Gabriel M. Ahlfeldt   Nikodem Szumilo   Jagdish Tripathy   October 2nd, 2024

Why higher house prices lead to higher borrowing

The UK housing market has experienced a dramatic rise in house prices and mortgage debt over recent decades, both of which have outpaced average income growth. Gabriel M. Ahlfeldt, Nikodem Szumilo and Jagdish Tripathy show that much of the increase in mortgage debt can be attributed to homebuyers being compelled to borrow more in order to afford adequately sized homes.

In the past three decades, house prices and mortgage debt in the UK have risen much faster than income. In other words, people end up borrowing more money when house prices go up. This finding goes against many canonical economic models in which, when house prices go up, home buyers are forced to buy proportionately smaller houses to keep the amount of borrowing and housing expenditure constant. What happens instead is that people aim to keep their type and size of housing constant, therefore adjusting upwards the amount they borrow.

There are two important reasons that explain why the canonical models are incomplete, and why we see this positive relationship between house prices and mortgage borrowing. First, when house prices increase, home owners *want* to borrow more since they feel richer and wish to use their additional wealth to afford, for example, luxurious holidays, or a new car. This is the wealth channel which applies mainly to homeowners, but not first-time buyers. Second, when house prices increase, home owners *can* borrow more since the value of their collateral has increased, making borrowing cheaper and easier to obtain. This is the credit-constraint channel which applies to both homeowners and first-time buyers to the extent that they are constrained mostly by the loan-to-value and not the loan-to-income ratio.

In a recent CEP discussion paper, we show that if house prices increase, deposit-constrained buyers *need to* borrow more if they cannot easily downsize to smaller homes. We label this effect of house prices on mortgage demand the *housing-consumption channel* which applies to all buyers.
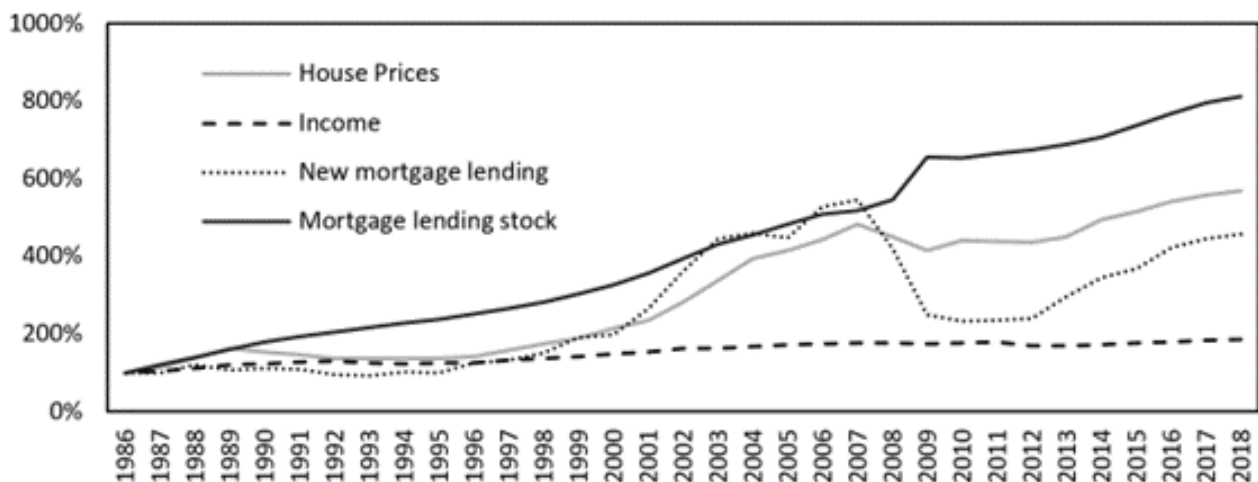
> *The housing-consumption channel posits that rising house prices compel households to borrow more to finance a given amount of housing.*

Naturally, changes in mortgage borrowing observed in data are shaped by all of the afore-mentioned channels. To disentangle these different channels, we estimate a system of mortgage demand and supply equations using a unique dataset. We combine transaction prices from the UK Land Registry with data on the mortgage value, interest rates, and borrower age and income at the time of the transaction, covering all UK mortgage issuances from 2005 to 2017. Our estimates show that the elasticity of mortgage demand in response to house prices is positive and relatively high, at 0.82. This means that for every 1 percent increase in house prices, mortgage demand rises by 0.82 percent. Actual borrowing increases by less than demand since banks respond to increases in demand by raising mortgage interest rates. However, actual borrowing, which also depends on how banks respond to the increase in demand, still increases by 0.31 percent. This suggests that housing and non-housing consumption are less easily substitutable than many economic models assume, where households are expected to downsize to more affordable homes without significantly increasing borrowing.

In counterfactual simulations in which the housing consumption-channel is switched off, mortgage borrowing and house prices in the UK are 50 per cent and 31 per cent lower, respectively.

"

We incorporate our estimates of the elasticity of mortgage demand with respect to house prices into a broader economic model where the housing and mortgage markets interact. Intuitively, when house prices rise—perhaps due to increasing demand not met by sufficient new supply—households seek larger mortgages. Similarly, when borrowing increases, for instance due to lower interest rates, housing demand grows as households can afford higher prices. This creates a feedback loop, where rising house prices are amplified through the mortgage market.

We calibrate this model to fit trends in average house prices and mortgage loan sizes in the UK since 1995. Then, we simulate how house prices and loan sizes would have evolved if the elasticity of mortgage demand with respect to house prices was zero. In this hypothetical scenario households respond to rising prices by downsizing instead of borrowing more, as assumed in many economic models. This means that there is no housing-consumption channel. Our results suggest that without the housing-consumption channel, mortgage borrowing in the UK would be 50 per cent lower than observed. House prices themselves would be 31 per cent lower due to the absence of the feedback loop in this hypothetical scenario. Therefore, the housing-consumption channel is not only intuitive but also quantitatively important.

"

Our results provide a case for limiting risks to the financial system from mortgage debt.

"

The size of the housing-consumption channel described in our paper has significant implications for economic vulnerability and housing market cycles. Our results provide a case for limiting risks to

the financial system from mortgage debt'. During periods of strong house-price growth, a household will seek higher amounts of mortgage which, without macroprudential interventions such as limits on high loan-to-income or loan-to-value mortgages, will increase the amount of mortgage debt in the economy directly in response to house price increases.

The housing-consumption channel offers a critical insight into the dynamics of the housing market and its broader economic implications. As house prices continue to rise, understanding this channel is essential for policymakers, real estate professionals, and financial planners. The challenge lies in balancing homeownership aspirations with financial stability to avoid a cycle of unsustainable debt. Our study adds to our understanding of the feedback loop between house prices and household debt and emphasises the role of the housing-consumption channel in driving the loop in conjunction with the wealth and credit-constraint channel.

Any views expressed are solely those of the authors and should not be taken to represent (or reported as representing) the opinions of the Bank of England or any of its policy committees.

All articles posted on this blog give the views of the author(s), and not the position of LSE British Politics and Policy, nor of the London School of Economics and Political Science.

Image credit: Ink Drop on Shutterstock

About the author

Gabriel M. Ahlfeldt

Gabriel M. Ahlfeldt is Professor of Econometrics at Humboldt University in Berlin, a visiting professor at the London School of Economics, faculty of the Berlin School of Economics, and an affiliate of the Centre for Economic Performance, CESifo, and CEPR.

Nikodem Szumilo

Nikodem Szumilo is an associate professor at University College London and the director at the Bartlett Real Estate Institute. He is also an academic visitor to the Bank of England and a Research Affiliate of the UCL Centre for Finance.

Jagdish Tripathy

Jagdish Tripathy is a Research Adviser at the Bank of England, with a PhD in Economics and Finance from Universitat Pompeu Fabra, Barcelona.

Posted In: Housing