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What the global housing shortage (and recovery) means for natural capital investment



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The residential housing sector is a central driver of wood consumption in major developed markets worldwide. After years of underbuilding relative to demand, the U.S., Canada, Australia, the U.K. and the EU all face massive housing shortages. We estimate about 5.1 million new housing units per year for the next ten years are needed to make up for the shortfall across these five markets alone. That is about a 40% increase compared to current levels and would significantly boost demand for sustainable timber and a wide range of wood products.

The solution to the global housing shortage sounds deceptively simple: build more houses. However, a close look reveals that the underlying causes of the housing shortage vary by country and region. While some markets have fallen far short of construction needed to meet demand, others have nearly kept up. In other markets, the high cost of

housing has put home ownership out of reach for many. Addressing housing affordability—income relative to prices—will be key to unlocking the supply of new housing in these markets, but challenges tied to macroeconomic trends may take time to improve. Additionally, as residential construction ramps up, the impact on timber demand and timberland markets will depend on each country or region’s mix of domestic resources and international forest products trade.

The solution to the global housing shortage will likely require a mix of investment and policy to both increase the pace of new residential construction as well as improve affordability. This paper explores the housing shortage and factors that have contributed to years of underbuilding relative to demand. We examine affordability challenges facing would-be homebuyers and evolving market conditions and policy initiatives aimed at improving affordability and spurring new residential construction. Finally, we identify links between the housing sector demand for wood and natural capital investment, highlighting timberland investment regions well positioned to benefit from expected increases in residential construction activity.

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A GLOBAL HOUSING SHORTAGE

Estimates of the depth and duration of underbuilding in the housing sector vary by country but in many cases the downturn dates back to 2009, in the years after the Global Financial Crisis (GFC). Nowhere was the dramatic drop in residential construction more pronounced than in the U.S., where the housing market itself was the catalyst of the financial crisis. Today, average annual starts in the U.S. are 40% below the long-term average since the GFC (Figure 1). And, there is evidence of similar trends in other major global markets.

As in the U.S., residential construction has failed to keep pace with demand from growing populations in Canada, Australia, the U.K. and much of the

of the list is the U.S., where the housing sector is underbuilt by an estimated 6 million total units since 2009.¹ To make up for the shortfall, the U.S. would need to build about 2.1 million units p.a. for the next 10 years, well above current levels of 1.3-1.4 million. In Canada, to compensate for the cumulative shortfall since 2009, the country would need to build about 280,000 units p.a. compared to 245,000 in 2024; Australia would need 245,000 units p.a. compared to the 169,000 units built in 2024; the U.K. would need 254,000 units p.a. compared to just 108,000 in 2024. These estimates may be conservative because they assume no population growth over the next ten years.

Comparable country-level housing start data is not available for all EU member countries

Figure 1: U.S. housing starts per 100,000 people



Source: Federal Reserve Bank of St. Louis. FRED, federal reserve economic data.

EU. Based on national statistics, the U.K., the U.S., Spain and Germany appear most underbuilt. The pace of building in Canada, Australia and France is closer to historic averages. However, even in these countries, fast-growing urban centers (e.g., Toronto, Vancouver, Paris, Sydney) are likely more impacted by underbuilding than country averages might suggest due to rapid urbanization and a relative scarcity of buildable sites.

Though estimates of the housing shortage vary by country, comparing average annual housing starts per 100,000 people pre- and post-GFC allows us to estimate the number of units needed to compensate for the cumulative shortfall (Figure 2). At the top

however, Figure 2 gives an indication of the wide range in housing starts and changes since 2009 in three EU member countries. Using its own data, the European Commission estimates that 2.25 million units p.a. are needed over the next decade, accounting for both the cumulative shortfall and expected demographic shifts, compared to about 1.6 million units constructed in 2024.² Altogether, these data suggest that across the EU, U.S., Canada, Australia and the U.K., about 5.1 million housing units need to be built every year for the next ten years to meet demand.

What will be the catalyst for the residential housing recovery and the construction of the millions of

Figure 2: Housing shortage decades in the making

Average annual housing starts per 100,000 population

	1980-2008	2009-2024	% CHANGE
U.S.	570	341	-40%
Canada	618	577	-7%
Australia	828	773	-7%
U.K.	326	250	-23%
Spain	897	194	-78%
France	593	560	-6%
Germany	473	304	-36%

Sources: Annual housing starts: United States – Federal Reserve Bank of St. Louis; Canada – Statistics Canada; Australia starts – Australian Bureau of Statistics; United Kingdom starts – Gov.UK for England only; Spain starts – ECB Data Portal; France starts – ECB Data Portal; Germany completions – Statistisches Bundesamt. Population – Federal Reserve Bank of St. Louis for all countries

additional housing units? There are both demand- and supply-side headwinds that have held back the construction of new houses that must be addressed to realize a recovery. On the demand side, affordability is a challenge for would-be homebuyers worldwide, though there are some early signs of improvement in certain markets. And on the supply-side, rising costs and lack of productivity gains in the construction sector are constraints on residential building activity

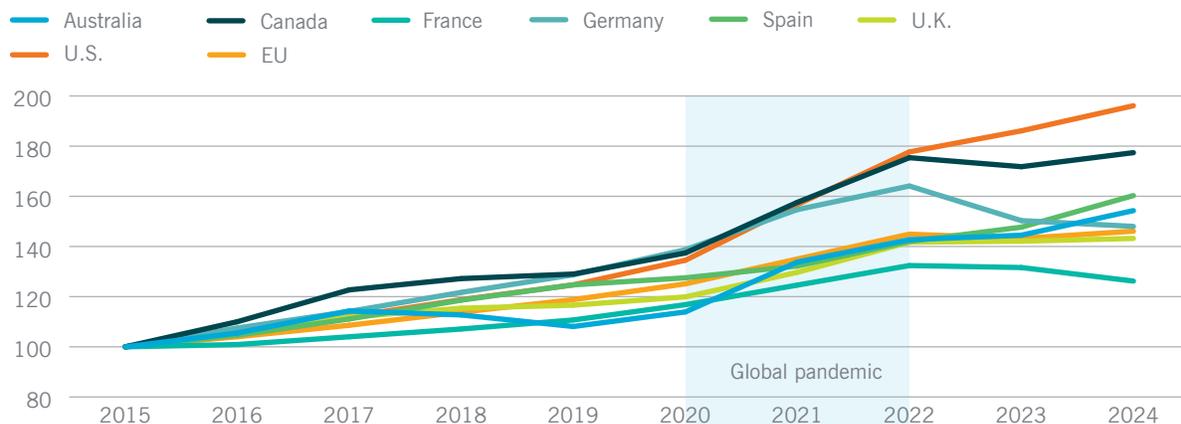
AFFORDABILITY CHALLENGES

Homebuyers across developed markets from North America to Australia and Europe are struggling to find housing they can afford. Figure 3 illustrates the rapid rise in home prices across major markets. Since 2015, housing prices have nearly doubled in the U.S., are up a staggering 77% in Canada and have climbed by more than 50% in Australia. In the EU, housing prices have increased by about 60% on average though there is significant variation across member states. Notably, in France, where home price increases have been relatively modest since 2015, the average pace of home building has held near its pre-GFC level (shown in Figure 2).

Strong demand for housing has pushed home prices higher with the steepest gains occurring between 2020 and 2022, during the global pandemic (see Figure 3). Home prices surged during this period as households sought out more living space and borrowing rates were low. After peaking in many markets in 2022, price increases have moderated in some countries such as France and Germany but are holding or still rising in others. In the U.S., certain southeastern and western states are beginning to see price corrections. For example, in 2025, Florida, Texas and California reported average housing price declines of 4.75%, 2.35% and 1.2% year-over-year, respectively.³

Figure 3: Housing prices have risen significantly

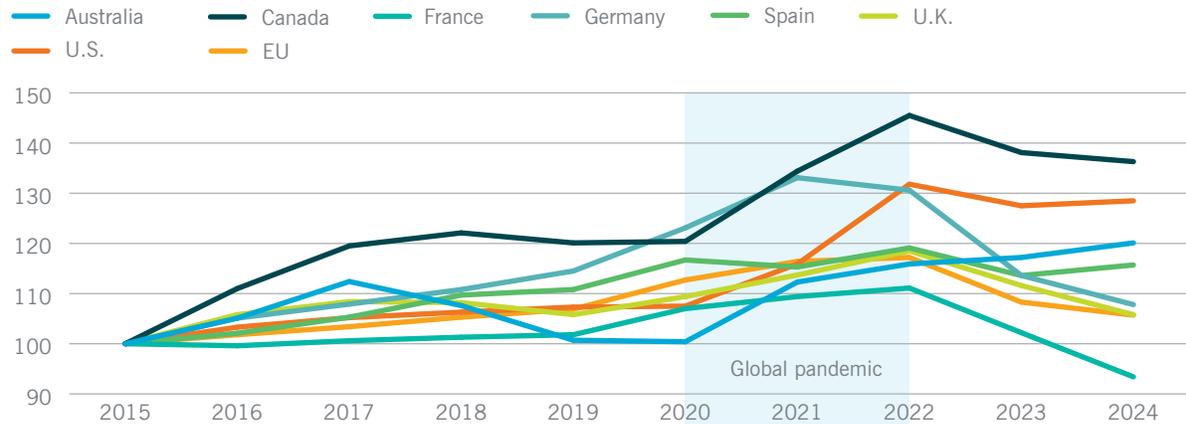
Increase in housing prices, 2015-2024 (2015=100)



Sources: OECD House Price Indices. Notes: House price index measures the prices of residential properties over time in nominal terms. EU includes: Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain).

Figure 4: Housing is becoming less affordable

Home price to income ratio, 2015-2024 (2015=100)



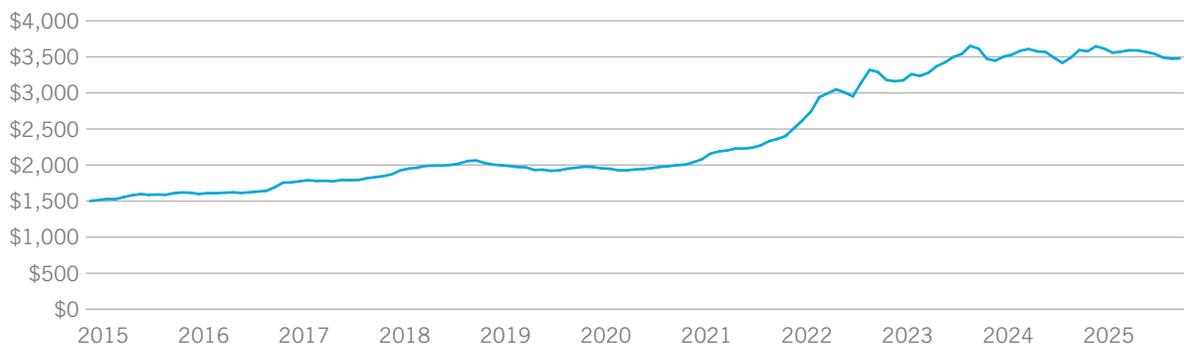
Sources: OECD House Price Indices. Notes: Nominal house prices divided by nominal disposable income per head. Net household disposable income is used. Population data are from the OECD national accounts database. EU includes: Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain.

By comparing changes in housing prices to changes in income over the same period provides insight on how affordability has evolved over time. OECD’s home price to income ratio (Figure 4) shows that income has not kept up with housing prices in most countries. Affordability has become most challenging in the U.S. and Canada, followed by Australia. In France however, income has increased faster than home prices since 2015 suggesting improving affordability.

Across North America, Europe and Australia, rising interest rates since 2022 have contributed to affordability challenges. In the U.S., for example, home ownership costs have increased by 50% since 2022 (Figure 5) with most of that increase due to higher interest rates driving borrowing costs up. The typical 30-year fixed mortgage rate in the U.S. more than doubled in 2022, going from about 3% in January to 6.5% by December of the same year. U.S. rates are showing some signs of improvement

Figure 5: Rising cost of homeownership

Average monthly payment on single-family home, 2015-2025



Sources: Nuveen Real Estate Research; John Burns Research & Consulting; RealPage, November 2025. Notes: Median total payment on a median price single-family home. Home payment, entry-level home (mortgage): 5% down payment, 30-year fixed-rate mortgage, PITI payment, plus mortgage insurance payment. Housing costs: monthly home payment plus annual maintenance costs ranging from 0.85% to 1.25% of the home price set in 2014 and historically adjusted for inflation, factored in monthly.

following three rate cuts in 2025 totaling 75 basis points however, mortgage rates remained at about 6.25% at year-end.

SUPPLY-SIDE HEADWINDS

Rising construction costs are another factor contributing to the housing shortage. Rapidly increasing materials and labor costs have dampened construction activity and slowed investment, and put additional upward pressure on home prices. Residential construction inflation surged in 2021 and 2022 due to pandemic-related supply chain issues. In the U.S., EU and Australia construction costs remain up more than 30% compared to pre-pandemic levels.⁴

As materials and labor costs increase, a lack of productivity growth is also pushing housing prices higher. Globally, productivity in construction lags far behind the total economy and other major industries.⁵ Even worse, residential construction productivity has actually fallen in the U.S. A 2025 report by the U.S. Federal Reserve confirmed that of all major industries, construction is the only one to have negative average productivity growth since 1987 even accounting for improvements in quality.⁶ Productivity growth is critical to addressing affordability because it lowers unit costs of production, reducing inflationary pressures. Productivity growth will also be critical to meet demand in markets where labor constraints are limiting construction activity and housing supply growth. Restrictive zoning policies and cumbersome permitting processes can also negatively impact productivity and limit supply growth in certain markets.

WHAT DOES THIS MEAN FOR NATURAL CAPITAL INVESTORS?

Residential construction is a major end-use market for timber in North America, Europe and Australia and a fundamental demand driver for timber and timberland investment. Timber is the primary input to production of a wide range of wood products used in the housing sector,

with both structural and interior applications. For example, sawnwood (or lumber) is used for structural framing, furniture, cabinetry, flooring, decking and engineered wood products, such as cross-laminated timber. In the U.S., residential construction accounts for more than two-thirds of all wood consumed in the country. Similarly, in Canada, Australia and the EU, there is a strong positive correlation between residential construction and sawnwood consumption.

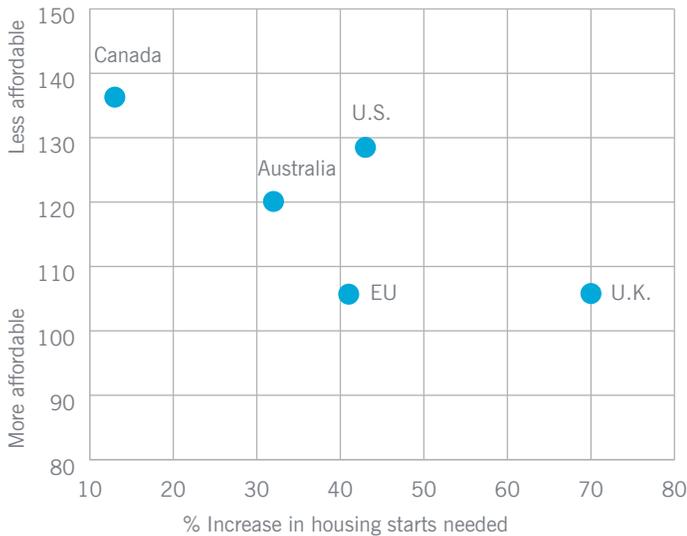
The last decade or more of underbuilding in major markets from North America to Europe and Australia has created the need for an estimated 5.1 million housing units per year—about a 40% increase above current levels—for the next ten years. Ramping up production to supply residential construction and housing markets will require meaningful increases in sustainably harvested timber and create strong tailwinds for timberland investors. How much more timber will be needed to supply these markets and where will we see the greatest increases in timber demand? Answers to these questions will be a key driver of timberland returns in the decade ahead.

For timberland investors, where housing affordability challenges are less severe and where the additional housing starts needed to meet demand is meaningful but achievable in the near to medium term, we expect timber demand to respond in a similar timeframe. In contrast, where affordability and supply-side challenges persist, housing construction and timber demand may take longer to materialize. The range of affordability and relative increase in housing starts needed to meet demand is shown in Figure 6. For each of the five major markets, we highlight key considerations for timber demand as well as policies to support new housing construction and increase the wood-based construction.

United States: On an absolute scale, the greatest number of new housing units are needed in the U.S. The U.S. forest products sector is largely domestically supplied, though Canadian softwood lumber represents about one-quarter of U.S. consumption, a steadily declining but still meaningful imported volume. Timber is readily available in the U.S. South and, following the recent

Figure 6. Housing affordability and construction ramp-up needed in major markets

Home price to income ratio vs. % increase in housing starts needed to meet demand



Source: OECD House Price Indices – home price to income ratio is 2024; NNC Research. Note: X-axis show percent change in annual housing starts needed to meet demand.

drop in Chinese log exports from the West Coast, the Pacific Northwest as well, albeit to a more limited extent. Softwood lumber manufacturing capacity could be quickly ramped up to meet demand, with about 60% of domestic capacity located in the South. Interest rates are perhaps the major hurdle for would-be homebuyers in the U.S. After three rate cuts in 2025, there is potential for the easing cycle to continue in 2026. Pushing in the opposite direction, labor constraints in the construction sector may worsen in the near term, with current immigration policy, challenging productivity. Wood-based construction is fast-growing and offers meaningful advantages in urban and high-labor cost markets, but remains relatively niche nationally.

European Union: On an absolute scale, the number of housing units needed in the EU is close behind the U.S. However, the highly fragmented timberland and residential construction markets

pose challenges for timberland investors. Though the EU is largely a domestically supplied timber market with a highly advanced forest products sector, there are few opportunities for timberland investment at institutional scale. From a policy perspective, the European Commission’s European Affordable Housing Plan and related initiatives seek to boost housing supply in part by addressing fragmentation of the construction sector by standardizing codes and supporting wood-based construction.⁷ Complementary Member State programs to scale wood-based construction further aim to improve productivity, advance decarbonization efforts, support local manufacturing and create jobs in the forestry sector.

Australia: With its well-developed, institutional scale timberland base, Australia has a largely a domestically supplied forest products sector. Domestic supply is supplemented by steady import volumes of softwood sawnwood, primarily from New Zealand and a mix of EU countries, rising when housing construction activity picks up. National policy to address the housing shortage directly supports the forestry sector. In 2025, the government released the Timber Fiber Strategy to improve the country’s ability to deliver housing by increasing domestic manufacturing capacity, including mass timber, strengthen domestic timber supply from healthy forests, and create jobs in the forestry sector.⁸

Canada: As reported by the OECD, Canada is the second least affordable based on home price to income ratio (after Portugal). At the same time, Canada contains a vast forest resource and is home to some of the world’s biggest forest products companies. The country is a net exporter of wood products with the majority exported to the U.S. Timberland investment in Canada is constrained by dominance of publicly owned Crown Lands accessible to investors through long-term lease agreements, not fee simple ownership. The country’s forest-centered policy approach to solving the housing shortage is focused on expanding wood-based building systems and mass timber from domestic manufacturers.⁹ Similar to the E.U.,

these programs are also expected to benefit climate targets, create jobs, and support local economies.

United Kingdom: With a limited domestic timberland base, the U.K. is net importer of every major category of wood products, primarily from the EU and U.S. Though the construction sector is the main consumer of domestically produced and imported sawnwood, wood use per housing unit is relatively low compared to countries like the U.S. or Australia due to the prevalence of brick and block construction. Opportunities for wood-based building systems and mass timber adoption may be limited in the near term due to persistent fire safety concerns, the high cost of insurance and restrictive building codes.¹⁰

INVESTMENT TAKEAWAYS

In order to ramp-up residential construction and build the 5.1 million housing units needed every year for the next ten years will require meaningful improvements in affordability and construction productivity. Timberland in the U.S., Australia and the EU appears best positioned to benefit from housing market recovery tailwinds. While investment return drivers and end-use markets are diverse, and not wholly dependent on a single sector, well-positioned portfolios are more likely to benefit from a surge in housing activity. In addition to strategic timberland portfolio positioning, investment in mass timber supply chains may accelerate the housing recovery through productivity gains, increase demand for timber, store carbon in long-lived wood products and contribute to sustainable economic growth.

For more information, please visit our website, nuveen.com/naturalcapital.

Endnotes

- 1 Alternatively, using vacancy approach to quantify the shortage, Nuveen Real Estate estimates the U.S. residential market is currently undersupplied by ~1.1 million units. This more conservative estimate is not cumulative and does not account for pent-up demand.
- 2 European Commission, 16 December 2025. The European Affordable Housing Plan: 756915b5-d1b1-4bde-ac82-03532d2d3d90_en.
- 3 Macrobond using Zillow, all homes residential.
- 4 Eurostat; Australian Government, National Housing Supply and Affordability Council. State of the Housing System 2025; Federal Reserve Bank of St. Louis.
- 5 McKinsey & Company, Delivering on construction productivity is no longer optional. [delivering-on-construction-productivity-is-no-longer-optional.pdf](#)
- 6 Garcia and Molloy, 2025. Reexamining lackluster productivity growth in construction. Regional Science and Urban Economics.
- 7 European Affordable Housing Plan | Housing; The European Affordable Housing Plan - Housing - European Commission.
- 8 Australia's Timber Fibre Strategy
- 9 6554f71b5899c5347abac39f_Position Paper - Solutions to Canadas Housing Crisis are Found in the Forest_Formatted.pdf
- 10SG-0010_SustainableFoundations.pdf

Sources

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