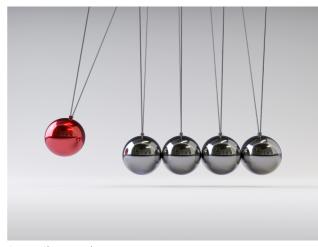


UBS Swiss Real Estate Bubble Index

UBS Swiss real estate bubble index

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- The UBS Swiss Real Estate Bubble Index rose only marginally from 1.57 to 1.58 in the second quarter of 2022. However, the figure for the previous quarter was revised significantly upward based on updated data on household incomes. The market for owneroccupied homes is thus overvalued compared to its own history.
- A continued divergence of home prices from household incomes and an increasing share of loan applications for buy-to-let properties contributed to a higher index value.
- Home prices in real terms stagnated due to the high inflation rate, while the increase in household debt was accompanied by robust income growth, which moderated the rise in the index.

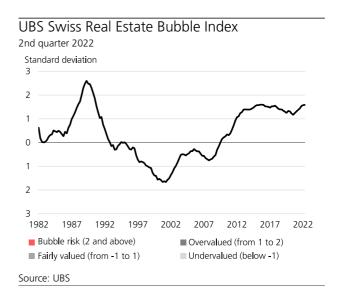


Source: Shutterstock

Development of market drivers: Consumer prices rose by 1.5 percent in the second quarter of 2022. However, the expectation of a tighter monetary policy being pursued by the Swiss National Bank (SNB) as a result is not having any impact yet on the homeowner market. Prices of owner-occupied homes continued to soar, likewise increasing by 1.5 percent over the same period. Growth in outstanding mortgages slowed only slightly to 3.0 percent compared to the previous year. Asking rents posted the sharpest quarterly rise since 2012 as a result of the fall in vacancy rates, positioning them 0.5 percent higher than in the previous year. Income per household increased by almost 1.5 percent.

Statement of risk: The *UBS Swiss Real Estate Bubble Index* remains significantly lower than during the real estate bubble at the beginning of the 1990s. However, the index level has risen significantly since mid-2020 and currently suggests a clear overvaluation of the local housing market. This implies increased correction potential in the event of a prolonged economic crisis or a rise in interest rates for an extended period. Higher long-term interest rates make buy-to-let investments less attractive and have inverted the

cost advantage that owner-occupied homes previously had over rental apartments, thus curbing demand for owneroccupied homes. However, a price correction is unlikely in the next twelve months due to limited supply.



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Sub-indexes

Home prices relative to annual rents

An above-average buy-to-rent ratio indicates a high dependency on sustained low interest rates or implies expectations of future price increases.



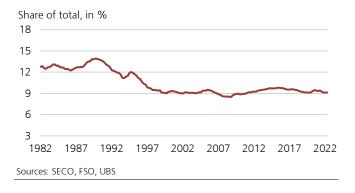
Home prices relative to household incomes

If the price development in the market for owner-occupied homes is not supported by a change in household incomes, this can be interpreted as a signal for interest rate risks.



Construction relative to gross domestic product (GDP)

If the construction sector gains weight within the national economy, this can imply an overheating of the real estate market.



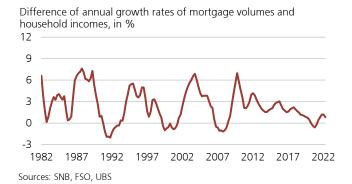
Home prices relative to consumer prices

If owner-occupied home prices rise faster than construction costs and general inflation for a long time, this can be a warning of a possible correction.



Mortgage volumes relative to household incomes

An acceleration in household debt that is not accompanied by income growth is a signal of an overheating of the real estate market.



Credit applications for buy-to-let properties

High demand for residential property for the purpose of leasing (buy-to-let) indicates greater speculative demand.

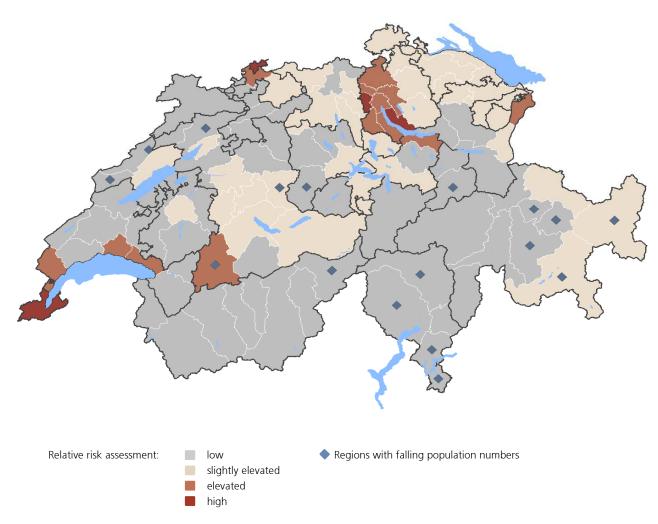


Regional risk map

The regional analysis is based on how the local price-to-rent ratio has changed over the past five years. Regions where this ratio experienced a disproportionately sharp rise have an increased correction risk. In addition, regions with falling population numbers (last three years) are highlighted.

Principles: The trend in rents shows the effective situation on the housing market. The price-to-rent ratio reflects the interest rate level and expectations about future increases in rental prices. If this ratio experiences a disproportionately sharp rise compared with the other regions, this may suggest that overheated speculation is driving prices in the local owner-occupied housing market. Independent of this, falling population numbers constitute an additional risk for real estate demand.

Regional risk map



Sources: Wüest Partner, FSO, UBS

Appendix

Index calculation

The UBS Swiss Real Estate Bubble Index represents the weighted average of six standardized sub-indexes using principal component analysis. The index shows the discrepancy, measured in standard deviations, from the mean normalized to zero. The index uses the following classification: Undervalued (below -1), fairly valued (from -1 to below 1), overvalued (from 1 to below 2) and bubble risk (2 and above).

Comment on the adjustment of the index history

Due to adjustments in its methodology and data, the history of the UBS Swiss Real Estate Bubble Index is no longer directly comparable with the numbers in publications prior to the fourth quarter of 2021.

First, the Swiss Federal Statistical Office published data on the development of household incomes during the pandemic, which are employed in calculating the index. As a result, pandemic-related fluctuations in economic output no longer affect the model-based estimate of real estate bubble risk for the Swiss market for owner-occupied homes. Moreover, household incomes increased much more than had been expected due to the slump in economic value added.

Second, the numbers are now only standardized (recursively) using the data available up to the relevant point in time. For example, the index value in the first quarter of 2015 is calculated using data from 1980 up to the first quarter of 2015. All index values up to and including 2010 are standardized (non-recursively) with data from 1980 to 2010 to ensure there are sufficient data points. That means that the published index values now reflect the imbalances from the perspective of the relevant quarter.

Deviations from the previously published index values can be explained by data revisions—in particular, household incomes according to the FSO—and the switch in price indexes from supply prices to the broader UBS Composite Index (average of all available price indexes) at the beginning of 2020.

UBS Swiss Real Estate Bubble Index Data series since 2016

Period	Index	Trend*
2016-1 2016-2 2016-3 2016-4	1.59 1.53 1.52 1.50	→ ע ע
2017-1 2017-2 2017-3 2017-4	1.47 1.53 1.52 1.55	א א →
2018-1 2018-2 2018-3 2018-4	1.50 1.42 1.40 1.40	y →
2019-1 2019-2 2019-3 2019-4	1.35 1.30 1.25 1.33	N N
2020-1 2020-2 2020-3 2020-4	1.32 1.22 1.17 1.24	у У У
2021-1 2021-2 2021-3 2021-4	1.31 1.38 1.44 1.54	л л л
2022-1 2022-2	1.57 1.58	7 7

Source: UBS. *Compared to the previous quarter

Appendix

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