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Research Briefing | Global

The global housing boom in historical perspective

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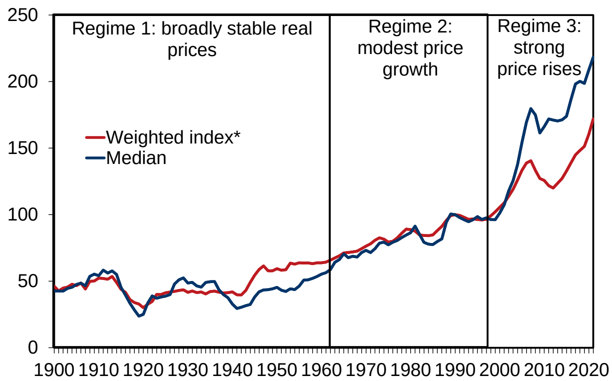
- **Our estimates suggest that house prices in advanced economies may be around 10% overvalued versus long-term trends, albeit with considerable variation between economies. This boom, while not as pronounced as the one that preceded the global financial crisis, is still one of the biggest since 1900.**
- **Currently, house prices look around 9% higher than long-term trend levels, as defined by data-smoothing filters to remove cyclical fluctuations. Looking at long-run price-to-rent ratios compared to trend suggests prices may be overvalued by about 11%. By comparison, in the last boom that peaked in 2006, we estimate overvaluation was 13%-15%.**
- **Since 1900, three broad phases are visible in world house prices: a stable period to the 1960s; steady growth to the 1990s; and accelerated growth since then. Prices cycle around these trends, with the duration of cycles often long.**
- **The current housing upturn is already quite lengthy at around a decade, with the weighted real price rise of 43% also high in historic comparison. The current boom looks to be perhaps the second-longest and third-largest (in terms of price rises) since 1900.**
- **The boom in housing prices since the 1990s has been associated with rapid expansion of mortgage credit. But in this upturn, although mortgage lending is showing signs of picking up, growth has not been very rapid compared to the period before the global financial crisis.**
- **Some evidence suggests the longer a housing boom continues, the bigger the risk of a large reversal. Looking at individual economies, risk indicators show a varied picture: the riskiest markets look to be the Netherlands, Canada, Sweden, Germany, and France.**

Figure 1: Three phases in world house prices since 1900

World: Real house prices since 1900

Index, 1990=100



Source : Oxford Economics/Jorda-Schularick-Taylor database. * Using Maddison PPP GDP, 14 advanced economies

Median real prices were broadly steady from 1900-1960s, then rose by around 1.7% per year to the 1990s and have grown at an accelerated pace of 3.1% per year since. In the current upturn, prices have risen by 2.5% per year.

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We recently wrote on the (surprising) surge in house prices during the coronavirus pandemic. But how does the current surge in house prices compare with long-run historical trends? And what does that tell us about the potential macroeconomic risks associated with it?

We have examined real house price trends for 14 advanced economies using data from the Jorda-Schularick-Taylor macroeconomic history database, updated to 2021 using Oxford Economics forecasts for house prices and inflation. This data suggests three epochs in real house prices since 1900: a period of broad stability to the 1960s; a period of modest rises to the 1990s (about 1.5% p.a.); and rapid price growth since the 1990s of 2.3%-3.1% p.a. (**Figure 1**).

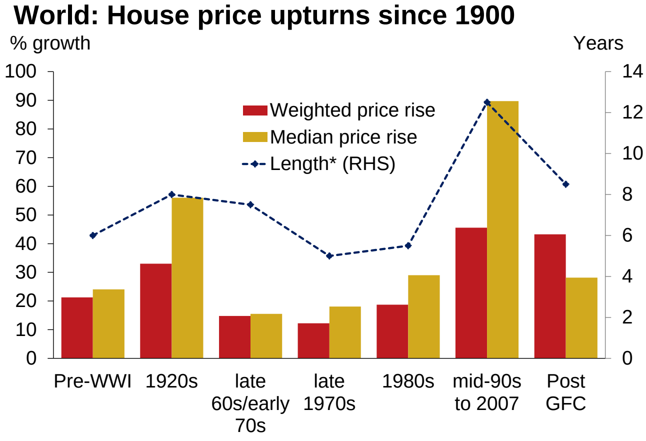
Real prices cycle around these broad trends. This is a fact of economic life, with evidence for such cycles going back to the 17th century. Cycles can be long, with Harrison suggesting 18 years for the US, and other studies 10-12 years but potentially getting longer over time.

The latest upturn in prices can be dated back to 2012/2013, with real prices rising 43% on a GDP-weighted basis and 28% on a median basis. Of seven booms since 1900, only the boom that preceded the global financial crisis has been longer. Only the pre-GFC boom and that in the 1920s have been clearly larger in terms of median price rises (**Figure 2**).

Are prices now overvalued? One way to assess this is to compare current prices with a long-run trend calculated using data smoothing to remove cyclical fluctuations. To start, we use an HP filter with a relatively large (for annual data) smoothing parameter of 490 to define the long-term trend for our GDP-weighted world house price series. On this measure, the 2021 value for our house price series is around 9% above the long-term trend (**Figure 3**).

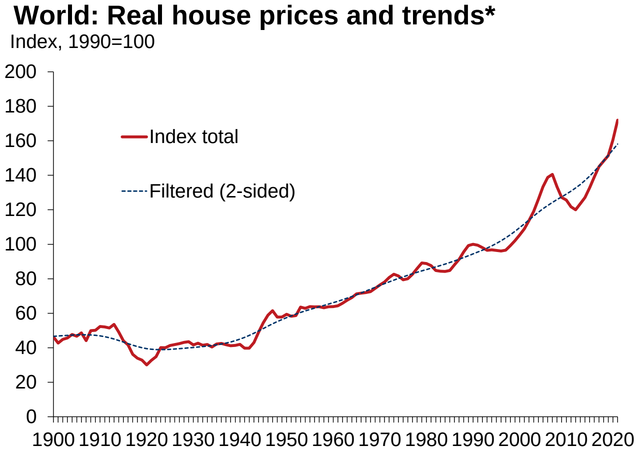
To put this in perspective we compared this deviation from the trend with past historic peaks. We also recalculated these deviations using other specifications for the HP filter as well, as a robustness check. The 9% deviation from trend for 2021 compares to a 13% deviation in 2006 using our preferred estimate. The 2021 deviation is the third highest in the post war period using either our preferred estimate or the average across different filter specifications but looks lower than the 1913 or 1929 peaks (**Figure 4**).

Figure 2: Latest upturn is among the strongest and longest since 1900



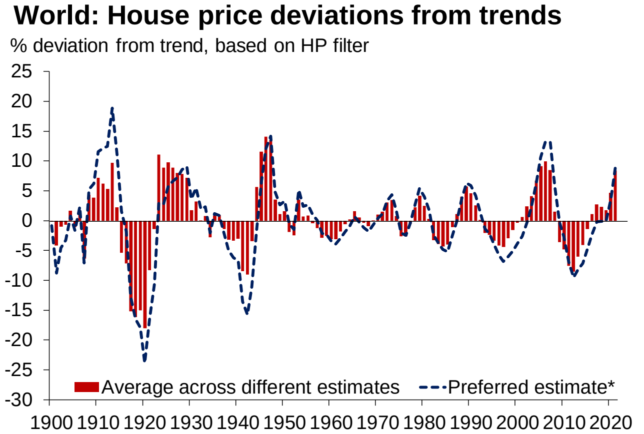
Source : Oxford Economics/Jorda-Schularick-Taylor database * Average of median and weighted. Upturns measured trough to peak.

Figure 3: Real house prices are set to be around 9% above the long-run trend in 2021



Source : Oxford Economics/Jorda-Schularick-Taylor database * As determined by HP filter (see text)

Figure 4: Housing valuations less elevated than in 2006 but close to two of four historic peaks



Source : Oxford Economics/Jorda-Schularick-Taylor database * Using a two-sided filter with smoothing parameter of 490. Other estimates using varying parameters from 100 to 1600 and one-sided filters as well as two-sided.

Another approach to estimate whether prices are overvalued is to look at price-to-rent ratios relative to long-term averages. Currently, the GDP-weighted ratio for our 14-country group is about 40% above the 1990 level and the long-term average. But the price-rent ratio has been trending upwards over time so it makes more sense to again compare today's ratio with a filtered trend. If we do that, we find the ratio is about 11% above the trend. By way of comparison the deviation was 15% in 2006 (**Figure 5**).

Arguably, sharp rises in house prices are more worrying if accompanied by rapid increases in housing debt/leverage. The rapid rise in prices since the 1970s coincided with a very large increase in the share of mortgage credit in GDP (from 20% to over 60% on a median basis across our sample), and some of the biggest housing booms – such as those in the 1920s, 1980s, and 2000s – were preceded or accompanied by rapid credit growth (**Figure 6**).

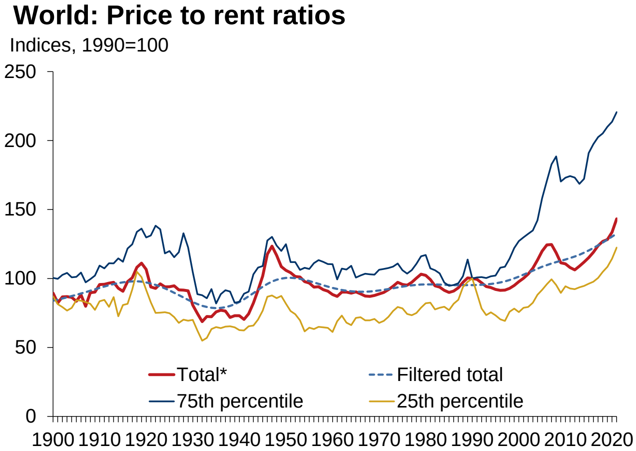
The current housing boom looks less worrying on this score. Growth in mortgage credit in recent years has been relatively subdued, although it has started to pick up lately. The share of mortgage credit in GDP remains below its 2008 peak and the recent rise is mostly due to the collapse in GDP in 2020 due to the coronavirus pandemic.

Are the risks similar across economies? The range of price-to-rent ratios revealed earlier already hints they are not, and a detailed look across our 14-country sample confirms this. Prices or price-to-rent ratios look 10% or more above trend in several economies, but a number of economies show prices and price-to-rent ratios below trend. Trends in mortgage credit are extremely varied.

Looking across four indicators, the riskiest markets look to be the Netherlands, Canada, Sweden, Germany, and France (notably the German price to rent ratio has not increased much from 1990 compared to some other markets). Interestingly, some previous hot spots such as Australia don't feature here, thanks in part to price corrections in 2018-2019 (**Figure 7**).

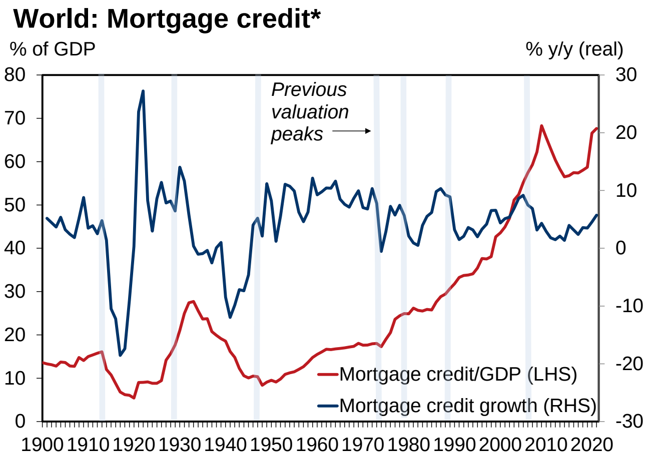
Macroeconomic risks from the current house price boom are twofold: that it might exacerbate overheating risks (see our recent report); and that it might push prices far from fundamentals, risking a later price crash that threatens activity and financial stability. The two are not mutually exclusive.

Figure 5: Price-to-rent ratio are also above long-term trend, but less so than in 2006



Source : Oxford Economics/Jorda-Schularick-Taylor database/OECD
* GDP-weighted, based on 14 advanced economies

Figure 6: Mortgage credit growth is less elevated than in some previous housing upturns



Source : Oxford Economics/Jorda-Schularick-Taylor database/Haver Analytics * Median across 14 economies

Figure 7: Housing risks vary across advanced economies

	Prices versus long-term trend, %	Price to rent ratio versus long-term trend, %	Mortgage credit in GDP, 2017-2021 % point change	Price to rent ratio 1990=100
Netherlands	14.3	15.3	6.5	212
Canada	11.8	9.4	2.1	299
Sweden	3.0	3.4	7.2	256
Germany	12.5	8.7	6.1	118
France	2.8	4.1	12.3	166
Denmark	7.5	8.8	-1.0	192
USA	12.0	10.9	-1.0	137
Belgium	0.9	-0.1	15.1	224
Norway	-1.8	0.0	19.5	204
UK	5.5	6.0	1.6	145
Japan	2.8	8.4	6.6	53
Australia	0.2	3.1	-2.6	317
Switzerland	-4.3	-0.1	9.6	102
Finland	-1.6	-1.1	1.2	79

Source: Oxford Economics, Jorda-Schularick-Taylor database, OECD, Haver Analytics
Economies listed according to average ranks across indicators, data from 1946-2021

Our long-run assessment of the current boom suggests the risks are tilted to the second kind, i.e. of a big price reversal. Valuations already look high in many economies, and the length of the boom also adds to the risk. There is evidence that the longer a housing boom continues, the more likely it is to end, particularly as prices becoming more detached from fundamentals – this is sometimes referred to as ’duration dependence’.

That said, risks look lower this time compared to the lead up to the GFC, with the slower rise in mortgage credit a notable difference. We also need to be mindful that estimates of price ‘overvaluation’ are imprecise and at least part of the price rises we have seen in recent years reflect the large (and generally unexpected) decline in real interest rates. A key issue for the coming years will be how real rates behave given opposing influences such as demographics, the savings glut, and the possibility of higher inflation.