Chapter 8:

Beyond the Conventionality of Housing Finance

Quick facts

1. The global financing requirement for adequate and affordable housing is estimated at US$3–4 trillion annually through to 2030, in addition to significant funding needed to maintain and upgrade existing housing stock.

2. Conventional housing finance excludes the majority of households, with only one in four (25.5 per cent) of eligible applicants securing a loan in 2023, while the majority were ineligible to apply.

3. Close to half (43 per cent) of the urban workforce is informal, rising to as much as 77.9 per cent in low-income countries – most of whom are unable to access conventional housing finance.

4. While home ownership remains the dominant tenure form, accounting for three quarters (74.9 per cent) of households globally in 2023, a significant and growing share (15.9 per cent) rely on rental housing.

5. The majority of urban households cannot viably access long-term homeownership finance, making affordable rental or social housing the most realistic option.

Policy points

1. Effective and inclusive housing finance should balance the dual role of housing as an economic asset and a basic human right, combining sustainable financing with tailored social safeguards.

2. To expand inclusion, housing finance need to move beyond mortgage-centric models to support incremental and microfinance loans, savings-based pathways, rent-to-own and rental housing, collective ownership models, and targeted non-debt interventions.

3. Robust de-risking frameworks that allocate risks transparently across government, developers, investors and households, such as insurance, guarantees, blended finance and securitization, can help catalyse the delivery of affordable housing at scale.

4. Urban land should be leveraged as a strategic asset, using land banking, leases, and value capture to curb speculation and channel gains into affordable housing.

5. National housing strategies should prioritize the financing of large-scale rental and social housing as a central pillar, supported through non-speculative land management, public-private partnerships and and long-term affordability safeguards.

While adequate housing has been firmly established on the global development agenda as a fundamental right, housing finance policy has largely been shaped by framing housing as a market commodity. This has contributed to widespread outcomes of systemic exclusion, declining affordability, widening inequalities, and the harmful financialization of housing, with impacts evident across both developed and developing economies.[1] The "enabling markets" framework championed in the 1990s[2] positioned the market, rather than the state, as the primary driver of housing delivery. As a result, many governments undertook wide-ranging policy, institutional and regulatory reforms to enable more efficient private home ownership form of housing finance, driven by the assumption that an "enabled" market would naturally provide for all. In subsequent years it has become clear that, while markets matter a great deal, they have consistently failed to serve the poorest and most vulnerable groups. The resulting market versus needs gap, and by extension the gap in conventional housing finance, is reflected in the scale and persistence of the global housing crisis. To achieve adequate housing for all, it is estimated that US$3–4trillion annually is required through 2030, in addition to substantial investment required to maintain and upgrade existing housing stock.[3] Consequently, any meaningful response to the global housing crisis should seek to develop and scale financing solutions that can reach those excluded by conventional housing finance.

The UN-Habitat-led Open-Ended Working Group on Housing defines housing finance as "the systems, instruments and institutions that enable individuals, households and developers to access the capital needed for the construction, purchase, improvement or rental of housing".[4] Put another way, housing finance should fundamentally enhances efficient flow and affordability of capital across the housing value chain from land acquisition and planning to design, construction, use, maintenance, renovation and retrofitting. It further follows, in advancing adequate housing as a basic human right for all, housing finance needs to support a continuum of solutions to meet the needs of diverse income groups, tenure options, and delivery models beyond individual mortgage- based homeownership tenure, especially those excluded from the conventional systems.

Any meaningful response to the global housing crisis should seek to develop and scale financing solutions that can reach those excluded by conventional housing finance

For a majority of those excluded, long-term debt-based homeownership finance for housing in urban areas may not be viable option. Policy therefore needs to shift decisively toward social protection and targeted subsidies that safeguard against further shelter induced impoverishment. Beyond mortgages, financing large-scale social and private rental solutions, as well as incremental and collectively owned housing arrangements, are critical pathways for realizing the right to adequate housing for all. It is also crucial that governments and financial institutions recognize the prevalence of informal workers representing close to half (43 per cent) of the urban workforce and rising to as much as 77.9 per cent in low-income countries, whose irregular or cash-based income limit their ability to access long-term debt-based forms of housing finance.

Aerial view of standardized houses of the Minha Casa Minha Vida Program of the State of Sao Paulo, Brazil © Shutterstock

Given the severely constrained fiscal space that national and local governments are operating in today, significant shifts are needed to unlock financing beyond public funding sources to develop adequate and affordable housing at scale.[5] This requires mobilising housing finance from a broader ecosystem of funding sources, alongside more systematic approaches to identifying, pricing, and managing risks—ranging from household credit risk and developer performance to environmental and climate risks. It further calls for stronger recognition of the interdependencies between financial services, construction systems, and land markets, as well as the expanded role of non-bank actors and data and technology enabled solutions, as illustrated in Figure 8.1.

Figure 8.1: The housing finance ecosystem

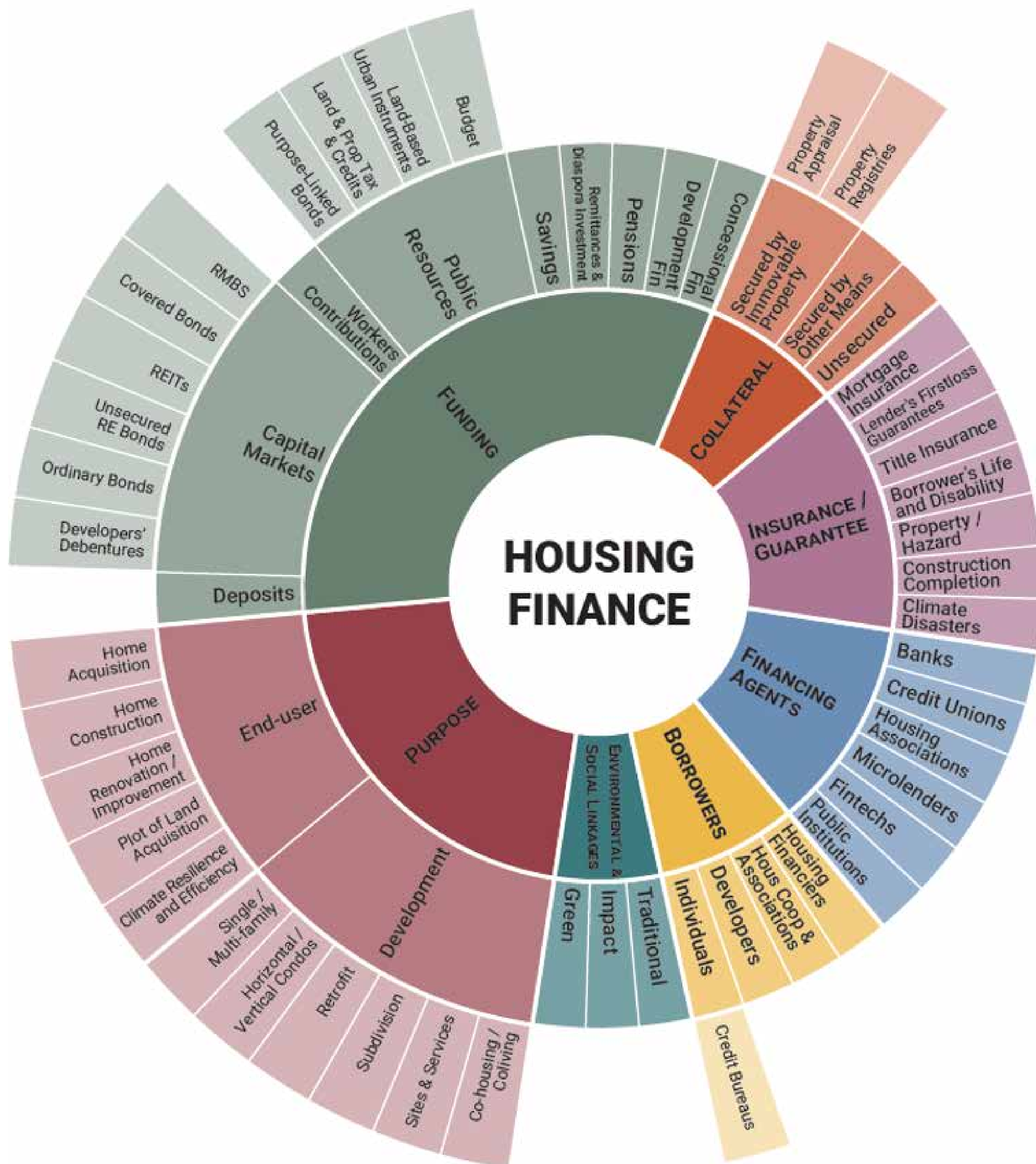


Image credit: Claudia Magalhães and Rennata Magalhães.

It is essential to recognize that housing needs are met through a wide range of tenure forms

Anchored on evidence and case studies, this chapter advances discussion an inclusive and resilient housing finance framework that looks beyond the narrow logic of market delivery. Instead, it centres housing as a basic human right while being attentive to market imperatives. The chapter contributes to debates on how to broaden and deepen housing finance beyond the conventional mechanisms to accelerate the realization of the right to adequate and affordable housing for all.

The chapter includes:

- An overview of housing finance needs across different regions, demographics and socioeconomic groups, highlighting who is excluded from conventional systems and why. It also examines the risks of extending conventional models to these groups (Section 8.1).
- An exploration of successful alternative financing mechanisms at household, community, city and national levels, including inclusive mortgages, pro-poor subsidies, government-led savings schemes and microfinance, analysing their features and the barriers to broader institutionalization and scale (Section 8.2).
- An examination of large-scale housing production, assessing how developers, investors, and especially local and national governments can deliver adequate and affordable housing within a rights-based framework. It also critically reflects on strategies for de-risking affordable housing (Section 8.3).
- A short framework for building an inclusive and resilient housing finance ecosystem, bringing together resource mobilization, land rights, risk management, digitalization and monitoring (Section 8.4).
- Some final concluding remarks, drawing on the analysis in the chapter (Section 8.5).

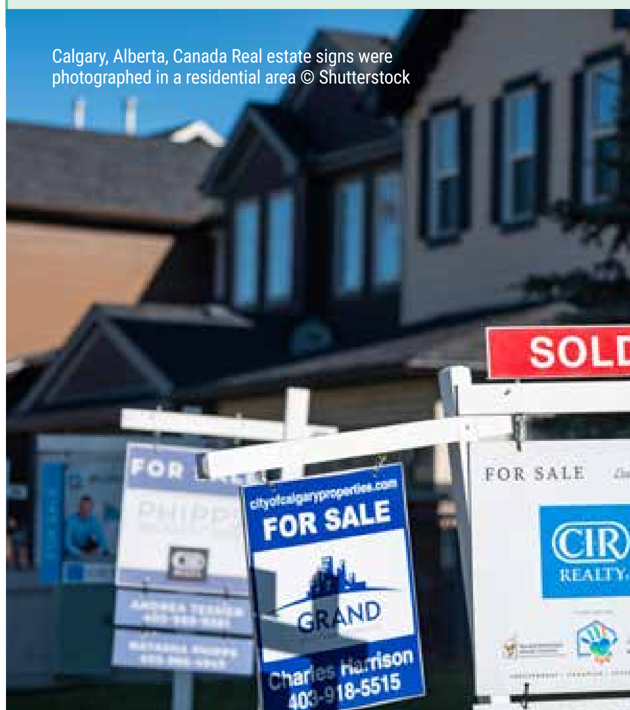
8.1 Assessing Housing Needs and Housing Finance Gaps

Over the last three decades, a succession of global milestones – from the United Nation's articulation of the right to adequate housing in 1991 and the Habitat Agenda in 1996 to the formulation of the Sustainable Development Goals (SDGs) in 2015 and the New Urban Agenda the following year – have progressively affirmed adequate housing as a basic human right. However, policy around housing finance has developed dominantly on the framework of housing as a market commodity. Conventional housing finance is typically structured through mortgage-based financing tied to secure and collateralizable property title and market-priced interest rate based on assessed credit risk profile of the borrower (Box 8.1). While this structure supports capital market development and has proved relatively effective for middle- and higher-income groups, it is increasingly evident that markets alone cannot

Box 8.1: Moving beyond the dominant paradigm of homeownership

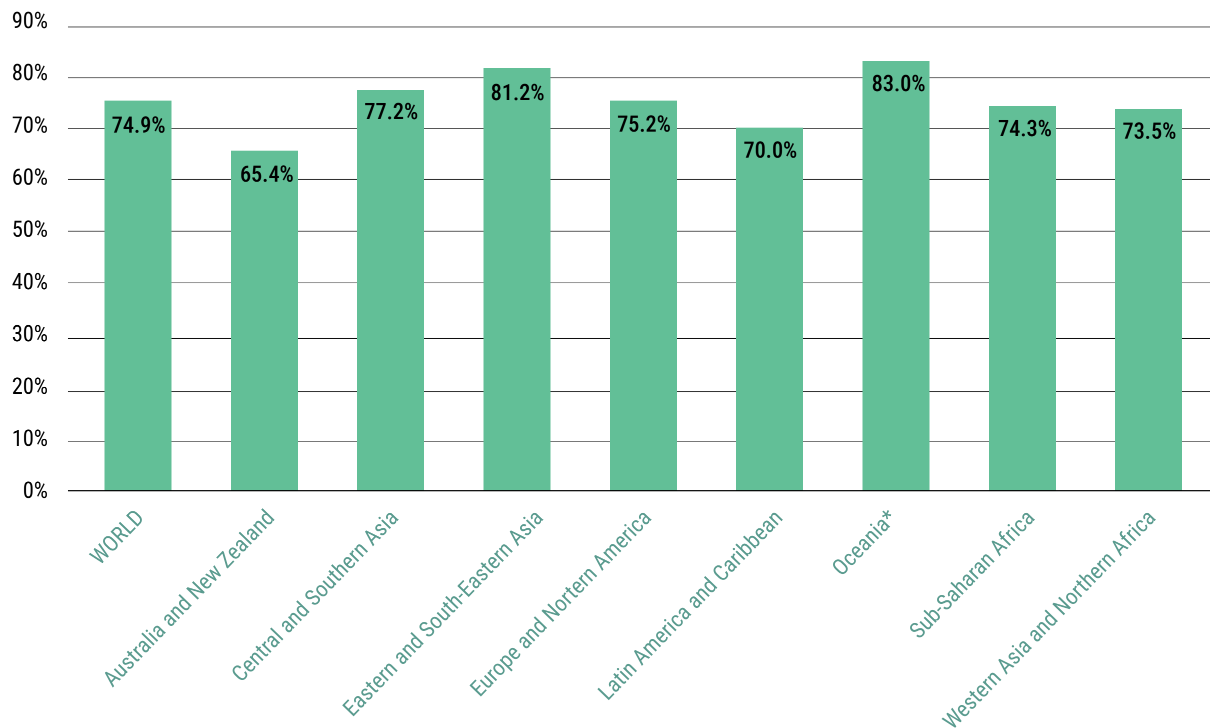
From the outset, it is essential to recognize that housing needs are met through a wide range of tenure forms, including outright homeownership, private and social rental housing, cooperative and mutual ownership, community-led land and housing arrangements, supportive or group housing, and various forms of incremental or hybrid tenures. Yet this diversity is rarely reflected in conventional housing finance systems, where the focus is primarily on homeownership. As argued in this chapter, there is a significant proportion of the population for whom ownership-focused financing is unfeasible and even potentially harmful.

Although homeownership remains the dominant tenure globally, accounting for an estimated 74.9 per cent of occupied housing units in 2023 (see Figure 8.2), down slightly from 75.5 per cent in 2020, there is substantial variation across countries. Homeownership rates range from as high as 98 per cent in Uzbekistan to just 36.4 per cent in Colombia.[8] Rental housing represents the second most prevalent tenure, accommodating a growing share of the population – around 17 per cent globally in 2023, up from 13.5 per cent in 2020 which is equivalent to more than one billion people worldwide. In a significant number of countries, the proportion of the population renting exceeds 30 or even 40 per cent.[9] Consequently, there needs to be a similarly diverse range of finance solutions to respond to these different housing types.



Calgary, Alberta, Canada Real estate signs were photographed in a residential area © Shutterstock

Figure 8.2: Percentage of occupied housing units that are owner-occupied as of 2023



Source: UN-Habitat, 2026.

efficiently and equitably deliver adequate and affordable housing for all income groups, particularly low-income and vulnerable households[6] who remain structurally excluded either through lack of credit histories, collateralizable assets or the imposition of inflated interest rates due to their perceived risk.[7] The outcome is that housing stands out as one of the most visible arenas of inequality in today's urbanized world.

While this chapter will in due course explore potential solutions and innovative approaches, this first section examines the exclusionary dynamics experienced by certain groups, including the homeless, displaced groups and informal workers. It then assesses to what extent the conventional finance system is not reaching the majority of households worldwide and the barriers contributing to their exclusion. From there, it attempts to identify four distinct groups of urban residents, arguing that each requires a specific form of assistance.

The discussion in Section 8.1 will examine the issue of financing shortfalls from the perspective of home ownership. The analysis of rental housing supply solutions, which are unquestionably a central pillar of inclusive and affordable housing, will be taken up in Section 8.3 discussing capital and risk structuring for large-scale developers, including city and national governments. Other tenure forms will be addressed through a case study approach in Section 8.2.

Markets alone cannot efficiently and equitably deliver adequate, and affordable housing for all income groups

8.1.1 Identifying key groups excluded from conventional housing finance

This chapter reframes housing finance within a right-based framework, recognizing its dual role as an enabler of housing as a basic human right and as a market commodity. To achieve this, it is essential to look beyond the aggregate global and regional statistics to get a clearer picture of the people behind the numbers. Understanding the perspective of low-income and excluded households helps illuminate the gaps and systemic barriers they face in accessing conventional housing finance. Some of the key groups currently sidelined by the system as a result of lack of resources, uncertain legal status, societal barriers or institutional discrimination are discussed below.

People experiencing homelessness constitute the most visible group lacking access to adequate housing. This group includes internally displaced persons, refugees and migrants who often lack any form of secure shelter: globally, at least 133 million people were estimated to be displaced by conflict, persecution, violence and natural disaster as of the end of 2024,[10] a figure that is likely a gross underestimation and does not include the millions of urban residents subjected to evictions every year (Chapter 1). Displaced persons, refugees and migrants often faces a range of legal and structural barriers to accessing adequate housing, including lack of documentation, the absence of local credit history, language barriers and discrimination. Homelessness cuts across both developing and developing economies, with estimates of at least 2.2 million people experiencing homelessness in OECD and EU countries as of 2024.[11]

Informal workers comprise the largest socioeconomic group at high risk of lacking access to adequate housing, accounting for 58 per cent of workers globally – amounting to around 2 billion workers.[12] The patterns of informal employment, however, vary sharply by location, with rural workers globally twice as likely to be informal (82 per cent) as their urban counterparts (43 per cent). Even within urban areas, informality differs significantly across income groups: in high-income countries only 13.6 per cent of urban workers are informally employed, while this rises dramatically in lower-middle-income countries (72.9 per cent) and low income countries (77.9 per cent).[13] There is strong evidence that informal housing and informal employment are deeply interlinked and mutually reinforcing,[14] with informal workers disproportionately residing in slums and informal settlements (as discussed in Chapter 5). Informal workers typically earn substantially lower and more unstable incomes than those in formal employment, effectively pricing them out of formal housing markets and pushing them toward peripheral informal settlements with inadequate housing conditions and little or no basic services.[15] Compounding this, many informal settlements sit on land with insecure or illegal title, which systemically locks them out of formal housing finance because of a lack of lienable collateral.[16]

Beyond informal workers, other vulnerable groups disproportionately experience a lack of adequate housing based on their demographic, environmental and socioeconomic characteristics. Older persons increasingly face lack of housing as well as inadequate, inaccessible or unaffordable housing, particularly in urban areas, with many occupying housing that lacks accessible infrastructure or social support.[17] Older persons tend to have diminishing income sources, limiting their ability to secure adequate housing with sufficient supporting infrastructure.[18] *Single-parent households*, especially those that are female-headed, face significant barriers to securing adequate housing in urban areas and are also disproportionately at risk of homelessness due to lower average incomes, limited access to affordable childcare and discriminatory socio cultural norms.[19] Meanwhile *people living with disabilities,* including people with reduced mobility, face higher barriers in accessing adequate, affordable and accessible housing. They are more likely than people without disabilities to face severe housing cost overburden, live alone and experience social isolation, as well as remain in the parental home well into adulthood due to the difficulty of securing suitable housing.[20]

People experiencing homelessness constitute the most visible group lacking access to adequate housing.

People living in territories with an elevated climate risk are also experiencing increasing housing insecurities as more extreme weather drives large-scale housing and infrastructure destruction. Across the Caribbean and the Pacific, islands and coastal cities, especially in Small Island Developing States, are experiencing increasing inundation and

Wheelchair Ramp fitted to front of home © Shutterstock

Table 8.1: Summary of social groups with an elevated risk of inadequate housing

Group	Estimated scale	Key drivers of high risk of lacking access to adequate housing
People experiencing displacement or homelessness	Significant displacement (at least 133 million internally displaced persons and refugees globally as of 2024) as well as widespread homelessness (2.2 million people in OECD and EU countries alone)	• Legal exclusion • Lack of documentation • No local credit history • Language barriers and discrimination • Restricted access to formal housing or finance
Informal workers	Around 2 billion workers globally (approximately 58 per cent of global workforce). In urban areas, the global proportion is 43 per cent, ranging between 13.9 and 77.9 per cent, depending on the region	• Low and unstable incomes • Concentration in informal settlements which lack lienable collateral
Older persons	Increasingly face inadequate, inaccessible or unaffordable housing, particularly in urban areas	• Declining incomes • Lack of accessible housing • Insufficient social support
Single-parent households (especially female headed)	No single global figure, but consistently overrepresented among the urban poor	• Lower average incomes • Unaffordable childcare • Discriminatory sociocultural norms
People living with disabilities	Estimated at around one-quarter of adults in OECD and EU countries	• Inaccessible built environments • Limited availability of adapted units • Higher likelihood of cost overburden and living alone
Climate-vulnerable populations	No single global figure, but escalating and widespread across regions	• Housing destruction • Rising insurance premiums • Chronic exposure to hazards • Increasing cost/decline of insurability in high risk zones

erosion. For instance, when Tropical Cyclone Pam hit Vanuatu in 2015, over 16,000 housing units were damaged and over 65,000 people – roughly one quarter of the national population at the time – were displaced from their homes.[21] Interlinked to the destruction of housing, the affordability and availability of property insurance for such high-climate-risk territories is rapidly deteriorating.[22] For instance, in fire-affected ZIP codes of Altadena and Pacific Palisades in California (US), homeowners' insurance premiums rose by 26 and 33 per cent above inflation respectively between 2018 and 2022.[23] In the Caribbean, annual premiums for property insurance have also risen sharply in response to increasingly frequent and severe storms in the region, even for households that have not incurred any direct damage or made any claims.[24]

Table 8.1 summarises the key vulnerable social groups and the key drivers of their elevated risk to lacking access to adequate housing. Recognizing the specific challenges that these and other vulnerable groups face is key to tailoring an inclusive and resilient housing finance system, particularly considering the diversity of characteristics and needs. Consequently, a key argument throughout this chapter is the need for diverse and flexible financing models to support the majority of the global population currently excluded from conventional housing finance.

People living in territories with an elevated climate risk are also experiencing increasing housing insecurities as more extreme weather drives large-scale housing and infrastructure destruction

8.1.2 Evaluating housing finance gaps

Financing remains one of the most significant barriers to achieving adequate housing for all, particularly for low-income and vulnerable groups. Consequently, understanding the limitations of conventional housing finance systems is of utmost importance to move toward more comprehensive, inclusionary frameworks. This section will draw out the scale of the shortfall from the perspective of home ownership and the limited coverage of formal financing in this area.

From a household's perspective, a housing unit often represents the most significant financial investment made in a lifetime. Conventional housing finance for homeownership is typically accessed through a bank-mediated mortgage arrangement. A mortgage is a powerful financing tool that converts massive capital demands into manageable payments. Moreover, by relying on collateral – established through legally recognized tenure rights over immovable property – mortgages are priced at lower interest rates compared to unsecured debt, as the use of property as collateral substantially reduces the lender's credit risk. While mortgage lending often relies on relatively standardized eligibility criteria, a significant majority fall outside these parameters, making it difficult or impossible for them to secure any loans. The result is huge variations in access at regional and even intra-regional levels.

Globally, only one in four applicants (25.5 per cent) successfully secured a housing loan in 2023. It should be noted that, as the majority of households in many developing countries are not even eligible to apply, the actual proportion of the global population excluded from formal housing finance is likely much higher. Though this marks an increase from 19.8 per cent in 2010, it nevertheless highlights the limited reach of conventional housing finance, particularly in certain regions (Figure 8.3). For instance, while Australia and New Zealand region records 71.5 per cent housing loan access, in Sub-Saharan Africa this falls to just 8.9 percent. One way of interpreting these disparities is by regional income level. While some high-income economies such as Australia (80 per cent), Canada (78 per cent) and Japan (75 per cent) show comparatively high access,[25] many low-income countries – particularly those with high informality, weak credit systems and limited collateral frameworks – remain far below global averages. This leads to the perception that conventional housing finance functions as a "luxury good", accessible primarily in more advanced economies.[26]

Access to conventional housing finance, often in the form of a mortgage, depends on three structural elements: income capacity, collateral quality and perceived risks

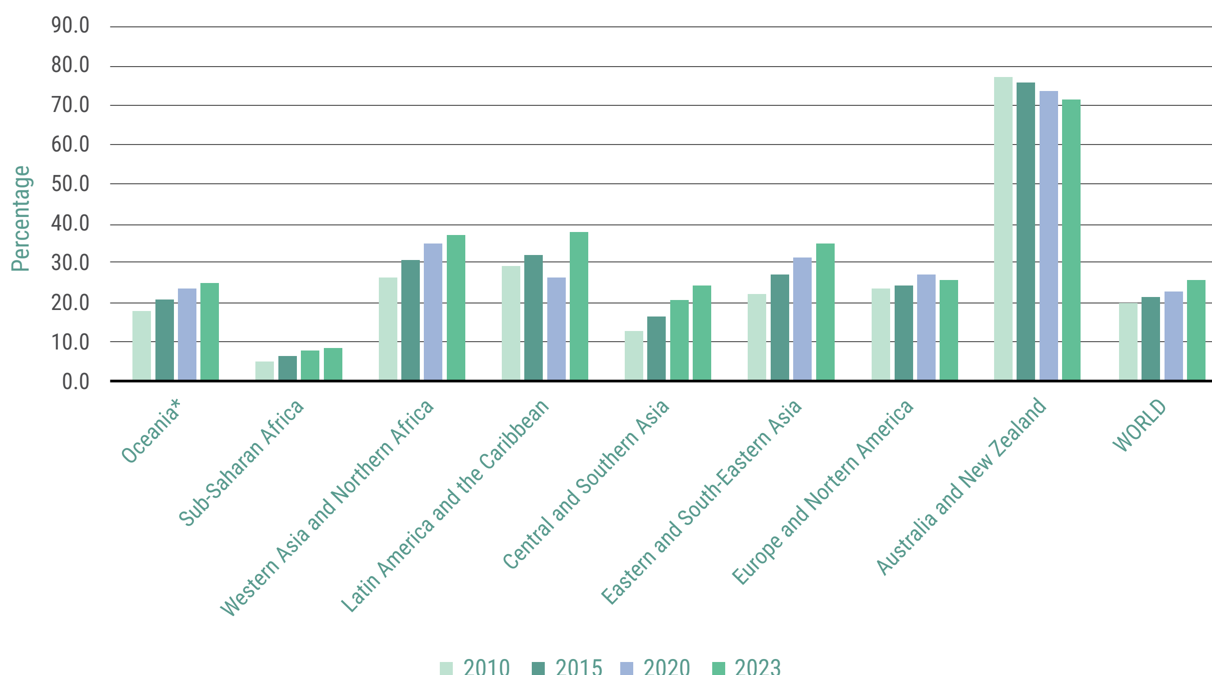
Disparities even within the same broad region are particularly striking and highlight that income level alone cannot explain differences in access to formal housing finance. For example, in Sub-Saharan Africa, access to housing loans ranges from 32 per cent in South Africa to just 1 per cent in Central African Republic and Eritrea.[27] This shows how financial infrastructure, credit information systems and policy environments can dramatically shape housing finance outcomes. In Europe and Northern America, access spans from 78 per cent in Canada and the United States (US) to less than a tenth of this in Moldova (8 per cent) and Ukraine (5 per cent), suggesting that regulatory efficiency, mortgage market development and urbanization patterns could also contribute to variation. Viewed through the lens of the right to adequate housing, these inter- and intra regional gaps point to an inclusion and equity challenge, underscoring the need for more diversified, inclusive and context-responsive housing finance models.

8.1.3 Access barriers to conventional housing finance

In practice, access to conventional housing finance, often in the form of a mortgage, depends on three structural elements: income capacity, collateral quality and perceived risks. These three elements jointly determine whether a household is considered bankable and eligible for a mortgage facility. Where any of these elements are weak or systematically unavailable for vulnerable groups, they form structural barriers that limit or even deny access to mortgage finance.

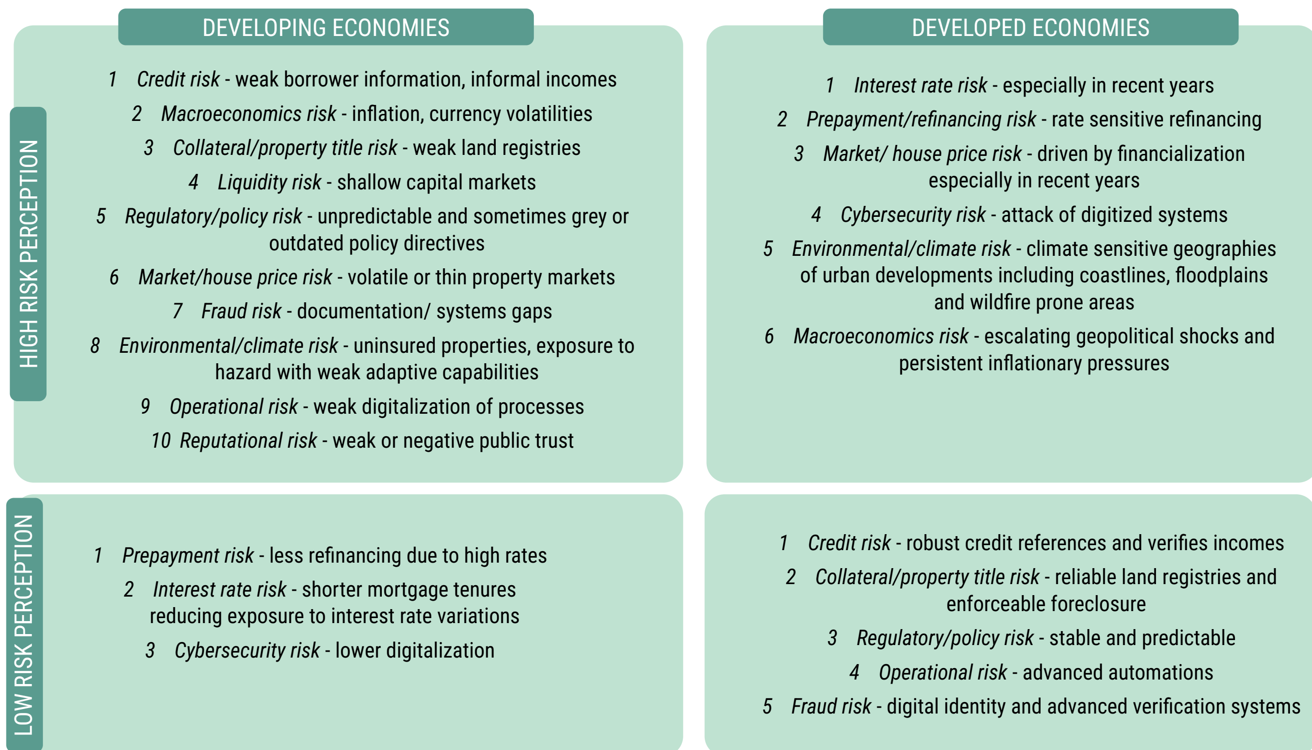
Income capacity: Conventional mortgage lending frameworks require

Figure 8.3: Percentage of eligible households who successfully obtained a housing loan compared to the total number of applicants



Source: UN-Habitat, 2026a.

Figure 8.4: Mortgage risk perception matrix (developing vs developed economies)



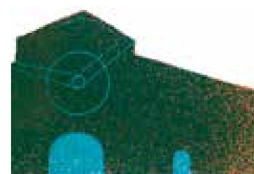
Source: Developed for this report.

regular, documented income, yet for the sizeable share of the urban work force in developing regions who are paid irregularly and in cash, this is not possible. This limits the building of credit histories and constrains the ability of lenders to verify repayment capacity.

Quality of collateral: Access to mortgage finance strongly depends on legally recognizable and enforceable property rights. Yet across many developing economies, insecure tenure, incomplete titling and slow or unreliable land administration systems significantly restrict the stock of “bankable” collateral, with only 46 per cent of urban land mapped and registered in developing countries.[28] It is important to note that, even in advanced economies with strong property administration, the quality of housing collateral is not constant and can vary over time, significantly shifting access to mortgage finance. For instance, the strong negative collateral quality shock during the 2008 housing crisis in the US accounted for roughly 50 per cent of the observed variation in house prices: this in turn precipitated a sharp tightening in mortgage lending, as lenders became more information sensitive and reduced the liquidity they were willing to extend.[29]

Perceived risks: Advancing a very large, long-term capital outlay obviously presents some risks to the lender. There are more than 10 different kinds of risks that are typically assessed when a mortgage is under consideration. However, the intensity and relevance differ sharply across developed and developing economies, as shown in Figure 8.4. In developing regions such as Africa, perceived high risk and information gaps can lead to prohibitively high interest rates (Box 8.1).

Whereas developed economies present mature credit information systems, predictable macroeconomic conditions and strong regulatory frameworks, interest rates – while lower relative to developing countries such as Ghana or Zimbabwe (Box 8.2) – still play a significant role in determining housing affordability. Evidence suggests that the sharp increase in mortgage rates in recent years is a major driver of declining affordability, as illustrated in Figure 8.5. From 2021, central banks raised interest rates at an unusually fast pace, reversing a decade of ultra low rates in developed economies from near zero to above 4 percent by 2023 in response to rising inflation. This sharp increase - the highest in four decades - transmitted quickly into mortgage markets, sharply raising borrowing costs and constraining housing affordability.[30] For instance mortgage rates in the US rose from a pandemic low of about 2.65 per cent in early 2021 to nearly 7.79 per cent in October 2023, more than tripling borrowing costs.[31]



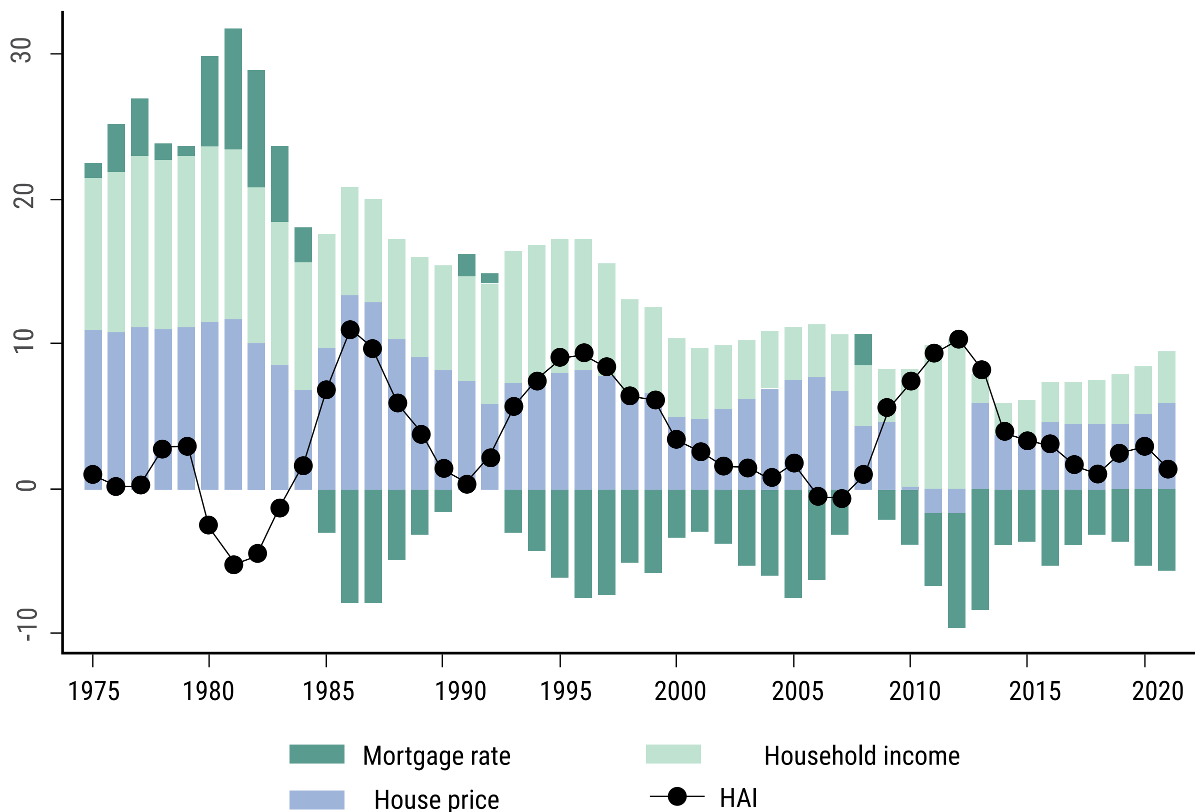
A mortgage is a powerful financing tool that converts massive capital demands into manageable payments

Box 8.2: Uncertainties and information gaps drive high mortgage interest rates in Africa

Mortgage interest rates reflect a lender's assessment of risks associated with advancing the long-term capital facility. In many developing economies, limited borrower level credit information, combined with elevated macro level uncertainties, lead lenders to adopt conservative underwriting practices. The result is often prohibitively high, double digit mortgage interest rates – common across many African markets – making the housing finance unaffordable for many. For instance, in 2023-2024, the average non-subsidized interest rate for a residential mortgage in Ghana and Zimbabwe was 29 per cent and 25.9 per cent respectively.[32] By contrast, average mortgage lending rates in the European Union (EU) – considered a low risk premium region at the macroeconomic level – was substantially lower at between 3.11 and 3.98 per cent.[33] Put differently, on a standard 15 year mortgage, a borrower in countries such as Ghana or Zimbabwe facing interest rates of 25–30 percent would repay around 300 percent of the original loan in interest alone—about three times the amount borrowed. By contrast, under the same loan term in most EU countries, where interest rates are typically 3–4 percent, total interest paid would be around 25–35 percent of the original loan over 15 years.

Government poster in Budapest metro promoting Hungary's FIX 3% housing loan program to support first-time homebuyers © Shutterstock

Figure 8.5: Impact of higher mortgage rates on Housing Affordability Index (HAI) across 40 countries (33 advanced economies and 7 emerging markets)



Source: Biljanovska et.al., 2023.

8.1.4 Categories of housing finance eligibility for households

There are several critical considerations in evaluating a household's eligibility for housing finance, especially in an urban context:

- **First**, as discussed in the previous section, there are the three essential criteria of income capacity, collateral and perceived risk through which financial institutions assess the ability to pay and bankability of a household. Understanding how any of these elements are systematically limited or denied to vulnerable urban groups – and thus generating barriers of access to housing finance – is critical to refining the true categories of eligibility.

- **Second**, alongside a household's ability to repay a housing loan, it is equally essential to consider their willingness to pay for homeownership. Not all urban residents seek, need or benefit from mortgage backed homeownership and for many their right to adequate housing would be sufficiently met through secure, affordable rental arrangements. For instance, many low-income urban households in Sub-Saharan Africa maintain a dual rural–urban existence, whereby employment and daily life take place in the city, but asset anchoring, social networks and often some form of self-built, inherited or incrementally built homeownership remain in rural areas.[34]

- **Third**, it is important to recognize there are limits and dangers to expanding mortgages to lower-income groups. Interest rate subsidies, often used to bridge access gaps, if poorly calibrated, may distort markets and ironically favour house price increases that can further aggravate the realities of the poorer household as witnessed in Croatia.[35] There is also the risk that extending loans beyond what is affordable or prudent can leave households, particularly those with precarious incomes, vulnerable to foreclosures or negative equity in the event of turbulence in the housing market.

Globally, only one in four applicants (25.5 per cent) successfully secured a housing loan in 2023.

These points further support the argument that to be effective and inclusive, housing finance needs to move beyond conventional mortgage-centric approaches. There is a need to recognize and scale alternative financing approaches that are better aligned to the diverse socioeconomic profiles of households. Broadening and deepening housing finance also addresses the need for financing to meet its dual function of enabling housing as a market commodity, while embedding sufficient guardrails to protect adequate housing as a basic human right for all. This includes, on the one hand, strategies for navigating and easing the structural barriers faced by households who are willing and able to pay for home ownership yet remain excluded by standard mortgage access metrices. At the same time, it calls for a deeper exploration of how to finance and maintain over the long-term large-scale developments of adequate and affordable rental housing as a critical pathway for advancing the right to adequate housing for households that are ineligible for mortgage finance.

It is important to recognize there are limits and dangers to expanding mortgages to lower-income groups

Bearing this in mind, four distinct groups emerge in terms of housing finance eligibility:

- *Mortgage-eligible:* Households with stable, verifiable incomes, sufficient savings and credit profiles that meet conventional requirements and can qualify for a standard mortgage facility towards the purchase of a formal housing unit. Based on average housing loan access, this likely represents less than one-quarter of households globally.

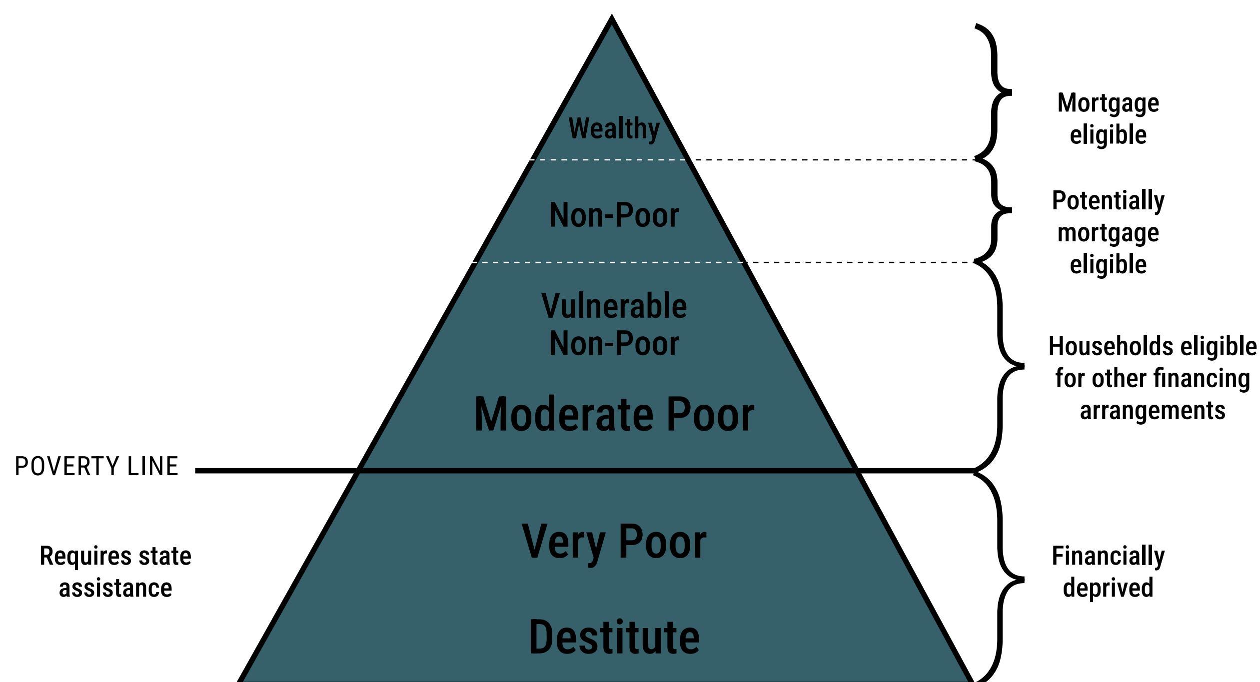
- *Potentially mortgage-eligible:* Households that are willing and able to service a mortgage, but do not qualify due to structural barriers such as insufficient or informal credit histories, high down payment requirements or volatile interest rates. Evidence shows that high interest rates in recent years have significantly eroded affordability and the ability of households to reliably sustain a mortgage facility.[36] Policies which adequately address key obstacles – innovative underwriting, mortgage insurance and/or smart targeted subsidies – can expand eligibility for this group.

- *Alternative finance-eligible:* Households that cannot qualify for mortgages, even when subsidized. These households have earnings above the threshold of what is considered financially deprived and often from irregular or undocumented sources but lack the formal documentation or credit metrics required for mortgage underwriting. Many have demonstrated cash flow and can sustain smaller, shorter-term, non-collateralized loans, which can support incremental construction, home improvement, serviced plot acquisition or formal rental housing. Many of the estimated 2 billion people engaged as informal sector workers fall into this category. Tailored mechanisms such as micro loans, incremental construction finance and rental housing programs often provide a more sustainable pathway for these households than attempting to force mortgage eligibility.

- *Financially deprived:* Households whose incomes are fully absorbed by basic subsistence, leaving no disposable margin for any form of housing loan. A significant share of this group are displaced and homeless. For this group, indebtedness is inappropriate and potentially harmful: policy should instead prioritize non-debt social interventions that lean on the guardrails in financial systems of securing and advancing the social function of housing, including direct subsidies, social housing and broader social protections.

Each of these groups demand different housing policy approaches and distinguishing clearly between them is essential for designing an effective, inclusive and sustainable housing finance ecosystem (Figure 8.6).

Figure 8.6: Different eligibility groups for conventional housing finance



Source: adapted from Goldberg, 2009.

8.2 Financing Homeownership Beyond Mortgages

This section shifts from identifying barriers and gaps in accessing conventional housing finance to outlining solutions. It examines both emerging adjustments within conventional systems to expand access, as well as the continuum of innovative and alternative housing finance mechanisms available to those for whom standard mortgage products remain limited or inaccessible. This section also broadens the focus beyond individual level financing to include communities, cooperatives as well as sovereign level financing for housing. The section presents a selection of global cases to illustrate how specific financing barriers and gaps are overcome. While not universal or necessarily replicable, these examples demonstrate that viable alternative, scalable pathways exist and merit deeper consideration.

8.2.1 Expanding mortgages to potentially eligible households

Potentially eligible households refer to households that are willing and capable of servicing a mortgage, but face obstacles in meeting the standard criteria used by formal lenders to assess a household's ability to pay. Solutions to expanding access therefore relate to policy and institutional directives that can make the households' capability to pay more visible.

Solutions to expanding mortgage access to potentially eligible households relate to policy and institutional directives that can make the households' capability to pay more visible

More inclusive underwriting: Underwriting is the comprehensive risk evaluation of a loan application, encompassing both the borrower's credit and the property's assessment, balancing factors like credit scores, collateral quality and down payments. Traditional underwriting assumes documented incomes from formal employment – a mismatch for millions of informal workers. Inclusive underwriting updates credit evaluation to incorporate alternative data and mixed income sources such as utility payments, rent payment histories, mobile money flows and platform economy earnings such as those on ride hailing apps. Some examples include:

- *The development of credit profiles through non-conventional information sources (US):* the government-sponsored institution Fannie Mae and Freddie Mae is integrating alternative data into their automated underwriting systems to consider rental payment histories. This particularly benefits first-time mortgage applicants who would otherwise be considered ineligible due to the absence of a documented credit history.[37]

- *The validation of platform economy earnings (Indonesia):* the Sarana Multigiya Finansial (SMF) – GRAB mortgage programme enables ride hailing drivers to qualify for mortgages by using digitally verified platform based earnings as proof of income, supported by SMF's de-risking mechanisms for non-bank financial institutions (NBFIs). This

helps self-employed drivers who lack the formal credit history and stable income documentation required by traditional commercial banks.[38]

- *Recognition of remittance income (Colombia):* the Mi Casa con Remesas programme – run by Colombia Nos Une (Ministry of Foreign Affairs) in partnership with Bancolombia and the Inter-American Development Bank – recognizes remittances as a legitimate income stream, enabling Columbians living abroad and remittance-receiving households to use their remittance histories as a basis for their housing loans.[39]

Leveraging digital technology and data-driven tools: Digital and data driven tools have been applied to enhance the efficiency and inclusiveness of housing finance by targeting specific inefficiencies such as credit assessment, subsidy targeting and information gaps. This is especially relevant for regions with high informality, weak credit information systems and limited collateral frameworks, such as the majority of the countries in Sub-Saharan Africa. For example, in South Africa, the Finance Linked Individual Subsidy Programme (FLISP) has been strengthened through the use of digitized deed registries, mortgage and subsidy data, enabling better targeting of subsidy eligible households and reducing lender risk. Analysis has shown that digital data integration has helped shorten approval timelines and improve subsidy take up in secondary cities.[40] In Egypt, the use of a centralized digital housing platform transformed housing finance efficiency by enabling large-scale, transparent processing of over 2.17 million applications, linking tax, utility and social databases. This supported mortgage processing at around 10,000 loans per month, extending formal finance to 65 per cent previously unbanked households while reducing documentation barriers for informal workers by about one third.[41]

Digital and data driven tools have been applied to enhance the efficiency and inclusiveness of housing finance

Insurance and guarantee schemes: Insurance and guarantee instruments are powerful tools for expanding access to housing finance that shift the risk evaluation away from individual collateral-focused requirements towards risk-sharing models that rely on institutional mechanisms. By spreading credit risk to other actors, the risks for lenders are eased off. This enables more lending to be extended to households perceived to be at higher risk of defaulting or falling into financial distress. In conventional approaches, borrowers with informal, irregular or non-documented income streams or with limited capacities to meet the down payment requirements would be categorized as an elevated credit risk. This situation either leaves them at the mercy of prohibitively high interest rates or denied access to financing altogether.[42] However, when designed with sufficient regulatory safeguards governing capital adequacy, solvency benchmarks, claim settlement rules and risk transfers, insurance and guarantee schemes can have a powerful, multiplier

Insurance and guarantee schemes can have a powerful, multiplier effect in expanding access to housing finance, allowing each dollar of capital to support a much larger volume of mortgages.

effect in expanding access to housing finance, allowing each dollar of capital to support a much larger volume of mortgages.[43] Insurance and guarantee schemes are well established in the US, Canada, Australia, across Asia, and Europe, and are now being strengthened in countries such as Serbia, Jamaica, Azerbaijan, Morocco and Pakistan. Generally, while insurance models allow the lender to claim payment after they have realized the losses, guarantee models allow the lender to file claims as soon as a default of payment occurs. Some examples of schemes that have achieved commendable scale include:

- *Damane Assakane, Morocco:* This national mortgage guarantee programme, in operation since 2003, has three main guarantee windows, targeting different groups of first-time buyers – low-income households, public workers and employees in the educational sector – who would struggle to qualify for conventional mortgages. The guarantee applies on a first-loss structure, ranging from 70 to 80 per cent of the outstanding loan at the point of default.[44]

- *Fondo de Garantía de Créditos de Vivienda de Interés Social (FOGAVIS), Bolivia:* This is a first-loss guarantee to cover a borrower's *aporte propio* (equity contribution). It guarantees up to 20 per cent of the property value and is limited to the regulated affordable housing programme, Social Interest Housing (VIS). FOGAVIS is designed to help low- and moderate-income families with the capacity to make regular repayments but lacking the wherewithal to make a larger one-off down payment, to buy or build their home.[45]

- *Pakistan Mortgage Refinance Company (PMRC), Pakistan:* PMRC's Credit Guarantee Fund, financed by the World Bank and supported by the State Bank of Pakistan, offers a first-loss credit guarantee for up to 40 per cent of the outstanding principal of low income housing mortgages. Besides covering both conventional and Islamic finance housing loans, it also embeds a gender responsive structure to address gender gaps in mortgage access and encourage lending to underserved women: to do this, the risk sharing facility boosts coverage to 60 per cent for women borrowers.[46]

Contractual saving-for-housing schemes: These promote affordability and creditworthiness in environments with high-interest rate volatility, shallow capital markets and limited long-term funding. Initiated in Germany around a century ago, this model has since been replicated in countries across Central and Eastern Europe and beyond (Box 8.3). This approach, balancing low-interest saving and borrowing rates to protect households from unpredictable fluctuations, has been used to upgrade existing housing stock and fund incremental, self-managed construction on acquired land.[47]

Government-led saving-for-housing schemes: Many countries have established structured savings-for-housing schemes to mobilize large, stable pools of capital that can support access to homeownership for low- and middle-income households who face eligibility barriers due to low or irregular incomes, limited collateral or vulnerability to default under variable mortgage interest rates.[50] These schemes are typically funded through mandatory payroll-based contributions from formally employed workers, while some also incorporate voluntary contribution mechanisms that enable participation by informal or gig workers.[51] Many schemes embed targeted subsidies for lower-income contributors, such as reduced interest rates or down payment assistance. Other inclusive features include allowing lower income families to pool contributions, offering flexible restructuring or default relief options, and providing insurance or guarantee mechanisms. Some examples include:

- *Central Provident Fund (CPF), Singapore:* This mandatory national saving scheme, in operation since 1955, allows members to use their CPF Ordinary Account towards purchasing public and private housing, including down payment, mortgage instalment, duties, insurance and other fees. Key features include compulsory automatic deductions, regulated usage of funds, the pooling of savings by family members to jointly purchase homes, and age-tiered safeguards aimed to balance housing costs with retirement needs.[52]

- *Affordable Housing Programme (AHP) and Boma Yangu Platform, Kenya:* This mandatory contribution scheme, in place since 2024, includes a 1.5 per cent levy through payroll for salaried workers. To enhance inclusion, it allows for voluntary savings from informal, gig, self employed and diaspora workers, allowing for as little as KShs 200 (~US$1.5) across multiple platforms, including mobile money transfers. To enhance affordability, AHP includes features of rent-to-own through Tenant Purchase Schemes (TPS) and affordable mortgages, issued in partnership with Kenya Mortgage Refinancing Company (KMRC), with interest rates capped below 10 per cent of for qualifying affordable housing units.[53]

- *National Housing Trust (NHT), Jamaica:* Established in 1976, with a core mandate of mobilizing long-term capital for housing, the NHT is funded primarily through mandatory payroll deductions, as well as by contributions from self employed workers. Uniquely, the NHT functions both as a housing finance institution and a direct housing developer, enabling it to deliver subsidized mortgage products alongside new housing supply. It features subsidized mortgage rates linked to contribution history, income and first time homeownership status. The system also embeds strong social targeting mechanisms, prioritizing vulnerable groups including elderly applicants, low-income households, youth, public sector workers and persons with disabilities. Beyond mortgage finance, it also provides for disaster repair grants, insurance-linked reliefs and special home improvement loans, thus enhancing resilience and housing security for its contributors.[54]

Box 8.3: The Bauspar Contractual Savings-for-Housing

The Bauspar system is one of the world's most established contractual savings-for-housing mechanisms. It originated in Germany in the early 1920s as a response to severe housing shortages, coupled with high inflation and the inability of households to access stable credit after World War I. It now operates in at least 10 countries, including Austria, China, Croatia, Czech Republic, Hungary, Kazakhstan, Luxembourg, Romania and Slovakia.

Households enter a Bauspar contract with a regulated building and loan association and save into a collective fund. In future, once they have saved 40 to 50 per cent of the contract amount, they become eligible to receive a guaranteed housing loan on a low (below market) fixed interest for developing, acquiring or renovating owner occupied homes.

The system especially serves low- to middle-income families who are able to save modest amounts but are vulnerable to the volatility of market interest rates. The mechanism allows them to gradually build their credit histories and borrow at favourable predicted rates. Additionally, the system also benefits from targeted government subsidies and employee savings bonus.[48] As of 2024 in Germany, there are about 22 million Bauspar contracts, translating to nearly one in two households in the country. In total the value of Bauspar contracts comes to around €930 billion.[49]

© Shutterstock

Many countries have established structured savings-for-housing schemes to mobilize large, stable pools of capital that can support access to homeownership for low- and middle-income households

A Housing & Development Board (HDB) Estate, in Yishun, Singapore.© Shutterstock

- *Rent-to-own / Lease-to-own schemes:* Rent to own schemes enable aspiring homeowners – especially those potentially mortgage eligible but struggling to save enough for a down payment or with a limited credit history – to occupy a home under a tenancy or lease arrangement while progressively building equity towards eventual homeownership. A number of variations of rent-to-own schemes exist differing by their equity building, tenure transfer points and instalment structures.[55] The examples below illustrate some of these variations:

  - ☐ *Divvy Homes, US:* Designed for "credit bruised" or savings constrained households who cannot qualify for mortgages immediately, the programme enables prospective buyers to sign an option to buy at a future date at an agreed price. After paying 1–2 per cent of the house price upfront, they then move into the house and make monthly payments, which also include some component of savings. After three years they become mortgage eligible and can exercise the option to buy the home or withdraw their savings less fees. However, surging mortgage interest rates in recent years have pushed monthly payments far above local market rents, making the model increasingly unsustainable.[56]

  - ☐ *Shared Ownership, UK:* The prospective home buyer pays 10–75 per cent of the housing unit market value and pays rent on the remaining share to a housing association, local authority or registered provider. As the buyer increases their shares contribution over time, their rent is reduced. By splitting the property's value into equity (debt) and occupancy (rent), the model lowers the purchase value barrier and the income barrier simultaneously, easing access for first-time home buyers who cannot afford a full market rate mortgage.57

  - ☐ *Tenant Purchase Scheme (TPS), Kenya:* A lease to own structure where buyers make an initial deposit of 10–15 per cent of the property price, followed by monthly instalments over 10 to 15 years, often at fixed interest rates on a reducing balance. During the repayment period, the property title remains with the seller (often the developer or government agency). The instalments resemble rent but directly reduce the outstanding balance, creating a gradual path to ownership.[58]

- *Subsidies to home buyers:* Subsidies can be a useful instrument if properly targeted to households at the margins of the mortgage market. Subsidies are often run by governments and strengthen a household's purchasing power by reducing the effective cost of purchasing or financing a home. There are different forms and entry points, including upfront subsidies for down payment, interest rate subsidies or innovative subsidies applied to rent-to-own models. Demand-side subsidies directly supporting homebuyers are generally more effective than supply-side subsidies to developers, as they avoid distorting housing markets and do not interfere with what is produced, who produces it or when new housing is delivered.[59] Some examples include:

  - ☐ *Finance Linked Individual Subsidy Programme (FLISP), South Africa:* A mean-tested one-time grant (capital subsidy) to reduce the initial down payment or mortgage size to qualifying households. To qualify, an applicant must secure approved financing, be it a mortgage facility, instalment sales agreement or other form. The subsidy ranges approximately between R27,960 and R121,626 (~US$1,500–7,000), depending on household income, with lower-income earners receiving higher amounts. The programme is targeted at low- and middle-income households who earn too much to qualify for fully subsidized Reconstruction and Development Programme (RDP) housing, yet too little to obtain a mortgage without assistance.[60]

  - ☐ *Fundo de Garantia do Tempo de Serviço (FGTS) and Minha Casa, Minha Vida (MCMV), Brazil:* The federal government channels FGTS resources into highly subsidized housing loans and grants, as well as interest rate subsidies advanced to qualifying households. MCMV operates through income based tiers that determine eligibility, subsidy levels and maximum house prices. These programmes support low- and lower-middle-income households that were previously excluded from conventional finance due to insufficient income or high interest rates.[61]

8.2.2 Enabling alternative finance eligible households

Alternative finance eligible households are unable to qualify for mortgage finance, even when loans are subsidized, and require alternative financing approaches to secure adequate housing. This group includes a large share of informal workers. For these households, alternative housing finance solutions – such as microfinance, incremental construction loans, collective financing models, pooled collateral models and well structured rental or rent to own programmes – offer more realistic and sustainable routes to adequate housing.

- *Microfinance-based models:* Microfinance schemes enable incremental construction, home improvement or progressive land consolidation through small loan sizes, shorter tenures and lower collateral demands. Though some mortgage lending commercial banks offer specialized housing microloans, the vast majority of products are delivered through non-bank entities such as microfinance institutions, cooperatives, credit unions, community savings groups and non-governmental organizations. This reflects the sector's first major innovation: its diverse and decentralized delivery channels.[62] It is highly suited to informal earners and self-employed households as it addresses the structural mismatch of conventional mortgage products dependent on stable, documented income and long-term creditworthiness. Microfinance for housing is, however, hampered by lack of access to affordable funding and significant operational risks. Without integrated technical assistance, construction projects may suffer from delays, cost overruns and unfinished works, necessitating robust, data-informed monitoring to prevent misuse of funds. A notable example of housing microfinance that has been brought to scale is Habitat for Humanity's MicroBuild Fund, discussed further in Box 8.4.

- *Community-led housing finance:* Community led housing finance is increasingly recognized as a powerful alternative to conventional financing models, particularly for low-income urban residents who face systemic exclusion from formal credit and land markets. Different from microfinance, community housing finance mobilizes collective savings not only for financing housing, but also for securing land and upgrading shared infrastructure. They usually operate informally, relying on trust, flexible contribution amounts and timings, to ensure broad participation and strengthen community bonds.[63] The Nakuru housing cooperative in Kenya illustrates the transformative potential of organized community finance: it has collectively acquired 26 acres of land for its members and supported the construction of 300 homes, all sustained by a vibrant membership of 600 people – more than two thirds of whom are women.[64]

Box 8.4: Pioneering housing microfinance at scale: Habitat for Humanity's MicroBuild Fund

The MicroBuild Fund, created in 2012 by Habitat for Humanity's Terwilliger Center for Innovation in Shelter, is considered the world's first housing focused microfinance investment fund. Rather than lending directly to households, MicroBuild channels capital to microfinance institutions and provides technical assistance so they can design and deliver housing microfinance products tailored to incremental homebuilding. As of 2024, the fund had supported 236,870 borrowers, improving shelter conditions for approximately 1.18 million people in 33 countries across Latin America and the Caribbean, Asia, Africa and the Middle East. Financially, the fund has grown beyond its initial US$100 million capitalization, disbursing US$230 million in debt to 62 partner institutions.

Source: Habitat for Humanity International, 2024.

Demand-side subsidies directly supporting homebuyers are generally more effective than supply-side subsidies to developers, as they avoid distorting housing markets

Nakuru Wanavijiji Housing Cooperative, Kenya © Nakuru Wanavijiji Housing Cooperative, n.d.

- *Community land–based financing models:* Acquiring and leveraging urban land is the single most critical enabler to financing adequate housing for low- and middle-income households in cities. Land prices in cities have surged in recent years, rendering housing markets inaccessible to many households,[65] particularly as housing prices decouple from wages.

Microfinance for housing is hampered by lack of access to affordable funding and significant operational risks

Collective land-based financing schemes provide a critical alternative to individual borrowing. Land value capture can be used as a financing tool at both a government level and community level. Of the latter, Community Land Trusts (CLTs) – an area also explored in Chapter 7 – are among the most effective mechanisms. A CLT is a community based, nonprofit organization that acquires and holds land on behalf of residents to secure long-term accessible and affordable housing. The CLT retains ownership of the land, with each member allocated a lease agreement, with embedded conditions on resale and transferability of the housing unit.[66] By treating land as a collective asset rather than an individually-owned commodity, the trust captures value appreciation for the community, preventing homes from being lost to speculative cycles or gentrification. By separating the value of the land from the building, households only finance the structure, lowering the entry "wealth barrier", while the trust preserves the land as a permanent social resource, decoupling the cost of shelter from the volatility of land markets. Some examples include:

Acquiring and leveraging urban land is the single most critical enabler to financing adequate housing for low- and middle-income households in cities

- *Fideicomiso de la Tierra del Caño Martín Peña, Puerto Rico, US:* The Caño Trust is a CLT designed and managed by the residents of eight neighbouring communities, along with allies from the public and private sectors, to implement a comprehensive development plan to revitalize a historically marginalized area. Regularizing and collectively owning land has helped prevent gentrification and involuntary displacement, with 2,000 low-income families benefitting from upgrading so far.[67] (This initiative is discussed in more detail in Chapter 7, Box 7.7).

- *Community Land Trust Brussels (CLTB), Belgium:* Through CLTB, land is collectively owned and land price inflation is neutralized. This allows residents to buy only the housing unit while the trust retains collective ownership of the land – reducing prices by an average of 40 per cent compared to the private market. This initiative benefits low-income households eligible for social housing and at risk of being priced out of Brussels.[68]

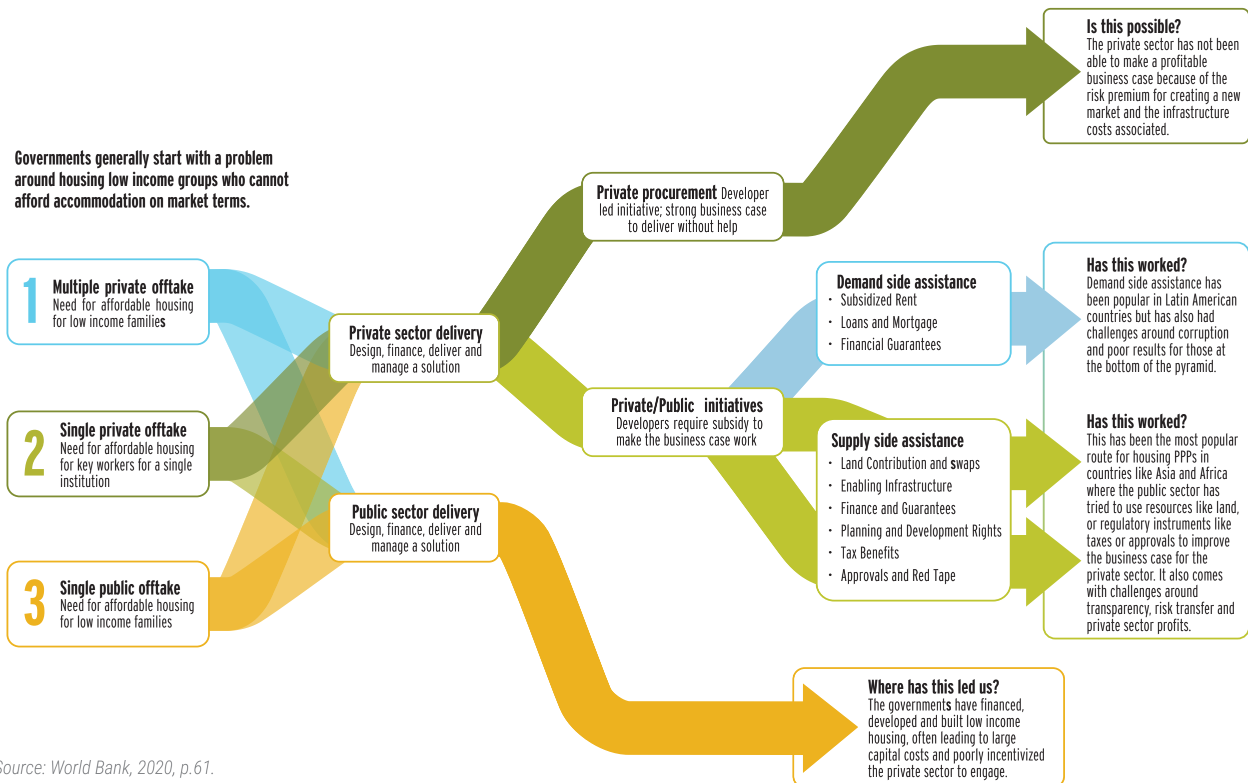
8.3 Financing and De-risking Rental and Social Housing at Scale

Expanding conventional housing finance to potentially mortgage-eligible households or scaling alternative financing for homeownership addresses only part of the inclusive and resilient housing finance puzzle. As shown in Section 8.1, a large proportion of urban residents fall into the "alternative finance eligible" or "financially deprived" groups for whom long-term financing for home ownership may not be viable or desirable. For these households, affordable rental housing becomes the more realistic route to securing adequate shelter, underscoring the need for the large-scale, sustained production of well-located rental stock. In many countries since the 2000s – particularly across Europe and North America – the supply of affordable rental housing has declined markedly over recent decades. As governments have scaled back the construction of public and social housing, sold large portions of their existing stock, and increasingly shifted responsibility for provision to the private market, affordability for low- and moderate-income households has been steadily eroded.[69] This section shifts the focus from household and community-level demand-side financing for homeownership to the institutional actors that shape urban housing supply: governments, developers, investors, housing funds and public land agencies. For these actors, the central challenge is producing and sustaining over the long term and at scale non-speculative, affordable housing, including public rental, social housing, limited equity cooperatives and temporary transitional housing.[70]

Large-scale housing development depends on land provision, regulatory reform, trunk infrastructure financing and long-term predictable subsidy flows, all of which sit within the remit of national and subnational governments. Therefore, public policy and coordination around land release, financing and grants play a decisive role in shaping financing for large-scale housing development.[71] The production of non-speculative and affordable housing at scale hinges not only the mobilization of resources, but also on how risk is allocated among different actors including governments, developers, investors and households. Lower returns, longer payback periods and exposure to regulatory and offtake uncertainties often deter private developers and investors from participating in affordable or social housing delivery. Yet when governments attempt to absorb all development risk and cost alone, projects often become fiscally unsustainable and difficult to scale. Figure 8.7 presents a flow diagram of the decision pathways governments navigate as duty bearers in realizing the right to adequate housing for all, illustrating the precarious balance of public–private risks and priorities. It is increasingly evident that markets alone cannot efficiently and equitably deliver adequate and affordable housing for all income

Public policy and coordination around land release, financing and grants play a decisive role in shaping financing for large-scale housing development

Figure 8.7: Decision making framework for governments delivering affordable housing at scale



Source: World Bank, 2020, p.61.

Protester from Warszawskie Stowarzyszenie Lokatorów (WSL) stands before a large crowd during a demonstration against unfair housing and mortgage policies in Warsaw, Poland
© Shutterstock

groups, particularly low-income and vulnerable households who remain structurally excluded from formal finance and land markets.[72] At the same time, governments – especially in fiscally constrained developing countries confronting rising debt servicing pressures – cannot meet the scale of need through public budgets alone, nor produce non-speculative, affordable housing at scale without coordinated partnerships with private actors and well-designed de-risking tools. The cases discussed in this section are not exhaustive but illustrate the range of feasible pathways to deliver housing at scale.

8.3.1 Public-private partnerships

Public–private partnerships (PPPs) have increasingly emerged as a viable mechanism for financing and delivering non-speculative, affordable rental and social housing at scale in emerging markets. PPPs create a structured collaboration in which public entities de-risk investments while private partners bring capital, construction capacity and long-term management expertise.[73] A core feature of effective housing PPPs is risk reallocation. Governments assume responsibilities that private actors cannot efficiently absorb – such as providing land, streamlining policy and approvals, and investing in trunk infrastructure – which reduce offtake uncertainties. In return, private partners commit to affordability conditions, non-speculative pricing, long term operations or regulated rents. PPPs can vary in form, largely based on what responsibilities the private player takes. They are most successful where public roles are transparent, land is leveraged efficiently and long-term affordability is embedded contractually, not left to market forces. There are four widely used structures for PPPs in housing development. These are as follows:

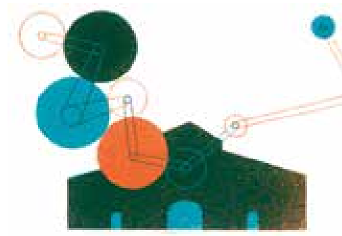
1. *Design–build–finance (DBF):* The private partner designs, constructs, and finances the housing development, with the public sector typically repaying costs once key milestones are reached.

2. *Design–build–finance–operate (DBFO):* The private partner designs, builds, finances and operates the project – often under a long-term agreement – while the public sector ensures affordability conditions and regulates performance.

3. *Design–build–finance–operate–maintain (DBFOM):* This structure places full lifecycle responsibility – financing, construction, operations and long-term maintenance – with the private entity, aligned to performance based payments or availability fees.

4. *Operate–maintain (OM):* Often used for existing housing stock where the private sector is contracted to operate and maintain affordable units to agreed service standards, while ownership and financing remain public.[74]

Countries such as India, Kenya, South Africa and Brazil have applied PPPs at scale, using public land concessions, credit guarantees, tax incentives, subsidies and blended financing to crowd-in private investment. One such example, the Bhubaneswar Affordable Housing Project in India, is further explained in Box 8.5.



A core feature of effective housing PPPs is risk reallocation

Box 8.5: Bhubaneswar Affordable Housing PPP, India

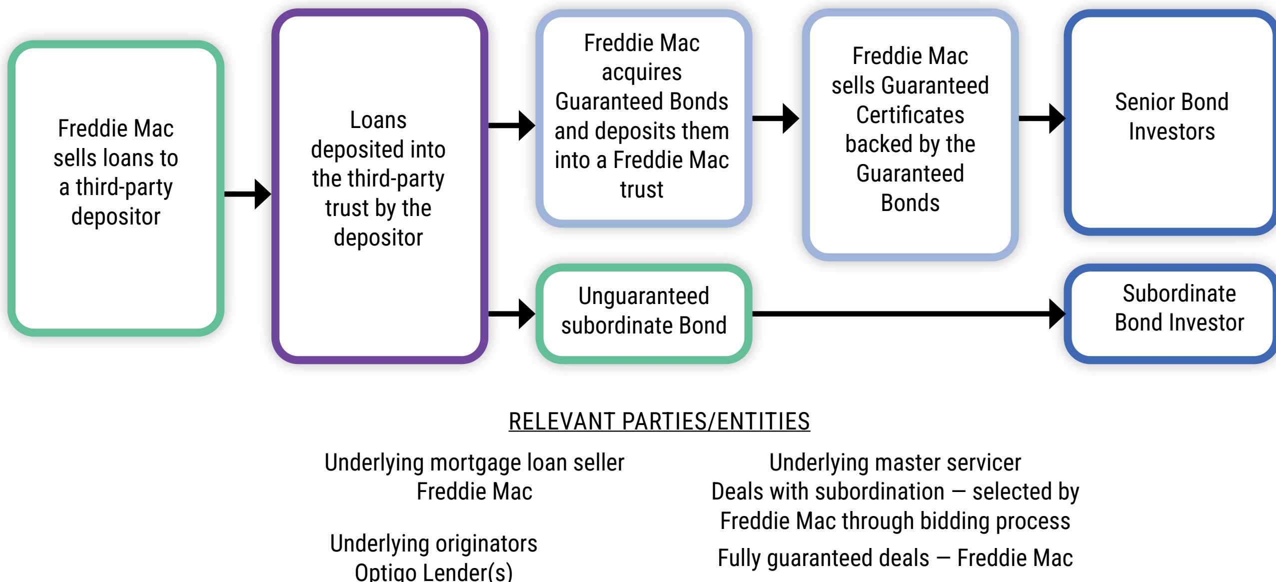
The Bhubaneswar Affordable Housing Project in the state of Odisha represents the first fully structured PPP in India designed explicitly to deliver affordable housing for low-income urban households at scale. The initiative was developed in response to Odisha's rapidly growing housing deficit – an estimated 400,000 units statewide, including 80,000 units in Bhubaneswar alone.

With advisory assistance from the International Finance Corporation (IFC), the Bhubaneswar Development Authority (BDA) structured India's first dedicated affordable housing PPP, using a DBF model. Under this arrangement, the private partner would finance, design and construct the units on 65 per cent of the land, cross subsidized through commercial development on the remaining 35 per cent. The government provided land, capital subsidies and a clear regulatory framework while developers built affordable units. Parallel PPP projects across Bhubaneswar, Cuttack and Rourkela now involve more than 5,000 units under development, accelerating formal housing access for urban poor households.

The PPP was guided through BDA's 2015 Policy on Housing for All in Urban Areas, which operationalized India's national PMAY U (Pradhan Mantri Awas Yojana – Urban) policy at Odisha state level. The Pradhan Mantri Awas Yojana Urban (PMAY-U) has become India's largest urban housing program, with around 11.8 million houses targeting low- to middle-income groups approved as of 2024. While PMAY-U serves as an inspiring model for large-scale, inclusive housing finance, it also highlights the inherent tensions of scaling and territorial coverage. Critics argue that PMAY-U better serves small cities, promotes poor coverage of slum households, and faces a significant number of delayed and yet-to-be-completed houses.

Source: Ministry of Housing and Urban Affairs, n.d.; World Bank, 2020; Times of India, 2026; Roy & Kundu, 2024; Press Information Bureau, 2024.

Figure 8.8: Freddie Mac's securitization structure



Source: Freddie Mac Multifamily, 2025, p.29.

8.3.2 Risk pooling and collective guarantees

A critical pathway for scaling non-speculative, affordable housing lies in mechanisms that pool risk and stabilize cash flows, thereby lowering the cost of capital for developers, lenders and social housing providers. These risk pooling and sharing instruments range from securitization to cross-collateralization, reinsurance and credit guarantees. Securitization is one of the most powerful tools used by governments and housing finance agencies. In its simplest form, securitization bundles a pool of mortgages, transforms them into tradable securities, and sells them to investors. The proceeds allow the housing finance institution to recycle capital, originate more loans, and channel substantially more financing into affordable housing than would otherwise be possible. The US continues to demonstrate the power of securitization through its government sponsored enterprises (GSEs), Freddie Mac (the Federal Home Loan Mortgage Corporation) and Fannie Mae (the Federal National Mortgage Association). For instance, by 2025, Freddie Mac had securitized over US$448 billion worth of multifamily mortgage loans out of its US$496 billion mortgage portfolio. In 2025 Freddie Mac Multifamily financed 617,000 rental units across nearly 3,900 properties, and securitization was the key liquidity engine enabling this level of production.[75] Figure 8.8 presents an illustration of how Freddie Mac structures its securitization.

A critical pathway for scaling non -speculative, affordable housing lies in mechanisms that pool risk and stabilize cash flows, thereby lowering the cost of capital.

Risk pooling also underpins successful European social housing systems. In the Netherlands, the Social Housing Guarantee Fund provides cross collateralization across the entire housing association sector, enabling associations to borrow at near sovereign rates – significantly reducing financing costs for low-income rental housing (Box 8.6).

Box 8.6: Waarborgfonds Sociale Woningbouw (WSW) Social Housing Guarantee Fund, Netherlands

The Netherlands operates one of the most effective and mature systems for financing affordable, non-speculative rental housing in the world through collective risk pooling. At the centre of the system is the Waarborgfonds Sociale Woningbouw (WSW) – the Social Housing Guarantee Fund. WSW provides a joint, cross-collateralized guarantee on loans taken out by 268 housing corporations participating in the WSW. This means, if one corporation fails, the entire association collectively covers the debt. In the event that resources within the association are insufficient, municipal and national governments act as ultimate backstops through formal agreements renewed in 2021 and 2023.

As a result, housing corporations hold minimal credit risk, enabling AAA-rated borrowing at near government interest rates (an average of 2.79 per cent in 2023). This dramatically lowers capital costs and allows Dutch housing corporations to sustain the large-scale delivery of non-speculative affordable rental housing, financing construction, retrofits, and neighbourhood improvements at scale. WSW had guaranteed €92.2 billion (~US$100 billion) in loans to housing associations (as of 2024) and collectively supports around 2.3 million affordable housing units – nearly a third of the country's housing stock.

Source: Housing Europe, 2025; Van Deursen, 2023; WSW, n.d.

Social housing project under construction in a suburb in Middelburg, the Netherlands © Shutterstock

8.3.3 Cooperative housing at scale

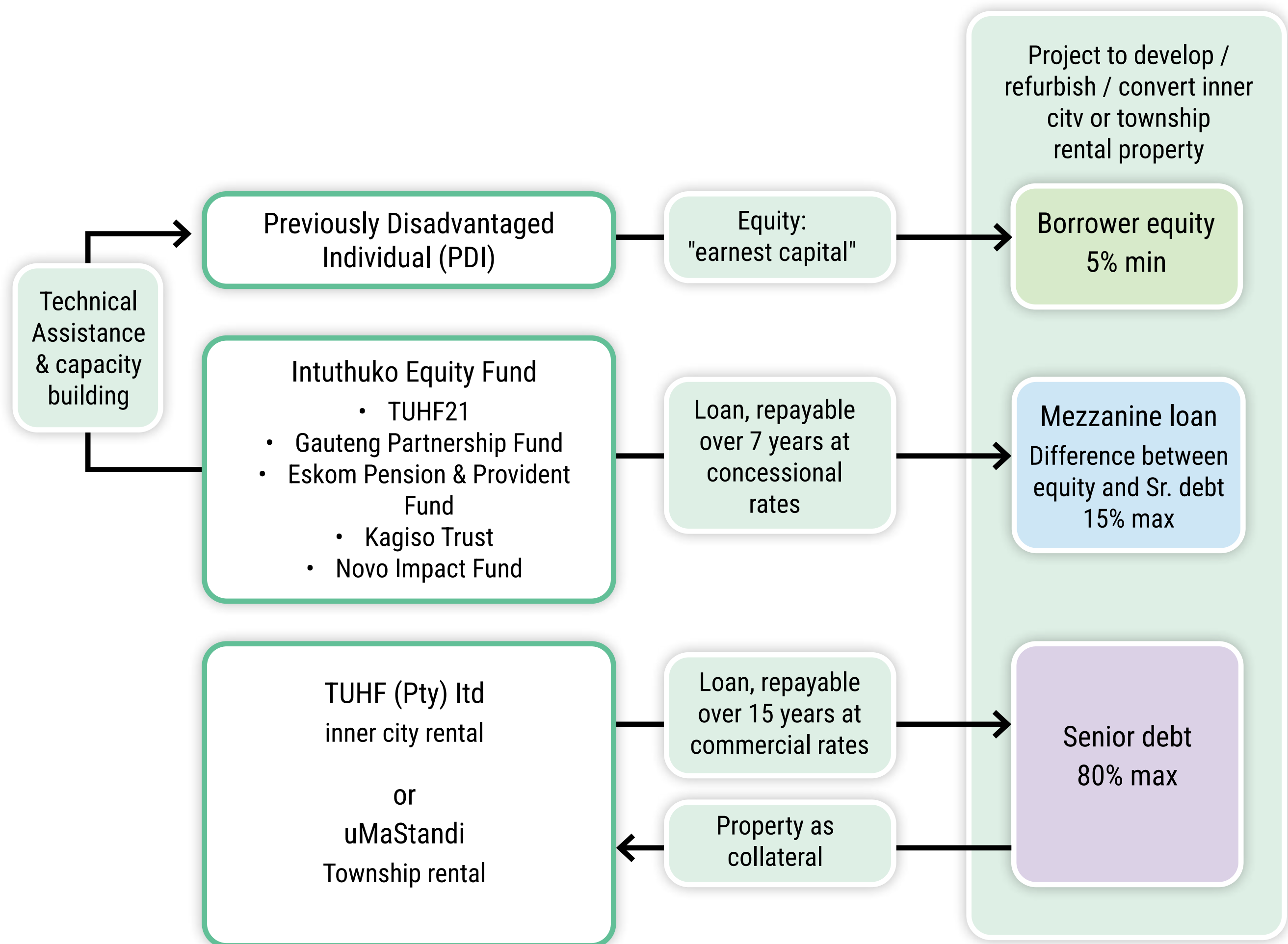
Cooperative housing offers a globally recognized pathway for financing non-speculative, affordable housing at scale. Unlike conventional rental or ownership markets, cooperatives embed collective governance, pooled financing and de-commodified land and housing management, reducing both household level risk and system wide exposure for lenders and municipalities. From a financing standpoint, cooperatives typically blend member equity contributions, long-term fixed cost financing, public guarantees and preferential access to land, while de-risking the system through at-cost operating rules, collective decision-making and restrictions on speculation. Table 8.2 summarizes some of the different types of cooperative housing models, highlighting their financing and risk sharing approaches.

Cooperative housing offers a globally recognized pathway for financing non-speculative, affordable housing at scale

Table 8.2: Cooperative housing models

Scheme	Financing and Risk Sharing	Solution and Targets
Non profit rental cooperatives [76]	• Development is often supported by public loans or grants • Risk is shared across entire cooperative, lowering debt exposure • Ownership is collective through members buying shares or paying deposits • Rents set on at cost basis • Members contribute and pool maintenance funds • Common in Germany, Switzerland and Canada	Targets mixed income households seeking long-term affordability by providing stable, below market rental housing, strong tenant participation
Collective equity cooperatives [77]	• Members purchase shares granting occupancy rights • Housing units are financed through collective mortgages with risk spread across shareholders • There is no direct ownership of units but share value can increase over time which can be transferred • The cooperative holds underlying property rights and may exercise control over speculation through by-laws • In a Limited Equity structure, the price at which members can buy or sell their shares is restricted to prevent rapid increases in housing costs • Common in Sweden, Norway and US	Low- to moderate-income resident seeking guarantees on long-term affordability
Mutual aid housing cooperatives (MAHCs)[78]	• Financing can be through state-backed loans (e.g., Uruguay's FUCVAM), solidarity funds, pooled repayment and members sweat equity • Cooperative owns land/buildings and collective decision-making minimizes default risk • Originated in Uruguay, expanded across Latin America	Provides permanently non speculative, community built housing
Mutual home ownership societies (UK)[79]	• These combine the benefit of CLTs and housing cooperatives • Debt for developing or purchasing housing units is undertaken and paid collectively over time • Payments build equity shares, risks are shared collectively and land is often held in trust • First pioneered with LILAC in Leeds, this approach is now being applied across other UK cities	Targets lower- and middle-income households assuring permanent affordability while allowing equity accumulation
Right of use housing cooperatives[80]	• Many initiatives reduce overall costs by developing on publicly owned land made available through long-term municipal leases • Financing development of housing units is through a mix of public or ethical bank • To join a "right of use" cooperative, members usually pay an initial social capital contribution – often around 20 per cent of construction costs – which is reimbursed when they leave the cooperative • Residents have rights of occupancy through membership and payment of monthly fees based on real costs of maintenance and operations, but do not own their unit	Long-term security and affordability without the debt of ownership

Figure 8.9: Blended capital structure of Intuthuko Equity Fund, South Africa



Source: Convergence Blended Finance and CAHF, 2025, p. 39.

8.3.4 Blended finance

Blended finance is increasingly used to unlock private financing for affordable housing when investors are reluctant to enter due to higher real or perceived risks, particularly when these are accompanied by low returns.[81] In its simplest form, blended finance combines public or philanthropic capital – which accepts a lower return or higher risk – with commercial investment, thereby reducing the perceived and actual risks of affordable housing projects. Blended capital structures reduce risk through instruments like first-loss capital, guarantees, patient debt, technical assistance and viability gap funding, thus lowering the cost of capital and improving the viability of projects targeting lower-income households. Blended finance is particularly effective when combined with land based instruments, municipal guarantees and affordability covenants, ensuring that public resources produce long-term social outcomes rather than subsidizing private profit.

A strong example is South Africa's Intuthuko Equity Fund, created in 2004 to help historically disadvantaged inner city entrepreneurs enter the affordable rental market. The fund blends concessional capital (from entities such as the Gauteng Partnership Fund and Eskom Pension and Provident Fund), commercial debt from the Trust for Urban Housing Finance (TUHF) or uMaStandi, and entrepreneurs' equity to support acquisitions, refurbishments and new affordable rental projects. Figure 8.9 illustrates the resulting blended capital structure.

8.3.5 Land-based financing

As urban land prices surge, land-based financing has become one of the most powerful levers for unlocking financing for housing. The core idea is straightforward: capture or leverage increases in land value generated by public action – such as rezoning, infrastructure investment or land assembly – and reinvest these gains into public infrastructure and affordable housing.[82] This reduces speculative pressure and ensures that land value appreciation benefits the broader public rather than private interests.

Several city models illustrate how land-based financing can achieve affordable housing at scale. For instance, in Austria, Vienna's public land strategy includes public land banking, restrictions on land prices for subsidized housing and large mixed income development zones such as Sonnwendviertel.[83]

France combines designated development zones – Zone d'Aménagement Concerté – to assemble, prepare and control the release of land (often at controlled prices) in exchange for obligations such as delivering social housing or mixed income units. The Caisse des Dépôts et Consignations provides long-term, low-cost public financing that enables municipalities and social housing providers to develop these zones and deliver affordable housing at scale.[84] There are various land value capture instruments that can be deployed by local and national governments, summarized in Table 8.3.

As urban land prices surge, land-based financing has become one of the most powerful levers for unlocking financing for housing

Table 8.3: Selected land value capture instruments

Instrument	Description	Where it has been applied
Land readjustment (land pooling or consolida-tion)	Land parcels are pooled and readjusted to make space for public utilities such as roads and parks Landowners end up with smaller sized plots but of higher value	Cuenca, Ecuador Qena, Egypt
Strategic land management (land banking or strategic acquisition)	Action on the land banked or acquired include development, rezoning or leasing allowing the public entity to engage strategic partners	PPPs in Egypt
Public land lease	Granting the right to use with incentives and conditionalities that advance social objectives such as housing	Ethiopia Ghana
Transfer of Development Rights (TDR)	Developers and landowners pay for additional rights such as densification	Quito, Ecuador Jarkata, Indonesia

Source: Adapted from IHS, 2022, p.52.

8.3.6 Capital market instruments

While access to capital markets may differ, cities can issue bonds to mobilize resources for housing and related infrastructure, especially targeting vulnerable groups at heightened risk of lacking access to adequate housing. For instance, in 2024 the city of Chicago (US) issued a US$1.25 billion housing and economic development bond, with proceeds allocated to affordable rental housing, home purchase assistance, home repair, addressing homelessness and supporting broader community development objectives, including small business support and job creation.[85] More broadly, US municipalities have used voter-approved general obligation bonds to finance affordable housing objectives. Notable examples include Boulder County (Colorado), Las Cruces (New Mexico), San Antonio (Texas), Durham (North Carolina), Baltimore City (Maryland) and Raleigh (North Carolina), where bond proceeds have supported housing production, preservation, home repair and rental assistance.[86] Raleigh's Affordable Housing Bond, first issued in 2020, raised US$80 million towards affordable housing programmes and has become one of the most popular policies in the city and region.[87] Building on this experience, the municipality is preparing a new affordable housing bond of up to US$200 million for the 2026 ballot to further scale delivery.[88]

Beyond the US, Thailand's National Housing Authority (NHA) provides a leading example from an emerging economy. Between 2019 and 2024, NHA issued thematic green and sustainability bonds to finance nearly 2,956 affordable housing units, representing approximately 11.4 per cent of NHA's housing stock, with bond tenors of 5–15 years and interest rates of 1–1.9 per cent.[89] The developments achieved about 25 per cent of energy savings compared with conventional public housing and were aligned with the SDGs and certified green building standards.[90] Barbados illustrates an innovative approach to mobilizing capital for

El Gouna Egypt: A street with a row of houses and a flower garden © Shutterstock

Mapping out a plot of rural land for development © Shutterstock

climate resilient infrastructure with adequate housing co-benefits through a sovereign debt for climate resilience swap. In 2024, Barbados restructured existing high-cost debt, generating approximately US$125 million in fiscal savings without increasing its public debt burden. The unlocked financing, while broadly focused on investments in sustainable infrastructure such as water reclamation and sewage management, also includes components to enhance housing resilience, such as roof retrofitting and improvements in energy efficiency.[91]

Real Estate Investment Trusts (REITs) are a growing channel for institutional investment in large-scale rental housing through the capital markets. South Africa presents one of the largest REIT markets in emerging economies, with a market capitalization of about R150–160 billion (approximately US$8–9 billion), although residential assets make up only a small share of listed portfolios.[92] International Housing Solutions (IHS) – one of the country's largest affordable housing investment platforms – has mobilized over US$740 million in equity and debt between 2008 and 2022 through funds and REIT like structures, financing around 30,000 housing units, including multifamily rental housing for lower- and middle-income households and thousands of social housing units across South African cities.[93] However, because REITs operate through capital markets and are driven by risk adjusted return expectations, their expansion does not automatically result in affordable housing provision for low-income households and thus require public policy intervention to serve the poorest groups.[94] Taken together, these cases highlight the growing role of capital market instruments by cities to mobilize long-term capital, crowd in private investment and scale affordable housing delivery in contexts where fiscal space and annual budgets are constrained.

8.3.7 Emerging digital infrastructure for housing finance: Blockchain and Tokenization

Distributed ledger technologies (DLTs) – including blockchain-based registries and tokenized assets such as non-fungible tokens (NFTs) – are emerging as enabling infrastructure in the financing and delivery of rental and social housing. When embedded within appropriate regulatory and governance frameworks, they can reduce information asymmetries, improve transparency and mobilize alternative sources of capital.

One area of application with direct relevance for rental and social housing is blockchain-enabled land and tenure administration, which enhances the ability to use real estate as collateral and thus enhancing project bankability. For instance, blockchain-enabled digital land registry, goLandRegistry, has been operationalized by the Government of Afghanistan to support the documentation of at least 1 million land parcels in a country context where more than 80 per cent of urban properties lacked formal registration.[95] Blockchain has also been implemented or piloted for land and property registries in countries including Georgia, Honduras, Ghana, Kenya, Estonia, Dubai, India and the US, primarily to improve transparency, reduce fraud and strengthen tenure security, with the greatest successes observed where digital readiness, legal alignment, and institutional reform are in place.[96] For example, in Sweden a hybrid public–private blockchain model has been integrated into the national land registry, significantly reducing transaction times and paperwork. It was estimated that this innovation would generate public sector savings of over US$100 million per year, enabled by high digital readiness and strong legal alignment.[97]

Distributed ledger technologies are emerging as enabling infrastructure in the financing and delivery of rental and social housing

Other models have evidenced similar savings. In Maputo, Mozambique, Mercy Corps Ventures partnered with Empowa and Casa Real to test a rent to own model financed through NFT based tokenized real estate assets. The pilot raised approximately US$300,000, enabling 30 low- and middle-income families to access climate resilient housing. Notably, 88 per cent of tenants reported improved safety against climate shocks, reinforcing the model's dual affordability and resilience benefits. Additionally, the effective cost of financing was reduced by over 50 per cent – from interest rates exceeding 22 per cent to levels closer to 10 per cent.[98] Though application of technology at pilot or early operational stage, blockchain-enabled registries and tokenized financing models show how digital technologies can complement public and non profit housing systems by improving transparency, lowering perceived risk and mobilizing alternative capital.

Old colorful townhouse in front of high-rise building © Shutterstock

8.4 Towards an Inclusive and Resilient Housing Finance Ecosystem

A housing finance ecosystem functions effectively and inclusively only when it balances the dual nature of housing as both a market asset and a basic human right. Leaning too far toward the market risks price escalation and exclusion of low-income households; leaning too far toward rights based approaches without stable financing undermines supply and places unsustainable burdens on public budgets. A balanced ecosystem requires both well regulated markets and purposeful public intervention, operating in tandem to align investment flows with right based outcomes. Building such balance depends not only on capital mobilization, but also on the broader enabling environment – notably land policy, risk management and institutional coordination. These structural enablers are briefly discussed below.

Funding and capital mobilization: Sufficient funding is a sine qua non condition for financing. A robust funding base ensures the liquidity needed to meet credit demand and to match debt duration with asset life. Conventional mechanisms – mortgage banks, savings institutions, and state-backed lenders – remain essential, but on their own they rarely reach most moderate and low-income households, particularly in economies marked by informality or shallow long-term capital markets. An inclusive ecosystem therefore integrates multiple complementary channels, including contractual savings and cooperative schemes, payroll linked housing funds, blended finance structures that deploy concessional capital to de-risk investments, and green or social bonds that expand access to climate aligned and socially targeted capital.

Land, legal and regulatory foundations: Even well-designed financing products will fail where land access and land rights are not supported by a clear institutional and regulatory framework. Effective housing finance systems rely on foundational enablers such as reliable land and property registration, predictable zoning and land use regulation, secure collateralization and enforceable foreclosure processes, and land value capture and progressive property tax systems that ensure serviced land becomes available for affordable housing rather than lost to speculation.

Risk management: Financing a long-term, high-cost asset such as housing exposes lenders, investors and households to multiple interconnected risks. An inclusive and resilient housing finance ecosystem needs to allocate risks to the actors best equipped to manage them, ensuring that no single segment, particularly households, is overexposed. Instruments such as guarantee schemes, portfolio insurance, and well targeted and transparent appraisal standards help stabilize market functioning, especially in emerging economies where volatility can quickly make housing finance inaccessible to most households. Capital adequacy requirements should also go beyond sound legislation to ensure robust supervisory capacity, especially as systems integrate innovative products. This includes mandating adequate technical reserves and vigilant monitoring to prevent the erosion of underwriting standards that contributed to the 2008 subprime mortgage crisis.

A housing finance ecosystem functions effectively and inclusively only when it balances the dual nature of housing as both a market asset and a basic human right

Data, digitalization and institutional coordination: Data systems – such as credit registries, land cadastres, rental databases and housing price indices – are essential for reducing perceived risk, guiding effective policy design and strengthening accountability across the housing finance ecosystem. Digital technologies further enhance system performance by enabling automated underwriting, incorporating alternative data and streamlining loan approval processes. Further, coordination across ministries, regulators, local governments and financial institutions ensures coherence between fiscal policy, land strategy, housing supply and financial sector regulation. By strengthening real-time national data systems on housing supply, demand, affordability and finance access, governments can enhance the reach and stability of housing finance markets. Significant potential exists to expand mortgage access through data-driven underwriting, alternative income verification and technology enabled loan structuring.

Data systems are essential for reducing perceived risk, guiding effective policy design and strengthening accountability across the housing finance ecosystem

Appropriate metrices for measuring inclusion and equitability: While the mortgage debt-to-GDP ratio is widely used to gauge housing finance depth, it is a poor indicator of inclusion. It captures market size but reveals little about whether systems meet the needs of diverse households. More meaningful assessment requires a multidimensional framework that evaluates both how far mortgage markets reach and whom they exclude. To guide meaningful reform, it is necessary to move beyond "size-based" metrics and adopt a multidimensional set of indicators that capture these complexities and can adequately express credit inclusiveness. An expanded toolkit of metrices could consider mortgage inclusivity and systemic diversity.

8.5 Concluding Remarks

The global housing crisis – marked by widening affordability gaps, growing displacements, persistent informality and escalating climate risks – demands a fundamental rebalancing of how housing finance systems are structured and governed. The chapter identifies four distinct housing finance eligibility groups – mortgage eligible, potentially mortgage eligible, alternative finance eligible and financially deprived – each requiring distinct financing strategies tailored to their specific needs. At present, conventional housing finance effectively serves only the first group, while the financing needs of the remaining three are only partially reached or entirely excluded.

This chapter posits housing finance must bridge two imperatives: housing as a market asset requiring financial discipline and efficiency, and housing as a basic human right requiring protection, inclusion and public purpose. This requires nuanced, socially informed financing strategies that do not, on the one hand, continue to exclude the poorest households.

Financing instruments alone are insufficient to deliver an inclusive and resilient housing finance ecosystem

At the same time, financial assistance should be appropriate and not risk creating unmanageable levels of debt for low-income earners. With that in mind, a number of key principles highlighted throughout this chapter include:

- *Embrace a continuum of financing solutions to target different groups:* An inclusive and resilient housing finance ecosystem requires a broad array of recognized, supported and well-regulated financial solutions matched to the diverse realities of households. Notably for financially deprived households, policy must shift decisively away from debt-based instruments toward social protection, rental assistance and targeted subsidies that safeguard against further shelter induced impoverishment.

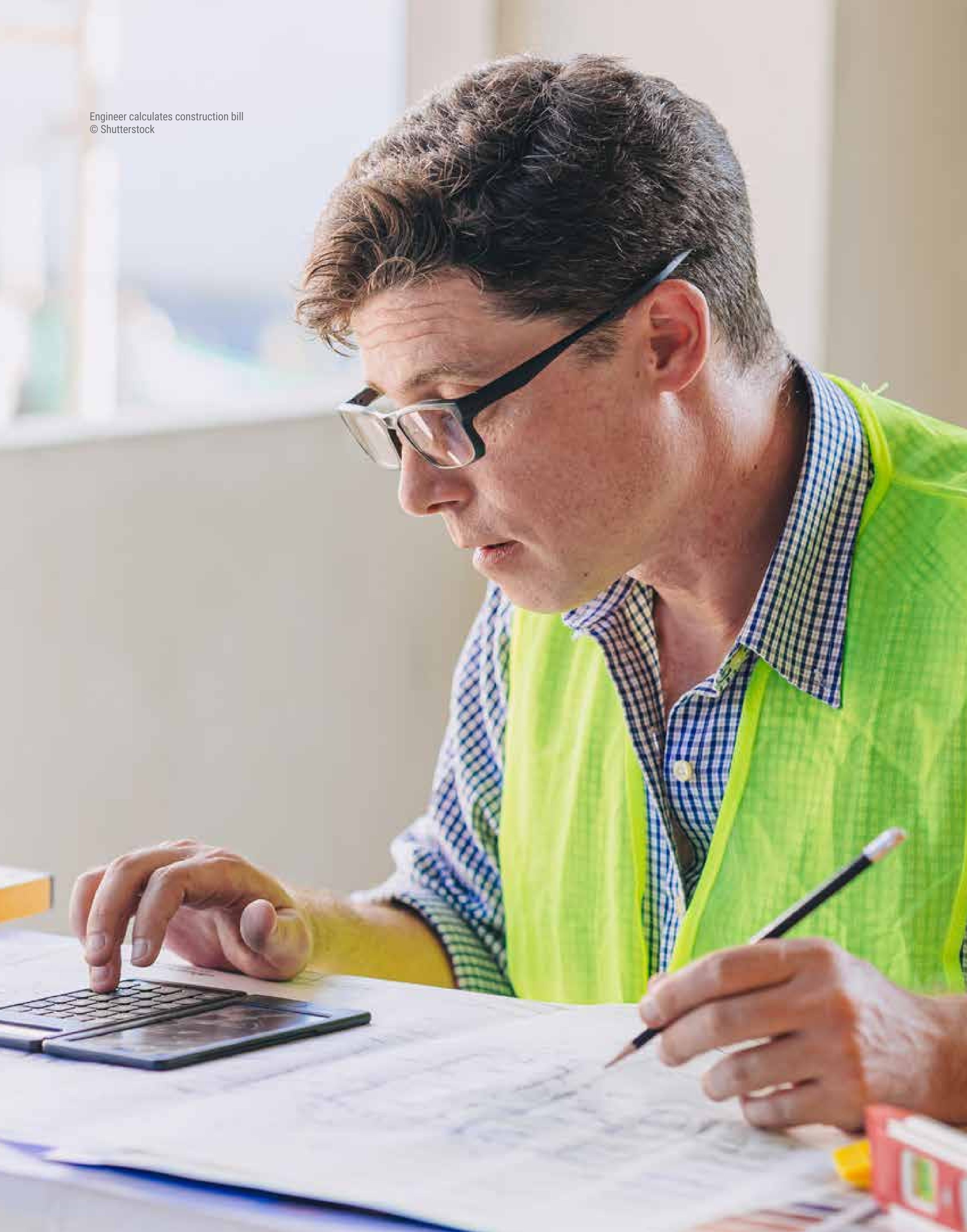
- *Acknowledge and incorporate informal and irregular payments:* A significant share of informal sector workers have sufficient earning capacity to take on some form of housing loan but are unable to do so because their income is informal or cash-based. Housing finance institutions need to urgently respond to this reality by mainstreaming mechanisms that enable informal workers to develop credit profiles and borrow at market rates.

- *Move beyond the dominant focus on home ownership to strengthen rental options:* Housing finance is skewed heavily towards mortgages and property ownership, a situation that leaves the growing share of urban residents who rely on rental with few options. Crucially, beyond mortgages, rental solutions are a critical pathway for realizing the right to adequate housing especially for the alternative finance-eligible groups. As outlined in this chapter, there are an array of tried and tested models to increasing affordable and adequate rental housing that have the potential to be scaled up.

- *Ensure a holistic approach to housing finance that reflects the wider ecosystem of land and infrastructure:* Crucially, financing instruments alone are insufficient to deliver an inclusive and resilient housing finance ecosystem. The delivery of adequate and affordable housing fails where land is scarce, infrastructure is incomplete or permitting is unpredictable. Financing instruments must therefore align with strategic land management, the release of serviced land, and long-term investments in utilities, drainage, climate resilient design and rental supply.

Endnotes

1. Çelik, 2024.
2. World Bank, 1993.
3. UN-HABITAT, 2025a.
4. UN-Habitat, 2023, p.x.
5. Walley and Vidal, 2022.
6. World Bank, 2020.
7. Kavaarpuo et. al., 2024.
8. UN-Habitat, 2026a.
9. Sharma and Samarin, 2022.
10. UNHCR, 2025a; IDMC, 2025.
11. OECD, 2024.
12. United Nations, 2025b; ILO, 2023.
13. ILO, 2023, p.28.
14. García et.al., 2024.
15. Okyere et.al., 2022.
16. Cavalcanti et.al., 2019.
17. Lee and Han, 2024.
18. World Bank, 2024.
19. Zewale et.al., 2026.
20. OECD, 2021a.
21. Government of Vanuatu, 2015.
22. Keys and Mulder, 2025.
23. Koller, 2025.
24. Rose, 2024.
25. UN-Habitat, 2026a.
26. Badev et. al., 2014.
27. UN-Habitat, 2026a.
28. Byamugisha and Dubosse, 2023.
29. Zhou, 2023.
30. Andaloussi et.al., 2024.
31. Consumer Financial Protection Bureau, 2024.
32. CAHF, 2024.
33. European Central Bank, 2026
34. Potts, 2022; World Bank, 2015.
35. Kunovac & Zilic, 2022.
36. Consumer Financial Protection Bureau, 2024.
37. FinRegLab, 2022.
38. Estiningrum et al, 2020.
39. EUDIF, n.d.
40. CAHF, 2023.
41. Alliance for Financial Inclusion, 2025.
42. Chiwetu, 2019.
43. Walley and Vidal, 2022.
44. Tagma, 2016.
45. Banco Ganadero S.A., n.d.
46. World Bank, 2021.
47. Braun et al. 2021; Polterovich et al., 2005.
48. W&W Group, n.d.
49. Verband der privaten Bausparkassen e.V., 2023.
50. Sümer, 2024.
51. Xu, 2017.
52. Central Provident Fund Board, n.d.
53. Kenya Mortgage Refinance Company, n.d.; State Department for Housing and Urban Development, n.d.
54. National Housing Trust, n.d.
55. World Bank, 2023.
56. Divvy Homes, n.d.; Azevedo, 2023.
57. Murray, 2024.
58. Gitonga, 2023.
59. International Growth Centre, 2018.
60. Mpumalanga Department of Human Settlements, n.d.
61. Caixa Econômica Federal, n.d.; Jussara Itou Advogados, n.d.
62. Merrill and Mesarina, 2006.
63. Kimani, 2025.
64. CAHF, 2026.
65. Fika, 2025.
66. Saiz, 2023.
67. Community Land Trust Network, n.d., World Habitat, 2015.
68. Brussels Capital Region, 2023.
69. Kholodilin et.al., 2022.
70. Satterthwaite, 2020.
71. Baum Snow and Duranton, 2025.
72. World Bank, 2020.
73. Ibid.
74. Ibid.
75. Freddie Mac Multifamily, 2025.
76. Matos & Alho, 2025.
77. Ibid.
78. Ibid.
79. Collective Community Housing London, 2023.
80. Catalan News, 2025.
81. Convergence Blended Finance and Centre for Affordable Housing Finance in Africa, 2025.
82. IHS, 2022.
83. City of Vienna, n.d.
84. Cerema, 2022.
85. City of Chicago, n.d.
86. Local Housing Solutions, 2026.
87. Guajardo, 2020.
88. Raleigh Public Record, 2026.
89. Povatong, 2025.
90. Ibid.
91. IDB Group, 2024.
92. CAHF, 2025, Simply Wall St., 2026.
93. International Housing Solutions, n.d.
94. Harrison & Butcher, 2025.
95. United Nations, 2021 ; UN-Habitat, 2020.
96. Paavo & Rodríguez Puentes, 2024; Graglia & Mellon, 2018.
97. Blockchain for the People, 2017.
98. Asiimwe, 2024.



Engineer calculates construction bill
© Shutterstock