

[Global house prices since 1950](#)

CFM-DP2023-07

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The paper applies a simple asset valuation model to country-level house price indexes for the period 1950-2019 in a sample of 12 advanced economies. The model ties house prices to a small number of fundamentals. The key elements of the model are stochastic processes for the growth rates of the fundamentals, which allow for persistent predictable components. These processes and their components are estimated from data using Bayesian state-space methods. Shocks to the predictable components result in large and persistent changes in expectations about future fundamentals, and thus future house prices, generating large and persistent house price swings around a stochastic trend. According to the model, deviations of house prices of 20% from trend are common in most countries. And in Japan, even a 50% departure from trend lies within just one standard deviation of the model fluctuations. On average, the half-life of the deviations is almost eight years. Expectations-driven departures of house prices from levels dictated by current fundamentals, such as current income, can thus be large and persistent.

The model accounts for three key patterns of house prices in the post-WWII period that, separately, characterize Japan, a group of 10 advanced economies (the G10), and Switzerland. The most remarkable result is that the model almost exactly replicates the spectacular decades-long boom and bust in Japan. The model also generates a boom that started in the G10 in the early 1990s and lasted until about 2007. Finally, the model generates cyclical fluctuations in house prices around almost a zero trend observed in Switzerland.

Expectations about future growth of income per capita and population are the two most important factors accounting for the three house price patterns. Their relative importance varies across the three house price patterns and periods. Expectations about future population ageing (demand for housing services due to the age structure of the population) also play a role, but less important one than the other two factors. In Japan, such expectations are already having a negative effect on house prices, while in the G10 the effect is still moderately positive. When the effect of population ageing on both expectations and the trend is taken into account, in all countries in the sample, ageing population had, so far, a positive effect on house prices.

A pertinent question also concerns the role of interest rates, especially in the decade since the global financial crises. Our findings support the view that loose monetary policy inflated house prices. In all countries, house prices would be lower between 2009 and 2019 if interest rates stayed at their post-WWII average. The gap in 2019 is about 12%. The effect of interest rates is weaker in Japan and Switzerland than in the other countries.