

Risk Analysis of the Real Estate Market in Switzerland (Diagnostic as of 2017-Q2)

Ahmed Ahmed, Diego Ardila, Yngve Abrahamsen*, Dr. Dorsa Sanadgol, Prof. Dr. Didier Sornette

ETH Zurich, Department of Management Technology and Economics, Chair of Entrepreneurial Risks Scheuchzerstrasse 7, 8092 Zurich, Switzerland

* ETH Zurich, KOF Swiss Economic Institute, Leonhardstrasse 21, 8092 Zürich, Switzerland

In collaboration with comparis.ch AG

Background

This work is a collaboration between the chair of Entrepreneurial Risks at the Department of Management, Technology and Economics (D-MTEC) of ETH Zurich, KOF Swiss Economic Institute and comparis.ch AG. It has benefited from funding by the Swiss Federal Commission for Technology and Innovation (CTI) in its launching phase in 2012 and is partially funded by comparis.ch. The goal of this project is to analyze the real estate market in Switzerland in order to empower the buyers and sellers of this market with critical information on price dynamics in every Swiss district.

Data and Methodology

The data used in this analysis has been collected by comparis.ch between 1 January 2005 and 30 June 2017. The property market division of comparis.ch gathers data from the 17 largest property portals in Switzerland, creating a rich view on the market, but also introducing a large number of duplicate ads (7.3 million records are present in the raw data). These duplicate ads advertise the same property, during the same period, and sometimes, with conflicting information. Within the scope of this study, the identification of the duplicates is crucial, as they could potentially affect the price indices. Before performing any analysis, duplicates in the aggregated data set have been automatically removed using a classification procedure based on the Support Vector Machine (SVM) algorithm and string distance measures. The application of the de-duplication procedure to the comparis.ch database classified approximately 788'000 apartments and 823'000 houses for sale between 2005-Q1 and 2017-Q2, which amount to a total of about 1'611'000 residential properties (about 41'000 new advertisements since the previous report of 2016-Q2, after removing the duplicate ads). This does not represent all the properties that were on the market in this period. However, it is assumed that the data collected by comparis.ch represents the market very closely. One important fact about this data set is that the prices are asking prices and not the final transaction prices¹.

roperty Type	Но	uses	Apartments								
Measure	Median A	sking Price	Median Asking Price per Square M								
Size	Min # of Rooms	Max # of Rooms	Min # of Rooms	Max # of Rooms							
Small	1	4.5	1	3.5							
Medium	5	6.5	4	5.5							
Largo	7_		6+								

Table 1: Categorization of properties based on the number of rooms.

¹ One can find a detailed study of the similiarities (and some differences) between asking and transaction prices in Ahmed Ahmed, Diego Ardila, Dorsa Sanadgol and Didier Sornette, Comparing ask and transaction prices in the Swiss housing market, ETH Zurich preprint (http://ssrn.com/abstract=2894404)



We have studied the development of prices in 166 Swiss districts (see disclaimer). In order to analyze the market, the ads in each district were categorized by type (i.e. apartment or house), and subsequently subdivided in three groups, according to the number of rooms, as described in Table 1. The properties in each subgroup were aggregated quarterly using the median asking price and the median asking price per square meter for houses and apartments respectively.

Real Estate Market in Switzerland

Figure 1 shows the change in median asking price per square meter between the first quarter of 2007 and the second quarter of 2017 for all apartments listed on comparis.ch. The district of Luzern, labeled 1, shows the highest price increase, where the median asking price of apartments per square meter has increased by 82% since the first quarter of 2007.

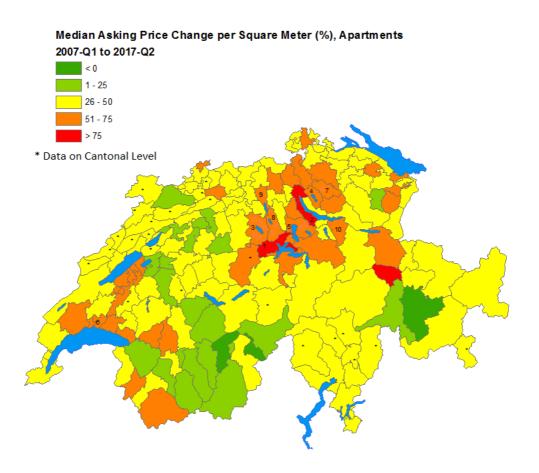


Figure 1: Change in median asking price per square meter for apartments in all Swiss districts between 2007-Q1 and 2017-Q2.

The regions marked with "*" represent the districts with not enough listings in either 2017-Q2 or 2007-Q1. The cantonal median price change per square meter values are shown for those districts. The top ten districts with the highest increase in the apartments' asking price per square meter between 2007-Q1 and 2017-Q2 are labeled in Figure 1 and listed in Table 2. For these top ten districts, the median increase in asking price per square meter since last year (between 2016-Q2 and 2017-Q2) and the median asking price per square meter as of 30 June 2017 are also reported in Table 2. The prices in the districts of Zurich and Imboden, although marked in red in Figure 1, were based on either too few advertised properties or the data has been too noisy to be included in the top 10 districts with the highest asking price per square meter. Please note that the reported numbers are based on asking prices and not the final transaction prices.



Table 2: Ten districts with the highest increase in median asking price per square meter for apartments between 2007-Q1 and 2017-Q2.

Rank	District Name	Median increase in asking price per square meter 2007-Q1 and 2017-Q2	Median increase in asking price per square meter 2016-Q2 and 2017-Q2	Median asking price per square meter (CHF/m²) 2017-Q2
1	Luzern	82%	11%	8′500
2	Horgen	80%	3%	11'000
3	Sursee	69%	10%	6'500
4	Uster	69%	8%	8′500
5	Zug	68%	1%	10′250
6	Lausanne	67%	6%	9'500
7	Pfäffikon (ZH)	67%	7%	7'500
8	Hochdorf	65%	11%	6'500
9	Lenzburg	64%	5%	6'250
10	March	63%	8%	7'500

On the other hand, the ten districts with the lowest increase in the apartments' asking price per square meter between 2007-Q1 and 2017-Q2 with **enough listings** are listed in Table 3. For these bottom ten districts, the median change in asking price per square meter since last year (between 2016-Q2 and 2017-Q2) and the median asking price per square meter as of 30 June 2017 are also reported in Table 3. The prices in the districts of Albula and Raron, although marked in dark green in Figure 1, were based on too few advertised properties or the data has been too noisy to be included in the bottom 10 districts with the lowest change in median asking price per square meter.

Table 3: Ten districts with the lowest increase in median asking price per square meter for apartments between 2007-Q1 and 2017-Q2.

Rank	District Name	Median increase in asking price per square meter 2007-Q1 and 2017-Q2	Median change in asking price per square meter 2016-Q2 and 2017-Q2	Median asking price per square meter (CHF/m²) 2017-Q2
1	Laupen	23%	2%	4'750
2	Hérens	25%	3%	4'500
3	Burgdorf	28%	2%	5'000
4	Kulm	29%	1%	4'750
5	Locarno	31%	1%	7'750
6	Brig	31%	-6%	4'000
7	Aarau	32%	1%	5′250
8	Martigny	33%	-4%	4'750
9	Willisau	34%	3%	5'000
10	Plessur	36%	-4%	6'750

Figure 1 shows the change in median asking price per square meter between the second quarter of 2016 and the second quarter of 2017 for all apartments listed on comparis.ch. The district of Schaffhausen, labeled 1, shows the highest price increase, where the median asking price of apartments per square meter has increased by 25% over the last year.



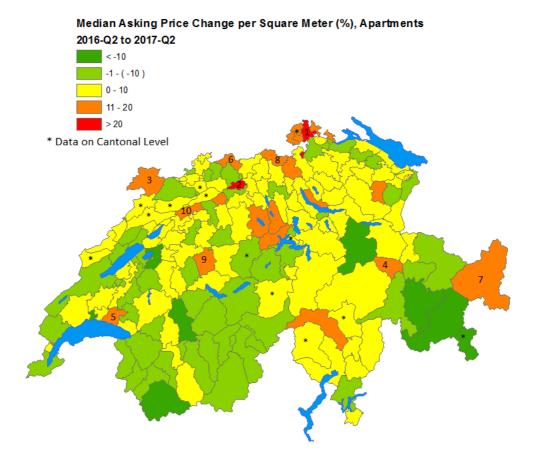


Figure 2: Change in median asking price per square meter for apartments in all Swiss districts between 2016-Q2 and 2017-Q2.

The regions marked with "*" represent the districts with not enough listings in either 2017-Q2 or 2016-Q2. The cantonal median price change per square meter values are shown for those districts. The top ten districts with the highest increase in the apartments' asking price per square meter between 2016-Q2 and 2017-Q2 are labeled in Figure 1 and listed in Table 2. For these top ten districts, the median asking price per square meter as of 30 June 2017 is also reported in Table 2.

Table 4: Ten districts with the highest increase in median asking price per square meter for apartments between 2016-Q2 and 2017-Q2.

Rank	District Name	Median asking price per square meter (CHF/m²) 2017-Q2	
1	Schaffhausen	25%	6'000
2	Gösgen	21%	4'750
3	Porrentruy	19%	4'250
4	Imboden	18%	8′500
5	Lavaux-Oron	18%	11′250
6	Rheinfelden	16%	6'750
7	Inn	15%	6'750
8	Zurzach	15%	5′500
9	Konolfingen	13%	6′500
10	Lebern	12%	5′000



On the other hand, the ten districts with the highest decrease in the apartments' asking price per square meter between 2016-Q2 and 2017-Q2 with **enough listings** are listed in Table 3. For these bottom ten districts, the median asking price per square meter as of 30 June 2017 is also reported in Table 3.

Table 5: Ten districts with the highest decrease in median asking price per square meter for apartments between 2016-O2 and 2017-O2.

Rank	District Name	Median asking price per square meter (CHF/m²) 2017-Q2	
1	Entremont	19%	9'250
2	Obersimmental	14%	6′500
3	Maloja	11%	11'500
4	Albula	10%	5′000
5	Ouest lausannois	10%	8′500
6	Hinterrhein	10%	3′750
7	Seftigen	9%	5′500
8	Visp	9%	4′500
9	Olten	9%	4′500
10	Andelfingen	8%	5′000

Figure 3 shows the median asking price per square meter for apartments as of 30 June 2017. The districts with "*" marks represent the districts with not enough listings in the second quarter of 2017. The cantonal median prices per square meter for apartments are shown for these districts. The top ten most expensive districts as of 30 June 2017 are labeled in Figure 3 and listed in Table 6. The ten districts with the lowest median prices per square meter for apartments as of 30 June 2017 are listed in Table 7. The prices in the district of Saanen, although marked in red in Figure 3, were based on too noisy data to be included in the top 10 districts with the highest asking price per square meter.

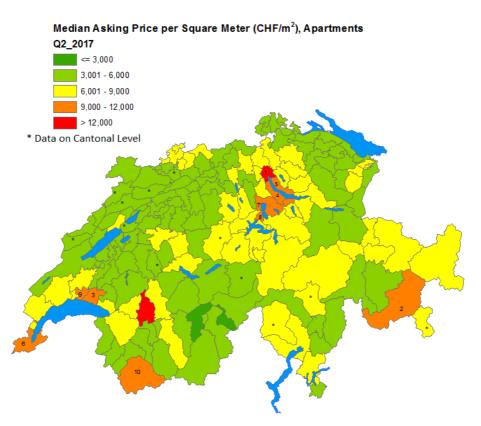


Figure 3: Median asking price per square meter for apartments in all Swiss districts as of 2017-Q2.



Table 6: Ten districts with the highest median asking price per square meter for apartments as of 2017-Q2.

	District Name	Median asking price per square meter (CHF/m²)
1	Zürich	12'250
2	Maloja	11′500
3	Lavaux-Oron	11′250
4	Horgen	11'000
5	Meilen	11'000
6	Genève	11'000
7	Zug	10'250
8	Küssnacht (SZ)	9′500
9	Lausanne	9'500
10	Entremont	9'250

Table 7: Ten districts with the lowest median asking price per square meter for apartments as of 2017-Q2.

	District Name	Median asking price per square meter (CHF/m²)
1	Raron	2'750
2	La Chaux-de-Fonds	3'250
3	Le Locle	3'250
4	Goms	3′500
5	Delémont	3'750
6	Leventina	3'750
7	Hinterrhein	4'000
8	Wangen	4'000
9	Leuk	4'000
10	Brig	4'000

The median asking prices for medium size houses (5 to 6.5 rooms) as of 2017-Q2 are shown in Figure 4. Districts with "*" marks represent the districts with not enough listings in the second quarter of 2017. The cantonal median asking prices for medium size houses are shown for these districts. The top ten districts with currently most expensive medium size houses are labeled in Figure 4 and listed in Table 8. The ten districts with the lowest median prices for medium size houses as of 30 June 2017 are listed in Table 9.



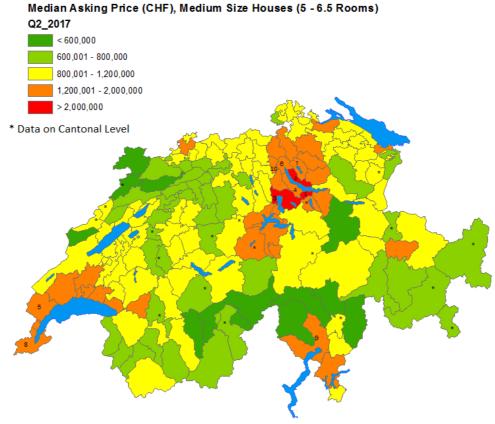


Figure 4: Median asking price of medium size houses (5 to 6.5 rooms) in all Swiss districts as of 2017-Q2.

Table 8: Ten districts with the highest median asking price for medium size houses as of 2017-Q2.

	District Name	Median asking price (CHF)
1	Höfe	2'450'000
2	Meilen	2'300'000
3	Zug	2'000'000
4	Horgen	1'950'000
5	Nyon	1'750'000
6	Zürich	1'600'000
7	Uster	1'550'000
8	Genève	1'500'000
9	Locarno	1'500'000
10	Dietikon	1'450'000

Table 9: Ten districts with the lowest median asking price for medium size houses as of 2017-Q2.

	District Name	Median asking price (CHF)
1	Porrentruy	350'000
2	Leventina	400'000
3	Raron	500'000
4	Blenio	500'000
5	Glarus	550'000
6	Vallemaggia	550'000
7	Moutier	600'000
8	Thal	600'000
9	Trachselwald	650'000
10	Courtelary	650'000



The Log-Periodic Power Law (LPPL) Model

The term "bubble" refers to a situation in which excessive future expectations cause prices to rise above long-term trends and/or above what would be justified by rent prices, incomes, demographics and other fundamental factors. Sornette and Woodard (2010)² illustrate the concept of housing price bubble as follows: "During a housing price bubble, homebuyers think that a home that they would normally consider too expensive for them is now an acceptable purchase because they will be compensated by significant further price increases. They will not need to save as much as they otherwise might, because they expect the increased value of their home to do the saving for them. First time homebuyers may also worry during a housing bubble that if they do not buy now, they will not be able to afford a home later." Furthermore, the expectation of large price increases may have a strong impact on demand if people think that home prices are very unlikely to fall, and certainly not likely to fall for long, so that there is little perceived risk associated with an investment in a home.

We employed the log periodic power law (LPPL) bubble model to diagnose the risk of real estate bubbles in Switzerland. The LPPL model diagnoses a bubble as a transient, faster than exponential growth process, decorated with ever increasing oscillations representing the developing low frequency price volatility. Speculative bubbles are caused by 1) precipitating factors that change public opinion about markets or that have an immediate impact on demand and 2) amplification mechanisms that take the form of priceto-price positive feedback: the larger the price, the higher the demand and ... the larger the price! The behavior of the market no longer reflects any real underlying value and a bubble is born. According to the LPPL model, a crash occurs because the market has entered an unstable phase and any small disturbance or process may reveal the existence of the instability. Like a ruler held up vertically on your finger, any small disturbance can trigger the fall. The LPPL model diagnoses also the end of bubbles, which signals a change of regime, in which the prices stop rising, and take different dynamics. This can be a swift correction, like a crash, but also a slow deflation or stagnation. In fact, a less violent and slower end of bubbles is a better representative characteristic of real estate markets since properties are durable goods that people tend to hold whenever falling prices are observed. The tendency to hold is also due to significant friction and transaction costs. In this case, the crash is more in the volume of transactions than in the price itself, which may take a long time to show a significant correction. Moreover, a crash is not a particular event but is characterized by a probability distribution: the critical time is the most probable time of a crash (the end of the bubble). This is an essential ingredient for the bubble to exist, as it is only rational for financial agents to continue investing when the risk of the crash to happen is compensated by the positive return generated by the financial bubble, and when there exists a finite probability for the bubble to disappear smoothly. In other words, the bubble is only possible when the public opinion is not certain about its end and when its end may be smooth. Many examples of forecasting financial and real estate bubbles with the LPPL model have been reported and listed at:

http://www.er.ethz.ch/media/publications/social-systems-finance/bubbles and crashes theory empirical analyses.html.

The following classification is used to express the status of the districts based on the LPPL analysis:

2

² Didier Sornette and Ryan Woodard, Financial Bubbles, Real Estate bubbles, Derivative Bubbles, and the Financial and Economic Crisis, in Proceedings of APFA7 (Applications of Physics in Financial Analysis), "Econophysics Approaches to Large-Scale Business Data and Financial Crisis", Misako Takayasu, Tsutomu Watanabe and Hideki Takayasu, eds., Springer (2010), pp. 101-148 (2009) (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1407608)



Critical: a strong bubble signal from the LPPL analysis. This is an indication that a change of regime is imminent. The bracket of the expected time of the change of regime is only reported for this status.

To Watch: a bubble signal from the LPPL analysis. However, the signal is not as strong as the "Critical" case.

To Monitor: This status is only obtained after a district has been previously depicted as a "Critical" or "To Watch" district. The price could be increasing without (anymore) a bubble signal or decreasing but there are not yet enough data points to declare a confirmation of a change of regime.

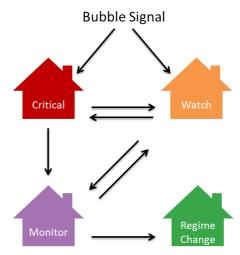


Figure 5: Classification of the districts.

Regime Change: This status is only obtained after a district has been previously depicted as a "To Monitor" district and the latest data points confirm a change of regime.

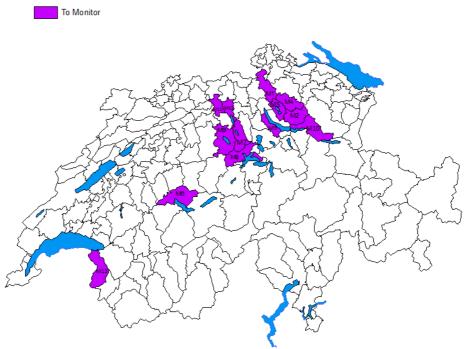
- A "Critical" district can downgrade into a "To Watch" (respectively a "To Monitor" district), reflecting
 a weakening of the presence/strength of the bubble signals (respectively a preliminary diagnostic of
 a change of regime).
- A "To Watch" district can become a "Critical" (respectively a "To Monitor" district) when the strength
 of the bubble indicators increases (respectively when there is evidence of an on-going change of
 regime).
- A "To Monitor" district can become a "To Watch" (respectively a "Regime Change" district) when the presence of bubble signals is more strongly confirmed (respectively when the price dynamics has validated the end of the bubble).

We applied the LPPL methodology to all subcategories of properties defined in Table 1, as well as to the aggregated index for apartments over the period of 2005-Q1 to 2017-Q2. The results of the LPPL analysis on the real estate market in Switzerland using the comparis.ch data from 2005-Q1 until 2017-Q2 are summarized in Figure 6 and are as follows:

- **Critical:** currently, none of the districts show signals that fall in this category.
- **To Watch:** currently, none of the districts show signals that fall in this category.
- To Monitor: prices in districts labeled M1 through M13 should be monitored. There are no new "To Monitor" districts compared to 2016-Q2. Districts still in the "To Monitor" category are: Bülach (all size apartments, labeled M1), Hinwil (medium size houses/ all size apartments, labeled M2), Horgen (all size apartments, labeled M3), Pfäffikon (all size apartments, labeled M4), Uster (all size apartments, labeled M5), Thun (all size apartments, labeled M6), Hochdorf (medium size houses/all size apartments, labeled M7), Luzern (all size apartments, labeled M8), Sursee (medium size houses/all size apartments, labeled M9), See-Gaster (all size apartments, labeled M10), Aarau (medium size houses/all size apartments, labeled M11), Lenzburg (medium size houses/all size apartments, labeled M12), and Monthey (all size apartments, labeled M13).
- Regime Change: currently, none of the districts show signals that fall in this category.



Detailed results of these analyses are presented in Appendix A. In addition, the development of the reported districts in 2013-Q2, 2013-Q4, 2014-Q2, 2014-Q4, 2015-Q2 and 2016-Q2 can be found in Appendix B.



Label	District Name	Status	Property Type	Property Size
M1	Bülach	To Monitor	Apartments	All
M2	Hinwil	To Monitor	Houses/Apartments	Medium/All
M3	Horgen	To Monitor	Apartments	All
M4	Pfäffikon	To Monitor	Apartments	All
M5	Uster	To Monitor	Apartments	All
M6	Thun	To Monitor	Apartments	All
M7	Hochdorf	To Monitor	Houses/Apartments	Medium/All
M8	Luzern	To Monitor	Apartments	All
M9	Sursee	To Monitor	Houses/Apartments	Medium/All
M10	See-Gaster	To Monitor	Apartments	All
M11	Aarau	To Monitor	Houses/Apartments	Medium/All
M12	Lenzburg	To Monitor	Houses/Apartments	Medium/All
M13	Monthey	To Monitor	Apartments	All

Figure 6: Results of the LPPL analysis as of 2017-Q2.

The median asking prices per square meter for apartments in two geopolitically important Swiss districts (city of Zurich and the canton of Geneva) are presented in Figure 7. Asking prices for apartments have stayed relatively constant since a year ago (2016-Q2) in Geneva and Zurich. The same (relative asking price stagnation) trend seems to be present in many other districts: in half of the districts, apartments' asking price per square meter has increased less than 5 percent compared to 2016-Q2).



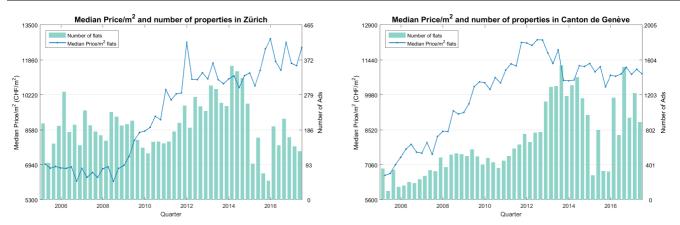


Figure 7: Median asking price per square meter for apartments. Left: City of Zürich, Right: Canton of Geneva.

Despite the continued low interest rate regime, the Swiss real estate market, for the time being remains stable. The application of our methodology to the national housing index³ (data up to 2017Q1) does not identify a bubble signal at the national level (though as a reminder, bubbles signals were identified using data up to 2014Q1 and 2014Q2).

Macroeconomic Environment

Thanks to a general upturn in global economic development, the Swiss economy is gaining momentum. The upswing in the euro area continues, with production expanding substantially in Germany, France, Spain, the Netherlands and Portugal; even the Italian economy has begun to recover slowly. The upswing in the euro area and in the rest of the EU is becoming solid and we expect an annual growth rate of 2% for the EU over the medium term. The global economic growth is expected to become more broad-based in the coming quarters.

The Swiss economy benefits from the global economic upturn. Economic activity is picking up and the companies that were worst affected by the Swiss franc appreciation have largely adjusted to the new conditions. Repeated interventions by the Swiss National Bank (SNB) have prevented a further revaluation of the franc. Recently, the Swiss Franc has even been depreciating against the euro, which should lead to an improvement in the profit margins of the exporting companies. However, a CHF/EUR exchange rate of almost 1.15 may not be sustainable.

Despite the acceptance of the 'mass immigration initiative' by the electorate in February 2014, the negative effect of the policy implementation on net immigration is expected to be limited, as immigration depends on work-force needs, driven by the health of the Swiss economy. Given the continued pressures for specialization and rationalization, we expect the unemployment rate to hover around the current level of 3.2 percent.

The monetary policy is expansionary, and no tightening in the near future is expected. Prices are slowly rising again, and without any further appreciation of the franc, we expect an annual inflation rate somewhat below 1%. A move in interest rates will mainly follow the European rates, so, the financial conditions will remain supportive of investment in construction and in machinery and equipment. The private households should benefit from the stable employment situation, but wage growth is likely to remain subdued next year.

³ SNB Economic data July 2017, Real Estate Price Indices, https://data.snb.ch/en/publishingSet/B



Recommendation

Persistently very low interest rates, coupled with a moderate level of warnings by the LPPL analysis indicate that the Swiss real estate market should remain stable in the rest of 2017 with the possibility of a few moderate adjustments. Nevertheless, households are advised to watch out for the medium-term changes in the monetary policy of the European Central Bank in the light of the improvements in the political and macroeconomic environment in Europe, as these developments could impact the domestic conditions in the Swiss real estate market. Having said that, medium- and long-term fixed-rate mortgages seem preferable as long as the interest rates remain low. Furthermore, the level of capacity utilization in the construction sector should be monitored. At the moment, the construction firms report no bottlenecks. Although this situation currently seems sustainable, any capacity bottlenecks in this sector may cause the future construction prices to rise above inflation.

Disclaimer

The districts map provided by the Swiss Federal Statistical Office (Bundesamt für Statistik, BFS) based on 2009 districts' divisions has been used as a basis for performing this study. The Swiss districts' borders regularly evolve (districts merge or split) and current districts name and borders might vary from the ones used in the presented maps. Therefore, the borders plotted in the maps presented in this study should be consulted when referring to the districts' names and the appropriate map(s) should always be accompanied with the district name when referring to the status of a district in this report.



Appendix A: Review of 2017-Q2 "To Monitor" Districts.

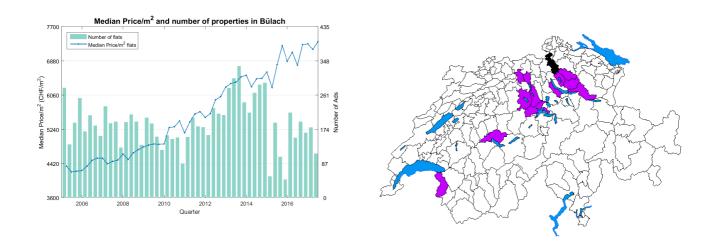
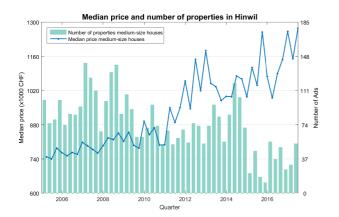


Figure A. 1: District: Bülach, Status: To Monitor, Property type: all apartments.



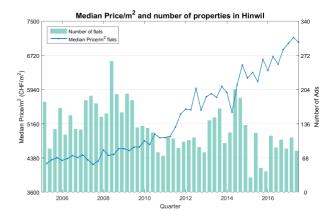




Figure A. 2: District: Hinwil, Status: To Monitor, Property type: medium size houses (top left), all apartments (top right).

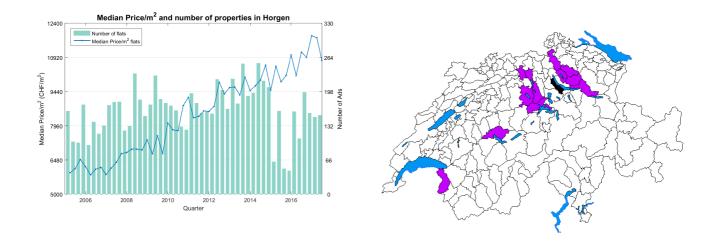


Figure A. 3: District: Horgen, Status: To Monitor, Property type: all apartments.

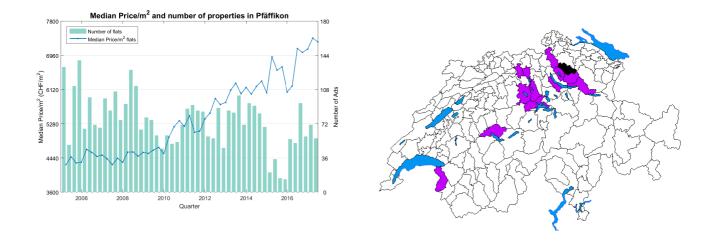


Figure A. 4: District: Pfäffikon, Status: To Monitor, Property type: all apartments.

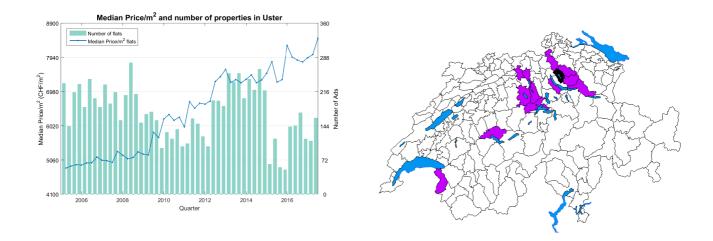


Figure A. 5: District: Uster, Status: To Monitor, Property type: all apartments.

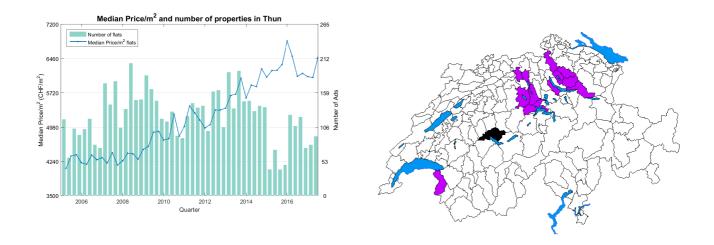
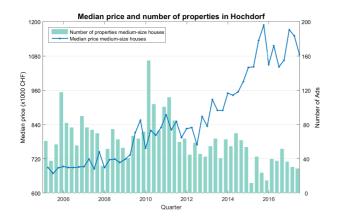
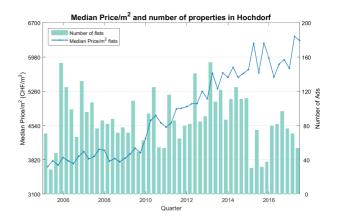


Figure A. 6: District: Thun, Status: To Monitor, Property type: all apartments.





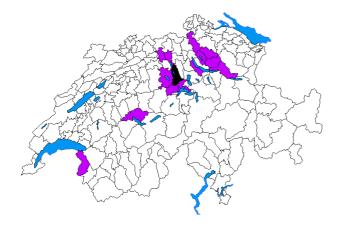


Figure A. 7: District: Hochdorf, Status: To Monitor, Property type: medium size houses (top left), all apartments (top right).

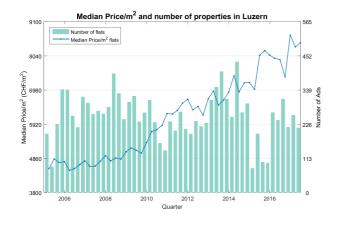
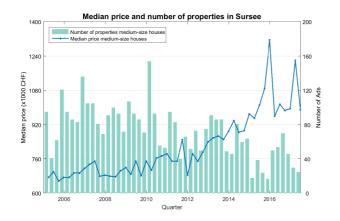
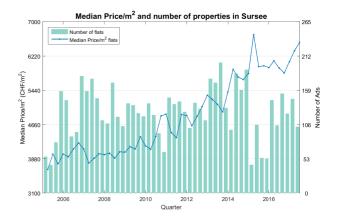




Figure A. 8: District: Luzern, Status: To Monitor, Property type: all apartments.





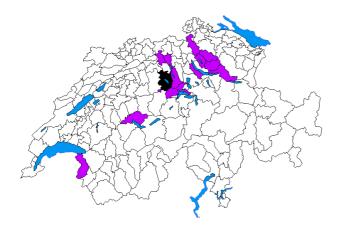


Figure A. 9: District: Sursee, Status: To Monitor, Property type: medium size houses (top left), all apartments (top right).

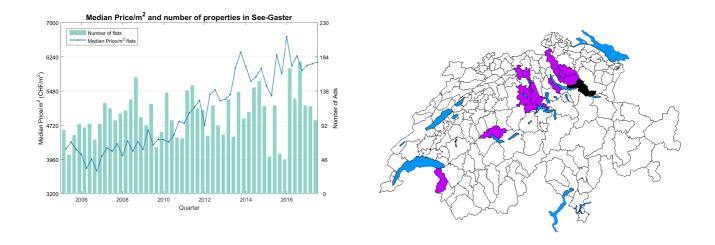
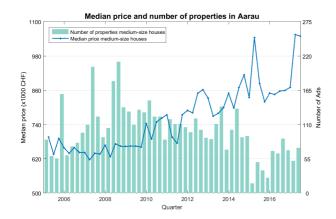
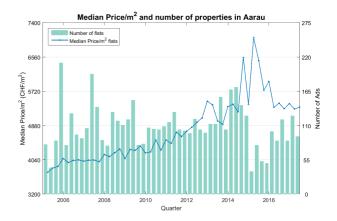


Figure A. 10: District: See-Gaster, Status: To Monitor, Property type: all apartments.





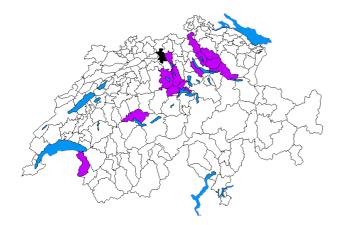
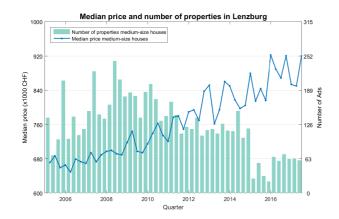
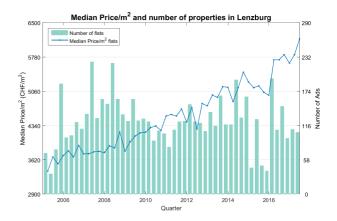


Figure A. 11: District: Aarau, Status: To Watch, Property type: medium size houses (top left), all apartments (top right).





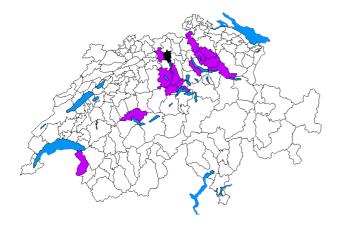


Figure A. 12: District: Lenzburg, Status: To Monitor, Property type: medium size houses (top left), all apartments (top right).

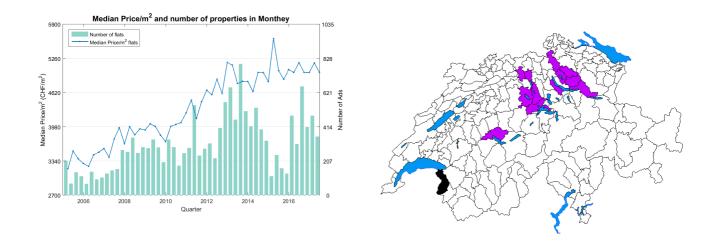


Figure A. 13: District: Monthey, Status: To Monitor, Property type: all apartments.



Appendix B: Development of the Reported Districts in 2013-Q2, 2013-Q4, 2014-Q2, 2014-Q4, 2015-Q2, 2016-Q2, and 2017-Q2.

	Analysis a	s of 2013-Q2		Anal	ysis as of 201	3-Q4	Anal	ysis as of 201	4-Q2	An	alysis as of 20)14-Q4	An	alysis as of 20)15-Q2	An	alysis as of 20)16-Q2	Analysis as of 2017-Q2		
District Name	Status (Critical Time)	Property Type	Property Size	Status (Critical Time)	Property Type	Property Size	Status	Property Type	Property Size												
Aarau	М	H/A	Med/All	М	H/A	Med /All	М	H/A	Med/All	М	H/A	Med/All	W	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All
Affoltern	R	Α	All	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
Baden	C 2013 Q3 - 2014 Q3	А	All	М	А	All	R	Α	All	-	•	-	-	-	-	-	-	-	-	-	-
Bremgarten	R	Α	All	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bülach	C 2013 Q3 - 2014 Q4	А	Med/S	C 2014 Q1 - 2015 Q2	А	All/Med/S	w	А	All/Med/S	w	Α	All/S	w	А	All/S	М	А	All	М	А	All
Dielsdorf	C 2013 Q3 - 2014 Q3	А	All	W	А	All/Med	М	А	All/Med	М	Α	All/Med	М	А	All	R	А	All	-	-	-
Dietikon	R	Α	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hinwil	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All
Hochdorf	-	-	-	W	Α	Med/S	W	Α	Med/S	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All
Höfe	М	Α	Med	М	Α	Med	М	Α	Med	R	Α	All	-	-	-	-	-	-	-	-	-
Horgen	М	Α	All	М	А	All	М	Α	All	М	А	All									
Jura-Nord Vaudois	М	Н	Med	R	Н	Med	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lausanne	М	Α	All	М	А	All	R	Α	All	-	-	-	-	-	-	-	-	-	-	-	-
Lenzburg	М	Н	Med	М	Н	Med	М	Н	Med	М	H/A	Med /All	М	H/A	Med /All	М	H/A	Med /All	М	H/A	Med /All
Locarno	M	Α	All	W	Α	AII/S	W	Α	All/S	М	Α	All	М	Α	All	R	Α	All	-	-	-
Luzern	-	-	-	-	-	-	-	-	-	-	-	-	W	Α	All	М	Α	All	М	Α	All
March	М	Α	All	М	А	All	М	Α	All	М	Α	All	М	Α	All	R	Α	All	-	-	-
Monthey	М	Α	All	М	Α	All	M	Α	All	M	Α	All	М	Α	All	М	Α	All	М	Α	All
Münchwilen	M	A/H	Med	М	H/A	Med /All	R	H/A	Med /All	-		-	-	-	-	-	-	-	-	-	-
Pfäffikon	W	Α	Med	W	А	Med	W	Α	Med	М	Α	All	М	Α	All	М	Α	All	М	А	All
See-Gaster	-	-	-	W	А	All/Med	W	Α	All/Med	М	Α	All	М	Α	All	М	Α	All	М	А	All
Sursee	-	-	-	-	-	-	-	-	-	-	-	-	W	H/A	Med/All	М	H/A	Med/All	М	H/A	Med/All
Thun	-	-	-	-		-	-	-	-	-	-	-	W	Α	All	М	Α	All	М	Α	All
Uster	W	Α	Med/S	М	Α	All	M	Α	All	М	Α	All									
Zug	R	Α	All	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Status: C: Critical, W: To Watch, M: To Monitor, R: Regime Change

Property Type: A: Apartments, H: Houses Property Size: Med. Medium Size, S: Small Size