Association*.

⁶ England: 190,600 new-build completions in 2024-25; UK total a little over 200,000: MHCLG, *net additional dwellings 2024-25*; ONS, *UK house building by country*.

⁷ UK completions peaked at 425,830 in 1968; 300,000 was last exceeded in 1969-70: *University of Liverpool*; *Today's Conveyancer*.

⁸ ONS projects 242,000 additional households a year in England to 2032, nearly two-thirds headed by someone over 65; net migration accounted for 37% of projected growth in the 2014-based projections and is now the main driver of population growth: ONS, *Families and households 2024*; ONS, *subnational population projections 2022-based*; ONS *FOI on household projection assumptions*.

⁹ England (dwellings, March 2025): 16.6m owner-occupied (64%), 5.0m private rented (19.5%), 4.2m social (16.3%); Wales 70% / 14% / 16%; Scotland 60% / 13% / 23%. Households (England 2024-25): 36% outright owners, 29% mortgagors, 19% private renters, 16% social renters: MHCLG dwelling stock estimates 2025; English Housing Survey 2024-25 headline report; *House of Commons Library*, *Home ownership and renting*.

¹⁰ MHCLG, *English Private Landlord Survey 2024*.

¹¹ *The Climate Change Act 2008 (2050 Target Amendment) Order 2019*, SI 2019/1056, in force 27 June 2019; *House of Commons Library*, *Net zero in the UK*.

¹² Residential buildings were about 53 MtCO₂e of 367 MtCO₂e territorial emissions in 2025 (14%); around 20% once homes' share of electricity is included: DESNZ, *2025 provisional emissions statistics*; Climate Change Committee, *2025 progress report*; *House of Commons Library*, *Housing and net zero*.

¹³ About 23m homes are on mains gas (*Energy & Utilities Alliance*). Residential buildings emitted about 53 MtCO₂e in 2025 (DESNZ); an average gas boiler emits about 2.2 tCO₂ a year (*Nesta*). UK international aviation was a record 36.1 MtCO₂e in 2024 (*Aviation Environment Federation*); domestic plus international flights were 29.6 MtCO₂e, 7% of the UK total, in 2022 (*House of Commons Library*).

¹⁴ GB grid carbon intensity averaged roughly 105 to 150 gCO₂/kWh in 2025: *Electricity Maps*, *Grid in Review 2025*; Hoare Lea.

path of around 2.7°C.¹⁵ They are, and we're not doing enough at a societal level. What has changed in the last five years is the visible impacts of climate change. Successive summers have driven the risk of overheating in homes significantly higher¹⁶, with heat now killing thousands a year: 2,877 deaths in two hot spells in May and June 2026 alone. Cold still kills several times more, but the Office for National Statistics reports the gap narrowing.¹⁷ Also as forecast in climate models, extreme rain has increased – periods of torrential downpours are driving flooding both on-premises (gutter overflows causing leaks and damp & mould), and downstream.¹⁸ Wind, so far, is the exception: the Met Office finds no clear trend in storminess over four decades, though projections point to more winter storms.¹⁹

None of this is unexpected, and broadly we're seeing the climate models playing out. The UK is also one of the lucky ones – overall our climate is expected to remain comparatively tolerable compared to those closer to the equator, in the shadows of glaciers or with populations largely at sea level.²⁰ In turn, of course, that is widely expected to increase migration pressure towards northern Europe, including the UK, in the coming decades, though robust numbers do not exist.²¹

What the last five years of climate change ought to have given us is a wider public understanding of the consequences. Awareness is certainly near-universal: 89% of UK adults know of the 2050 target. Oddly, concern has softened, from 85% in 2021 to 79% in 2025, with the 'very concerned' down from 44% to 37%. Quite how that squares with the summers we have just had is anyone's guess.²²

3. Tools & understanding

The UK still does not have a clear legal definition of net zero carbon that is applicable to homes. However, the picture is clearer than it used to be, albeit with some overlaps. The most common definition originated with the UK Green Building Council and has since morphed into the UK Net Zero Carbon Buildings Standard, an industry standard rather than a government one, piloted in 2024 with its first full version in 2026²³, which looks at separating the carbon emissions from materials, the construction processes and the ongoing operation of the homes. The last – "Operational Carbon Emissions", is where I'll focus in this article.

4. SAP & HEM

The key tool at the heart of how the UK's housing energy and emissions are assessed is through the provision of Energy Performance Certificates (EPCs), which use a calculation method called the Standard Assessment Procedure (SAP) or the Reduced Data Standard Assessment Procedure (rdSAP) as the UK's National Calculation Methodology (NCM). The EU law that set up EPCs required each state to have an NCM, and SAP is the UK's.²⁴ This means that despite various elements of devolution to the 'home nations' of Wales, Scotland and Northern Ireland, the core calculation engine is UK-wide, even though the rules that use it are devolved.

In 2021 I was (politely) rude about this tool, as not being fit for purpose in a 'Net Zero' future. I'd like to think someone listened, since it's being replaced with a new one: the Home Energy Model (HEM). HEM goes 'live' for new homes from 2027, running alongside SAP for at

least two years, and is expected to be the only permitted method from around mid-2029.²⁵ The version of HEM that will assess existing homes is under development, expected in the second half of 2027, with the old-style rating shown alongside until at least the end of 2029.²⁶

So, without being too nerdy, is HEM better than SAP? Hell yes! HEM can model homes in ½ hour periods, whereas SAP modelled them in months.²⁷ That means HEM can reflect how a home might generate solar power, store it in a battery, and release it to the electricity grid later in the same day. It can also reflect how a home might defer or advance heating to avoid drawing "dirty" electricity from the energy grid at certain times. HEM models 17,520 periods a year, which makes it 1,460 times "better" than SAP!

Once the key tool has swapped, the UK's EPC regime will change too: no more single A-G rating system, instead becoming three A-G ratings for each home, plus a forecast of overall running costs for a 'typical' home usage. Carbon emissions, notably, become a secondary metric rather than a headline one.²⁸ UK government is still finalising how these A-G bands are determined, but the methodology driven by HEM will remain that the three new bands represent the home's regulated energy use – this is the 'hardwired' components of any home with a notional/average usage profile. The new EPC, like the old EPC, will still not represent the actual performance of any given home: As a nation, all EPCs collectively will be approximately right, whilst simultaneously being wrong 30 million individual times.²⁹ That is important given the other mechanism used for carbon emissions assessment: Greenhouse Gas Protocols.

¹⁵ Global fossil CO2 reached a record 38.1 Gt in 2025 (Global Carbon Budget 2025); Climate Action Tracker puts current policies at 2.7°C by 2100 (CAT Global Update 2025).

¹⁶ 4.6m English homes already overheat (Loughborough, 2021); around 90% of existing homes would overheat at 2°C of warming: CCC, UK housing: fit for the future? (2019); Arup for the CCC (2022); Environmental Audit Committee.

¹⁷ England 1988 to 2025: 40,063 deaths associated with the hottest days against 138,944 with the coldest; 'the gap between heat- and cold-related deaths is narrowing': ONS, Climate-related mortality, England and Wales: 1988 to 2025; UKHSA, summer 2025 (1,504 heat-associated deaths); UKHSA, May and June 2026 (2,877).

¹⁸ October 2023 to March 2024 was the wettest winter half-year in over 250 years for England and Wales (Met Office / RMetS); 6.3m properties in England are at flood risk, 4.6m of them from surface water, up 43% on the previous assessment (Environment Agency, NaFRA 2024).

¹⁹ Met Office, UK and global extreme events: wind storms; Met Office, Recent trends and future projections of UK storm activity (2021); UKCP18 wind factsheet.

²⁰ EU JRC, PESETA IV drought report; NHESS (2025), compound drought and heatwave risks in Europe; UK Climate Risk, CCR3 chapter 7, international dimensions.

²¹ Council on Geostrategy, The climate and migration: implications for Britain; House of Lords Library, Climate change-induced migration.

²² DESNZ Public Attitudes Tracker, Net Zero and Climate Change, Summer 2025; Spring 2025.

²³ Developed by CIBSE, BBP, BRE, IStructE, LETI, RIBA, RICS and UKGBC; pilot September 2024, tested on 205 projects in 2025; voluntary: UK Net Zero Carbon Buildings Standard; CIBSE; Osborne Clarke.

²⁴ MHCLG, notice of approval of methodologies, England and Wales, June 2025; Designing Buildings, Standard Assessment Procedure.

²⁵ The Future Homes Standard was laid on 24 March 2026 and comes into force on 24 March 2027, with transitional arrangements to March 2028; HEM becomes available at least three months after launch and runs in parallel with SAP 10.3 for a minimum of 24 months: Written ministerial statement HCWS1445, 24 March 2026; MHCLG consultation response; HEM Guide, transition.

²⁶ DESNZ, Home Energy Model: EPC methodology (updated 17 March 2026); Elmhurst Energy, HEM for existing homes consultation; HEM Guide, RdSAP to HEM transition.

²⁷ HEM runs a half-hourly dynamic simulation over a full year, 17,520 timesteps, against SAP's 12 monthly averages: HEM Guide, technical reference; Elmhurst Energy, SAP vs HEM; DESNZ, HEM consultation, December 2023.

²⁸ Four headline metrics (Fabric Performance, Heating System and Smart Readiness banded A to G; Energy Cost as an annual £ figure), with carbon and delivered energy as secondary metrics: MHCLG/DESNZ, Reforms to the Energy Performance of Buildings regime: partial government response, 21 January 2026; Mayer Brown; HEM Guide, new metrics.

²⁹ The average gap between EPC-modelled and metered energy was 16% in 2021 (10.9% once weather, later upgrades and occupancy are allowed for), widening from 8% at band C to 48% at bands F and G: DESNZ, EPC Accuracy Research (2025); UCL, over-prediction of energy use by EPCs (2023); Smart Energy Research Lab.

5. Scopes 1, 2 & 3

Greenhouse Gas (GHG) protocols are international standards for understanding the emissions from activities, broadly defining emissions into Scope 1, 2 and 3 (with a lobby group ongoing for “4”!).³⁰ Scope 1 are emissions you generate in your business, 2 are emissions generated from fuel you used in your business, and 3 are emissions generated from products, services or activities related to your business but not directly your own – the creation of the computers your business uses, or the emissions from the homes you run. As a general rule in housing, and especially in housing ownership and finance, Scope 1 & 2 are dwarfed by Scope 3.³¹

Scope 3 reporting requires the inclusion of emissions from homes held within your ownership, or for secured lending, the loan-to-value proportion of the emissions of those homes.³² This reporting is the overall emissions of the homes, not solely the regulated emissions (which is what SAP and HEM calculated). It’s also worth recognising that this reporting is intended to be specific to the homes, not notional averages (though those are commonly used currently).

Since 2021, the UK has therefore made some strides in a broadly positive direction: the core tool to assess homes (HEM) is a materially, demonstrably better engine. That is great news. Where the UK still struggles is the translation of that tool into EPCs for homes, which whilst updating the system to three A-G ratings, still don’t directly reflect the carbon emissions of those homes. This is the route I flagged in 2021 as a risky path, and it is where we’ve gone. It means that EPCs still don’t directly translate into GHG Scopes, and most importantly don’t provide direct evidence of the levels of greenhouse gases being emitted into the atmosphere by (or because of) any given home.

6. Rules & Drivers

Perhaps some of the most material changes since ‘part 1’ have happened around rules

and behaviours, and many of them are positive signs. Let’s start with some of the least publicly known, but most important.

6.1 Finance

The Prudential Regulation Authority (PRA) published its Supervisory Statement 5/25 in December 2025. This obliges all PRA-regulated banks, building societies and insurers to include climate scenarios in their risk identification and decision making.³³ It was followed in February 2026 by the UK Sustainability Reporting Standards S1 and S2 (the UK’s version of ISSB IFRS S1 and S2), which require annually updated resilience assessments that use climate related scenarios.³⁴ Given the direction of travel, it’s expected that the Financial Conduct Authority (FCA) will make these requirements mandatory for listed companies, including the listed banks, from 2027, with final rules due this autumn; building societies and other unlisted lenders are expected to follow under a separate Companies Act route.³⁵ It’s less clear whether compliance will require Scope 3 emissions, and therefore homes in a lending portfolio, or leave it as currently a “comply or explain” option. What is clear is that the Partnership for Carbon Accounting Financials (PCAF), whose standard UK lenders use to calculate financed emissions and which SS5/25 and UK SRS S2 both lean on, grades the confidence of that data on a five-point scale. The highest grade, 1, needs measured energy use for each home with real emissions factors. Collecting every home’s EPC only reaches grade 3, and homes covered by statistical estimates score 4 or 5.³⁶

Historically, the “cost of Net Zero” has always been the root of the barrier to change – the old carbon emitting ways were cheaper and inherently more known/less risky than carbon-free alternatives, despite Stern’s 2006 review showing that it is cheaper to prevent climate change than to live with it: around 1% of GDP a year to act, against at least 5% and possibly 20% not to.³⁷ Taken together, these changes begin to materially adjust that balance. The

best rates in the capital markets are now likely to start to ask for real data on emissions, and real evidence of climate resilience planning. When “the money” asks such questions, most other things follow.

6.2 Property

In 2021 I spoke of recent research projects LENDERS and VALUER, seeking to find value differences in UK homes; “Green Premiums” and “Brown Discounts” for valuations, and how property lending could better model affordability by factoring energy costs. VALUER’s own analysis with Rightmove of 200,000 paired transactions found homes improved by one EPC band rose 6.7% above market trend, by two bands 12.1%, and by three bands 19.5%.³⁸ From 2025, the Royal Institution of Chartered Surveyors’ ‘Red Book’ (which governs the vast majority of property valuations) requires valuers to consider, record and report any significant ESG factors, with its guidance naming energy efficiency, carbon emissions, flooding and heat, while telling valuers to reflect markets rather than lead them.³⁹ Much as the VALUER work predicted, there is now emerging, if still largely anecdotal, evidence of a ‘brown discount’ where homes are identified as requiring works in the foreseeable future to mitigate climate or remain up to contemporary standards. In short, it appears home buyers are just beginning to ‘chip’ offer prices, after the survey comes back, for more than just dodgy electrics or an old roof. There’s some evidence they’re now doing it for climate-related measures (though often not for that headline reason). The firmer evidence is on the lending side, where poor EPC ratings are already attracting lower loan-to-value limits and higher margins on refinancing.⁴⁰ If this does become commonplace, then it will be transformational. Once property valuations move closer to reflecting “retrofit” costs for the new owners, sales prices will adjust, and that adjustment enables both the new build market to genuinely build net zero carbon homes, and

³⁰ GHG Protocol, Scope 3 FAQ; ‘Scope 4’ (avoided emissions) was coined by WRI in 2013 and is not an official scope: [Plan A](#).

³¹ Financed emissions (Scope 3 category 15) are typically over 95% of a lender’s footprint: [PCAF, Financed Emissions standard, 3rd edition \(December 2025\); CDP](#).

³² PCAF mortgages: attribution factor = outstanding loan ÷ property value at origination: [PCAF standard, Table 10.1-5; Green Calculus methodology note](#).

³³ SS5/25 and PS25/25, 3 December 2025, replacing SS3/19; firms were expected to complete a gap analysis by 3 June 2026 and physical risk is treated as a first-order concern: [PRA SS5/25; PwC summary](#).

³⁴ UK SRS S1 and S2 published 25 February 2026; S2 paragraph 22 requires disclosure of the resilience of strategy and business model, assessed using climate-related scenario analysis and updated annually: [CMS; HSF Kramer; UK SRS S2 scenario analysis guide](#).

³⁵ FCA CP26/5, 30 January to 20 March 2026: UK SRS S2 mandatory for listed issuers from accounting periods beginning 1 January 2027, policy statement expected autumn 2026, Scope 3 on comply-or-explain with a one-year deferral: [FCA CP26/5; KPMG](#).

³⁶ PCAF Table 5.5-1: Score 1 metered consumption with supplier-specific emission factors; 2 metered with average factors; 3 estimated from official energy labels plus floor area; 4 from building type and location statistics plus floor area; 5 from statistics and number of buildings only. Most UK lenders with a disclosed score sit between 3 and 4: [PCAF standard, p.86; Kamma](#).

³⁷ [Stern Review on the Economics of Climate Change \(2006\); LSE Grantham Institute summary](#).

³⁸ [Monmouthshire Building Society, VALUER project summary report \(BEIS Green Home Finance Innovation Fund\)](#).

³⁹ RICS Valuation – Global Standards, effective 31 January 2025: VPS 1 para 3, VPS 4 para 3.8 and VPS 6 para 2.2(q) (mandatory); VPGA 8 paras 3.7.2 and 3.7.3 (guidance): [Red Book Global Standards \(PDF\); RICS announcement](#).

⁴⁰ [Willow Private Finance, the brown discount in 2026 refinancing](#); on price, estimates range from 1.7% (Nationwide) to 1-3% per band (Energy and Buildings, 2025 scoping review).

the improvement of the 30 million homes that already exist.

Valuation changes aren't the only property change, though they may be the most material in the medium term. Five years ago Wales was leading the charge with an "Optimised Retrofit Programme" to support Social Landlords to improve their homes. The programme is ongoing, with £98.75m of funding for 2026-27 (equivalent to around £410 per social home per year in Wales) and more than £466m since 2020.⁴¹ England has not caught up on spending per home, but with its new grant schemes it has arguably overtaken in other respects.

The Warm Homes Plan, published in January 2026, commits £15bn to 2030 across all tenures. Its social housing strand, Warm Homes: Social Housing Fund, is £1.3bn over three years, around £100 per social home per year in England, matched by landlords to £2.6bn in delivery; a further £0.5bn Warm Homes: Local Grant goes through local authorities to low-income owner-occupiers and private tenants.⁴² Although the plan does not say so, this programme follows the approach of the work we did to start the Optimised Retrofit Programme: it requires every funded project to follow PAS 2035 (the whole-dwelling retrofit standard) so that homes are assessed and considered holistically.⁴³ This helps to avoid some of the issues from piecemeal or isolated improvements that historically have knock-on impacts, some of which were illustrated by the National Audit Office's October 2025 report into the "ECO4" and Great British Insulation schemes, which end in March 2026.⁴⁴ The Warm Homes Plan also heralded the creation of the "Warm Homes Agency", a single body charged with being the front door for home upgrades, absorbing Salix and parts of DESNZ and Ofgem. The details of what sits behind that front door, and whether it will work in practice, we'll find out from April 2027.⁴⁵

Amongst the raft of requirements coming through we've also had new requirements for the energy performance levels for social housing and privately rented homes. Minimum Energy Efficiency Standards (MEES) were first introduced in 2015, requiring an EPC "E" for new tenancies from 2018 and all tenancies from 2020, but in January 2026 this was shifted up.⁴⁶ Social homes must now achieve a new EPC "C" in one of the three new EPC categories by 1st April 2030, and in a second by 2039, whilst privately rented homes must achieve EPC "C" in two of the three categories including the fabric performance category by 1st October 2030. Some homes can claim exemption, though the bar for that has been set high, whilst all homes have a financial spending cap, so that the owner need spend no more than £10k per home on the works (reduced to 10% of the property value for homes worth under £100k), with spending from October 2025 counting towards it; social landlords get a second £10k cap for the second metric.⁴⁷ As with exemption, the bar is set that owners will have to spend £10k towards the target, not just prove the total cost of achieving the target is more than £10k.

What's happening for new homes? Actual regulations are devolved to home nations, so different in each instance. England has the weakest – the "Future Homes Standard".⁴⁸ Whilst the weakest, it fundamentally requires the homes to be electrified, which at its heart is what is needed for their decarbonisation (more below).

Overall, whilst more examples could be called out, the general trend in the property space has been laying the groundwork for a shift in the next five years. Although clearly later than ideal, these changes broadly raise the obligations on homes from a climate perspective. The notable exception being home owner-occupiers – no government has yet had the nerve to go after that many voters!

6.3 Energy

Five years ago, I was tearing my hair out with the lively 'debate' about hydrogen-fuelled homes. Plus, although Sero (the business I co-founded a few years earlier) is built on electrification of homes, I also didn't put enough weight on the remarkable work already underway by the UK's electricity network. So, let's update where that's got to.

First, hydrogen heated and powered homes is now out of the question at any scale. The Climate Change Committee's Seventh Carbon Budget gives hydrogen no role in home heating and puts half of UK homes on heat pumps by 2040.⁴⁹ Hydrogen plays an important part in our future decarbonised world from industrial processed to long-duration energy storage, but it's been largely ruled out directly into homes: The UK's gas network isn't going to start pumping hydrogen, and we can focus on the real transition, which, with heat networks expected to supply around 20% of heat demand by 2050, means electrification for the other 80% or so of homes.⁵⁰

Next, the UK's electricity carbon intensity has continued its remarkable fall. In 2010, one unit (a kWh) of electricity emitted a little under ½ kg of CO₂eq. In 2025 it averaged around 1/8 kg CO₂eq, a fall of roughly 73%, and 2025 was the first full year without coal.⁵¹ The UK Government's Clean Power 2030 Action Plan sets a target of at least 95% clean electricity by 2030, with a fully decarbonised system by 2035.⁵² The target is likely to be hit, indeed already is nearly hit, for some times during some days – periods of low demand with high solar or wind (or both). As we get into the 2030s, we'll see those periods of a zero carbon electricity grid become longer and more frequent. It's likely that during the 2030s, the periods of zero, or very near zero, will begin to outweigh those where material carbon emissions are created by electricity generation. Whether we hit zero carbon all the time in

⁴¹ £98.75m announced 23 January 2026, taking the total since 2020 past £466m and 31,000 upgrades; Wales has 238,700 social homes (149,800 RSL, 88,900 local authority); [Welsh Government; Welsh Government dwelling stock estimates](#).

⁴² Warm Homes Plan published 20 January 2026: £15bn to 2030, £4.4bn in low-income grants, WH:SHF Wave 3 £1.3bn for 2025-28, WH:LG £0.5bn for 2025-28; England has 4.2m social homes: DESNZ, Warm Homes Plan; Carbon Brief Q&A; MHCLG dwelling stock estimates 2025.

⁴³ DESNZ, Warm Homes: Social Housing Fund Wave 3 scheme guidance (PAS 2035:2023 required).

⁴⁴ Over 30,000 homes with defective wall insulation; almost all external and a third of internal wall insulation needing remediation: NAO, Energy efficiency installations under the Energy Company Obligation, 14 October 2025.

⁴⁵ DESNZ, Warm Homes Plan; Energy Saving Trust, what local authorities need to know.

⁴⁶ Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015: PRS EPC C confirmed in the Warm Homes Plan, 21 January 2026, social sector response 28 January 2026: Elmhurst Energy, PRS; Elmhurst Energy, social.

⁴⁷ Simmons & Simmons, the Warm Homes Plan and MEES for privately rented homes; Devonshires, government response on social housing MEES; MHCLG social rented sector MEES consultation.

⁴⁸ Scotland's New Build Heat Standard has required zero direct-emission heating in new homes since 1 April 2024, with a Passivhaus-equivalent standard due by 2028; Wales's 2022 Part L uplift went beyond England's and a 'net zero ready' standard follows from 2026: [Scottish Government, New Build Heat Standard; Ideal Heating, Part L changes in Wales and Scotland; House of Commons Library, environmental standards for new housing](#).

⁴⁹ Climate Change Committee, The Seventh Carbon Budget (2025); the Whitby and Redcar hydrogen village trials were cancelled and the hydrogen town pilot postponed beyond 2026: [IGEM; Commons committees, decarbonising home heating](#).

⁵⁰ The Warm Homes Plan expects heat networks to meet 7% of heat demand by 2035 and around 20% by 2050: DESNZ, Warm Homes Plan; Energy Saving Trust.

⁵¹ 2010: about 457 to 462 gCO₂/kWh; 2025: about 105 to 150 gCO₂/kWh: [Carbon Brief, how the UK transformed its electricity supply; Electricity Maps, Grid in Review 2025; Hoare Lea](#).

⁵² DESNZ, Clean Power 2030 Action Plan, December 2024; Carbon Brief analysis; [House of Commons Library, clean power targets](#).

⁵³ 29 suppliers failed between July 2021 and May 2022, affecting nearly four million households: [ICAEW; Citizens Advice, Market meltdown](#).

2035 could be questioned, but we'll be in the right ballpark.

In support of this transition, energy market reforms led by OFGEM are being explored. Traditional residential energy retail companies have collapsed down to a handful of suppliers since 2021, partly Ukraine driven, but also a complex regulatory environment and tight margin business model with hard-to-predict forward buying.⁵³ The regulator, which was also handed control over heat networks from January 2026,⁵⁴ is looking at how to adapt to the new world. Whilst consumer protection remains at the heart of OFGEM's mission, more variety of energy service offerings are emerging that allow individual homes and landlords to benefit from providing services to the electricity network: Homes have been able to be paid for exporting electricity for at least a decade, but now it is possible to be paid for 'shifting' electricity demand or for increasing/decreasing demand in response to the needs of the wider electricity grid. For landlords and financiers, these payments can also be aggregated across portfolios into repayment mechanisms for lending, such as the scheme currently being finalised in London Borough of Camden with capital funding from the private sector.⁵⁵

Worthy of mention in here also is the UK's roll-out of "smart meters". Although the programme is delayed from its original goal, more than 2/3rds of homes in the UK now have an energy meter that measures and reports usage in ½ hourly blocks.⁵⁶ Since October 2025 that half-hourly data flows to the home's regulated energy supplier by default, for settlement; it is sharing beyond the supplier that remains the battleground. Welsh Government's Optimised Retrofit Programme offers a precedent, processing residents' energy data under the 'public task' basis in UK GDPR, an argument that could reasonably be made nationally given the climate emergency.⁵⁷ This isn't 'smart' in the common parlance of smart phones, but it's foundational to a future marketplace that allows the buying, selling and shifting

of electricity. It's also fundamental to any financial institution looking to achieve "1/5" on their PCAF confidence score – this is the data you need.

Countering the smart meter roll-out, one area the UK continues to struggle to change is the 'spark price' – the gap between the cost of 1 unit of electricity and 1 unit of gas. The UK has one of the biggest gaps in Europe, with electricity costing four to five times as much per unit as gas.⁵⁸ This imbalance makes electrification an uphill struggle for the UK generally, and for homes specifically. Whilst UK government acknowledges the need for change, fears of fuel poverty for gas-heated homes are currently paralysing action.

The UK's energy sector is a strong contender for the biggest progress in the past five years in relation to homes. Since 2021: It is now clear and largely (but discretely) embedded into requirements that decarbonising homes means electrifying them. Homes can now unlock payments by modifying not just how much electricity they use, but when they use it, as well as how much they sell back to the Grid. OFGEM and private investment is recognising these new financial models, and meanwhile the large-scale decarbonisation of the electricity grid is continuing apace, with a realistic chance of "more-often-than-not" zero carbon in a decade.

7. Competency & quality

The UK's new build homes are dominated by a few (and decreasing) number of private housebuilders, whilst most of the UK's existing stock is maintained and improved by an army of small, typically <10 people, contractors who operate in an effectively unregulated market. This was the picture in 2021, four years after the UK's tragic Grenfell fire. It is still generally the picture in 2026, but changes are coming through.

Though different legislation, England (2022) and Wales (2026) each now have their own

"Building Safety Act" (BSA).⁵⁹ Whilst focused on safety, they drive both digital record keeping and competency, and in England it can now be a criminal offence to take on building work you are not competent to undertake, with contravention carrying an unlimited fine and up to two years' imprisonment.⁶⁰ These are still bedding in, but align with lobbying from various bodies for making building works a 'licensed' activity, which has been a direction of travel underpinning English and Welsh Building Regulations for a number of years (primarily around services previously).

For retrofit, funding requirements for Social Housing have embedded the use of PAS2035 – the de facto standard for how to assess a home, which the Optimised Retrofit Programme discussed five years ago was built around.⁶¹ Sadly, funding requirements, timings, and the processes that follow these mean PAS2035 is now being challenged as an expensive overhead.⁶² Whether it remains, is refined, or abandoned, the evidence collected does suggest that schemes properly implementing a holistic and independent assessment of the home, and the works undertaken to it, have a lower instance of failure and better outcomes for the key beneficiaries – the people who live in them.

The BSA's requirements for digital records are, perhaps, the thin end of a future wedge. For years many, including myself in a past life at the UK's Building Research Establishment (BRE), have called for "Building Passports" or "Logbooks". The BSA begins to introduce these, and recently the UK government announced digital property logbooks "as a standard feature of all property transactions"⁶³ by the end of this parliament (that's no later than August 2029)⁶⁴. Why does this feature in a section on competency and quality? Because it's widely expected that, as and when this forms a persistent digital record of "who-did-what-work" to a home is securely and reliably available, the ability to challenge poor quality or performance will increase and potentially extend over the point of sale of a home.

⁵⁴ Heat Networks (Market Framework) (Great Britain) Regulations 2025 under the Energy Act 2023; Ofgem became regulator on 27 January 2026: [Ofgem](#); [Devonshires](#).

⁵⁵ [Camden Council, cheaper bills for 3,000 council homes \(March 2026\)](#); [Zero Carbon Accelerator case study](#); [Camden New Journal](#).

⁵⁶ At the end of March 2026, 66% of domestic meters run by large suppliers were smart meters in smart mode, 72% including those in traditional mode: [DESNZ, smart meters in Great Britain, quarterly update](#).

⁵⁷ Market-wide Half-Hourly Settlement began migrating meters from October 2025 ([Elexon](#); [E.ON Next](#)); Welsh Government's ORP privacy notice: [Optimised Retrofit Programme: why we need your data](#).

⁵⁸ 4.7 to 1 under the January 2026 price cap, the widest gap since 2022 and the highest of any IEA economy; April to June 2026 cap: gas 5.74p, electricity 24.67p per kWh: [Nesta](#); [Nesta, electricity-to-gas price ratio explainer](#).

⁵⁹ [Building Safety Act 2022](#); [Building Safety \(Wales\) Act 2026](#). Royal Assent 27 April 2026.

⁶⁰ Building Regulations 2010 Part 2A (from 1 October 2023) requires dutyholders to be competent and not to accept appointments beyond their competence; contravention of building regulations is an offence under section 35 of the Building Act 1984, as amended by section 39 of the Building Safety Act 2022: [Building Regulations 2010, Part 2A](#); [Building Act 1984, section 35](#); [Construction News on the strengthened sanctions](#).

⁶¹ [DESNZ, Warm Homes: Social Housing Fund Wave 3 guidance](#); [Welsh Government, ORP3 Year 5 guidance](#).

⁶² [Scottish Housing News, what does PAS 2035 mean for social landlords?](#).

⁶³ Home Buying and Selling Reform Roadmap, 19 June 2026: mandatory sales packs at listing, digital property logbooks, earlier binding contracts; legislation by the end of the Parliament: [MHCLG roadmap](#); [Press release](#); [Residential Logbook Association](#).

⁶⁴ Parliament first met on 9 July 2024 and dissolves automatically on 9 July 2029, with polling within 25 working days: [House of Commons Library, Dissolution of Parliament](#).

Whilst the UK's home construction, improvement and maintenance industry remains of variable quality, suffers significantly from 'boom-bust' cycles driving skills out, and generally has a shortage of clear long term pipelines that might encourage the needed new skills to flourish, there are some signs of change over the past five years.

8. Recent examples

It's fair to say a lot can happen in five years. It's also fair that some things don't seem to change quick enough. However, I'd pull out some recent positives as possible indicators for the next five years:

London Borough of Camden are in the process of finalising private sector funding to support the retrofit of around 3,000 social homes,⁶⁵ with the repayment mechanism through Sero driven by sharing the income that can be generated by the electricity grid payments explained earlier – residents get savings, but the loan gets repaid too. Private sector bodies putting pension funds into home retrofit.

Barratt Redrow, the UK's biggest housebuilder, has signed a land deal with Welsh Government to deliver 576 new homes, half of them affordable, at Cosmeston Farm, outside of Cardiff.

The contract obliges the housebuilder to deliver net zero carbon homes in practice, as built and as monitored after completion, independently verified by Cardiff University⁶⁶, including the 'plug in' electricity use not covered by EPC A-G ratings. This metering has the ability to deliver PCAF confidence rating 1/5 (though the contract is technically 2/5), and aligns with GHG Scope 3 reporting requirements.

9. Looking ahead...

In conclusion, what do I think has changed in five years?

The financial sector has started to move. Although first generation "green mortgage" products are largely dusty on the shelves, seen as the marketing exercise they largely were,⁶⁷ the underlying structure of finance is changing. Climate resilience, property devaluation and confidence in the underlying data are coming in, and these will play out materially.

Digital sits alongside this. Smart meter roll out, together with the massive reduction in the cost of "internet of things" monitoring devices, mean that real, ongoing performance data from actual homes is viable. This aligns with the increasing drive for property record data, both of which are expected to increase

confidence, which is what the financial sector will be increasingly rewarding.

And the energy, or in future perhaps increasingly called the electricity, sector, is transforming. The 'spark price' must eventually be closed – it feels more like when than if – and that, combined with regulatory reforms, will strongly stimulate each homes' electrification as its core route to decarbonisation.

Skills and supply chain is always last, it follows demand and needs confidence in the future to scale, but that will come with the finance, energy and digital insights that are being generated.

What does that mean I'll be writing for part 3 of this piece, in 2031?

I'd suggest your home will be worth less if it's not electrically heated, and your bills will be higher if you're not able to pick and choose when you draw your electricity from the Grid. You'll be increasingly expected to have digital records of works you've undertaken, including probably their performance in practice, and there'll be an expectation if not quite an obligation that they should be shared with authorised third parties – for those with lending secured on their properties, that will include the lender. That's the future I'm preparing my own home for. And building my next business to support!

⁶⁵ Camden Council, March 2026; Zero Carbon Accelerator.

⁶⁶ Welsh Government, UK's largest net zero housing development to be delivered in Wales (October 2025); Barratt Redrow announcement.

⁶⁷ Virgin Money's Green Reward closed to new registrations on 30 June 2025; VALUER found its EPC A product 'was not required in the current housing market': Energy Saving Trust, green finance and home energy efficiency; VALUER project report.

Housing decarbonisation in Spain 2026; what is the progress?

↪ By Corné Koppelaar

1. Introduction

In the special spring issue of 2021 of Housing Finance International, dedicated to decarbonisation in housing across the European Union, we reported on the situation in Spain. In this article we will look how decarbonisation has progressed since. To remember where we left it back in 2021, we will now use the conclusion of that article as a starting point of today's analysis.

What we concluded in 2021 was that the Spanish housing market had started the transition to a more energy efficient and sustainable future. There was a strong correlation between the objectives that were set by the European Commission and the strategic plans that had been adopted by the Spanish Government. It was, at the time, observed that the housing stock needed a massive transformation. The stronger Building Codes that had been adopted ensured that newly added stock was up to the desired standards. In a country with, generally, high density building concentrated in the major urban centres, the challenge was around the energetic upgrading of multifamily housing. With a relatively high proportion of home ownership, it was essential for private people to buy into the plans of the Government. It was assessed that, often, capital investments could only be earned back over a longer period of time.

It was crucial to inform the market in the most transparent way. A start had been made to collect more detailed building information, but this operation only just started in 2021, and the ambition was to ultimately come to a granular level of detail on individual dwellings (commonly known as a "building passport") in order to optimize the renovations needed.

Only with detailed information, could holistic plans for the upgrading of buildings be made in a way that also considers the limited resources available (time, money, energy sources, etc.).

On a higher (political) level, the building data could be aggregated and used to consider environmental strategies at the level of neighbourhoods, municipalities or even regions. Once the characteristics of the status quo were known, scenarios could be elaborated in respect of the optimal mix of energy sources, the infrastructure to supply energy and the way public and private bodies could cooperate.

Compared to other European housing markets, it needed to be considered that the ownership of housing was very fragmented in Spain, with few institutions managing larger portfolios of dwellings. This meant that there needed to be special attention to the way communication was managed. In general, the collaboration between different stakeholders was considered the key to making the operation successful. There needed to be a high level of interaction between governments, energy providers, contractors, individual households, etc.

From a financial perspective, we expected that innovative financial products would be needed and be crucial to support the whole transformation process. Even with enough funding available, investments were not always considered to be beneficial from a financial perspective. The Government was expected to play a strong role in order to develop tools to incentivise private investments. The Green Deal from the European Commission (2019) was one of the catalysts to kickstart the transformation and gradually improve the energy efficiency and carbon footprint of the building stock in Spain.

2. Key events after spring 2021

In 2021 the world was in the grip of the COVID pandemic, we could know little about the effects of this pandemic on the decarbonisation programmes of residential housing. NextGenerationEU is an €800 billion temporary recovery instrument created by the European Union to help member states recover from the COVID-19 pandemic and build a greener,

more digital, and resilient economy. It operates alongside the long-term EU budget.

Spain's recovery and resilience plan responded to the urgent need to foster a strong recovery, while making Spain's economy and society more resilient and future ready. An important pillar of the plan (Plan de Recuperación, Transformación y Resiliencia (PRTR)), that was accepted by the EU on the 16th of June 2021 was the "Green transition". In the area of climate and environmental policies, Spain faced the challenges of significant renovation needs in relation to its building stock to increase energy efficiency, make mobility and the transport sector more sustainable, and of further increase the share of renewables in the energy mix. Spain also faced challenges in the area of biodiversity (including transformation of the agri-food and fishing systems and preservation of ecosystems integrating climate change adaptation) and the need to enhance water and waste management. The Green transition Plan included support to the green transition through investments of over €12 billion in the energy efficiency of public and private buildings including new social housing.

The funding from the EC was directed to ICO (Instituto de Crédito Oficial) who redistributes the money across Spain. Spain has strongly devolved political powers, and housing is one of the devolved competences of the 17 autonomous regions (and 2 autonomous cities). The decarbonization and energy efficiency measures in housing that qualify for funding have been determined by the central government and include:

- **Project funding:** Cover up to 100% of management costs and 70% of energy efficient refurbishment and new constructions.
- **Energetic requirements:** Reductions in non-renewable primary energy of more than 30% are required for renovations.
- **Access:** Access is requested through collaborating financial institutions or directly at Instituto de Crédito Oficial (ICO official credit institute).

■ Uptake of ICO funds

■ ICO funds earmarked for housing and energy efficiency have seen very low levels of utilization and implementation compared to high initial expectations. Financing lines for sustainable construction and renovation offered through the Official Credit Institute (ICO) have encountered significant operational and bureaucratic hurdles:

■ **Low initial uptake:** Only a small fraction of the billions budgeted – with an execution rate hovering around or not exceeding 10% of the projected figures during the initial phases – was actually requested or channeled by the sector.

■ **Bureaucracy:** The validation procedures and coordinated sign on through banking institutions proved slow and complex.

■ **Readjustments of funding lines:** Faced with difficulties in the initial uptake of European loans, the government has had to restructure budget allocations and propose new stimulus instruments – such as the ‘España Crece’ fund – that introduced additional incentives and loan write-offs of up to 30% to boost the affordable and energy-efficient housing sector.

The European Union’s Energy Efficiency Directive establishes clear, progressive requirements for the building stock of all member states. Properties must hold a minimum energy rating of label E to be allowed to be sold or leased starting in 2030. This measure aims to fully decarbonize the residential sector, reduce CO₂ emissions, and combat the energy poverty affecting millions of Spanish households. This means that (at the start of 2026) more than 8 million homes in Spain must undergo urgent energy-efficiency renovations before 2030.

3. Progress 2021-2026

In total, 510,000 renovation projects were expected to be carried out over the entire implementation period of the EU supported Plan de Recuperación, Transformación y Resiliencia (PRTR), implying an average rate of 71,000 homes per year (2019-2026). In 2019, just over 31,100 homes were renovated; although this represents a 10% increase over 2018, the Government’s goal was to increase activity tenfold by 2030, reaching 300,000 homes annually.

The overall goal of these measures was to reduce non-renewable energy consumption in homes by at least 30%, while decarbonizing

and lowering heating and cooling demand by a minimum of 7%. Demonstrating this reduction is essential; therefore, an expert must issue an energy certificate for the home or building both before and after the work is carried out. The most effective way to meet the thresholds required under the PRTR framework was to address the building envelope – installing insulation on facades and roofs – and to replace existing window units with ones featuring thermal breaks to prevent cold air from seeping in through the windows.

Decarbonizing the housing stock requires tripling the pace of emissions reduction – moving from an annual rate of -2% (2019–2022) to a target of -6% to -7% per year – in order to meet the goals of the 2023–2030 PNIEC (*Plan Nacional Integrado de Energía y Clima*).

A recent analysis identified that the residential sector in Spain still accounts for 18% of final energy consumption and 8% of net greenhouse gas emissions, with 37% of consumption still dependent on fossil fuels. The assessment warned that climate control – heating, cooling, and hot water – accounts for around 50% of household energy consumption, and that more than a third of Spanish homes still use gas boilers. Furthermore, the vast diversity of the housing stock – in terms of age, size, typology, and climate – requires tailored solutions to energy efficiency.

It has been noted that transforming the housing stock will only be viable if accompanied by the upgrading and strengthening of electricity grids – measures essential for accommodating increased demand and the growth of distributed renewable generation.

To this end, it is crucial to implement more flexible and forward-looking planning, streamline permitting and grid access, establish remuneration structures that attract necessary investment, and create a stable regulatory framework that reduces uncertainty and facilitates financing.

Without these conditions, the deployment of efficient technologies and the electrification of households could slow down, jeopardizing climate goals and the development of new industrial activity linked to the energy transition.

4. The buy-in to decarbonization of individual homeowners

In 2021 we considered that it would be crucial for individual homeowners to buy into the plans of the government. In 2026 we can conclude that this buy-in has been insufficient.

Homeowners are not participating sufficiently in government decarbonization plans, as the current pace of energy-efficiency renovations is inadequate and falls far short of climate targets.

The main reasons for this lack of uptake are:

■ **Knowledge gap:** More than 70% of homeowners do not know how to decarbonize their homes, and a vast majority are unaware of the public grants available.

■ **Excessive bureaucracy:** Complex paperwork and the lack of operational “one-stop shops” hinder grant applications. Only a small percentage of renovation projects actually proceed to the stage of applying for financial aid.

■ **Economic cost:** The main barrier is the high cost of work. Despite Next Generation funds or personal income tax deductions, many households cannot afford the upfront cost.

■ **Differing expectations:** When homeowners decide to renovate their homes, their priorities are remodeling the bathroom (33%) or kitchen (25%) or replacing windows and doors (24%). Measures related to energy efficiency – such as insulation, electrical system upgrades, or the installation of photovoltaic panels – rank lowest on the list.

5. How are we doing on data?

As you have seen at the start of this document, a key focus was on data to extract information that could support informed transformation decisions. In terms of detailed data available on the Spanish housing stock, the country has made progress in the past years. There still is a desire to come to so-called “building passports” in the coming years.

In 2026, the available official data on residential energy efficiency in Spain comes primarily from the Institute for Diversification and Saving of Energy (IDAE), the Ministry of Housing and Urban Agenda, and the National Statistics Institute (INE).

The “renUEva: Know and Improve Your Home” tool – also promoted by the Ministry of Transport, Mobility and Urban Agenda – allows for an approximate calculation of a specific building’s energy consumption. It offers various options for building improvements and provides guidance on meeting the requirements to access the grants, tax incentives, and financing implemented under the Next Generation EU funds for residential renovation.

The calculation of these solutions is based on an analysis of the Spanish residential building stock, which defines the construction characteristics of residential buildings according to three criteria: two categories (single-family homes or multi-family residential buildings); four time periods based on the regulations in force at the time of construction – up to 2007, when the Technical Building Code (CTE) came into effect – regarding aspects such as thermal insulation requirements; and four clusters based on winter and summer climate severity, in order to account for differences in construction and technical systems across different regions of the country. This results in 32 building typologies.

Regarding renovation scenarios, a total of 19 possible solutions – or combinations thereof – have been developed. Not all solutions apply to every baseline case, as specific factors related to the cluster (e.g., systems used only in certain climates) and building type (e.g., technical systems unsuitable for certain buildings) were taken into account. These solutions, along with the associated savings calculations, align with the grant conditions established in Royal Decree 853/2021 of October 5 – which regulates aid programs for residential renovation and social housing under the Recovery, Transformation and Resilience Plan – and are based on seven types of measures. Combinations of these measures yield the 19 solutions applied to the initial state (where applicable), resulting in over 7,500 variations of renovated buildings that have been modeled and calculated using the (CERMA) software programme.

Regarding economic calculations, investments are estimated based on the size of buildings and using the typology that is determined as described above. Prices of individual construction elements are extracted from publicly available databases. The corresponding grant percentage is determined by considering the full set of eligible measures (including accessibility and conservation) rather than solely energy efficiency measures.

6. Towards the future

The new 2026–2030 State Housing Plan, validated following the publication of Royal Decree 326/2026, introduces structural and management transformations designed to cement housing as the fifth pillar of the welfare state. What are the key features of the new 2026–2030 State Housing Plan?

The 2026–2030 State Housing Plan promotes energy-efficient renovation as a strategic priority, allocating 30% of its total budget (approximately €2.1 billion) to this area and to accessibility improvements. The plan aims to upgrade the quality of the existing housing stock, optimize its efficiency, and lower household energy bills in the face of the climate and supply crises.

The plan incentivizes ambitious efficiency improvements through funding amounts that increase in line with the savings achieved:

- Savings of between 45% and 60%: Aid can cover up to 65% of the cost, with a maximum of €13,000 per dwelling.
- Savings exceeding 60%: The subsidy can reach 80% of the investment, capped at €20,500 per dwelling.
- Economic vulnerability: In verified cases, aid can cover up to 100% of the project cost.
- Technological restriction: Investments in thermal generators using fossil fuels are not eligible for subsidies.

The plan breaks down the renovation effort into several areas to address different needs:

- Comprehensive building renovation: Focuses on the building envelope (facades and roofs) to reduce energy demand.
- Interior home renovation: Grants to improve comfort and reduce energy consumption in individual apartments within multi-unit buildings.
- Neighborhood regeneration: Funding for joint interventions involving buildings and public spaces in run-down or obsolete areas.
- Rural housing: Targeted aid to combat depopulation through the renovation of vacant or dilapidated homes.

To ensure the quality of the work, the plan requires:

- Existing building logbook (LEEx): A detailed assessment of the building's improvement potential and a prioritized action plan.
- Energy certificates: Submission of both pre- and post-renovation energy efficiency certificates is mandatory to verify the savings achieved.
- Renovation agents: The role of the renovation manager or agent is legally recognized

to facilitate the processing of grants and project execution for homeowners' associations (condominiums).

- This initiative aligns with European decarbonization goals and the National Integrated Energy and Climate Plan, aiming to transform the building stock so that in the future it will no longer be an inefficient energy consuming asset.

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The Israeli mortgage: one loan, many tracks

↪ By Eran Peter

1. Introduction; the market at a glance

Outstanding mortgage balance: ₪540 billion, about \$181 billion (September 2023, Bank of Israel (BOI) Research Department Discussion Paper (DP) 2024.13; United States dollar (USD) conversion at the 21 August 2026 exchange rate). About 98% of the stock is originated and held by banks; non-bank lenders hold under 2%. 36% of the outstanding balance is linked to the consumer price index (CPI). The Bank of Israel reports low, broadly stable household-credit delinquency; wartime payment deferrals are reported separately.

2. A mortgage is a portfolio, not a loan

Open an Israeli mortgage agreement and the first surprise is that the 'loan' is not one loan at all. It is a small portfolio of parallel sub-loans, known as tracks. Each track has its own interest-rate formula, indexation rule and maturity, yet all are secured by the same home and serviced through one monthly payment. A household borrowing ₪1.5 million might place 40% in a fixed unindexed track, 30% in prime – which reprices with every Bank of Israel decision and allows low-cost early repayment – and 30% in a CPI-linked track. The three pieces amortize side by side, and the borrower experiences their combined cash flow as a single mortgage.

Every track is fully described by two orthogonal choices, plus two free parameters:

2.1 Axis 1 – indexation. The principal is either CPI-indexed – the outstanding balance is revalued monthly by the consumer price index, and the quoted rate is a real rate – or unindexed, a plain nominal shekel loan. CPI is not the only possible anchor: a small family of tracks is linked to other indexes, including the exchange rate. In a foreign-exchange (FX)-linked track the borrower draws and repays in shekels, but the principal is linked to the USD

or euro (EUR) rate and the interest re-fixes off an offshore anchor (formerly London Interbank Offered Rate (LIBOR), now Secured Overnight Financing Rate (SOFR)/Euro Interbank Offered Rate (Euribor)) every 3–6 months – historically the track of choice for households with dollar income, now well under 1% of new volume (Taub, Figs. 4 and 7). A related exposure United States (U.S.) readers sometimes miss: purchase contracts on new construction are typically linked to the building-inputs index until delivery, so the buyer carries index risk on the unpaid contract balance even before the mortgage exists.

2.2 Axis 2 – rate fixation. The interest rate is either fixed for the life of the track, or variable. Variable is not one thing: what distinguishes the variable tracks is the reset frequency – continuous/monthly (the prime track, which

reprices at every Bank of Israel rate decision), annual, or once every five years (the dominant reset tenor, priced off government-bond yield anchors).

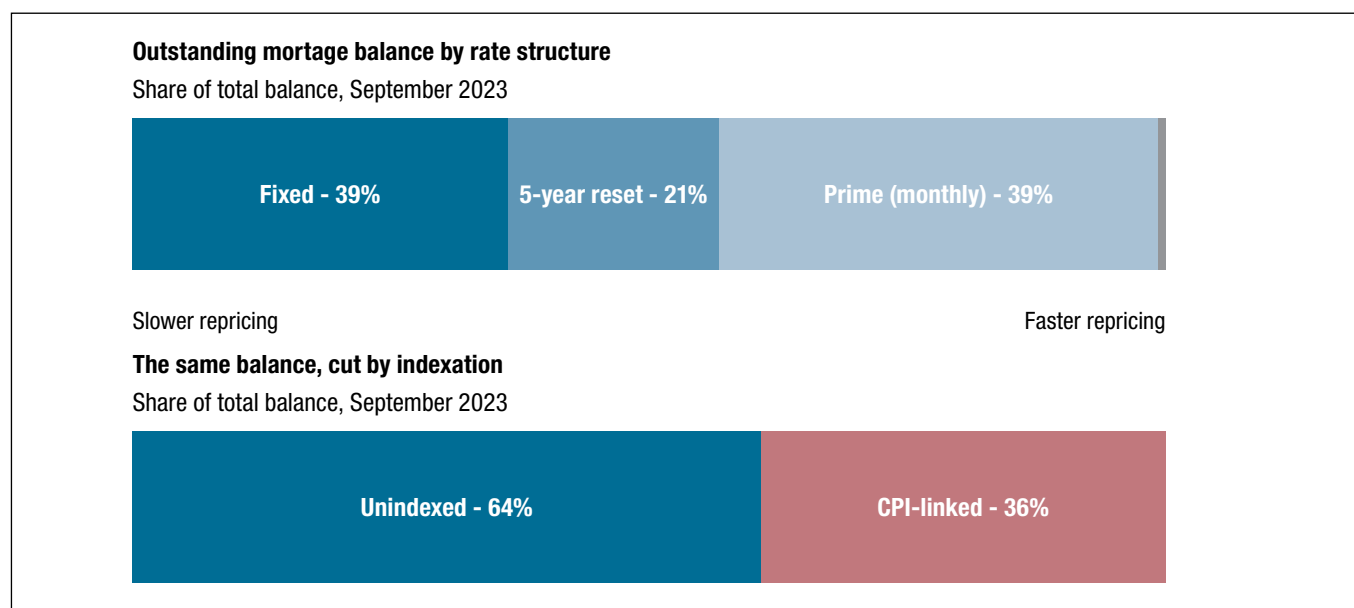
2.3 The remaining choices. Each track can have its own maturity, up to the 30-year regulatory cap. The borrower's central decision is how much principal to place in each track – inside the regulatory envelope described in §6.

Regulators classify these by reset speed: anything repricing within 5 years (prime, annual resets) is the risky "variable" bucket; the 5-year-reset tracks are "medium-fixed"; a track is "fixed" only if the rate never moves. That three-way cut – not the marketing names – is what the composition limits in §6 bind on.

TABLE 1 THE TRACK GRID

Rate mechanic	Unindexed (nominal ₪)	CPI-indexed (real)
Fixed for life	Fixed unindexed – "kalatz". Fully deterministic nominal payment. The safe anchor track; regulation requires at least one-third of every mortgage to be fixed-rate. Carries an early-repayment fee if market rates have fallen.	Fixed indexed – "katz". Real rate fixed; principal revalued by CPI monthly. Lower headline rate than kalatz, but the balance – and payment – drifts up with inflation. Early-repayment fee plus indexation adjustment.
Monthly / continuous	Prime track. Rate = prime plus or minus an agreed spread; prime = BOI policy rate + 1.5 percentage points (pp), repricing at every rate decision. Never CPI-indexed. Low-cost early repayment – the escape hatch of the mortgage.	Does not exist: the monthly-reset track is nominal by construction.
Annual reset	Variable unindexed, 1-year. Resets yearly off a bond-yield or bank anchor; also the home of the small FX-linked family.	Variable indexed, 1-year. Annual reset off a real (CPI-linked bond) anchor. Minor share.
Five-year reset	Variable unindexed, 5-year. Re-fixed off the unindexed government-bond curve. Low-cost early repayment at each reset window.	Variable indexed, 5-year. The classic Israeli track: real rate re-fixed off CPI-linked government-bond yields, principal indexed monthly.

FIGURE 1 OUTSTANDING MORTGAGE BALANCE BY RATE STRUCTURE AND BY INDEXATION, SHARE OF TOTAL BALANCE, SEPTEMBER 2023. BY RATE STRUCTURE: FIXED 39%; FIVE-YEAR RESET 21%; PRIME (MONTHLY) 39%.
By indexation: unindexed 64%; CPI-linked 36%. Sources: Caspi, Eshel & Segev, Bank of Israel Research Department DP 2024.13, §2.2; Standard & Poor's (S&P) Maalot (Feb. 2025).



Sources: Caspi, Eshel & Segev, Bank of Israel Research Department DP 2024.13, §2.2; S&P Maalot (Feb. 2025).

3. Start with inflation

To understand the Israeli mortgage, begin with a word that barely belongs in the American mortgage vocabulary: indexation. Roughly a third of the market is denominated not simply in shekels, but in purchasing power. The practice is a survivor of Israel's high-inflation era, when wages, savings, government bonds, and mortgages were tied to the CPI to keep the economy functioning. Inflation was subdued in 1985. The indexed infrastructure remained, because three balance sheets still need it:

3.1 The government. Israel still issues CPI-linked bonds as a core funding instrument – roughly 30% of government debt is CPI-indexed, among the highest shares in the Organization for Economic Co-operation and Development (OECD). This gives the market a deep, liquid real yield curve – and that curve is the pricing anchor for the indexed mortgage tracks.

3.2 The pension system. Israeli retirement saving is mandatory (since 2008) and structurally long CPI: the old funds were built on non-tradable designated bonds paying CPI + ~4.86% guaranteed by the Treasury; new funds carried a 30% designated-bond allocation until October 2022, when it was replaced by a Treasury-backed assured-return mechanism on the same slice. Insurers' annuity liabilities are effectively real liabilities. The

result is a large institutional investor base with a structural bid for CPI-linked, long-duration assets – government linkers, banks' CPI-linked bonds, and now the first residential mortgage-backed securities (RMBS). The household's pension is a real asset; their indexed mortgage track is a real liability. At the system level, the two sides of the CPI trade live in the same household.

3.3 The banks. Israeli bank asset-liability management (ALM) is run in three indexation segments – nominal shekel, CPI-linked, and FX – each with its own assets, liabilities, and gap limits. The indexed mortgage book is funded with CPI-linked liabilities: indexed deposits and savings schemes, and CPI-linked bank bonds bought largely by the pension and insurance money described above. The bank's inflation exposure is the net indexed position, which is managed to be small. Inflation risk therefore passes through the bank, from the indexed borrower to the indexed saver, with the bank earning the spread – the bank is an inflation conduit, not an inflation position.

3.4 Cash flow vs. wealth: how indexation actually works. Indexation changes the nominal balance, not just the next payment. In the Bank of Israel's worked example, a ₪100,000 (about \$33,000 at the 21 August 2026 exchange rate), 25-year, 3%-fixed indexed loan under 2.5% annual CPI begins at ₪474 a month (about \$159) and ends near

₪858. Nominal payments rise with the index, while the outstanding balance is revalued monthly. The crucial distinction is that cash flow adjusts gradually, but wealth is affected immediately through the principal balance; the contractual interest rate itself remains fixed in real terms.

4. The same word, two different machines

The two markets solved the same problem by hiding complexity in opposite places. In the United States, the borrower usually sees one nominal, freely prepayable loan; the machinery sits behind it, in government-sponsored enterprises (GSEs), mortgage-backed securities, and the to-be-announced (TBA) market. In Israel, the machinery sits inside the mortgage itself, while the funding model is comparatively plain: banks originate the loans and keep almost all of them on their balance sheets.

That inversion moves risk, choice, and pain to different balance sheets.

4.1 Rate risk sits in a different place. The U.S. borrower holds a free prepayment option: when rates fall they refinance; when rates rise they keep the old coupon – the lock-in effect. The investor bears the convexity. In Israel the risk is split by construction: the prime

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track floats (borrower bears rate risk, repriced monthly), the fixed track is protected but carries a prepayment fee (the bank recovers its present value (PV) loss, reducing the incentive to refinance when rates fall), and the indexed tracks shift inflation risk to the borrower's balance and payments.

Portability – The mortgage can move with the household. A borrower who sells one home and buys another can ask the bank to move the existing loan to the new property, retaining its tracks and contractual terms. The bank assesses the replacement security. If the sale comes first, a pledged deposit or bank guarantee can secure the loan for a period agreed with the bank, with repayment if no replacement home is bought by the deadline. The household can therefore move without automatically giving up favourable borrowing terms.

4.2 No indexation in the U.S. product. The U.S. never adopted a CPI-linked household mortgage. Israel kept the indexed product because the entire local capital market – government debt, pension liabilities, bank funding – is partly CPI-linked, so the bank can fund an indexed asset with an indexed liability – the ecosystem laid out in §3 above.

4.3 Recourse and insurance change the credit product. Israeli mortgages are full-recourse, and borrowers carry life and property insurance assigned to the bank. The Bank of Israel's 2025 Annual Report says low repayment-arrears levels were maintained as credit expanded. Its 2024 Financial Stability Report described household-credit delinquency as low and broadly stable and reported housing loans still under wartime payment deferrals at about 4% of outstanding housing credit in mid-2024. Those deferrals were a policy accommodation, not a measure of realized credit losses, and should be read separately from arrears.

4.4 Scale and concentration: small country, very large lenders

Israel is a small country with very large mortgage lenders. Five banking groups hold essentially the entire ₪540 billion-plus mortgage stock. The market leader, Mizrahi-Tefahot, holds roughly a third of it on its own balance sheet. Measured against the country's population, Israel's leading banks rank among the world's largest balance-sheet mortgage lenders.

The concentration made the macroprudential regime in §6 comparatively easy to enforce: five supervised balance sheets, one regulator.

4.5 A country with almost nowhere to sprawl

U.S. readers routinely misjudge the collateral because they misjudge the geography and the demography. Israel is almost exactly the size of New Jersey (~22,000 km² vs. ~22,600 km²), and holds a similar population (~10M vs. ~9.3M). Driving across the country's width takes 20-45 minutes; the full north-south length is about five to six hours. Roughly 90% of land is state-owned, so supply responds slowly and politically.

Demography and housing demand. Onto that footprint, add the OECD's fastest-growing developed population: a fertility rate of ~2.9 children per woman – about 1.4 above the OECD average (~1.5) and nearly double the U.S. rate (~1.6) – life expectancy of ~83-84 years, and ~2% annual population growth. Household formation chronically outruns completions.

The credit consequence is more nuanced than 'no vacancies, therefore no defaults.' Israel's dense housing market supports resale and reletting, while full recourse, mandatory insurance and lender workouts add protection. Arrears have remained low, and wartime payment deferrals were tracked separately from arrears and credit losses.

TABLE 2 ISRAEL AND THE UNITED STATES COMPARED

Dimension	Israel	United States
Denomination	Nominal ₪ or CPI-indexed ₪ (36% of stock), chosen per track	Nominal USD only – no indexed household product
Product form	One loan = blend of 2-4 tracks, each with its own mechanics and maturity	One loan, one rate in the dominant form. Thirty-year fixed-rate mortgages predominate; adjustable-rate mortgages (ARMs) were 7.7% of applications in the week ended 14 Aug. 2026 (Mortgage Bankers Association).
Rate resets	Monthly (prime = BOI + 1.5 pp), annual, or five-year, per track	Fixed for 30 years, or ARM resets after teaser period
Prepayment	Fee on fixed tracks; low-cost early repayment on prime and at five-year reset windows	Free at any time on agency loans; refi waves and lock-in
Funding	Originate-and-hold: ~98% bank balance sheet; public RMBS only emerging	Agency/GSE entities and pools held about 69% of household one-to-four-family mortgage liabilities in 2026 Q1 (Federal Reserve Financial Accounts).
Recourse	Full recourse	Non-recourse in many states
Credit enhancement	Mandatory life + property insurance assigned to lender; loan-to-value (LTV) cap 75%	Private mortgage insurance (PMI) above 80 LTV; GSE guarantee for investors
Affordability	Payment-to-income (PTI): this mortgage payment / net income; cap 50%, effective 40%	Debt-to-income (DTI): all debt payments / gross income; qualified mortgage (QM) benchmark 43%
Tax treatment	No owner-occupier mortgage-interest deduction	Mortgage interest deductible for eligible itemizers
Recent credit performance	BOI reports low, broadly stable household-credit delinquency; housing loans still deferred were about 4% of housing credit at mid-2024 and were reported separately from arrears and losses.	Cyclical credit risk is distributed through borrower equity, mortgage insurance, agency guarantees and private structures.

Land registration. Land registration in Israel reflects successive layers of Ottoman law, British Mandate administration and Israeli legislation; religious endowments such as waqf add further complexity. The historical, legal and political complexities of land registration lie beyond the scope of this paper, which focuses on the mortgage as a financial product.

5. DTI is not PTI

Cross-border conversations often treat the two labels as synonyms. They are not. The distinction matters whenever underwriting standards are compared:

5.1 U.S. DTI (debt-to-income) is a household leverage measure: all monthly debt obligations – the mortgage payment (principal, interest, taxes and insurance) plus cards, auto, student loans – divided by gross (pre-tax) monthly income. Classic benchmarks are 28% front-end / 36% back-end; the QM rule used 43%; agency automated underwriting approves up to ~50%.

5.2 Israeli PTI (payment-to-income) is a single-obligation cash-flow measure: this mortgage's monthly payment divided by net disposable income (after tax, and net of existing fixed loan payments). The regulatory cap is 50%; above 40% the loan is risk-weighted 100%, so ~40% is the practical ceiling – and banks must compute it under BOI-supplied rate and inflation stress paths, not the teaser payment.

So a 40% Israeli PTI is substantially tighter than a 43% U.S. DTI: the denominator is smaller because it is net rather than gross, and the payment is stressed. The same number can therefore describe two very different borrowers.

6. The regulatory envelope

Israel's banking supervisor does something subtler than set mortgage prices: it writes the grammar from which lenders and borrowers build the loan. Three families of borrower-based limits apply at origination:

6.1 Composition limits – who bears rate risk

The composition rule fixes how much of the principal may float at origination. From 2013 to December 2020, at least one-third of every new loan had to be fixed for life, no more than one-third could sit in fast-reset or prime tracks, and the remaining share was free to be placed in fixed or five-year-reset tracks. Since January 2021, the rule is simpler: at least one-third fixed for life, no more than two-thirds variable, and prime may fill the entire variable allowance.

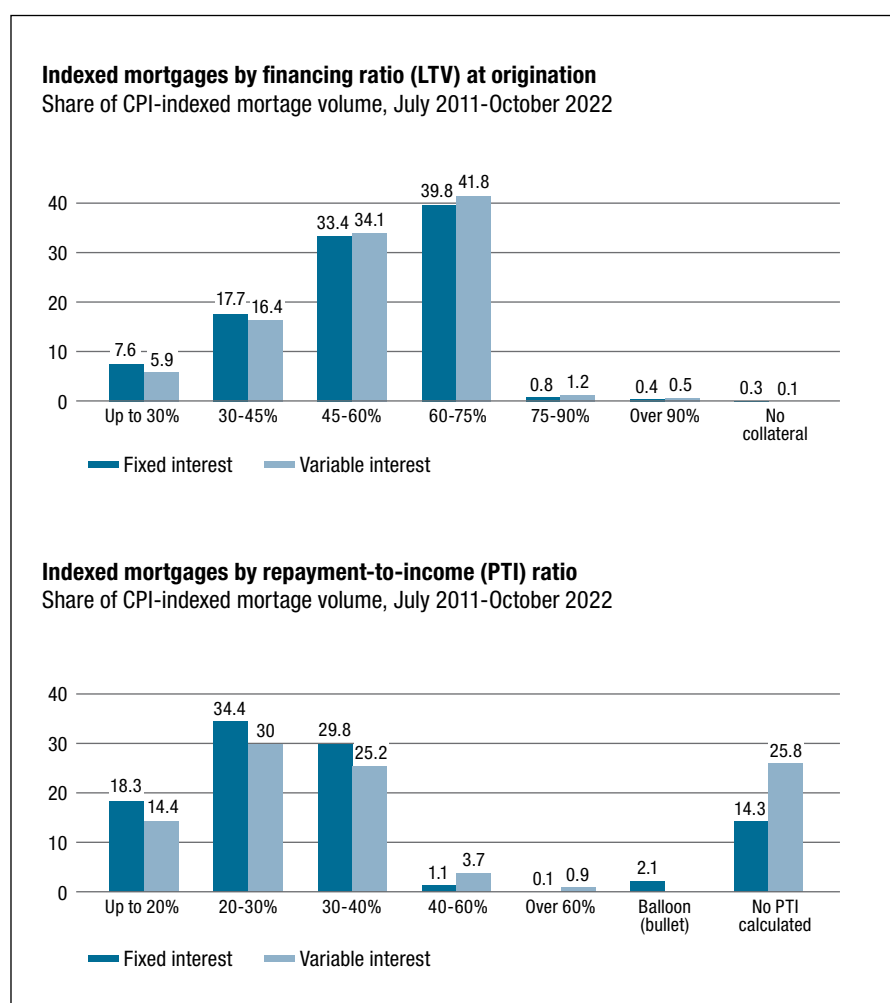
(Sources: Bank of Israel Banking Supervision; BOI DP 2024.13 §2.2; Bank for International Settlements (BIS) Committee on the Global Financial System (CGFS) Papers No. 69, Israel case study.)

6.2 Leverage and affordability limits

TABLE 3 BORROWER-BASED LIMITS AT ORIGATION

Instrument	Limit	Detail
LTV cap	75% / 70% / 50%	75% first (sole) home; 70% upgrader; 50% investor or other borrower. In force since Nov. 2012.
PTI cap	50% hard / 40% effective	Monthly payment may not exceed 50% of net income; above 40% the loan carries a 100% risk weight. Tested under BOI paths.
Maturity cap	30 years	Maximum final maturity of any track.
Recourse	Full	Limits strategic default; borrower remedies remain subject to law and workout practice.

FIGURE 2 CPI-INDEXED MORTGAGES BY LOAN-TO-VALUE RATIO AT ORIGATION (UPPER PANEL) AND BY PAYMENT-TO-INCOME RATIO (LOWER PANEL), share of CPI-indexed mortgage volume, July 2011–October 2022, fixed-interest versus variable-interest loans.



Sources: Kimhi & Meshulam, Taub Center (2023), Figures 2 and 5. Some observations have no calculated PTI.

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6.3 Where the indexed stock actually sits against those limits

Two distributions from the Taub Center study, covering all CPI-indexed mortgages originated July 2011–October 2022, split by fixed vs. variable interest. The stock hugs the regulatory ceilings from below: almost everything sits under 75% LTV. Where PTI is calculated, most lending falls below 40%.

6.4 How the envelope was built

2010. First macroprudential steps. Extra capital and provisioning against high-LTV, floating-rate housing credit.

April 2011. Prime-share cap. Rate resets within five years capped at one-third of a new loan.

November 2012. LTV caps. 75% first home / 70% upgrader / 50% investor.

August 2013. Full composition rule. At least one-third fixed; no more than two-thirds variable; PTI and maturity limits.

January 2021. Prime cap lifted. Prime permitted to fill the two-thirds variable allowance.

August–September 2022. Transparency reform. Uniform track baskets and total expected cost make bank offers comparable.

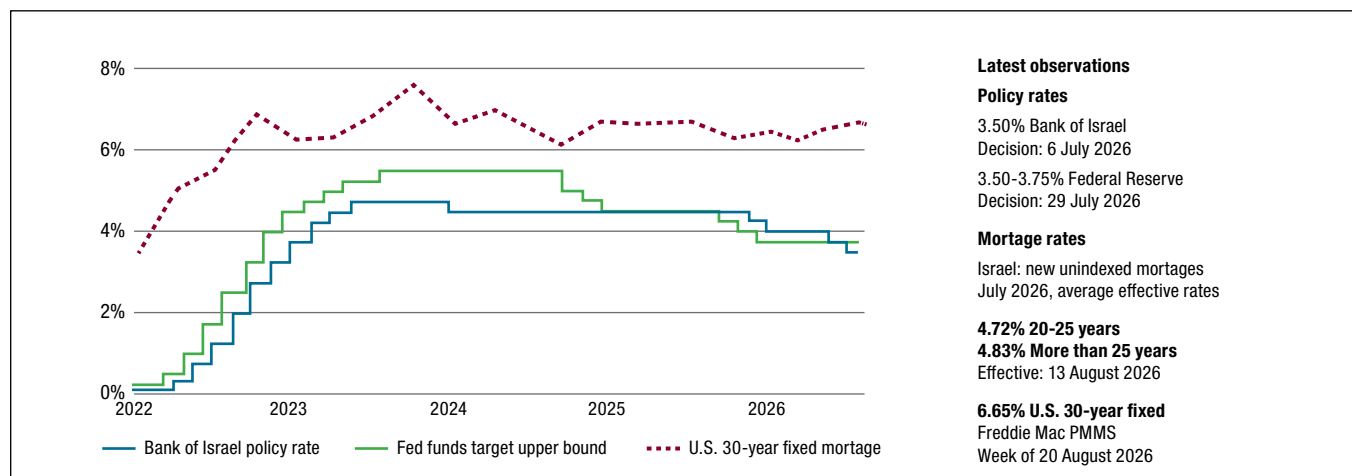
7. Monetary policy runs straight through the tracks

In Israel, monetary policy does not wait for refinancing season. It travels down the prime track and reaches the household budget within weeks. During the 2022–23 tightening, the average monthly mortgage payment rose from

₪3,873 in March 2022 to ₪4,808 in June 2023 – about 25% in fifteen months – with the burden concentrated among borrowers who had placed more of their loan in prime. Set against the United States, the current snapshot makes the transmission contrast visible. The Bank of Israel policy rate is 3.50%. Average effective rates on new unindexed Israeli mortgages in July 2026 were 4.72% for 20–25 years and 4.83% beyond 25 years; in the United States, the 30-year fixed averaged 6.65% in the week of 20 August 2026. The comparison is not a forecast or a borrower quote. It shows how quickly policy reaches Israeli prime-track cash flows, while U.S. borrowers with existing fixed-rate loans remain insulated – and locked in.

FIGURE 3 POLICY AND MORTGAGE RATES: ISRAEL AND THE UNITED STATES, 2022–2026, PERCENT

Solid lines show policy rates; the dashed line shows the U.S. mortgage rate. The Israeli prime benchmark sits 1.5 percentage points above the Bank of Israel policy rate. The latest-observations panel reports July 2026 average effective rates on new unindexed Israeli mortgages separately by maturity: 4.72% for 20–25 years and 4.83% for more than 25 years. The U.S. 30-year fixed rate is 6.65% for the week of 20 August 2026. Sources: Bank of Israel and Federal Reserve policy decisions; Bank of Israel mortgage-interest data; Freddie Mac Primary Mortgage Market Survey (PMMS). Current observations and dates are in Table 4.



Sources: Bank of Israel; Federal Reserve; Freddie Mac PMMS. Current observations and dates match Table 4.

7.1 Current-rate snapshot: Israel and the United States

TABLE 4 CURRENT-RATE SNAPSHOT

Series	Current observation	Source / date
BOI policy rate	3.50%	Decision 6 July 2026; prime = policy + 1.5 pp
Israel unindexed mortgage (new, 20yr+)	4.72% (20–25 yrs); 4.83% (>25 yrs)	BOI weighted averages on new unindexed mortgages in July 2026; effective 13 Aug.
Fed funds target range	3.50–3.75%	Federal Open Market Committee (FOMC) decision 29 July 2026
U.S. 30-year fixed-rate mortgage (FRM)	6.65%	Freddie Mac PMMS, week of 20 Aug. 2026

Sources and cutoff: Bank of Israel policy decision of 6 July 2026 and July 2026 average unindexed mortgage rates (effective 13 August); Federal Reserve decision of 29 July; Freddie Mac PMMS of 20 August. Values are dated observations, not borrower quotes.

Further reading

Stanley Fischer, 'Inflation and Indexation: Israel' (1985), in J. Williamson (ed.), *Inflation and Indexation: Argentina, Brazil, and Israel*, Institute for International Economics, pp. 57-84. The canonical account of how Israel became an economy-wide indexed system.

Caspi, Eshel and Segev, 'The Mortgage Cash-Flow Channel', Bank of Israel Research Department Discussion Paper 2024.13. Section 2.2 formally describes the track system; the paper then quantifies the 2022-23 pass-through with loan-level data.

Ziv Naor (Bank of Israel), Israel country case study, BIS CGFS Papers No. 69 (2023). The regulatory-design view: why each macroprudential tool was introduced, in what order, and what it did.

Kimhi and Meshulam, 'Interest, Inflation, and Mortgages in Israel', Taub Center (2023). Scenario arithmetic on how each track responds to rates versus inflation.

S&P Maalot, 'Israel's Public RMBS Market Takes Off' (February 2025). The funding side: how the track mix looks from inside a securitization pool.

Federal Housing Finance Agency (FHFA), 'The Lock-In Effect of Rising Mortgage Rates'. The U.S. counterpart risk: what happens when the borrower holds the whole prepayment option and rates rise.

Bank of Israel, Financial Stability Report 2024 and Annual Report 2025. Public performance evidence used here: low, broadly stable household-credit delinquency and low repayment-arrears levels; wartime mortgage deferrals are reported separately from arrears and losses.

Bank of Israel, exchange rates and average mortgage-interest data. Representative exchange rate, 21 August 2026 (₪2.991 per US dollar); average effective rates on new unindexed mortgages for July 2026, effective 13 August.

Federal Reserve, Financial Accounts of the United States, Table L.218 (2026 Q1). Agency/GSE entities and pools held \$9.55 trillion against \$13.82 trillion of household one-to-four-family mortgage liabilities, about 69%.

Mortgage Bankers Association, Weekly Mortgage Applications Survey (19 August 2026). ARM share was 7.7% in the week ended 14 August 2026; cited as a contemporaneous product-flow indicator, not a stock measure.

Bank of Israel, Federal Reserve and Freddie Mac, current-rate releases. Policy decisions of 6 July and 29 July 2026; Freddie Mac Primary Mortgage Market Survey for the week of 20 August 2026.



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