OXFORD MARTIN SCHOOL

UNIVERSITY OF OXFORD

Institute for New Economic Thinking AT THE OXFORD MARTIN SCHOOL

Housing markets in the 2020s: valuation, drivers, risks and ***policies***

John Muellbauer

SUERF- webinar

21 September 2022

- **Monetary policy and housing**
  - Transmission to inflation: the feed-through from house prices and rents.
  - Differences between the US and the Euro area.
  - Transmission channels to aggregate demand via housing and mortgage markets: missing links in policy models.
  - Country heterogeneity is important.
  - Loose monetary policy: overstated effectiveness and serious negative side-effects.
  - Current policy implications.

- **Macroprudential policy and housing**
  - Has regulatory reform gone far enough?
  - How good are current risk dashboards?
  - Where is over-heating most serious?

- **Tax reform and housing**
  - Towards efficiency, sustainable growth, improving intergenerational inequality and reducing social exclusion in OECD 2021 and the new housing tax report.
  - Dealing with the climate emergency.
  - Promoting financial stability.

- In the US
  - CPI core index has a weight of nearly 40 percent on an index of rents (proxies owner-occupied equivalent rent, OER for housing costs, as well as the rents paid by around 40 percent of families).

- Insights from forecasting model
  - 1-year ahead US inflation forecasting model finds a robust and large effect on the consumer expenditure deflator from slowly transmitting house prices, and from unit labour costs and international prices (Aron & Muellbauer, 2013).

- Prospects for inflation in rents and the wider cost of living in the US
  - linked to years of rising house prices especially in the last 3 years (Bolhuis, Cramer & Summers (2022); Brescia (2021) & Dolmas and Zhou (2021)).

- Hot topic: if you want to know where inflation is headed look at rents
  - *"Housing costs play big role in measures of underlying prices"*
  - *"Rent may be close to topping out, but won't cool any time soon"*

- For Euro area
  - the HICP excludes OER, though
  - "the inclusion of the costs related to owner-occupied housing in the HICP would better represent the inflation relevant for households and that the inclusion of owner-occupied housing in the HICP is a multi-year project" (ECB Gov. Council in 2021)

- For France
  - rent index well forecast by 1-year ahead, incl. strong house price effect (Muellbauer, 22).
  - slow feedthrough partly due to rent adjustment for existing contracts being typically lower than for new contracts, and flexible rent controls.

- *Less clear for many other Euro area countries* where there is an even stronger weight on controlled social rents in the rent index.

- *Little research in Euro area* on transmission of housing costs to price or wage inflation.
  - But strong evidence that house price rises feed into perceived inflation, ECB (2021d), p.50-51 .
  - Missing channel?

- US-Euro area differences in transmission of house prices to inflation
  - From lack of OER in HICP, structural differences (owner-occupation rates and rental sector).
  - helps explain differences in monetary policy stance

- Relevant both for monetary *and macroprudential policy*, but most current central bank policy models have inadequate coverage of these channels.
- Crucial to control for variation in loan standards to estimate effects of policy rate and QE on aggregate demand.
- Transmission of monetary policy *and loan standards* to lending interest rates, and via house prices, to residential investment, debt, wealth, consumption and non-performing loans (NPLs) – and potentially growth expectations.
- Loose loan standards are major cause, years later, of higher NPLs. In turn, higher NPLs feed back on tighter loan standards, exacerbating down-turns.
- Evidence in Muellbauer (2022) for this credit cycle in France, using a latent variable measure of variation in loan standards.
- NPL ratio or loan standard is relevant in every equation: mortgage interest rate, house prices (along with nominal and real interest rate, and income relative to housing stock), residential investment, mortgage debt, consumption and forecasting model of NPLs.

- Pre-crisis ratio of real estate investment to GDP differs; elasticity of construction volumes to real estate prices differs; share of public sector housing differs.
- Access to home equity loans differs greatly between countries, e.g. the US vs. Germany.
- Tendency to extrapolate past house price appreciation –risking over-valuation- is higher where homebuyers are more heavily geared and where property taxes are weakly linked to current market values.
- Greater where lax regulation permits high levels of gearing both for banks and borrowers, and fixed rate mortgages slow transmission of policy mitigation, though when rates rise, the impact is faster in floating rate environments.
- Greater where high levels of maturity mismatch exist in funding mortgages.
- Greater where systemic risk in finance is high, i.e. where the degree of leverage, maturity mismatch, the degree of interconnectedness, levels of complexity and/or the prevalence of mispricing of risk pose problems. In turn, these depend on the quality of prudential regulation and financial sector structure.
- Greater where household debt levels are high, liquid assets low, and households are dependent on new credit.

Monetary easing *was intended to* increase aggregate demand from households, *but …*

(i) The impact has varied a great deal by country:

- For example, the housing wealth effect is ***different*** for different countries and time varying (since housing wealth has mainly a collateral effect where home equity withdrawal is available, for example low in Germany).

(ii) It has tended to be overstated:

- Examples of how the effects on consumer spending are ***muted*** are from the negative longer-term effects of higher debt levels on consumption and the negative affordability effects of higher house prices on non-owners –even w/o credit cycle downturns or a financial crisis.

(iii) It has induced seriously negative side-effects:

- Although higher house prices reduce Gini measure of wealth inequality (OECD (2021) and Dossche et al. (2021)), the ***gap has been widened*** between owners and non-owners, and between older and younger generations; and inequality increased within younger cohorts.
- Moreover, credit-fuelled real estate booms have ***crowded out more productive investment***, with negative consequences for sustainable growth, and crisis risk.

- Müller and Verner (2021)
  - Find crowding out of more productive investment in real estate booms with negative consequences for sustainable growth.
  - Study the sectoral allocation of credit in 116 countries since 1940
  - Show that credit to non-tradable sectors, including construction and real estate, is associated with a boom-bust pattern in output, similar to household credit booms.
  - Such lending booms also predict elevated financial crisis risk and productivity slowdowns

- Doerr (2020)
  - More evidence for a negative relationship between rising real estate values and productivity comes from a study of US firms
  - Finds that rising real estate values relax collateral constraints for companies that own real estate and allow them to expand production.
  - Consequently, an increase in house prices reallocates capital and labour towards inefficient firms, with negative consequences for aggregate industry productivity.

- Chakraborty et al. (2018)
  - Show that for US data, bank lending for housing crowds out commercial lending, lowering investment by firms borrowing from these banks, especially small credit constrained firms.

- Basco et al. (2022)
  - find a similar result for Spain and document the negative impact on TFP in the manufacturing sector.

- For China, Hau and Ouyang (2021)
  - show that real estate price rises caused by a restrictive land supply reduce bank credit to small firms, increase their borrowing costs, diminish their investment rate and compromise their output and productivity growth.

- Grjebine et al. 2022 argue, via a sectoral allocation mechanism
  - "there is a group of countries where real estate shocks generate TFP losses, including countries where real estate booms started early and were substantial, such as Ireland, the UK, France, and Spain…..
  - On the other hand, there is another group of countries for which our mechanism generates TFP gains – including Germany, Austria, and Italy, where real estate prices grew later or at a slower pace."

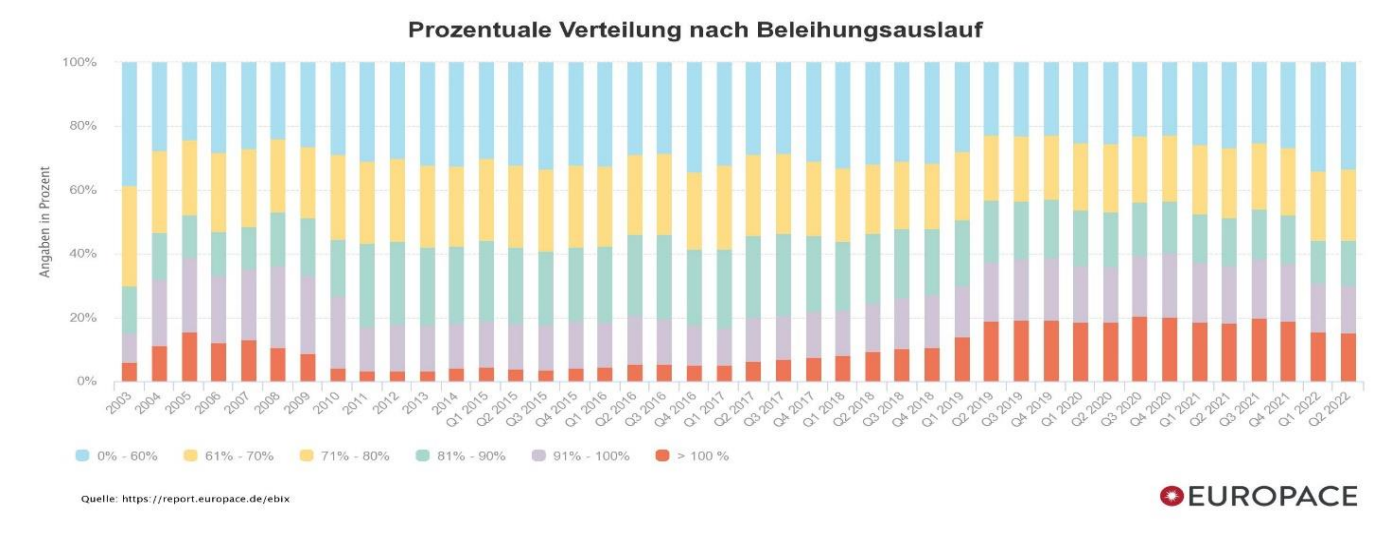
- Stellar work at the ESRB, the EBA, the ECB, at country central banks, BIS & IMF.
- Given institutional heterogeneity in the Euro area, commendably they do not adopt a 'one size fits all' approach in real estate-linked macropru.
- Institutional heterogeneity - apart from principles of democratic control and subsidiarity – make it a functional necessity that the supra-national bodies (the ESRB, the ECB, the EBA) and national central banks and regulators co-ordinate.
- Welcome push from the supra-national bodies for:
  - Greatly improved cross-country data monitoring across CRE and RRE.
  - New instruments e.g., sectoral systemic risk buffers.
  - Minimum standards on the legal perimeter for borrower-based macropru measures. At present, LTI or DSTI limits are not available in national legislation in Germany and Finland
- Current system where the ESRB issues warnings of risk build-up, recommendations for macropru tightening and follow-up checks on implementation, is largely working - subject to data constraints.
- The macroprudential tightening in the last few years is now validated by the current economic crisis, which otherwise is not far from a 'perfect storm'.

- Serious gaps in historical data, in risk dashboard, in borrower-based toolbox and in assessment of effectiveness of real-estate related macropru.

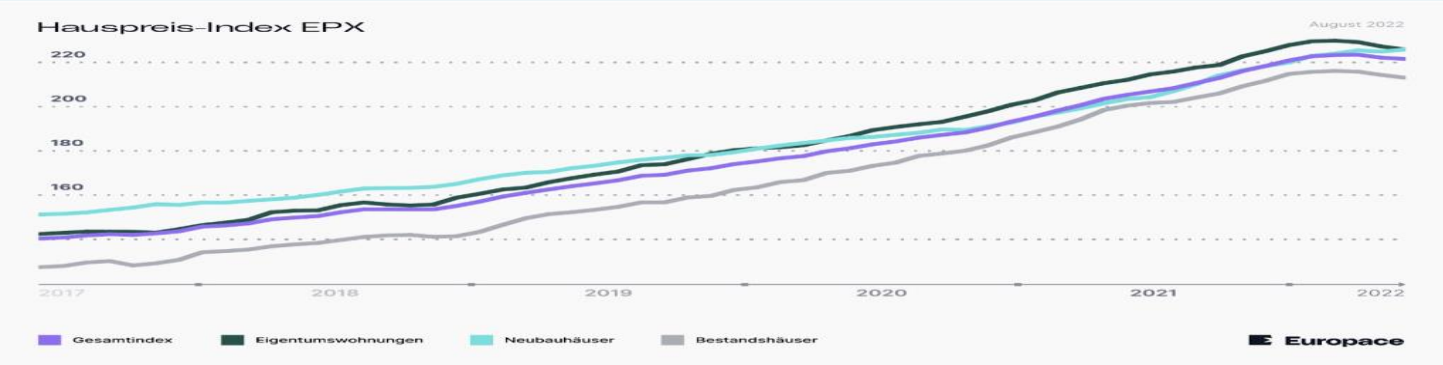
- Muellbauer (2022) argues: latent variable metric of loan standards and over-valuation measure based on house price models (in e.g., Chauvin and Muellbauer (2018)) would enhance the risk dashboard and improve effectiveness tests.
  - *The latent variable for mortgage loan standards captures a common factor in house prices, mortgages and consumption, **after** a full set of economic and demographic factors have been controlled for.*
  - *For forecasting the French NPL ratio 1 and 2 years ahead, this latent variable, with other controls, radically outperforms the measures currently in the toolbox, and the domestic Systemic Risk Indicator (d-SRI) of Detken et al. (2018) and Lang et al. (2019).*
  - *According to the model, a 'perfect storm' that would push up the French NPL ratio: a rise in interest rates, a rise in the unemployment rate, a fall in economic growth, a fall in the house price to income ratio and loose credit conditions in the previous 4 to 5 years.*

- Has Euro area macropru been tight enough, given 'behind the curve' central banks?

- Rising fraction of LTVs over 90% since 2017, hike in average mortgage interest rate from 1% in 2021 to 3.2% in June 2022



- German Hedonic house price indices starting to fall (August data).



- Barasinska et al. (2019)
  - stress test suggests that a fall in house prices and a rise in the unemployment rate would generate significant credit losses at German banks.
- Germany: high energy dependence on Russia and export sector sensitive to global recession. Owner occupation under 50%, little access to home equity loans and a relatively low ownership of illiquid financial assets, hence risks posed by *asset price declines* for *households* are relatively moderate.
- Netherlands: households on average, heavily in debt and heavily exposed both to declines in equity prices and to potential falls in house prices. DNB
- *"In November 2021, the average price of owner-occupied homes was 20.1% higher than a year earlier, which is the largest price increase since Statistics Netherlands (CBS) begun its measurements in 1995."*

- There is controversy on 'leaning against the wind' (e.g., Svensson vs. the BIS).
  - In the Euro area, LAW is even more difficult to implement because of *institutional heterogeneity in the real estate and credit markets* across countries.
  - Globally, LAW would have been less damaging than policies followed - provided that fiscal policy could have been expansionary - since low interest rate policy and QE caused *high real estate valuations with negative consequences* for financial stability and for sustainable growth.
  - Failures by governments to correct housing supply distortions and promote stabilising measures (e.g., market price-related property taxes and cutting mortgage interest tax relief), have *exacerbated high real estate valuations* and *made CB choices far harder*.

- The risk outlook.
  - For investors, real estate looks like an inflation hedge (such negative real interest rates, encourage levering up to pay back loan in devalued currency).
  - Suggests controlling leverage on CRE and BTL residential, which should also dampen inflation expectations.
  - Climate change has huge *real estate-related risk implications* (EC (2020) suggests that 40% of CO_2 emissions in continental Europe are building-related).
  - *Holistic policy across public agencies* is needed (OECD (2021): 'Build back better').

OECD *Brick by Brick* (2021) (confirmed in *Housing Taxation in OECD Countries* (2022)):

- *"Relying less on housing transaction taxes and more on annual taxes on immovable property while shifting the base of these taxes from the value of structures to current land prices would bring multiple benefits. The move away from transaction levies towards recurring taxes would lower obstacles to mobility, facilitating labour market adjustment and boosting economic growth. Shifting the basis from the value of structures to current land prices would encourage construction in valuable developable areas, helping to address supply-demand mismatches. Many countries are underutilising recurrent property taxes and have substantial scope for increasing these levies."*

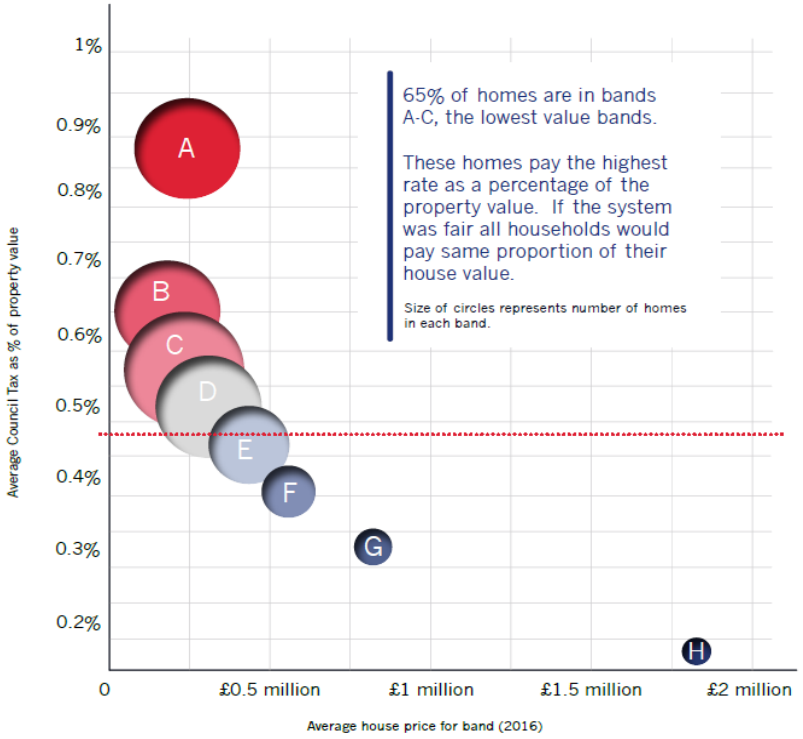
Need for tax shift has never been greater, exacerbated by the COVID-19 pandemic:

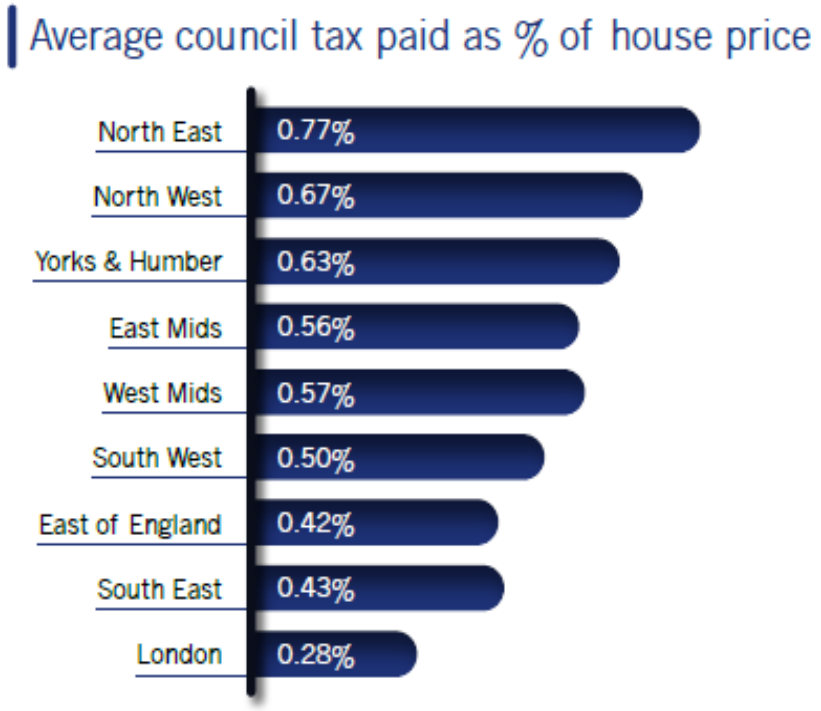
- Pandemic generated huge structural changes in employment patterns and in housing preferences, many long-lasting.
- Spatial patterns of employment and residence need to adjust.
- High quality OECD research confirms transactions taxes are a serious impediment to desirable adjustment.

More generally, the need for *tax shift is driven by affordability criteria*.

- Large pre-pandemic rises in house prices relative to incomes (esp'ly in Anglo-Saxon and Scandinavian countries).
- Priced many younger citizens out of home-ownership, esp'ly with tougher down-payment requirements after GFC.
- Upward pressure on rents in many countries.

- Much discussion in both reports of the regressivity of mortgage interest tax relief and what affects progressivity of property taxes.
- But reluctance to call a spade a spade: no mention of individual and regional regressivity of UK's Council Tax (data for England from Fairer Share)





- Swedish populist property tax reform (2008): changed a progressive system into a regressive one (D'Arcy & Nistotskaya (2022)).
- Introduced ceiling on maximum tax, favours the ~40% most expensive properties.
- OECD tax report:
  - acknowledges regressivity of assessed values for property tax in the US, but not the racial aspect nor staggering differences in median wealth by race and ethnicity, e.g. Urban Institute (2017), nor that age-based wealth inequality has increased over time.
  - 1989 to 2016: median net worth of families with a head of HH age 65+ increased by 68% in real terms while median net worth of families with a head of HH age <35 fell by 25%, Brookings (2019).
  - Housing and mortgage debt is part of this story.
- Localism in tax *rates* helps explain locational and other inequalities:
  - More affluent families move out of poorer areas, reducing tax base funding education and other amenities.
  - There, tax rates rise to try to cover basic public services, but making those locations even less attractive, in a vicious circle of decline.
- *Research puzzle:* compare outcomes with counter-factual of state or nation-wide property tax rates?

- Green land value tax (a type of 'split-rate' tax recommended in the tax report) :
  - potential to resolve conflicts between affordability and equity in meeting climate goals and to reduce intergenerational injustice and social exclusion.
- The green LVT would consist of a standard per square metre charge on the land minus a discount on the building depending on its energy usage, maximum for an energy-neutral building and gardens.
- Regular revaluations discourage speculation and avoid cliff-edge changes.
- To protect cash-poor but land-rich households, everyone would have the right to defer the tax.
- Avoid complex interest charges: tax authority would register a proportionate interest at the Land Registry equal to the unpaid tax for each year deferred, to be settled when the property was sold or transferred.
- Increases incentives for green mortgage pricing and use of EPCs.
- *OECD (2021):* the residential sector (buildings and construction) accounts for:
  - 28% of global final energy consumption; 17% of total CO_2 emissions; and 37% of emissions of fine particulate matter.
  - "Yet, in 2018, two-thirds of countries still lacked mandatory building energy codes. High-performance buildings, such as near-zero energy buildings, still make up less than 5% of new construction".