The landscape of housing finance in OECD countries: shifts and faultlines

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Housing finance is critical to help households make their typically largest purchase in their lives and makes up a very large part of financial markets of OECD countries. The OECD has undertaken in-depth work to map and better understand the drivers and implications for borrowers of cross-country differences in mortgage finance and the risks for global financial markets that stem from the on-going transformation of real-estate-credit markets. Two companion papers, one focussing on households willing to borrow (van Hoenselaar et al., 2021) and the other one on global housing finance markets (OECD, 2021)., provide detailed analysis and discuss reform options to improve the functioning of real estate finance markets so that they better serve households without accumulating systemic risk.

Mortgages look different across OECD countries

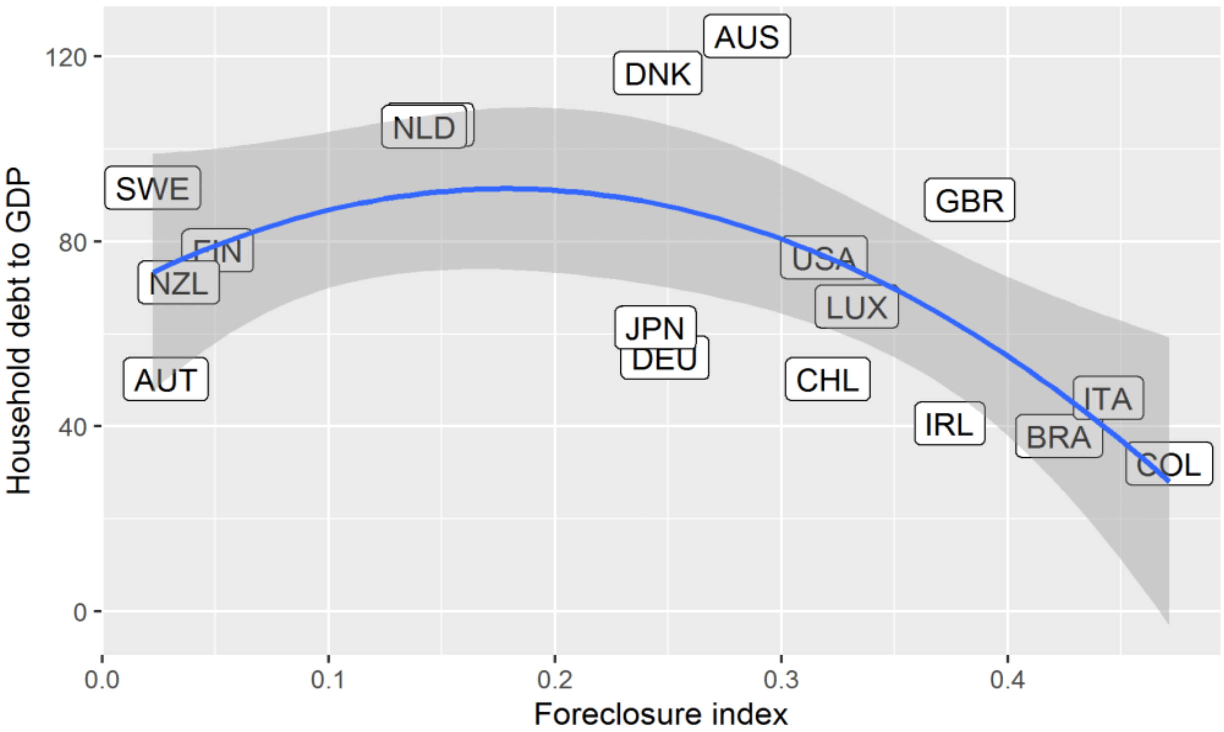
The landscape of housing loan markets varies a lot across OECD countries. There are considerable differences in mortgage take-up across OECD economies. Within countries, the share of households with a mortgage is substantially lower for low-income households and young households. Several countries promote homeownership and mortgage access through tax subsidies (such as mortgage interest deduction) or other mortgage support schemes. However, as these subsidies become partly capitalised in house prices, they prove largely ineffective in improving housing accessibility and are often mostly benefit the upper-middle rather than the lower part of the income distribution.

Regulatory ceilings on loan-to-value (LTV), loan-to-income (LTI) or debt-service to income (DSTI) vary widely across OECD economies. Similarly, the extent of effective borrowing, measured by mortgage debt to income ratios, exhibits considerable cross-country differences. Several mortgage characteristics such as variable interest rates, foreign-currency payments and interest-only payments are common in some countries, widening the debt-related risk exposure of households.

Across OECD economies, there are many discrepancies in how borrower and creditor rights are balanced and how quickly insolvency is resolved. A new *Foreclosure Regulation Index* built for the report uncovers that mortgage markets are deepest in countries where the index shows that creditor and borrower rights are well balanced.

Figure 1. Balanced foreclosure regulation settings are associated with greater household access to credit

Foreclosure index (greater values mean stronger borrower protection) vs. household debt



Note: Greater values of the Foreclosure index means that regulations are focussed on protecting borrowers rather than lenders. The blue line shows the fitted values of a quadratic relationship between the variables; the grey bands depict 95 per cent confidence intervals.
Source: van Hoenselaar et al (2021).

Global real estate finance markets are undergoing deep changes

Since the Global Financial Crisis (GFC), the credit quality of structured real estate finance products has broadly improved, as securities are no longer backed by subprime and Alt-A collateral. In this regard, regulators have strengthened regulation and oversight to better address risks posed by securitisation. Also, national authorities and international organisations have made considerable progress to identify and better understand activities and risks in financial intermediation more broadly across the world. All these developments have contributed to more stable real estate finance markets in the last decade. However, very low interest rates in the aftermath of the GFC have led to a substantial rise in indebtedness of households and corporates concomitantly with real estate prices, which have risen above 2008 pre-crisis levels in many jurisdictions, which has in turn increased concerns over exuberance in residential and commercial real estate markets.

In parallel, investors' reach for yield over the last decade has supported the growth of non-bank leveraged institutions (such as non-bank mortgage originators) and forms of collective investment vehicles in real estate finance (including mortgage real estate investments trusts (mREITs) and real estate mutual funds (REMFs)). Such attractiveness of investments in mREITs and REMFs has contributed to an increase in demand for mortgage backed securities (MBS) and has supported the rebound of MBS issuance over the last decade. Against a backdrop of observed exuberance in some real estate markets, the rising importance of leveraged mREITs and REMFs that perform liquidity transformation could contribute to financial stability risks and ultimately disrupt the availability of finance to the real economy. In this regard, the COVID-19 crisis has posed unprecedented challenges for economic and financial resilience and the market turmoil in March 2020 has exposed structural fault lines in the non-bank financial sector. In particular, many mREITs and REMFs faced liquidity stress following significant outflows and difficulties to meet margin calls that resulted in the liquidation of assets in markets with little or no secondary trading. Therefore, the pro-cyclical behaviour and liquidity risks associated with mREITs and REMFs (which are subject to relatively weak liquidity requirements) combined with their increasing reliance on public support, demonstrate the need to further develop and implement activities-based tools to address vulnerabilities in some parts of the non-bank financial sector without undermining the benefits of market-based finance.

Real estate mortgage-backed securities (MBS) are subject to risks

Froth in some housing markets and vulnerable commercial real estate markets make MBS markets prone to rating downgrades and rising defaults in the post COVID-19 environment. Household and corporate mortgage payment risks are likely to increase, which may erode the credit quality of underlying mortgage collateral of MBS. In addition to the possible pandemic-induced structural changes, commercial MBS (CMBS) markets are also exposed to medium-term challenges related to climate transition risks that are likely to erode further the credit quality of some non-financial corporates. Also, hedging activities on MBS markets may trigger sell-offs of Treasury securities and heightened volatility in Treasury markets. Therefore, deteriorating conditions in several major MBS and Treasury markets may result in substantial losses for a wide range of financial intermediaries and investors with detrimental implications for financial resilience, as well as the availability of finance to the real economy and ultimately economic growth.

Mortgage real estate investment trusts and real estate mutual funds are vulnerable to margin calls

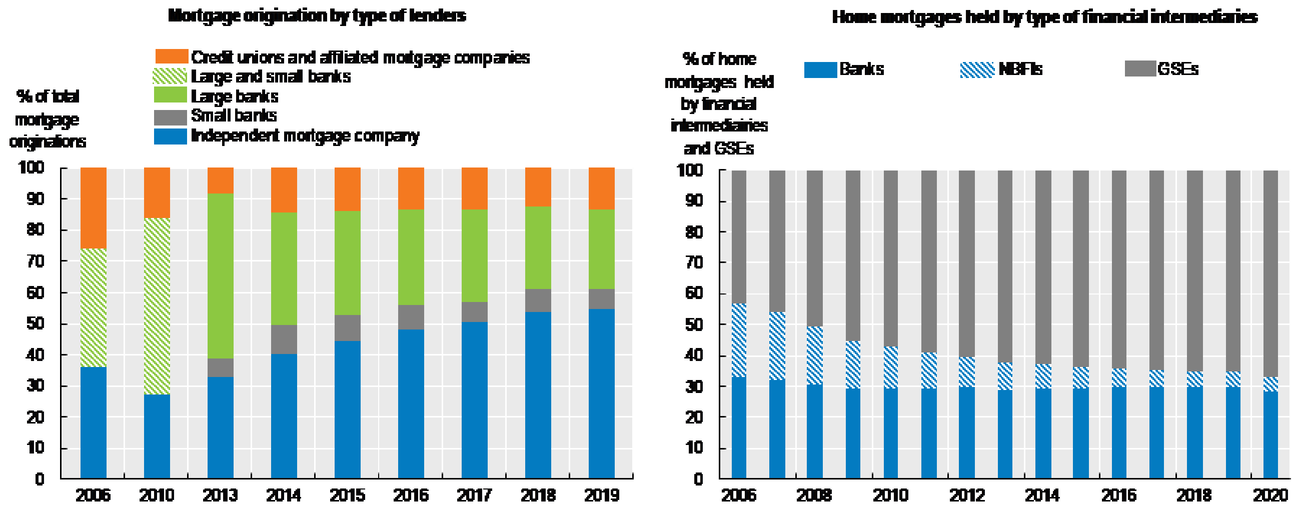
While mREITs and REMFs can contribute to market liquidity under normal market conditions, they are vulnerable to margin calls and share redemptions following a shock in underlying real estate markets. mREITs use leverage to perform liquidity and maturity transformation by funding the acquisition of real estate MBS and mortgages with revolving credit facilities from banks and borrowing from short-term secured funding markets. REMFs invest using investors' funds in mREITs and provide liquid investments by offering redemptions at higher frequencies. mREITs may be subject to margin calls and may have to deleverage by unwinding their positions in MBS that could create feedback loops to MBS markets. During the first semester of 2021, REMFs recorded losses due to the deteriorating financial soundness of mREITs. The broad deterioration in the market liquidity of REMFs' assets was particularly severe for funds facing larger share redemptions from investors. Notably, REMFs attempted to use a liquidity waterfall strategy, to initially meet increased redemption demand using cash and cash equivalents. However, some REMFs ran out of cash and cash equivalents forcing them to sell real estate assets into increasingly illiquid markets. Developments at the onset of the pandemic have shown that structural vulnerabilities remain in mREIT and REMF products which have been deeply affected by and contributed to the price volatility in MBS markets. For these reasons, deteriorating credit quality of mortgages and business model of mREITs and REMFs make them prone to abrupt changes in investor risk sentiment that are exacerbated by elevated real estate prices, indebtedness and liquidity transformation of various types of stakeholders in the investment chain.

Non-bank mortgage intermediation is taking greater and greater importance in real estate finance

The low interest rate environment in the aftermath of the GFC and more stringent regulation implemented in the banking sector have contributed to the development of leveraged non-bank mortgage originators and servicers, mainly in the United States, that perform liquidity and maturity transformation (Figure 2). In addition, very low interest rates have contributed to heightened interest of insurance companies, pension funds and investment funds, especially in several European economies, for investing in real estate loans. Evidence shows that insurance companies and investment funds are exposed to higher risk of losses from their commercial real estate investments while pension funds face moderate exposure to the real estate sector. While unprecedented monetary and fiscal support measures have mitigated the COVID-19 induced financial strain on non-bank mortgage lenders as well as their funding sources, any emergence of new COVID-19 variants combined with the uneven recovery across sectors could have detrimental implications for the asset quality of non-bank mortgage lenders in the absence of targeted income support for households and firms that operate in the most vulnerable sectors. Therefore, the main points of concern relate to non-bank mortgage lenders that are increasingly exposed to several types of shocks that may substantially disrupt mortgage markets and create spillovers to other markets and ultimately the real economy.

Figure 2. US mortgages have become predominantly issued by non-bank lenders and purchased by agencies

United States, 2006-2021



Note: GSE refers to “Government Sponsored Enterprises” and NBFI stands for “Non-Bank Financial Intermediaries”.
Source: OECD (2021).

Policies can bring improvements

In light of the strains in global housing-finance markets during the pandemic, a further assessment of the efficacy and use of activities-based tools for mREITs and REMFs, and also a more comprehensive risk-based approach for the regulatory framework of non-bank mortgage lenders and servicers, is warranted. The consideration of appropriate tools to address risks at leveraged real estate NBFIs would help mitigate excessive leverage, excessive liquidity transformation and further increase the transparency of real estate finance products and intermediaries. Authorities should also determine whether they have sufficient activities-based tools that incentivise leveraged real estate NBFIs to take heed of

liquidity and maturity transformation risks.
Given that the renewed rise in interest rates could contribute to a sharp correction in real estate prices, the consideration of appropriate tools to address risks at real estate collective investment vehicles is prescient. As mREITs and REMFs grow in importance, it is crucial to mitigate their risks to strengthen resilience of the non-bank financial sector. This is the new frontier that must be crossed to make progress towards a more resilient global financial system.

Looking ahead, the capacity of mortgage markets to lastingly help households would be enhanced by measures to:

- Encourage inclusive access to good-quality housing by:
  - Eliminating mortgage interest deduction, which would help to curb house price pressures and boost long-term affordability while providing potentially significant additional tax receipts;
  - Shifting the focus from promoting mortgage-funded homeownership to improving affordable access to housing in an environment where tax and subsidy programmes gradually become neutral between rented and owner-occupied dwellings.
- Prevent the build-up of potentially destabilising levels of mortgage debt by:
  - Applying macroprudential brakes as DSTI and LTV-caps, which can limit household debt accumulation and limit house price appreciation;
  - Ensuring that lending standards properly account for the risks associated with variable rate and foreign-currency loans.
- Align mortgage markets with environmental goals*:* There is scope for progressing towards climate objectives through innovations in housing finance, such as the development of green mortgages. Policies can create a favourable environment for such advances by
  - Establishing international standards for energy-

efficient, or “green”, mortgages;
    - Creating mechanisms to ensure the quality of the energy certification of dwellings;
    - Setting supervisory standards for green mortgages to properly reflect their risk (which is typically reduced compared with standard mortgages).
- Facilitate orderly and efficient debt resolution: foreclosure procedures should strike a balance between the rights of borrowers and lenders so that both sides have an interest in managing housing loans risks.

References

OECD (2021), Structural developments in global real estate finance markets: The rise of non-bank financial intermediation.

van Hoenselaar, F. et al. (2021), Mortgage Finance Across OECD Countries, OECD Publishing.