



## Prof. Didier Sornette

Didier Sornette holds the Chair of Entrepreneurial Risks at ETH Zurich and is an SFI faculty member. He is the founding director of the Financial Crisis Observatory. He received his PhD in Physical Sciences from the University of Nice. His research interests include the development of diagnostic tools for financial market anomalies, such as price bubbles, and the prediction of financial crises.

## Advertised and Actual Transaction Prices in the Swiss Housing Market

Rising real estate prices in Switzerland are a cause for concern as memories of the aftermath of the 1980s pricing bubble remain fresh. Yet a lack of widespread data on actual transaction prices—the price at which property changes hands—makes it difficult to monitor the market and assess whether a price bubble is forming. One may wonder whether advertised offering prices by prospective sellers could be used as a suitable alternative to transaction prices.

SFI Professor Didier Sornette, together with fellow researchers Ahmed Ahmed, Diego Ardila, and Dorsa Sanadgol, analyze the relationship between offering and transaction prices in the Swiss residential real estate market from 2005 to 2015. Their findings reveal that the real estate market has recently been dominated by an auction-like dynamic, with transaction prices frequently exceeding offering prices.

### Why are rising housing prices worrying?

Residential real estate prices in Switzerland have been rising for a number of years, with ratios such as price-to-rent and price-to-income increasing steadily since 2008. The last time a price bubble formed was at the end of the 1980s. When the bubble burst in the early 1990s, it caused a sharp drop in Swiss gross domestic product and a significant reduction in real estate prices, and strongly impacted the banking sector. Concerns regarding the current price trend are such that in 2012 the down payment requirements for individuals seeking to purchase residential property were tightened and in 2013 there was a doubling of the share of equity commercial banks must set aside when issuing mortgages. Yet while some countries, such as the UK and the US, have centralized databases that gather and publish transaction prices, Switzerland does not. This raises the question of how to monitor market trends when data on transaction prices are insufficient and whether offering prices may be a valid substitute.

A new paper—*Comparing ask and transaction prices in the Swiss housing market*—applies empirical research techniques to monitor for real estate bubbles over the period 2005–15. The paper explores how prices behave during different market phases, the relationship

between offering prices and transaction prices, and whether one can rely on offering prices to determine whether a real estate price bubble is forming.

### How do offering and transaction prices interact?

The researchers find that, as one could reasonably expect, posted offering prices and actual transaction prices move along with each other in the long run. Transaction prices tend to exceed offering prices during bubble situations, as buyers adopt an auction-style approach and excess demand drives the transaction price above the offering price.

### Are there limitations to using offering prices to detect a bubble?

Data reveal that offering prices are informative of the general trend in the real estate market and provide a valuable alternative when monitoring the market when actual transactions are scarce. One must nonetheless be aware that, when the market is booming and auction-like dynamics are in place, offering prices might understate the extent of price increases. Conversely, offering prices may understate the size of the correction when the market enters a bust phase, as offering prices are stickier than actual transaction prices and adjust more gradually. In a nutshell, offering prices seem to be a practical substitute for transaction prices, though caution is in order regarding an excessive reliance on offering prices to determine policy responses.

### What do the study's results mean for Switzerland?

Real estate is an important economic sector for policy makers. The large amounts of money that flow into the sector mean that price trends and forecasts are relevant to a wide range of institutional and private parties. With Swiss household debt among the highest in OECD countries, and real estate representing 44 percent of Swiss household wealth, the country could suffer greatly should a real estate pricing «correction» occur.

This insights draw on the academic paper by Ahmed Ahmed, Dr. Diego Ardila, Dr. Dorsa Sanadgol, and Prof. Didier Sornette. The full academic paper can be accessed at: <http://bit.ly/2y6fwEv>





# Swiss Finance Institute Practitioner Roundups



## Prof. Donato Scognamiglio

Donato Scognamiglio is SFI Adjunct Professor and CEO and co-owner of IAZI AG. He studied Business Administration and Economics in Bern and at the William E. Simon Graduate School of Business Administration in Rochester (NY), and Statistics at ETH Zurich. He holds a doctorate from the University of Bern, and is a lecturer in Real Estate & Finance and a Titular Professor of the Faculty of Economics and Social Sciences at the University of Bern.

## Real Estate Market: Transaction Data as the Measure of Market Developments

Around 25 years since Switzerland's last real estate crisis, the market is again reaching a critical point. Comprehensive information and transparency is vital, as real estate makes up almost half of Swiss household assets, and almost everyone participates in this market in the course of their lives—as a homeowner, tenant, or investor. The challenge is not a lack of data, however, but how to interpret it. The diverse nature of real estate makes this challenge complex, and the comparison of objects and prices more difficult.

As in the real estate crisis of the early 1990s, the situation is currently tense, especially with regard to investment properties: Current low interest rates have resulted in significant capital flows into this market in particular. This has led to the construction of unusually high numbers of apartments for rent. At the same time, demand for such apartments is falling, and an increasing number stand empty. Yet the hope of an increase in value continues to push prices up. A significant price correction can therefore be expected.

### Adjusting transaction prices for property-specific characteristics

Reliable, complete data are central to evaluating price trends and achieving market transparency. There are two sources of information: offering prices and transaction prices. Offering prices are the values advertised by prospective sellers. These prices, desired by sellers, already contain an interpretation of the market situation and signal the sellers' expectations to potential buyers. Transaction prices meanwhile represent the price actually paid when an object changes hands. In real estate valuation practice, transaction prices are crucial as they represent actual sale prices and not wishes.

To measure the development of real estate prices at national and regional levels, IAZI looks at more than 25,000 residential property transactions each year across Switzerland. As real estate is a heterogeneous asset, prices must be adjusted to take into consideration the specific characteristics of an object in order to obtain its value. For each property, around 70 characteristics are taken into account, including living space, number of rooms,

property size, and condition. Around 50 other factors regarding the property's location are also considered. This analysis is important for the calculation of average prices and for making comparisons possible.

### Comparing offering and transaction prices in practice is informative

Offering prices indicate sellers' perspectives on the market. Comparing these prices with corresponding transaction data allows an assessment of market phases such as, for example, differentiating between a seller's market and a buyer's market. At turning points in the real estate market, reliable price information is particularly important: Are prices still rising or beginning to fall? It is during such phases that interpreting offering prices is extremely difficult, however, due to their being on the cusp of whether sellers believe the upward or downward trend is continuing, or a turnaround in the market is anticipated.

IAZI's transaction price indices show that prices for single-family houses in Switzerland are continuing to rise. With a rise of 3.2 percent over the past 12 months (as of Q3 2017), the increase in value in this segment is above the long-term average. Comparing this with offering prices for single-family houses reveals a similar trend: sellers also seem to expect value to grow further. In the medium term, prices are likely to flatten out: construction activity in Switzerland remains high, while lower levels of immigration are driving a decline in demand and a rise in vacancy rates. Such a slowdown in price growth is already visible in the condominium category. Interested parties will observe such trends intently. Tracking offering and transaction prices is central to the ability to monitor the effects of such trends on this important sector of the Swiss economy.

