

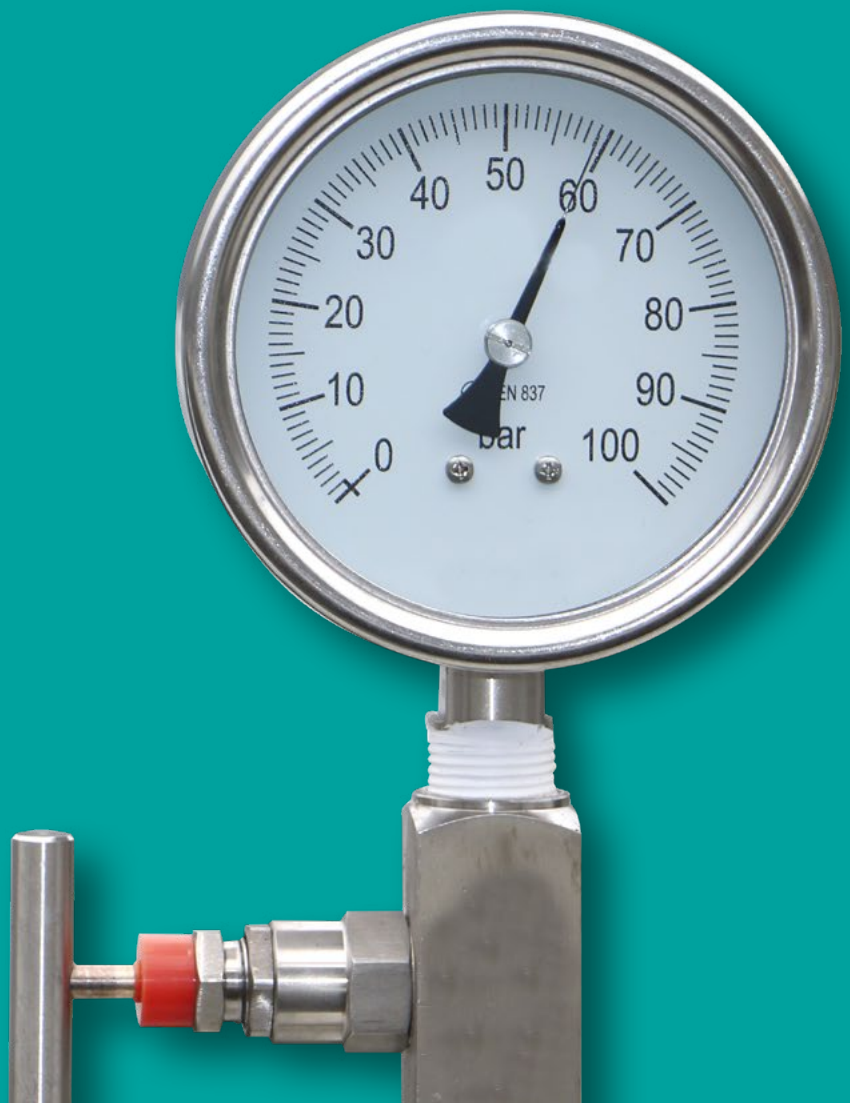


# Swiss Real SnapShot!

## **The pressure is still on**

Current developments  
in the Swiss real estate  
investment market

Spring/Summer 2019



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# Introduction

Dear Sir or Madam

KPMG Swiss Real SnapShot!, published twice a year, provides you with an overview of the current developments in the Swiss real estate market and its influencing factors.

The Swiss real estate market is a heterogeneous and strictly segmented structure. Thus, KPMG Swiss Real SnapShot! concentrates on a global observation. Regional deviations are commented occasionally in a focus article.

KPMG Real Estate has both, Swiss-specific and global expertise in the real estate markets. Our extensive data pools on local markets along with competent and in-depth consultation generate added value for our clients in all areas related to real estate.

Turn to page 19 of KPMG Swiss Real SnapShot! to see what we can do for you and how you can benefit from our services.

We wish you a pleasant and informative reading.

With kind regards,



Ulrich Prien  
Partner, Head of Real Estate Switzerland



Beat Seger  
Partner, Real Estate M&A

# The pressure is still on

## Macroeconomic overview

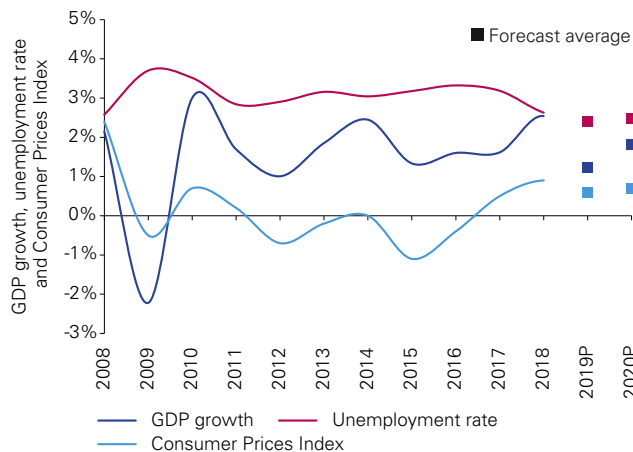
The early euphoria of 2018 gave way to discernibly more reserved assessments of Swiss economic growth in the second half of the year. With modest growth in the final quarter of 2018, the Swiss economy closed the year with a clearly positive result of 2.54%. Switzerland has only managed to cross the 2% growth line twice in the last decade – once in 2010 (3.00%) and again in 2014 (2.45%).

Forecasters are predicting that the Swiss economy will cool down significantly in the current year, with the export industry in particular feeling the lack of positive growth trends in a weaker global economy. On average, the forecasting institutes included in this analysis expect growth of 1.24% in the Swiss economy for the current year, roughly equivalent to the level of 2017. Credit Suisse (CS) and UBS – Switzerland's two major banks – are the most optimistic, with both anticipating growth of 1.5%. KOF, the economic research institute of the Swiss Federal Institute of Technology (ETH), makes the lowest growth forecast at 1.0%. On the plus side, there has been no mention of a potential recession despite the economic slowdown.

Buoyed by the strong economic development of 2018, the Swiss labor market also looks back on a positive year. Unemployment reached its lowest level since the financial crisis, sliding below the 3% mark for the first time since 2012 to 2.63%. When growth rates fall, there tends to be a lag before the labor market responds. So it is likely that the trend toward lower unemployment will only reflect the weaker economic outlook in the medium term. For now, forecasters expect the unemployment rate to drop again in the current year to 2.40%. Companies will become cautious as the economy slows, with unemployment predicted to rise again to 2.48% in 2020.

The Federal Statistical Office (FSO) put inflation at 0.9% last year. As the year progressed, predictions of inflation increased significantly compared to initial values. Inflation of 0.6% is anticipated for the current year, increasing to 0.7% for 2020. Forecasters agree that the inflationary trend first observed in 2017 – following a period of price stability since 2009 – will continue at a modest level.

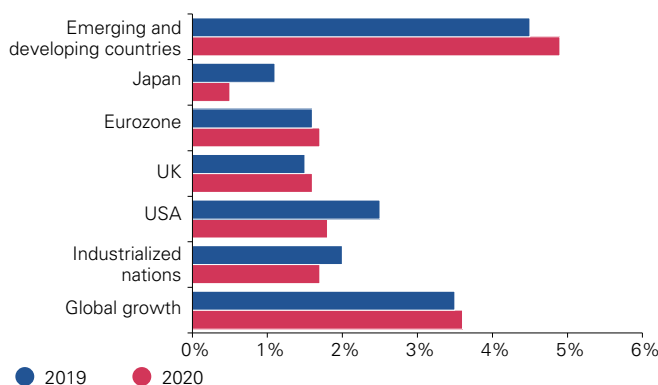
## Macroeconomic indicators<sup>1</sup>



Source: BAKBasel, Credit Suisse, KOF, SECO UBS and KPMG

After solid growth in 2017 and 2018, global economic activity slowed down considerably in the second half of 2018 according to the International Monetary Fund (IMF). Global GDP growth is set to reach 3.5% in the current year – a considerable correction of the prior-year forecast of 3.9%. The IMF reported slower economic growth in China as a result of tighter regulatory requirements, coupled with the country's tense trading relationship with the US. In the eurozone the economy lost steam in the face of falling consumer confidence and a gloomier business climate. Industrialized nations are set to see growth slow down from 2.3% in 2018 to 2.0% in the current year according to the IMF. Growth prospects in emerging and developing economies will slip slightly from 4.6% to 4.5%. Although a slowdown is expected across regions, growth forecasts remain positive for the next two years.

## Global GDP growth



Source: IMF and KPMG

With 55,000 net new immigrants in 2018, the State Secretariat for Migration (SEM) announced a year-on-year increase in net migration for the first time in five years. This trend is not likely to reverse any time soon, despite the more subdued economic outlook. In its reference model for

population trends (medium scenario), the FSO expects net annual immigration to stagnate at around 60,000 people per year until 2030 and a decline to a level of 30,000 people per year from 2030 to 2040.

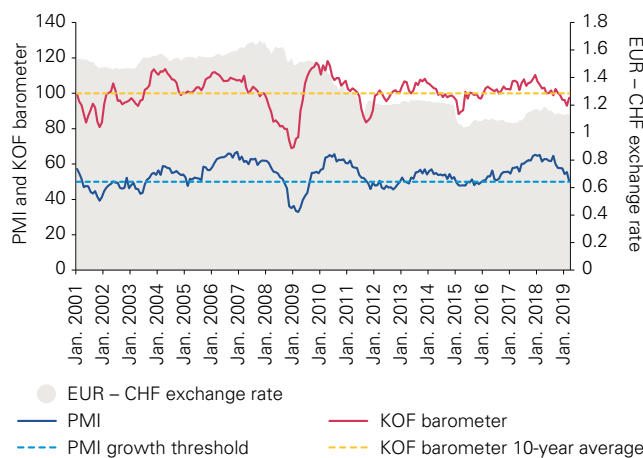
## Net migration



Source: FSO, SEM and KPMG

Having peaked at 65.6 points in December 2017, the Purchasing Managers' Index (PMI) followed a relatively stable downward trajectory over the course of 2018, reaching 57.5 in December 2018. The index continued to fall, hovering just above the growth threshold of 50 points as of the end of March 2019. It seems increasingly likely that we will see it slip below the threshold again for the first time since December 2015. Between May and November last year, the KOF Economic Barometer fluctuated around its long-term average of 100 points before starting a downward descent around the end of the year. It bottomed out in February 2019, recovering again to 97.4 points in March – still below average. Accordingly, KOF anticipates weaker economic growth in the coming months.

## Purchasing Managers' Index, KOF Economic Barometer and EUR – CHF exchange rate



Source: Procure, Credit Suisse, SNB, KOF and KPMG

<sup>1</sup> P = Consensus forecast based on BAKBasel, UBS, Credit Suisse, KOF and SECO

In March 2019, the European Central Bank (ECB) once again postponed interest rate hikes and now expects rates to remain at their present levels at least through the end of 2019. The SNB is likely to follow suit, meaning changes to its monetary policy are unlikely in the current year. CS and UBS expect the return on 10-year federal bonds to climb to 0.00% in 12 months, while Zürcher Kantonalbank is less optimistic with a prediction of -0.10%. Julius Bär anticipates a return to positive interest rates (0.15%), albeit at a lower level than expected in the previous month (0.45%).

In recent issues of Swiss Real SnapShot! this section has ended with a rosy overall economic outlook. This time, prospects are less promising. Although fears of a recession can be put aside for now, the broad consensus is that economic growth is slowing down. The real estate investment market is likely to remain under pressure in the current year as capital seeks an alternative to low yields on bonds but the muted economic outlook will impact the rental market.



# Office property market

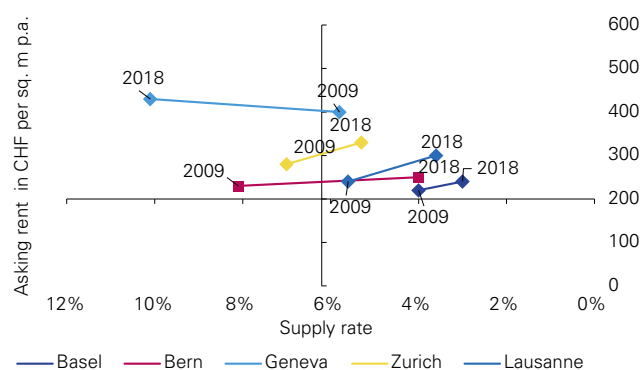
The economic upturn of the prior year had a positive impact on office employment, which in turn pushed up demand for office space. As already indicated, demand is likely to slow down again already as the year progresses.

With typical office employment (measured in FTEs) up +2.64% on the prior year in 2018, year-end growth crossed the 2% mark for the first time since 2012 according to the FSO. Growth was highest in the area of other business services (+1.17%), followed by professional, scientific and technical services (+1.16%). With combined absolute growth of around 26,000 FTEs, these two service areas account for a major portion of the overall increase of just under 30,000 FTEs in 2018. At the same time, employment in the area of financial and insurance services fell in 2018, which reflects ongoing structural change in the banking sector. The Swiss Bankers Association (SBA) sees challenges in an environment shaped by digital transformation, pressure on margins, persistent negative interest rates and growing compliance costs.

At CHF 195/m<sup>2</sup> p.a., the median asking rent for office space in Switzerland as a whole has increased by around 2.6% from CHF 190/m<sup>2</sup> p.a. in 2009. According to WP, the overall supply rate for office space in Switzerland was 6.9% at the end of 2018, equivalent to an increase of +40 basis points over the last decade. Within Switzerland's five largest cities, Geneva had the highest supply rate at 10.1%, followed by

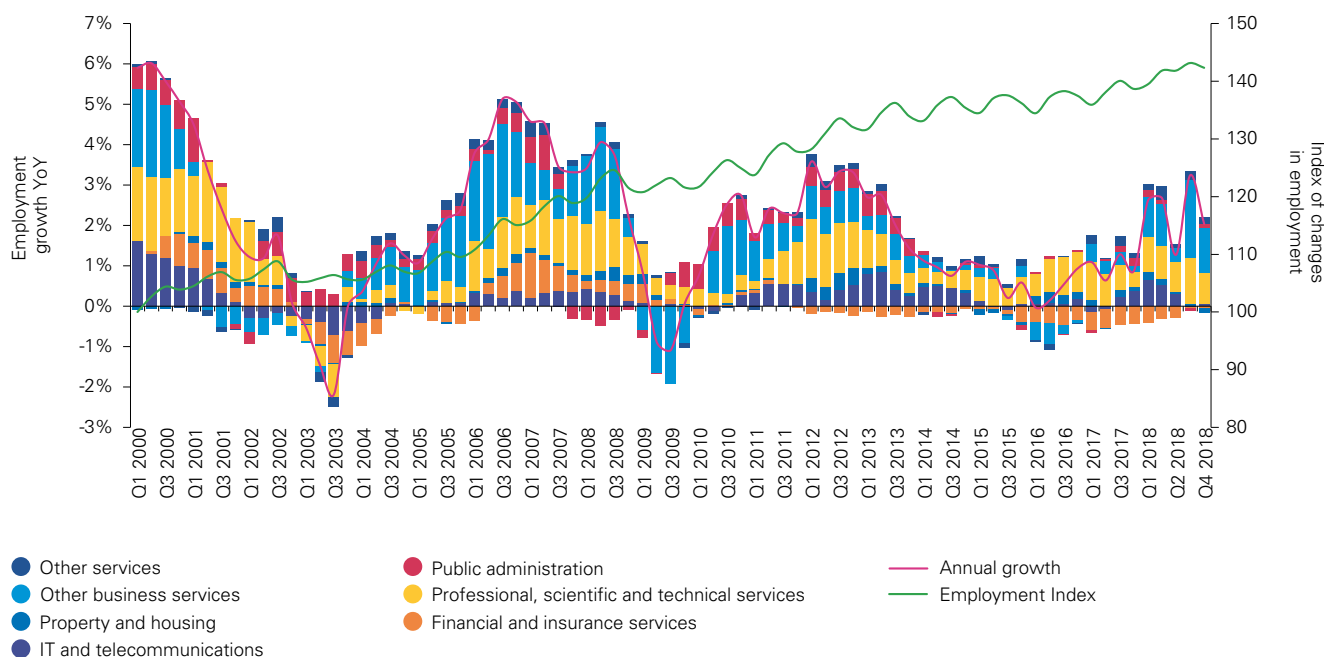
Zurich at 5.3% and Bern at 4.0%. Despite higher supply rates for Switzerland as whole, the rate was down in four of these five cities, with Geneva the only exception. The development is reflected in asking rents. The price per square meter per year increased in this decade from CHF 220 to CHF 240 in Basel, CHF 230 to CHF 250 in Bern, from CHF 240 to CHF 300 in Lausanne and CHF 280 to CHF 330 in Zurich. Geneva is an outlier in the city comparison, with both the supply rate and asking rent up in the past ten years. They grew from 5.8% to 10.1% and CHF 400 sq. m p.a. to CHF 430 sq. m p.a., respectively. The inverse correlation may reflect new construction activity, which could in future lead to higher vacancy levels, lower absorption rates or falling asking rents for older real estate.

Supply rates and asking rents in the centers



Source: WP and KPMG

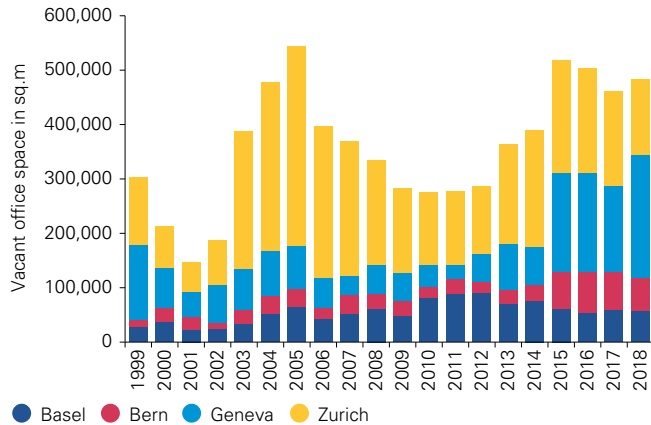
Changes in typical office employment by sector (seasonally adjusted)



Source: FSO and KPMG

Compared to the prior year, the office space vacancy situation improved somewhat in Switzerland's major cities Basel (-2.8%), Bern (-13.1%) and Zurich (-20.7%) in 2018. In Geneva, however, the better prior-year situation gave way to a significant increase in vacant office space in 2018 (43.7%). Geneva pushed up the total vacant office space to 480,000 sq. m in Switzerland's five major cities overall.

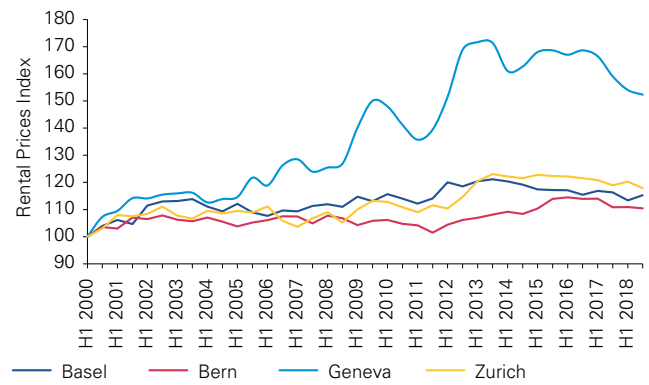
#### Office space vacancy in the principal centers



Source: City statistical offices and KPMG

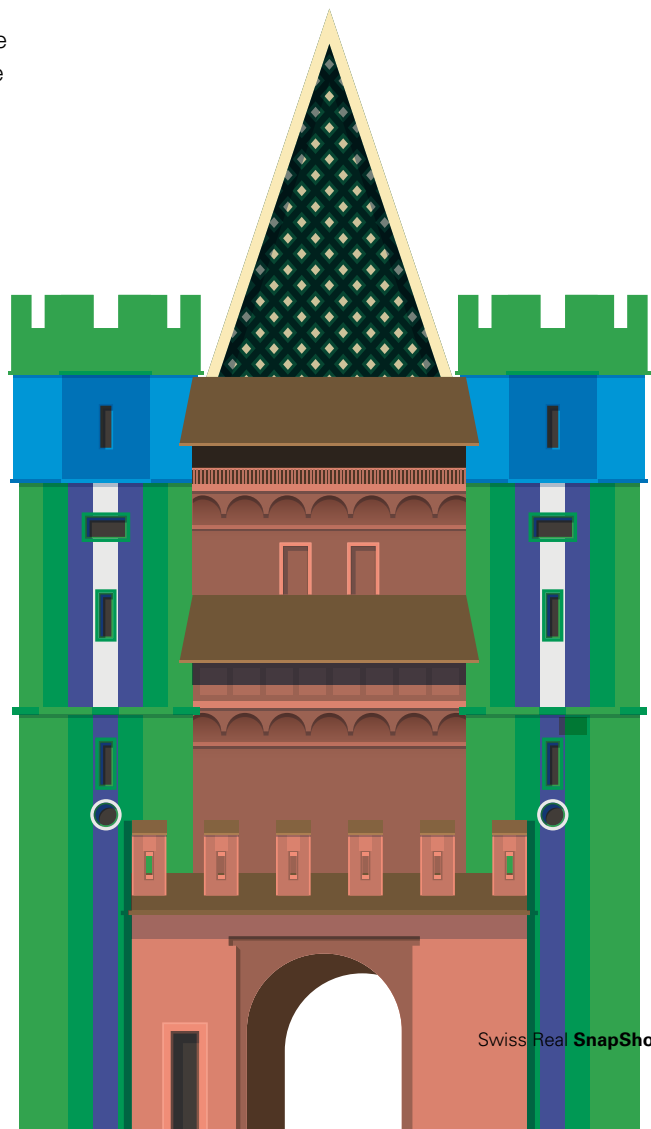
Asking rents for office space fell on the prior year despite the positive economic development and above-average demand for office space in 2018. Geneva saw the largest drop, with rents down -4.3%; there were modest decreases in Basel (-0.9%), Zurich (-0.9%) and Bern (-0.3%). While asking rents in Geneva, Zurich and Bern underwent negative development in the second half of the year compared to the first, Basel experienced a like-for-like drop of -2.5% in the first six months, which was partially compensated by an increase of +1.7% in the second half of the year compared to the prior period.

#### Asking rents for office space in the principal Swiss cities



Source: WP and KPMG

Ongoing structural challenges in the office space market are compounding the vacancy situation and falling rents. Many older premises no longer meet modern requirements and find themselves being squeezed out by new builds, which offer higher quality and greater flexibility. The result is fierce competition and aggressive marketing when tenants change.





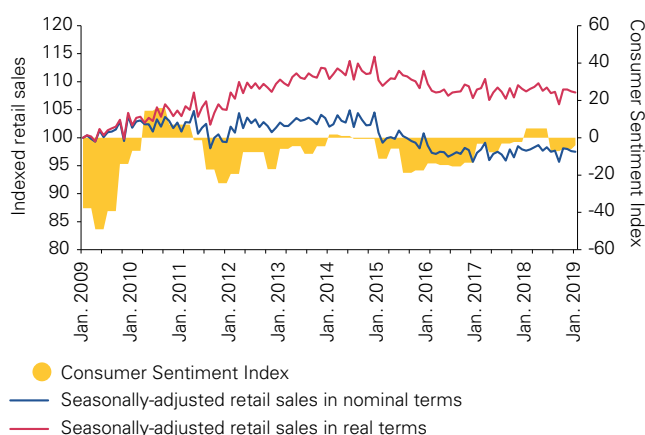
# Retail property market

Retail space owners look back on a challenging year 2018 despite the dynamic economic environment. Pressure on retailers – and providers of retail space – remains high as the shift toward online and mail-order shopping continues.

While retail sales excluding fuel had enjoyed unexpected growth of +2.2% in real terms in 2017, they sank again in 2018, losing -1.7% in a year-on-year comparison according to the FSO. This falling trend persisted into the first quarter of 2019, taking retail sales to -3.3% below level of December 2018 as of the end of March 2019. At the beginning of 2018 the quarterly Consumer Sentiment Index reported a positive value for the first time since July 2014. Consumer mood had benefited from the recovery of the Swiss economy and improved labor market, but was short-lived, slipping back into negative territory after two positive quarters. In July 2018, the Consumer Sentiment Index stood at -7, improving slightly in the first quarter of 2019 but remaining negative at -4. The most recent analysis highlights job security, household finances and timing of major purchases as key factors affecting negative consumer sentiment.

Considering the shift toward online shopping, poor consumer sentiment and a consolidation of sales at physical retail outlets, it is little surprise that the retail sector continues with its wave of restructuring. Retail Atlas observed a net change of -371 or 5.8% in the number of non-food retail chain branches in 2018. This corresponds to a -5.2% decrease in FTEs employed in the retail sector over the past five years according to the FSO.

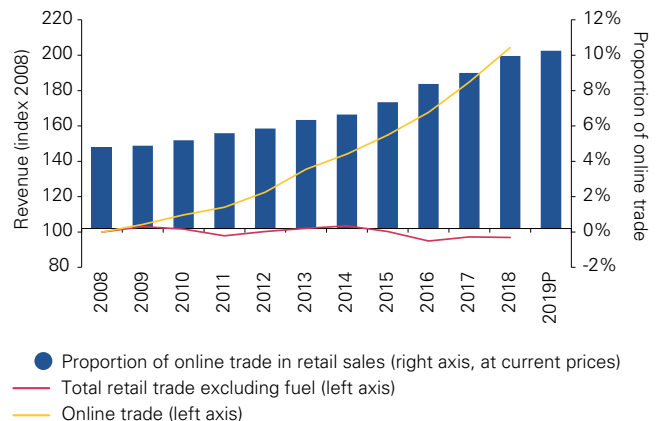
**Retail sales and Consumer Sentiment Index**



Source: FSO, SECO and KPMG

In contrast to physical retail outlets, online trade enjoyed year-on-year growth of 10% in Switzerland. GfK reports that Swiss consumers purchased goods worth CHF 9.5 billion<sup>2</sup> online in 2018 (2017: CHF 8.6 billion). Sales were particularly strong in the area of household electronics (CHF 2.1 billion) and fashion/shoes (CHF 1.8 billion). For every three francs spent on household electronics, one relates to online purchases according to GfK. If the ten-year trend continues, 2019 will see online sales account for over 10% of the nominal retail revenue (excl. fuel) for the first time.

**Share of online trade in retail sales**



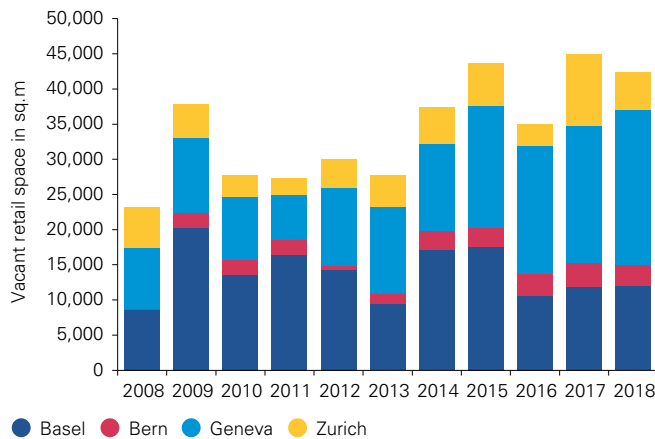
Source: FSO, GfK and KPMG

According to the city statistical offices, the combined vacant retail space in the cities of Basel, Bern, Geneva and Zurich fell by -6% or around 2,500 sq. m in total in 2018 compared to the prior year. This has helped redress the balance after a significant prior-year increase (+28%). There was considerable variation in development between the four major cities, however. Vacant space fell by -47% in Zurich<sup>3</sup>. This positive development was shared by Bern, which saw an -11% decrease. The situation in Basel has been relatively stable since 2015, with an increase in vacant space of around 1% in 2018 compared to the prior year. In Geneva, vacant space increased by a sizable 12%.

<sup>2</sup> Excluding collection points in bordering countries.

<sup>3</sup> Only retail space with a shop floor of more than 500m<sup>2</sup> was included for analysis; the vacancy rate is therefore systematically under-reported.

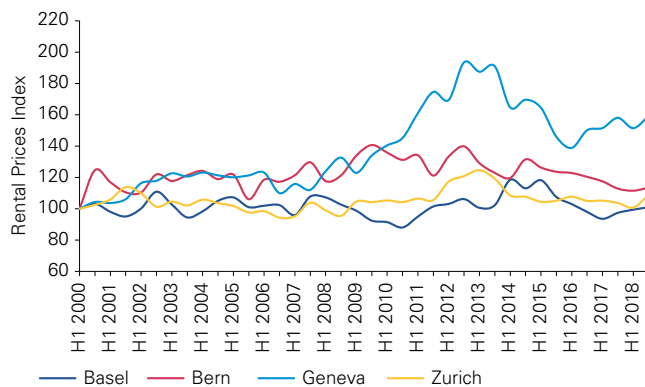
### Retail space vacancy in the principal centres



Source: City statistical offices and KPMG

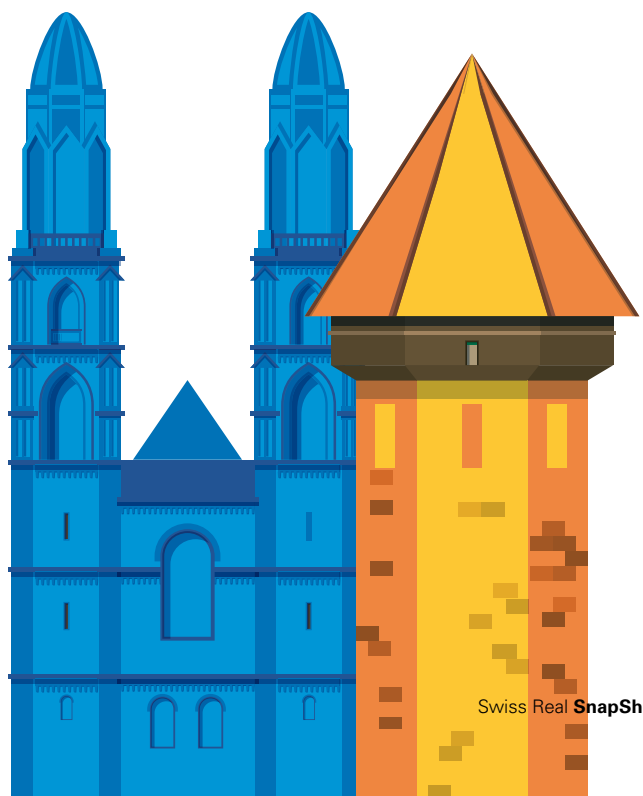
Asking rents increased in the second half of the year compared to the prior quarter, despite continued pressure on retail space. At +8.0%, this development is most pronounced in Zurich and reflects the development in vacancy rates in the past year. Asking rents were up +5.0% in Geneva – after a decrease of -4.2% in the prior quarter – despite the growing vacancy situation. The increase in asking rents was more modest in Basel (+1.6%) and Bern (+1.7%).

### Asking rents for office space in the principal Swiss cities



Source: WP and KPMG

In the current year, there are likely to be fewer positive economic trends. Although the labor market should remain stable, sluggish economic growth forecasts are reflected in weaker consumer confidence. A turnaround in the retail space market is unrealistic. Instead, the shift toward online shopping or hybrid formats and falling sales at physical outlets will trigger closures or downsizing at less well frequented locations. Demand remains high for shopping formats that complement the online offering, as well as convenience stores and flexible retail space at locations with high footfall. For other types of retail space, the result is lower rental income, higher tenant turnover and increased need for active rental management.



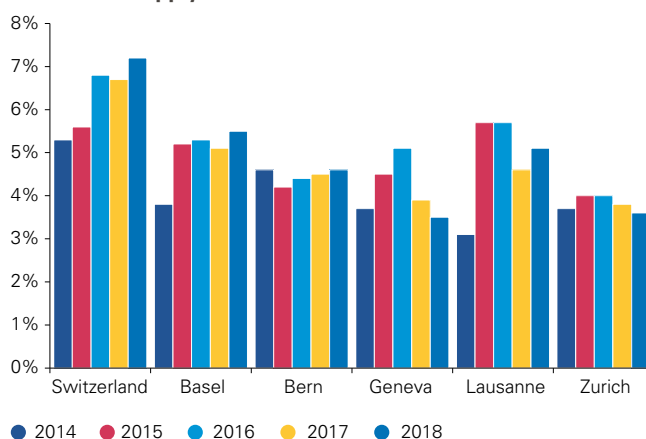
# Residential property market

The additional demand, due to the slight increase in net migration, was unable to absorb the additional supply of housing resulting from high construction activity. With interest rates remaining low, real estate is set to remain an attractive investment prospect, albeit with increased caution given the current price level, growing vacancy rates and falling rental revenue.

Investment pressure has increased noticeably for this asset class since negative interest rates became a reality. Construction and property development has been high accordingly. CS reports that planning permission was granted for 27,000 rental apartments in 2018 – a decrease of -6.2% on the prior year but 37% above the average of 2003 through 2018. Construction often focused on municipalities in the agglomerations due to the scarcity of investment opportunities and high prices in major cities and the surplus supply already in rural areas. In the major cities, planning permission was granted for a slightly smaller number of units in 2018 compared to the prior year, but remained high at 44% above the mid-term average. Municipalities within the agglomerations exceeded the long-term average by 61%. This year is unlikely to see an increase in interest rates, the strongest driver of the investment crisis, leading to increased construction activity. Against this background, FINMA is considering initial steps to calm the lending situation in this segment. Pressure on income returns from residential property is set to increase in the agglomerations as well as rural regions. In addition, the reference interest rate may drop again in September.

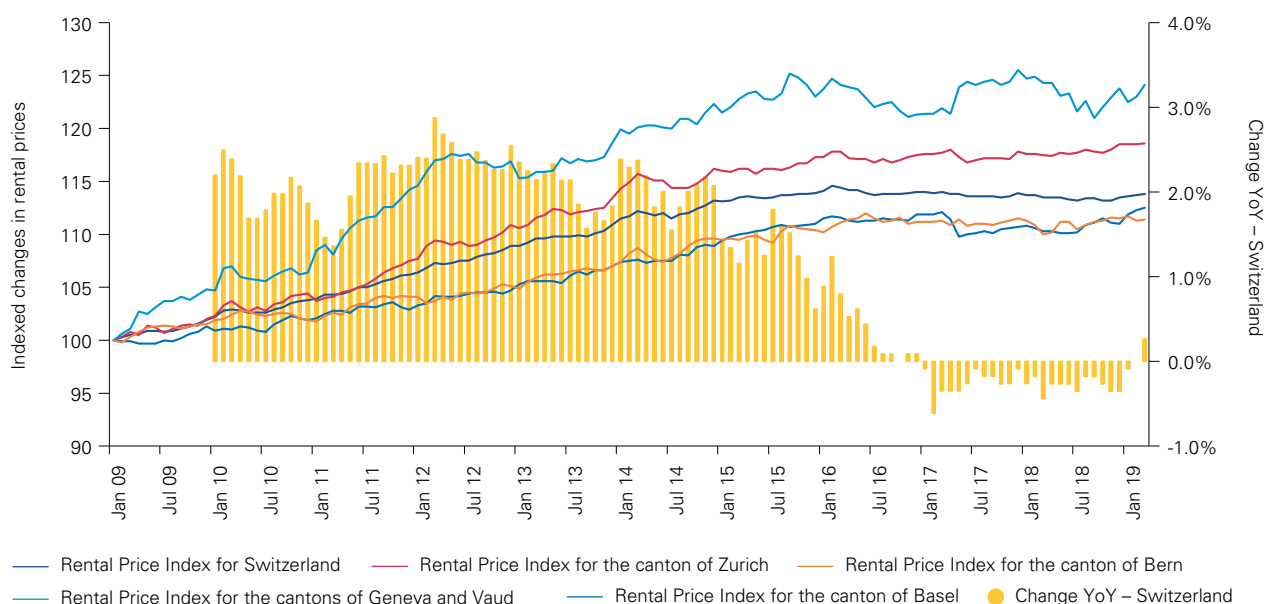
In a five-year comparison, the supply rate for Swiss rental properties peaked at 7.2% in 2018. Supply rates also increased in individual cities in 2018: Basel (5.5%, 2017: 5.1%), Bern (4.6%, 2017: 4.5%) and Lausanne (5.1%, 2017: 4.6%). The largest cities Zurich and Geneva were the only ones to see available residential space decrease, to 3.6% (2017: 3.8%) and 3.5% (2017: 3.9%), respectively. The development of Switzerland as a whole compared to the five largest cities also reflects the increase in residential property outside the key centers. This assessment corresponds to the observed construction activity, increased vacancy rates and falling rents.

**Residential Supply Rates**



Source: WP and KPMG

**Asking rents index, quality-adjusted**



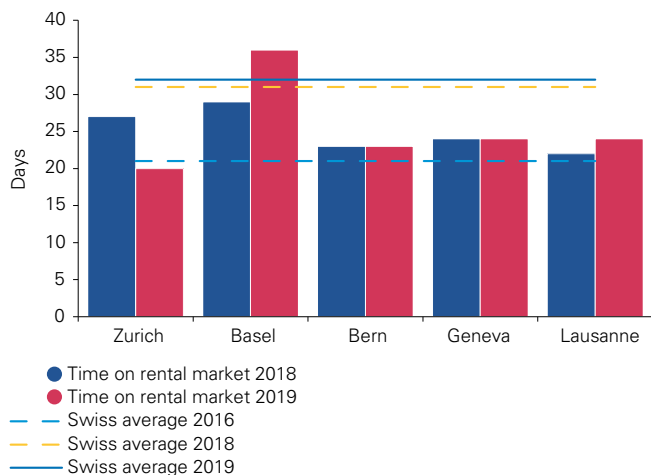
Source: homegate.ch and KPMG

Following a period of negative rental price development in Switzerland since January 2017, asking prices have increased in the first quarter of 2019. This is according to the index of asking rents published by homegate.ch, which showed a year-on-year change of +0.3% as of the end of March 2019. The largest price increase was seen in the city of Basel (+2.1%), followed by Zurich (+1.9%). Rents fell by a slight -0.6% in Lausanne and Bern, and somewhat more sharply in Lugano (-1.6%).

A breakdown of data by canton reveals the canton of Zug to once again have the highest increase in asking rents (+4.1%), followed by Lucerne (+2.2%) and Basel-Stadt (2.0%). The canton of Ticino saw the largest decrease in rental prices (-1.6%).

In Switzerland's five largest cities it is not only the vacancy rates that are low compared to the Swiss average; the advertising period for available rental properties is also short. In Zurich, it fell again from 27 days to 20 days according to immodatacockpit. In Basel, the median advertising duration increased from 29 to 36 days, which may be related to the increase in asking rents in Basel. Bern (23 days) and Geneva and Lausanne (both 24 days) more or less matched the prior-year level. The Swiss overall average of 32 days was up one day on the prior year.

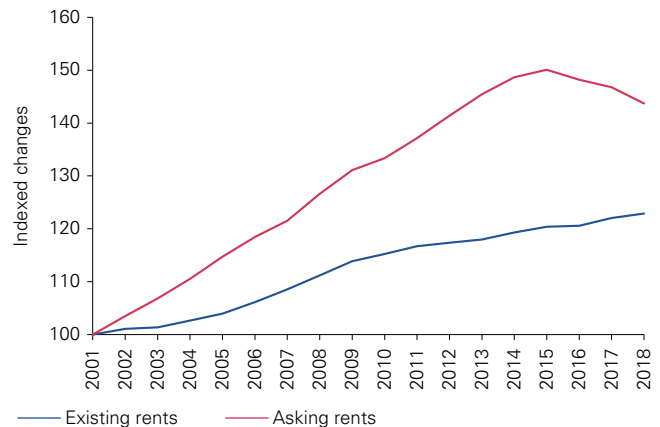
#### Average time on market



Source: immodatacockpit and KPMG

The WP rental price index shows a -2.1% decrease in asking rents for residential space in Switzerland in 2018 compared to the prior year. Existing rents increased slightly by 0.7% in the same period according to the FSO. The chasm between reference and asking rents, which has been widening since 2015, therefore closed somewhat in 2018. Unlike asking rents, existing rents have tended to fall in recent years under the influence of reference interest rate cuts. As a result, rent increases were only possible when tenants changed or if value-adding improvements were made to a property.

#### Indexed changes in current and asking rents



Source: FSO, WP and KPMG

Outside the major cities, pressure on rental income will increase again, albeit not as drastically as in recent years, while construction activity remains high. While the living standard of a property can be changed throughout its life cycle, its location remains one of the most important success factors. Indicators such as accessibility (proximity to places of work and public transport links), coupled with a property's immediate surroundings (noise levels or an unobstructed view), are decisive in today's real estate market. Competition triggered by new construction activity increases owners' willingness to renovate and enables a higher tenant turnover.

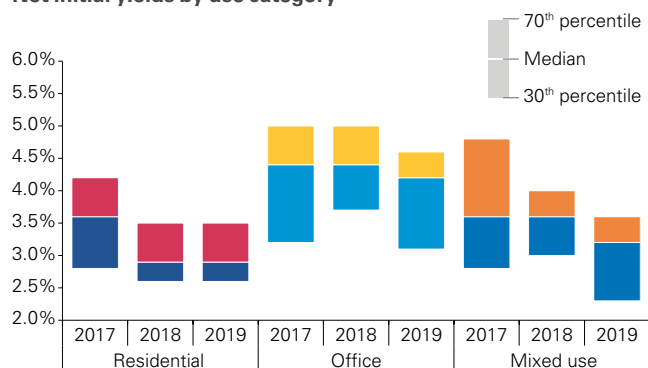
In this issue's spotlight article *How self-driving vehicles affect land prices*, we explore in more detail how accessibility affects property values using the example from the canton of Zurich. We also look to the future of land prices and how they could be impacted once a comprehensive network of self-driving vehicles has been established.

# Direct property investments

The Swiss property investment market has largely been characterized by persistent yield compression in recent years.

While the median net initial yields for residential property dropped significantly once again from 3.6% in 2017 to 2.9% in 2018, they matched the prior-year level of 2.9% in the first half of 2019 according to SIV/REIDA. With interest rates expected to remain stable, this development can be interpreted as indicating a calmer transaction market for residential properties in light of the price level already reached. Investors appear unwilling to pay even higher purchase prices in an environment of growing vacancy rates and stagnating asking rents in the residential segment. In contrast, initial net yields on commercial and mixed properties have fallen again by -20 basis points and -40 basis points, respectively, according to the 2019 analysis. This development follows a relatively stable prior year. Median initial net yields now stand at 4.2% for commercial and 3.2% for mixed properties. In addition, the 30th percentile of both these segments (3.1% for commercial, 2.3% for mixed) is once again well below the median compared to the residential segment. As a result, investors in these segments are increasingly prepared to invest in lower-yield properties, probably due to the high prices for residential properties.

## Net initial yields by use category<sup>4</sup>

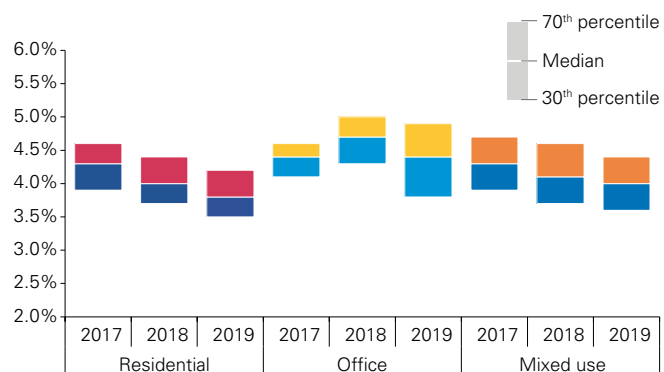


Source: SIV/REIDA and KPMG

The median net yield on existing direct property investments fell in the first quarter of 2019 across segments compared to the prior year. At 3.8% SIV/REIDA reports the lowest net yield on existing property investments in the residential segment (2018: 4.0%). The net yield on existing investments in the mixed segment fell 10 basis points to 4.0%, just 20 basis points above the level for residential property. The highest net yields were generated in the commercial segment (4.4%, 2018: 4.7%). While there was hardly any change in basis points between the 30th and

70th percentiles in the residential and mixed segments, at 70 and 80 basis points respectively, the commercial segment saw the gap widen from 70 to 110 basis points. This indicates that real estate appraisers weighted differences between individual buildings more strongly, even for existing properties. While premium office space in city locations are once again valued at lower yields, the net yields at the upper end of the spectrum barely fell.

## Net yields for existing investments by use category



Source: SIV/REIDA and KPMG

Net initial yields in the residential segment are set to flatline in an environment shaped by weaker economic prospects compared to 2018. This situation is compounded by stagnating or even falling returns on direct property investments due to higher vacancy rates and falling rents, and anticipated interest rate developments for 2019 including a potential adjustment of the reference interest rate.

<sup>4</sup> Swiss association of real estate appraisers (SIV), market report as of the first semester 2019

# Indirect property investments

With a yield of up to 0.19% in February, 10-year federal bonds were – comparatively at least – comfortably on positive ground for much of 2018. Towards the end of the year, yields returned to negative figures, however, and the lower-yield trend of the last quarter of 2018 continued into the first quarter of 2019. The yield on 10-year federal bonds was once again clearly negative at -0.37% as of the end of March 2019.

Following the extraordinary 13% growth of the Swiss Market Index (SMI) in 2017, the Swiss broadcaster SRF talked of “plummeting stock markets” when describing share performance in 2018. The SMI lost -11% over the course of 2018. Other commentators described the period as a “year to forget.” At 8,429 points, the SMI closed 2018 only just above the level of year-end 2016 (8,220), having lost most of the gains made from the strong 2017 performance. The current year got off to a much better start, with the SMI up 12% on the beginning of the first quarter by the end of March 2019.

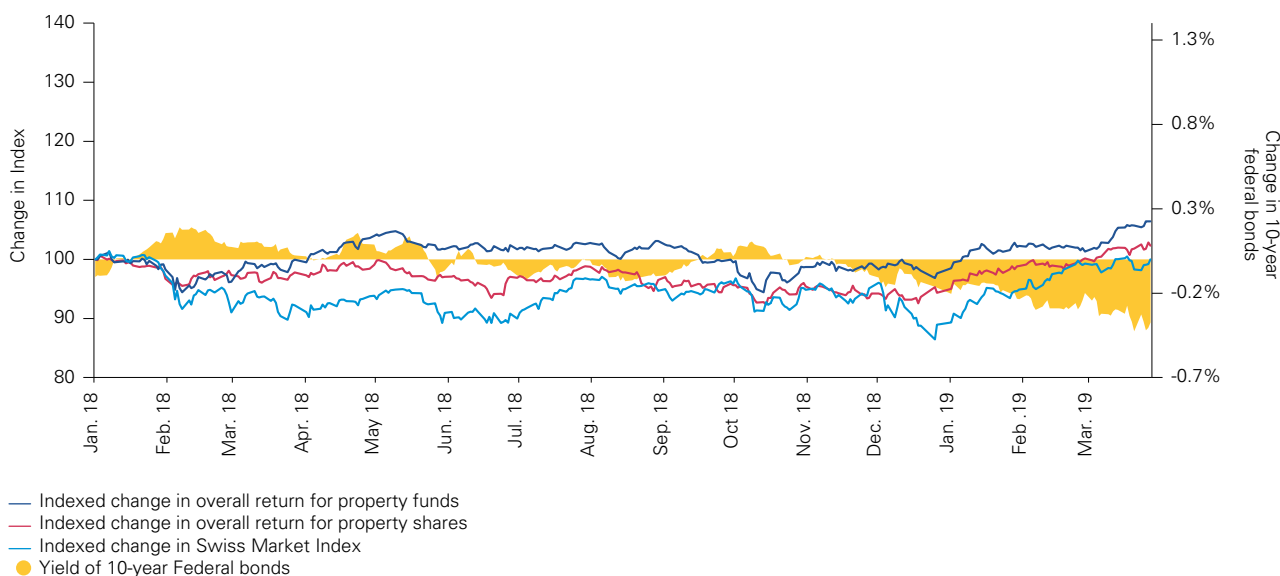
Holders of listed property investments also had to contend with a negative yield in 2018. As of year-end listed real estate funds were down -6% (YTD TR) on the beginning of the year. Real estate companies fared slightly better, but also performed negatively with a decrease of -2%.

Following a difficult 2018, indirect property investments like the SMI recovered value significantly as the current year got underway. At the end of the first quarter, the overall yield of real estate funds and real estate companies exceeded the year's opening figures by around 8% and 9%, respectively.

As of the end of March 2019, the premium on listed Swiss real estate funds came to 24% on average, virtually matching the 25% reported at the end of March 2018 and marking a significant recovery on the tumble to 16% observed at year-end 2018. Swiss real estate companies' premiums are thus now virtually back on a par with those of real estate funds, with an average premium of around 22% on the net asset value.

Listed real estate vehicles raised capital of around CHF 4.6 billion in 2018, once again exceeding the amount raised in each of the two preceding years. For now, pressure on the direct property investment market remains high for listed investors. In the first four months of 2019, Swiss Prime Site, PSP Swiss Property and Investis Holding AG – among others – successfully issued bonds. This takes capital raised to around CHF 900 million as of the end of April (April 2018: around CHF 1 billion).

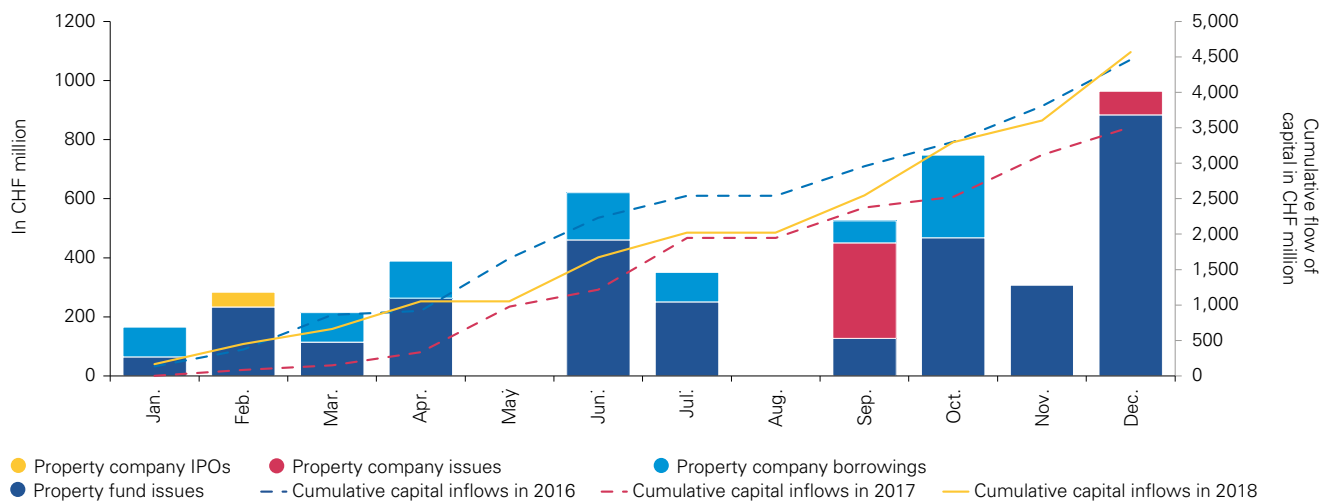
## Movements in quoted property investments



Source: SIX, SNB and KPMG

Like the yields on direct property investments, indirect property investments have also seen write-ups as a result of low interest rates in recent years. As interest rate differences are so important for exchange rate stability, the wait is on for interest rates to climb in the eurozone. Following the ECB's announcement that interest rate hikes are off the table until the end of 2019 at the earliest, the interest rate environment is also unlikely to change materially in Switzerland in the current year. In today's tough environment, investors take varying views of the listed segment, which is reflected in the broad premium range.

#### Flow of capital into listed property investments in Switzerland 2018



Source: Bank J. Safra Sarasin and KPMG



# How self-driving vehicles affect land prices

Myra Rotermund, Assistant Manager Real Estate

## Land prices today

The statistical office of the canton of Zurich states that 32% of variation in land prices is attributable to accessibility factors. In other words, in the canton of Zurich, a third of any price differences can be explained by the connections and infrastructure at that particular plot.

For statistical purposes, accessibility is considered to include factors such as journey time to Zurich, public transport links and proximity to places of work, retailers, a highway and elementary schools.

The chart below sets out price factors by category. The figures can be generalized for other agglomerations as well.

Of all the factors affecting land prices, journey time to Zurich stands out as the most important at 18%. Almost a fifth of price variation is attributable to the number of minutes it takes to travel to Zurich – or the next major center – in a private vehicle or by public transport. Today, locations that are well connected to the main road network and enjoy good traffic conditions and/or a fast public transport connection to a major center benefit from higher land prices than similar locations without good transport links. The

distance in kilometers is secondary – journey time and the reliability of the transport infrastructure are what counts most.

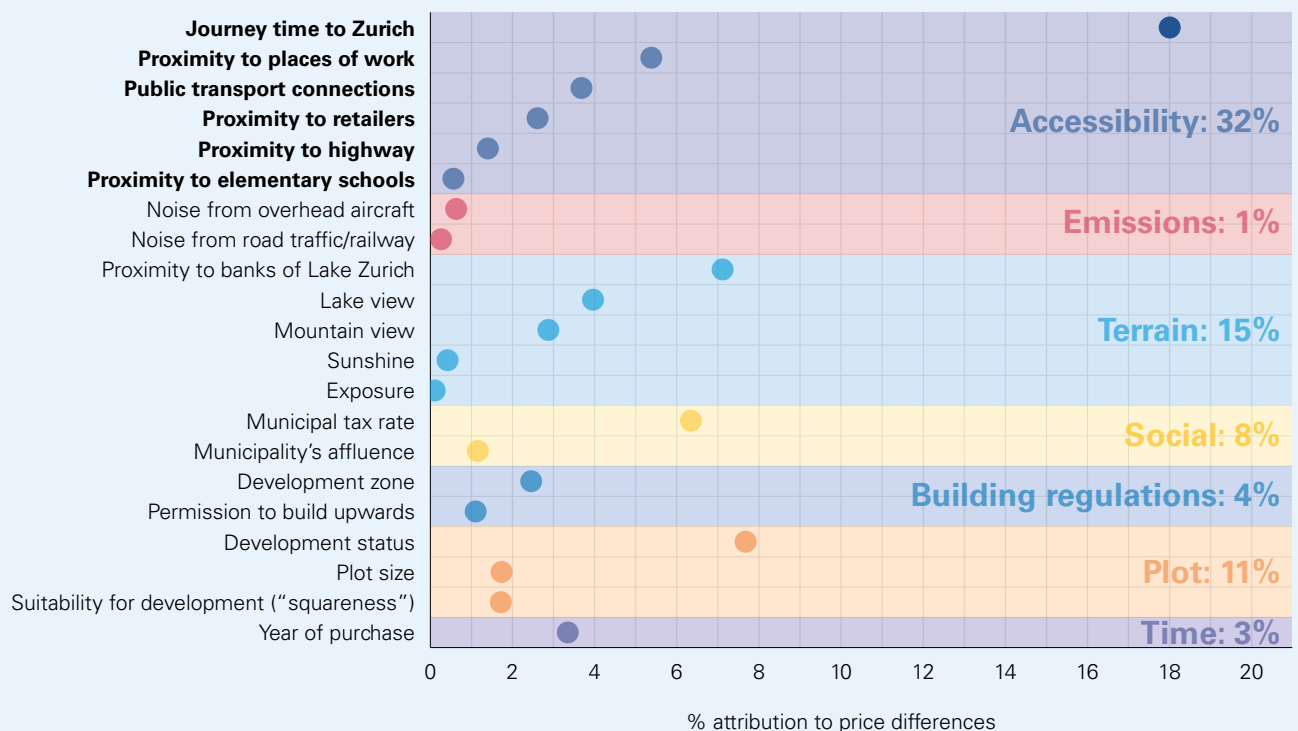
## Self-driving cars – a game changer

Today, there is no question that self-driving vehicles will enhance the range of available mobility options. Indeed, commercial vehicles are already in use in numerous agricultural applications. The more complex and risky task of transporting people in urban settings will develop more slowly, however. Politicians and regulatory bodies have the power to accelerate, or curb, the development. The result is gradual global progress that depends on the demands of different countries and cultures. Technical aspects on the other are no longer such a hurdle, with driverless vehicles certain to take their seat in passenger transport as they are safer, more efficient and cheaper.

They are safer because they eliminate drivers as the source of human error when operating a vehicle. Touring Club Suisse (TCS) rates speeding, inattentiveness and the driver's physical condition as the three most common causes of fatal road accidents.

Connected and automated vehicles (CAVs) are more efficient for several reasons. Firstly, trips can be made without any people on board; the vehicle can move itself from A to B, enabling people and goods to be transported depending on the exact logistical requirements in a given situation. While journeys today have to be star-shaped, with stop-offs at the headquarters/home, vehicles will in future

## Factors affecting land prices in the canton of Zurich



Source: Statistical office of the canton of Zurich, statistik.info 2017/052017/05



move independently from point to point in sequence. The way families use vehicles will also change. Children will be able to get around independently and safely, relieving mom and dad's taxi service.

Self-driving cars are also cheaper. Studies by the ETH's Institute for Transport Planning and Systems (IVT) show that for individual users, self-driving vehicles (being used as a private car) are similar in terms of cost to owning and operating a vehicle today (50 centimes/km). But they offer a much higher level of comfort – comparable to having a private chauffeur. In car sharing scenarios, costs fall to 38 centimes/km, even taking cleaning expenses into account.

### **Impact on land prices of affordable, tailored, door-to-door mobility for everyone**

Besides comfort and cost advantages, there are two other aspects of central importance when considering what impact self-driving vehicles will have from the perspective of spatial economics. Firstly, human skill/intelligence is no longer required – so no need to get a driver's license or arrange a driver for the post bus or truck. Secondly, journeys can be made without any people on board.

It means users benefit from door-to-door mobility that is more suited to their specific needs, either in their own vehicle or in a shared one. Children will become independently mobile, while older people retain their mobility for longer.

One major effect will be that accessibility factors will lose their significance for building land prices.

Improved comfort – like being able to work or rest in a vehicle – also reduces the importance of travel time and distance to place of work or highway.

The need for good public transport connections will disappear almost completely as it becomes virtually obsolete, especially for that all important last mile. Shared (micro) vehicles will move freely around the road network, safeguarding transport provision as it is needed throughout Switzerland. Without drivers, these vehicles will be significantly less expensive to operate, reducing the burden on the public purse compared to larger transport vehicles running at low capacity utilization.

Purchases will also be transported by low-emission micro vehicles, reducing the importance of proximity to a retailer.

### **Will land prices then fall?**

In principle, locations that today are popular mainly due to their good connections, but that score less well on other factors (sun exposure, emissions, tax level, etc.), stand to see a negative land price development, assuming all other factors are equal. On the other hand, demand will grow at locations that do not currently enjoy good transportation links but have other aspects going for them.

Behavioral patterns of the past show that compensatory effects are likely, however.

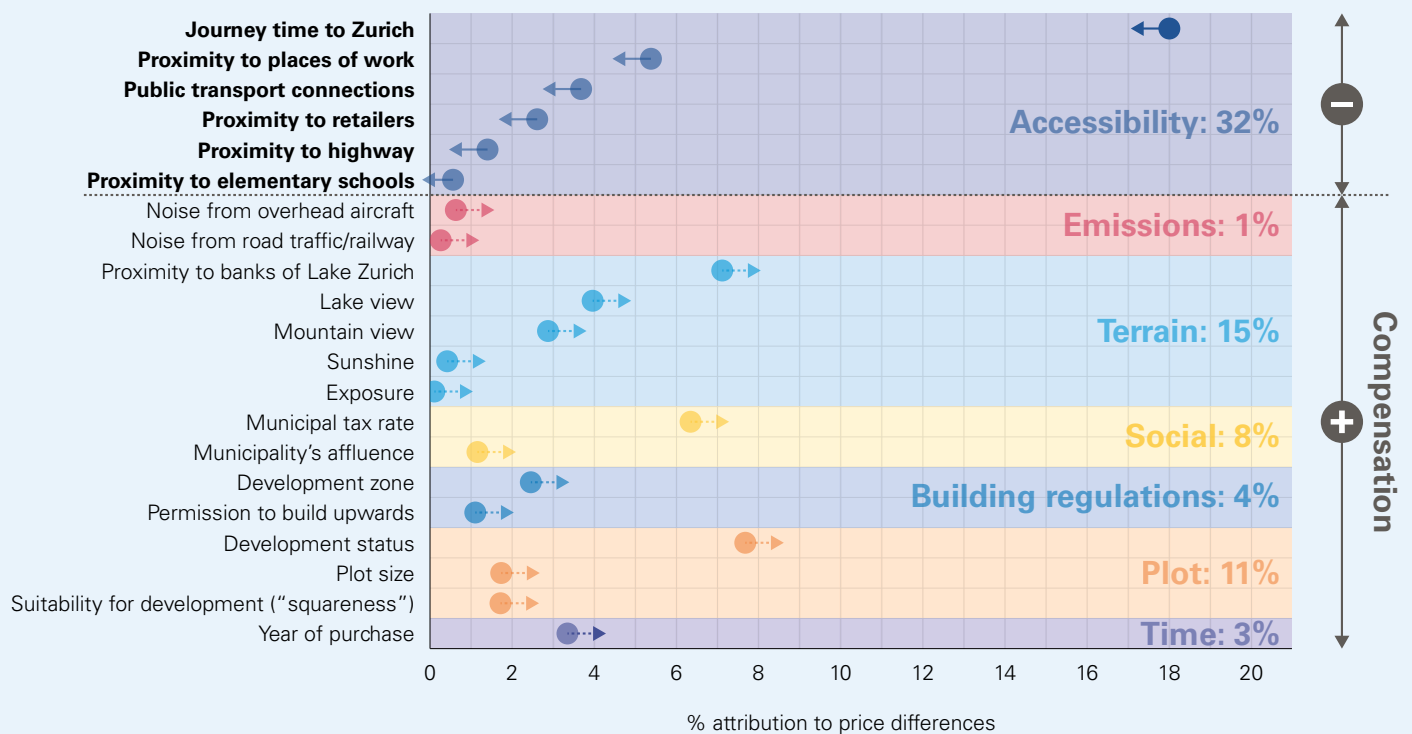


As accessibility becomes less important, the phantom savings on building land prices will be compensated by increased consumption in other areas. Consumers will opt for more space, for example, or a better position in what's known in economics as a rebound effect. Savings are not truly – or only partially – realized because the increase in demand eats into them to some extent. Historically, households have spent 15% to 18% of their disposable income on housing. This figure that has stayed fairly constant since 1950 according to the FSO even as affluence has grown, and with it typical living space consumption.

The figure below illustrates how the falling significance of accessibility could impact the potentially positive development of other factors.

Municipalities and property owners can start to prepare for future developments by focusing on creating an attractive package beyond the traditional accessibility factors. They can also support the transformation of transportation towards flexible mobility, and take targeted action to build on their strengths.

#### How self-driving vehicles affect accessibility factors



Source: Statistical office of the canton of Zurich, statistik.info 2017/052017/05 and KPMG.

# Table of abbreviations

<b>BAK Basel</b>	BAK Economics AG
<b>CAV</b>	Connected and automated vehicles
<b>ECB</b>	European Central Bank
<b>FINMA</b>	Swiss Financial Market Supervisory Authority
<b>FSO</b>	Federal Statistical Office
<b>GfK</b>	Institute for Consumer Research, market research institute of Switzerland
<b>IPO</b>	Initial Public Offering
<b>IWF</b>	International Monetary Fund

<b>KOF</b>	The Swiss economic research institute of the Federal Institute of Technology
<b>PMI</b>	Purchasing Managers' Index
<b>REIDA</b>	Real Estate Investment Data Association
<b>SBB</b>	Swiss Federal Railways
<b>Seco</b>	State Secretariat for Economic Affairs
<b>SEM</b>	State Secretariat for Migration
<b>SIV</b>	Swiss Association of Real Estate Appraisers
<b>SNB</b>	Swiss National Bank
<b>SIX</b>	SIX Swiss Exchange
<b>WP</b>	Wüest Partner AG

Editorial deadline: 30 April 2019

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