

Location, location, floor plan

Swiss Real Estate Market 2019 | March 2019



Owner-occupied housing
Buying cheaper than renting

Page 7

Rental apartments
Quality prevents vacancy

Page 28

The future world of work
Office demand in flux

Page 31

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Content

Management Summary	4
Owner-occupied housing	7
Demand: Buying cheaper than renting	7
Demand: Homeowners accept longer commutes	9
Supply: Lower ownership rate	11
Market outcome: Prices continue to rise	13
Outlook 2019: Shortage supports price growth	15
Focus – Floor plans: «It's the floor plan, stupid!»	16
Rental apartments	23
Demand: “Rösti divide” in immigration	23
Demand: Families discover the city	25
Supply: Focus on the suburbs	27
Market outcome: Quality prevents vacancy	28
Outlook 2019: Tenants keep up the pressure	30
The future world of work: Office demand in flux	31
Office property	35
Demand: Pick-up in demand	35
Supply: Supply of office space is growing moderately	36
Market outcome: Recovery at the core	38
Outlook 2019: A recovery for the office market	39
Spatial development: Structure plans offer guidance	40
Building permit process: Complex and time-consuming	43
Retail property	46
Retail property: Bleeding out	46
City Retail: City appeal threatens to fall	49
Outlook 2019: No relief from the pain	51
Sustainable real estate: Sustainability increasingly important	52
Real estate investments	55
Indirect investments: Real estate is indispensable	55
Direct investments: Focus on quality	57
Outlook 2019: Real estate delivers returns	59
Factsheets : Regional real estate markets at a glance	60

Location, location, floor plan

The housing situation in Switzerland is increasingly affected by vacancies. Tenants – except for those in the major centers – have already gained greater leverage. Such a market environment forces landlords to refocus on the quality of their product. Floor plans play a role here, after being largely ignored for far too long. A well planned layout can significantly boost the quality of a residence, and thus aid in reducing the risk of vacancies. So perhaps the real estate agent's mantra of the value drivers in the housing market – “Location, location, location!” – will have to be updated to include the quality of the floor plan.

Owner-occupied housing Page 7

Buying cheaper than renting

Even at the current high property prices, owner occupancy remains the most economical form of housing in nearly all regions of Switzerland. In a full cost accounting, a condominium is 18% cheaper, on average, than a comparable rental apartment. If only the cash-effective costs are included, the result is even more pointedly in favor of owner occupancy. This can be attributed to persistently low mortgage rates, which when combined with the favorable economic environment and the healthy labor market, should actually boost demand. However, demand for owner-occupied housing is constrained by strict regulations. Consequently, price growth should be modest, remaining below the 2% threshold. The fact that prices are rising at all is due to sparse construction activity. Since promoters are concentrating on building rental apartments, production of owner-occupied housing is in a steady decline. This leads to shortages in some places, pushing prices higher. With demand restrained by regulations, and construction of owner-occupied housing on the back burner, the ownership rate is likely to fall back in 2019 for the first time after years of expansion.

Excursus: Floor plans Page 16

“It's the floor plan, stupid!”

The oversupply on the market for rental apartments draws attention to quality of housing issues. Among these is the floor plan. Although prospective tenants name the quality of the layout as their fourth most important selection criterion, floor plans have long been ignored by the real estate industry. This is probably because apartments have been absorbed without any problem over the last 20 years. Moreover, the quality of a floor plan has always been difficult to assess objectively. Digital technologies now allow users to evaluate floor plans in a quantitative, and thus objective, approach. For example, algorithms can be used to calculate the amount of direct light entering every room, allowing the brightness of the apartment to be quantified. Qualities of floor plans can be more closely compared, and prospective tenants have access to more information without having to visit the apartment. The ideal floor plan does not exist, because different layout characteristics take precedence depending upon the target group. Based on key ratios, however, an apartment can be better trimmed to a particular target group and positioned more precisely on the market. We use examples of connectivity, brightness, and ease of furnishing to analyze floor plan qualities and show that architecture – at least in terms of floor plans – can be measurable.

Rental apartments Page 23

Quality prevents vacancy

The decline in immigration has come to a halt, thanks to the economic recovery. Net immigration should increase by around 10% in 2019. Since immigration is rising again, demand for rental apartments should recover, even if economic momentum decelerates. The German-speaking part of Switzerland is most likely to profit first, since the immigration trend has not yet turned in Western Switzerland. This “rösti divide” can be attributed to the heightened emigration of Portuguese, who make up the largest foreign contingent in Western Switzerland. In 2019, another batch of new rental apartments will be released onto a market that is already saturated in many regions. Building is concentrated in the suburbs, while construction activity in the major centers is falling drastically compared to that in other types of municipalities. So the housing shortage in the major centers is actually a home-made problem. Total construction activity remains too high, largely due to the low level of interest rates, and it is centered in the wrong areas, with an insufficient level of densification. The disparity between supply and demand outside the cities is likely to create even more vacant apartments, albeit at a somewhat slower pace. Meanwhile, advertised rents will probably trend more markedly lower, falling 1% to 2%. Locational quality is thus more important than

ever. The topography of vacancies indicates that accessibility of a location, and/or its proximity to the centers, is a key factor of vacancy risk.

**Excursus:
Families
Page 25**

Families discover the city

Cities were long considered a less attractive place to live, especially for families. But now increasing numbers of young people are moving to the cities and staying. Although net migration by young families to the core cities is still decidedly negative today, the number of family households in the centers has risen disproportionately because many young urban residents do not leave the city once they start a family. Families have learned to appreciate the advantages of urban life and they benefit from the gains in quality of life at many different levels as a result of re-urbanization. The spectrum ranges from falling emissions, to measures to reduce traffic, to the expansion in public transport options and cultural and leisure offerings. In addition to the popularity of the urban lifestyle, another key driver is probably the gradual erosion of the traditional family model. Shorter commutes, a greater variety of work, and abundant childcare options are all appreciated by families whose lifestyles depart from the traditional model. However, the sluggish construction of apartments in the major cities makes urban life more difficult for families.

**Excursus:
The future world of
work
Page 31**

Office demand in flux

There are greater forces at work in the market for office space than might be assumed based on the relatively intact market data. The world of work is in transition. Digitalization and automation are transforming work activities. Atypical working relationships are becoming more widespread, among them part-time work, temporary assignments, freelance careers, job sharing, working on-call, or practicums. Models for flexible working hours are likewise becoming more prevalent, as they meet a great need of the workforce. The obstacles to working from anywhere have been overcome thanks to laptop computers, powerful broadband connections, and cloud solutions. Nonetheless, more than 80% of workers are still active at a fixed location, which can be explained by the phenomenon of implicit knowledge at locations with a high worker density. Workers are spending less time at this fixed workplace, however, because telecommuting and mobile working are becoming more widespread. Companies thus have incentives to shift from a territorially organized workplace model to an activity-based one, in which the task at hand determines the appropriate workplace. Consequently, providers of office space must prepare for new standards in terms of the flexibility and layout they offer. Open, flexible, smart office layouts are in demand. Fixed spatial structures are being rearranged, which is only possible with highly mobile office furnishings and the corresponding architectural prerequisites. Communication is becoming a key factor and calls for unconventional office spaces. Moreover, greater flexibility is also desired in leasing conditions.

**Office property
Page 35**

A recovery for the office market

The market environment for office property is positive. An economic revival has stimulated job creation and demand for office space, which had long been stagnant. The robust estimated 600,000 m² increase in demand for 2018 should be followed by further, albeit somewhat more moderate, growth in 2019. However, the recovery has reached different stages in the individual major office markets, due to differing sector compositions. The office market in Lausanne, for example, appears to be in much better condition than the Geneva market just a few kilometers away. One thing all markets have in common, though, is that the recovery originates in the central business district and spreads from the inside outward. In the central districts of the major centers, the office space available for lease has already declined by nearly one fifth. Meanwhile, in Geneva and Zurich, the recovery has now spread to the middle business district. Central city locations and easily accessible areas in the middle business districts are particularly attractive to firms that aim to position themselves as interesting employers for specialist staff. Nonetheless, most supply rates have increased further, because in the outer business districts – except for Lausanne's – there has been little sign of a recovery yet. For a widespread recovery, which extends to the outer edges of the office markets, the future trend in demand will be decisive – and this in turn relies upon the duration and type of job creation.

**Excursus:
Spatial development
Page 40**

Structure plans offer guidance

Swiss voters rejected the Urban Sprawl Initiative, which aimed to freeze the area of building zones in Switzerland at the current amount. The vote thus indirectly lends support to the development policy outlined in the revisions to the Spatial Planning Act (SPA). The cantons have until May 2019 to adjust their structure plans in line with the new requirements of the revised SPA. These must include specifications of the size and distribution of settlement areas, of inward development, and of measures to prevent disproportionately large building zones. Based on the 15 cantonal structure plans so far approved by the federal government, we analyze how the cantons plan to

manage their spatial and settlement development in the future. The individual structure plans take various approaches, and it will be interesting to see which instruments are employed by the municipalities in order to reach the goals fixed in the structure plans.

Excursus:
The building permit process
Page 43

Complex and time-consuming

According to a regular international survey by the World Bank, the building permit process in Switzerland is anything but optimal. Switzerland fell in the global rankings from 32nd place in 2009 to 69th place in 2019. Despite the increasing complexity of the building permit process in Switzerland, the procedure today is no more lengthy than it was ten years ago. Nonetheless, other countries seem to have exploited greater potential for improvements. The length of the approval process depends heavily on the use and size of the project, and on the size of the municipality. It seems, however, that there are further differences between the cantons, so that several cantonal authorities need much longer than others to conclude a permit process.

Retail property
Page 46

Bleeding out

Online trade is chipping away at stationary retail business. Despite a flourishing economy, revenues fell flat. This is likely to remain the case in the years to come, because further growth in online sales is inevitable. Providers of retail space must thus adjust to ongoing structural change and weak demand. However, not only property owners are affected. Online trade threatens to sharply reduce shopping frequency in the city centers. The quality of experience can only be maintained with a targeted strategy and proactive measures. In order to prevent a vicious circle outside the top locations, radical solutions are called for – such as bundling viable offerings in selected locations. To do this, both property owners and city authorities must be prepared to take the plunge.

Excursus:
Sustainable real estate
Page 52

Sustainability increasingly important

Investor demand for sustainable investments is growing at an impressive rate. Property owners are confronted with the challenge of compiling sustainability data and creating reasonable benchmarks. Another driver of sustainable real estate is the increase in regulatory requirements, reflected in building regulations and energy laws that are continually being tightened in order to achieve national and international climate goals. While building labels are certainly useful, they are of little value in a comprehensive sustainability assessment because they are not directly comparable. The Global Real Estate Sustainability Benchmark (GRESB) has emerged as the leading standard in the real estate market to systematically evaluate sustainability performance and provide market comparisons. The GRESB comprises more than 900 of the leading real estate companies worldwide.

Real estate investments
Page 55

Real estate delivers returns

In 2018, a difficult year for the stock markets, indirect real estate investments suffered some value corrections, albeit to a less serious extent than other investments. As a result, the price-risk ratio for listed real estate funds looked quite attractive again, triggering a rally early in 2019. Given the lack of lucrative investment alternatives and the strong revenue streams from real estate, we expect investor demand to hold steady. In the process, focus on object quality is increasingly a theme. Investors are also more mindful of vacancies, as we show with an analysis of changes in ago. Most recently, we observed good momentum in real estate shares that are less exposed to the housing segment, and thus better positioned to profit from an economic upturn. However, the expected economic clouding could reverse the trend again in favor of real estate funds that are mainly active in the housing segment.

Buying cheaper than renting

Thanks to mortgage rates that are still at rock bottom, the financial burden of owning one’s own home remains lighter than that for renting an apartment of the same size.

Healthy economic conditions drive demand

The overall conditions for homeownership remain highly supportive, in general. One key component is economic growth, which is forecast to continue in 2019, albeit at a much more modest rate than in the preceding year of robust growth. Thanks to that surge, the labor market has revived markedly since the spring of 2018. The broad upturn in employment has a benign effect on household incomes, which is a strong demand driver in the housing market. On top of that, there is a psychological aspect: job security is a necessary precondition for major financial decisions such as buying a home. Consequently, the falling unemployment rate probably increases surplus demand for owner-occupied housing.

Mortgage rates still at very low levels

An important part of the overall environment is the ongoing phase of low mortgage rates. The Swiss National Bank (SNB) is keeping its monetary policy focus on the exchange rate of the Swiss franc. There is unlikely to be any substantial change here in 2019, so mortgage rates should remain very low. We do not expect any change in Libor mortgage rate levels. In contrast, after a volatile sideways movement in 2018, Fix mortgages are likely to embark on a gradually rising path. Given the political uncertainties, this ascent will likely be punctuated by both upward and downward volatility.

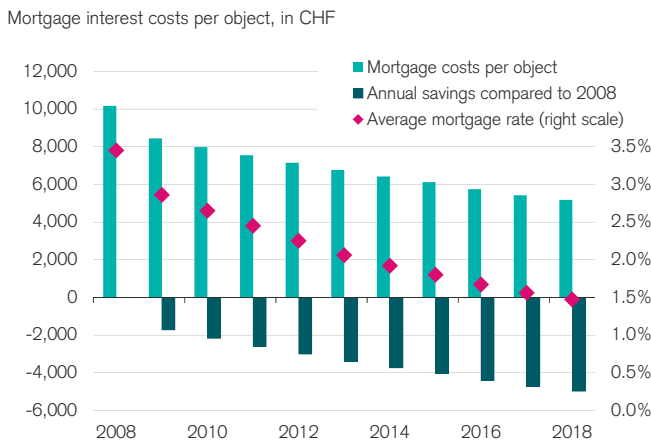
Interest burden for homeowners fell further

Since homeowners have in most cases been able to renew their mortgages at the same or lower interest, the average mortgage rate has fallen further over the last 12 months from 1.56% to 1.47% (Fig. 1). This decline has reduced the average mortgage rate burden by CHF 245 to CHF 5,181. Consequently, homeowners had an additional CHF 514 million available for other spending. Compared to 2008, each homeowner can now save CHF 4,985 p.a. on mortgage costs.

Mortgage costs are less than half rent costs

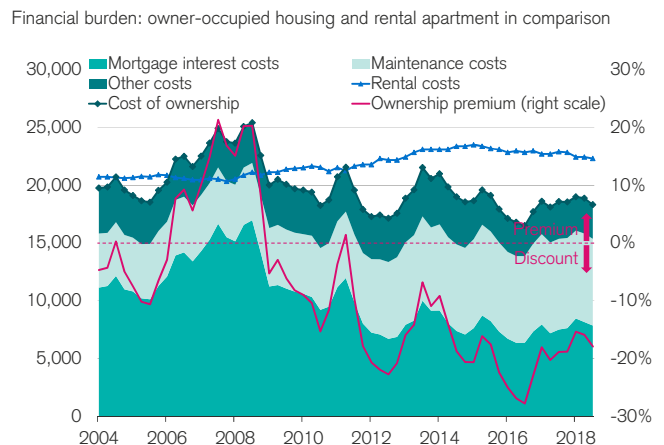
Owner-occupied housing remains quite attractive in a direct comparison with rental apartments. For the comparison, we reference the advertised purchase price, or monthly rent, of an existing 4.5 room condominium or apartment. We assume financing of 80% using a Fix mortgage with a 5-year term. For the condominium, the interest cost amounts to CHF 7,862 p.a. (Fig. 2). An apartment of similar size costs CHF 22,308 p.a. So the interest costs of the purchased condominium are equivalent to just 35.2% of the apartment rental. If the percentage to be borrowed is lower, the difference is even greater.

Fig. 1: Massive savings for homeowners thanks to low mortgage costs



Source: Credit Suisse, Federal Housing Office, Swiss National Bank

Fig. 2: Homeownership still cheaper than renting



Source: Credit Suisse, Meta-Sys AG

Last data point: Q3/2018

Don't overlook maintenance costs

A simple comparison between the cost of a mortgage and apartment rent does not adequately portray the total price of owner-occupied housing. There are other factors to consider. For example, maintenance costs are estimated at 1% of the object's value. This lifts the condominium costs in the above example to CHF 15,362, which is still 31.1% lower than the cost of renting the apartment.

Imputed rental value system is another cost point

Fiscal aspects, such as the imputed rental value and the deduction of debt interest, also impact the cost of homeownership. Due to the low interest burden, these fiscal aspects have for some years had a net positive effect for homeowners. Political negotiations are now under way regarding sweeping changes to the system, which in the current environment would provide further benefits for most homeowners. The odds are good that voters will approve the change, but it is unlikely to take effect before 2023.

"Buying" also comes out on top in a full cost accounting

A full cost accounting must consider further aspects: opportunity costs in the form of investment alternatives for the cash, risks such as financial cluster risk or the short-term illiquidity of the object, and profit opportunities thanks to the long-term appreciation of the property. Considering all these factors, the total cost of homeownership in the above example would rise to CHF 18,312¹. But even then, the purchase of a home is still 17.9% cheaper, on average, than renting in Switzerland. This discount corresponds to a negative ownership premium, because homeowners are typically prepared to pay more for their own four walls, as we could observe between 2006 and 2008 (Fig. 2).

Homeownership is cheaper in most regions

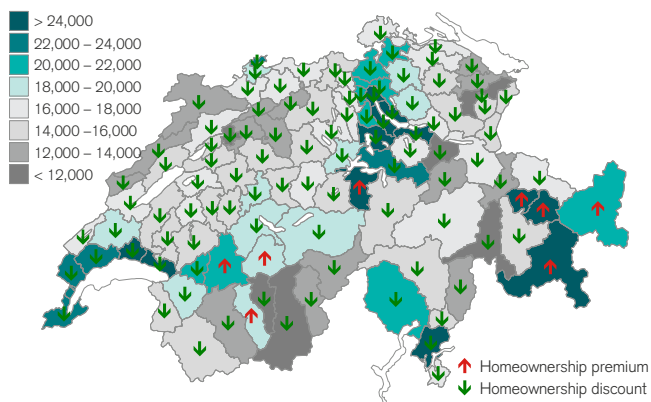
The costs of homeownership vary widely from one region to another, which is attributable to the great differences in land and property prices. For example, homeownership costs amount to CHF 25,450 p.a. in the region around Zug, but only CHF 17,500 in the neighboring Freiamt region (Fig. 3). However, rental apartments are also considerably more expensive around Zug than they are in Freiamt, so homeownership costs in both regions are still 20% lower than rent costs. At present, owning is more expensive than renting predominantly in tourist regions, where second-home owners have the capacity to pay higher prices. Detailed information on the situation in the individual Swiss regions can be found on the web page of the real estate study.²

If interest rates spike, the discount will switch to a premium

The relationship between owning and renting is heavily affected by the level of mortgage rates. As mentioned above, mortgage rates are unlikely to change much in the current year. However, if mortgage rates begin to rise significantly in future, homeownership will again become more expensive than renting. An increase from the present 1.3% to 2.0% would lift homeownership costs in the example above to CHF 21,578, making a purchase just 3.3% cheaper than a rental (Fig. 4). A rise to 3.0% at the current price and rent level would convert the ownership discount to an ownership premium of 18%.

Fig. 3: Major regional differences in homeownership costs

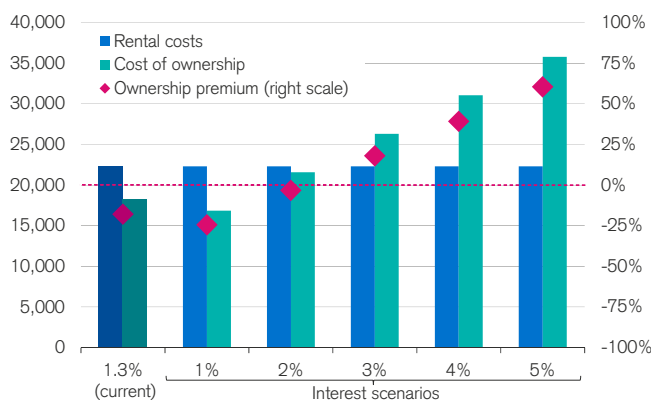
Estimated financial burden for a 4.5 room home (including maintenance and other costs, p.a.), 2018



Source: Credit Suisse, Meta-Sys AG, Geostat

Fig. 4: Mortgage rates are a decisive factor

Estimated ownership costs by interest rate at prices and rents of 2018



Source: Credit Suisse, Meta-Sys AG

¹ Amortization payments are not considered in this example. They are not costs; they simply represent a transfer from cash to the assets tied up in the home.

² See: www.credit-suisse.com/realestatedstudy

Homeowners accept longer commutes

High prices in central locations force many homeowners to locate in more reasonably priced regions at a distance. The result is longer commutes.

Demand continues to be restrained

Mortgage volumes for private households increased a mere 2.7% in nominal terms year-on-year, which is just half the long-term average since 1985. Despite the excellent general conditions, demand for owner-occupied housing is restrained by the high price level and strict regulations. This is unlikely to change soon. On the contrary, regulatory authorities are currently exerting considerable pressure on lending institutions. They would prefer more restrictive mortgage conditions, and have already intensified the micro-prudential regulations at the level of individual institutions.

Young adults are doubly disadvantaged

Today’s financing regulations are problematic for young households, families, and senior citizens. Young households are actually at a double disadvantage: they have hardly had enough time to accumulate assets, and they typically earn lower incomes since they are still at the beginning of their careers. For families with children, the situation is often exacerbated by a reduction in income if the parents reduce their workload. The average annual gross household income for 35- to 44-year-olds is CHF 137,508, while for 45- to 54-year-olds the figure is CHF 149,450 (Fig. 5). So assuming borrowing of 80%, the price of a property for a 35- to 44-year-old should not exceed CHF 780,000.

Asset accumulation helps older borrowers

With increasing age, most homeowners have accumulated more assets, which reduces the affordability problem. The minimum down payment on a property priced at CHF 800,000 would be CHF 160,000 (Fig. 6). To fulfill the imputed affordability criterion, the borrower’s income would have to be at least CHF 141,440. If the down payment can be increased to CHF 200,000, the required income falls to CHF 127,440. Our estimates indicate that one fourth to one third of all first-time home buyers rely upon anticipated inheritance or loans from family members to come up with the required cash.

Retirees tripped up by affordability rules

Unexpected problems can arise for older borrowers. After retirement, income drops significantly. Gross household income for 65- to 74-year-olds averages just CHF 83,862. With a collateral loan limit of 66% for retirees, the maximum price of a property would be CHF 645,000. Retirees already make up the largest segment of demand for owner-occupied housing, and with demographic aging advancing, new regulatory solutions will have to be found sooner or later. However, there is very little room to maneuver in the current environment, due to regulatory pressure.

Fig. 5: Young and old must seek cheaper housing

Average gross income 2012–2014 in CHF; *max. collateral loan limit 66% from age 65

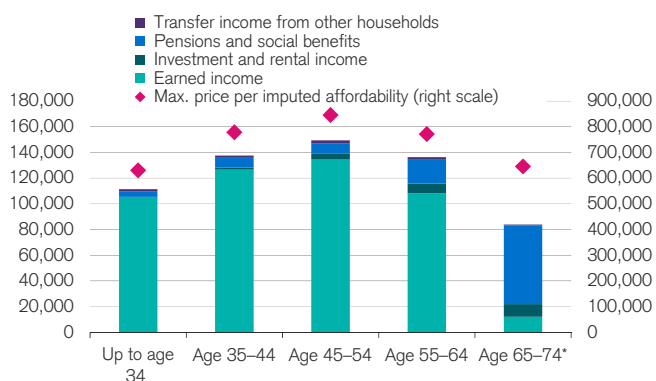
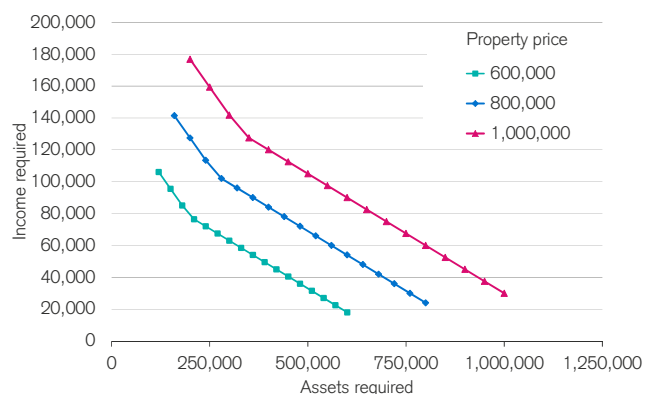


Fig. 6: Interplay of income and assets

Required income/assets in CHF when purchasing owner-occupied housing



Source: Swiss Federal Statistical Office, Credit Suisse

Source: Credit Suisse

In many areas, new construction only affordable for a minority

The extent to which a household is affected by affordability guidelines depends heavily upon the location. Our estimates indicate that the imputed affordability for a new 4.5 room condominium is no longer given for a household with an average income in 63 of the 106 Swiss regions. Especially in the centers and surrounding regions, income must be above average in order to afford owner-occupied housing at all.

Fanning out to more reasonably priced regions

To purchase owner-occupied housing, households must increasingly be prepared to make concessions. They may shift their focus to a less expensive region, especially since prices decline with increasing distance from the major center. Basel provides an example: the median price for all condominiums advertised in 2018 that were less than five minutes away from Basel's main train station was CHF 8,368 per square meter (only objects on Swiss soil). A travel time of just 15 minutes already lowers the price level to CHF 7,137 (-14.7%). Accepting a 30-minute commute brings the median price down to CHF 4,777 (-42.9%). At the same time, many mid-sized centers display a price gap to their surrounding regions. To visualize this situation, we analyzed prices for condominiums along the A1 highway from the national border west of Geneva to St. Margrethen in the east, in a radius of five kilometers along the highway (Fig. 7).

Homeowners accept longer commuting distances

The connection between distance from the center and real estate prices is evident in commuter behavior, which is more pronounced with homeownership, although renters also pay less with increasing distance. Each household can compare these savings to their personal preferences as well as the monetary and time costs of commuting. Homeowners, on the other hand, often have very little choice given the high financing hurdles. In order to realize the dream of homeownership, often the only solution is to accept a lengthy commute.

Longest commutes for single-family homeowners

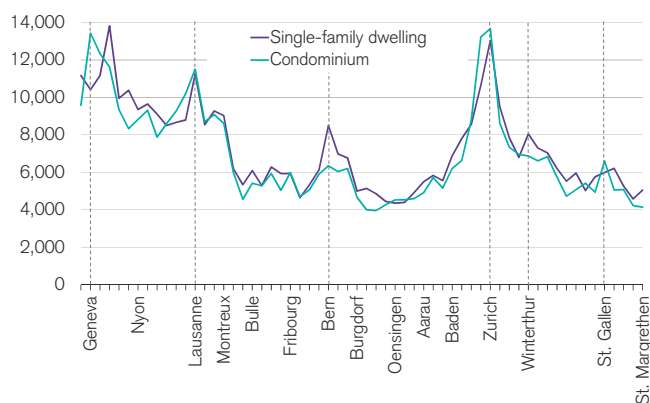
The longest commutes are accepted by owners of single-family dwellings. Of those who work in Zurich, only 32% can reach their place of employment in 30 minutes or less (Fig. 8). Meanwhile, 38% of commuters who live in a condominium reach their workplace in the same amount of time. However, 51% of all renters who work in Zurich reach their job within 30 minutes. The difference between the two owner-occupied housing segments can be attributed to the higher prices of single-family dwellings and a consequent need for greater distance from the city center. The only reason the gap is not even wider is because there are still many older single-family homes in proximity to the center, for historical reasons.

Hardly any difference outside the expensive central regions

The results presented here can also be observed in other centers. However, the situation is quite different for many employees outside the centers. Here, development land tends to be affordable and available in sufficient quantities. So purchasing a home near one's workplace is often less of a problem in such locations. This is evident in equally long commutes for homeowners and renters.

Fig. 7: Wide price gap between centers and surrounding areas

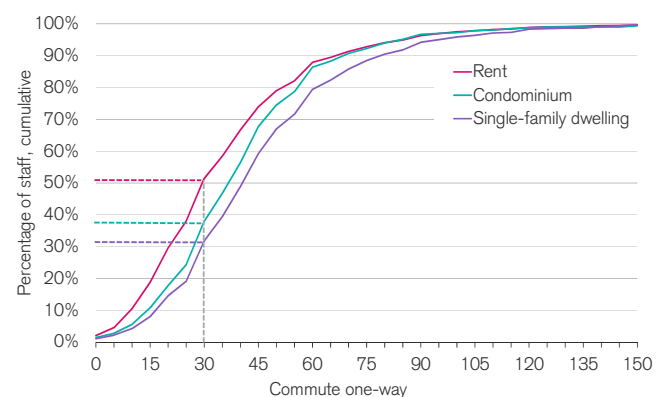
Price of advertised condominiums along the A1, 2018



Source: Meta-Sys AG, Credit Suisse

Fig. 8: Homeowners accept longer commuting distances

Commuting time for workers in Zurich in minutes, by housing segment, 2016



Source: Swiss Federal Statistical Office, Credit Suisse

Lower ownership rate

Production of owner-occupied housing continues to decline. Developers are still focused on construction of rental apartments. As a result, the ownership rate remains in a downward trend.

Output of owner-occupied housing in a descent

In contrast to construction of rental apartments, building in the owner-occupied segment is steadily decreasing. In 2018, 13,250 condominiums were produced, an estimated 5.2% decline from the 2017 figure. As a percentage of existing owner-occupied housing, this nonetheless represents an increase of 1.9%. On the other hand, the net increase in single-family dwellings of around 7,400 objects was roughly in line with the previous year, which represents a slight 0.5% increase relative to the existing inventory.

No trend reversal in sight

The state of building permits does not suggest that this trend will be turned in the current year. The number of single-family dwellings, in particular, approved for construction over the last 12 months fell another 11.4%. Meanwhile, the number of approved condominiums fell by 4.5%. Surprisingly, the low interest rates only triggered overproduction in the rental apartment market, not in single-family homes. Building permits for single-family dwellings are 41% below the average since 2002 (Fig. 9), while the figure for condominiums is 25%. This situation is unlikely to change soon, since planning applications over the last 12 months present a very similar picture: a decline of 9.3% for condominiums, and a decrease of 15.3% for single-family homes. This suggests that production of owner-occupied housing will continue to fall until 2020. The sharp drop in output of single-family homes is mainly due to the high prices for land adjacent to the centers, as a result of which, in many locations single-family houses are being gradually replaced by condominiums.

Pressure from construction of new apartments

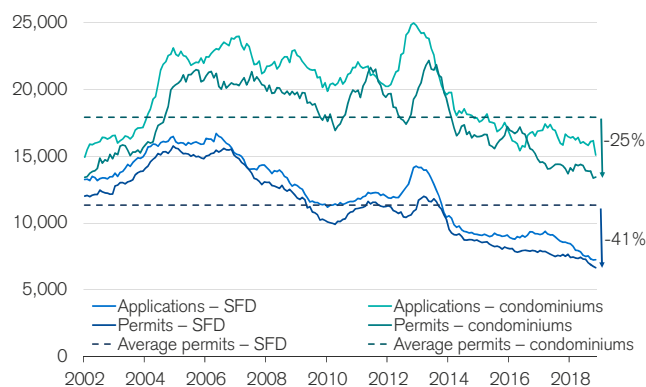
Construction of owner-occupied housing has been falling for years, predominantly due to higher hurdles in financing; now developers too are more cautious about building condominiums. Today, projects comprising more than 50 condominiums are a rarity. Their share of all approved condominiums fell to 13.2%, whereas in 2011 the figure was nearly twice as high at 25.9%. For developers, the planning and production of apartment complexes clearly involves less risk, given the great demand from institutional investors, and such projects are easier to conclude than the sometimes long and difficult marketing necessary for condominiums.

Switzerland's ownership rate has peaked

With demand restrained by regulations, and construction of owner-occupied housing neglected, the home ownership rate is likely to fall back in 2019 for the first time after years of expansion. There is no sign of a reversal in the trend of declining production of owner-occupied housing, so the ownership rate, which today is around 39%, is likely to fall further over the next one to two years.

Fig. 9: Output of owner-occupied housing in descent

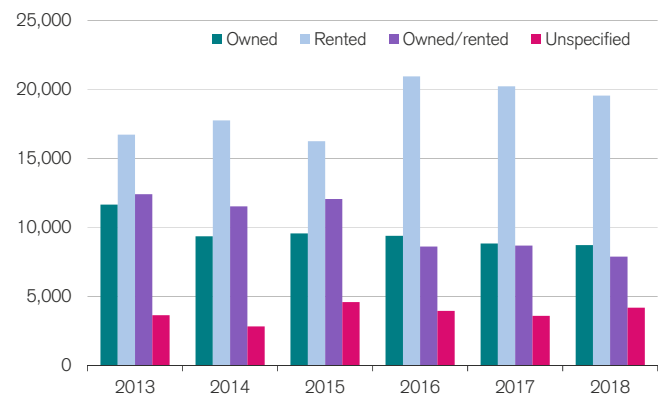
Planning applications and building permits in numbers of units, moving 12-month total



Source: Baublatt, Credit Suisse

Fig. 10: High number of projects with unspecified housing form

Building permits for multi-family dwellings in numbers of units, by housing format



Source: Baublatt, Credit Suisse

Many objects lack a specific indication of use

Rental apartments are still being built at a fast clip, which creates a latent uncertainty factor for the owner-occupied housing market, especially since investors may begin to consider converting rentals to condominiums in locations where high vacancies hinder the marketing of rental apartments. Moreover, for 10.4% of all housing units in multi-family dwellings (MFD) there is no clear indication of whether the units will be rental apartments or condominiums (Fig. 10). For another 19.6% of MFD units, both renting and owning are indicated as use types.

Increase is above average in just a few regions

An analysis of purely owner-occupied housing projects reveals that building activity has slowed to a trickle in the mountain regions – mainly a result of the new second-home legislation. Only in a bare quarter of all regions of Switzerland does the planned increase exceed the average for the last five years. Future construction activity focuses mainly on Cantons Vaud and Fribourg, as well as broad swathes of Central Switzerland, where, except for the centers of Zug and Lucerne, there is still a good deal of building activity in the owner-occupied housing segment (Fig. 11). New construction is restrained in many other centers around Switzerland.

Single-family homes lose their shine

The sharp decline in building permits for single-family dwellings means that their construction exceeds that of condominiums in just a few regions. This is still the case in Canton Jura, for example, where single-family homes make up 64% of approved owner-occupied housing projects, or in the Thal region of Canton Solothurn, where the figure is 65%. At the same time, condominiums are gaining ground in these regions too. Just 15 years ago, the percentage of single-family dwellings in Canton Jura was 82%.

Supply rates at low levels

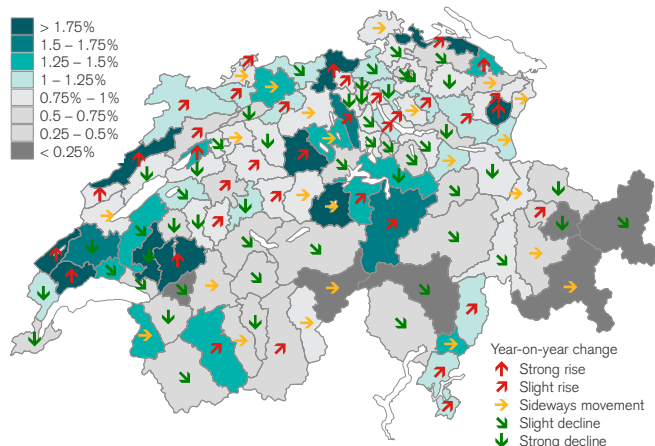
One expression of the low level of construction activity is the fact that, compared to the existing housing inventory, relatively few condominiums and single-family dwellings are coming onto the market. The supply rates are currently at the lower edge of the range for the last 12 years (Fig. 12). In the mountainous regions there are still many owner-occupied housing objects available for sale, while in contrast the supply rates are low specifically in the Mittelland. The decline in the supply rate for single-family homes recently stabilized at 1.5%. For condominiums, a slight countermovement was observed, which lifted the supply rate to 3.5%.

Time on market back below the long-term average

The supply rate has hardly reacted at all to the regulatory market interventions in 2014 (reduction in amortization period, lower of cost or market principle). However, the reaction in time on market was all the greater: by the end of 2016, the average marketing period had climbed above 150 days for both single-family dwellings and condominiums (Fig. 12). Thereafter a trend reversal was initiated that concluded in the third quarter of 2018 with a time on market back below the long-term average. Most recently, the time on market for condominiums appeared to be on the verge of a slight rise again. This is relevant in that, as a rule, the time on market moves inversely to the price trend, and can give early indications of future price developments. Consequently, we expect prices to rise more sharply for single-family homes than for condominiums in the coming quarters.

Fig. 11: High expansion in Central and West Switzerland

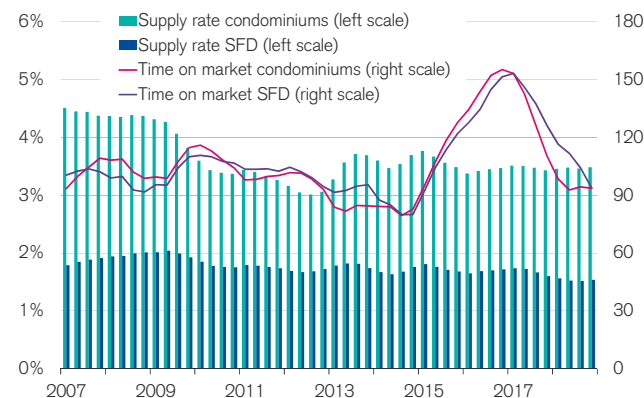
Planned expansion of owner-occupied housing, as % of housing inventory, 2018



Source: Baublatt, Credit Suisse, Geostat

Fig. 12: Normalization of time on market

Supply as % of inventory, time on market in days (right scale)



Source: Meta-Sys AG, Credit Suisse

Prices continue to rise

Despite somewhat higher vacancies, the absorption period for owner-occupied housing has decreased. Thanks to good overall conditions, prices are still in positive territory.

A surprising jump in vacancies in owner-occupied housing

A further rise in vacancies of owner-occupied housing was expected. However, the extent of the increase came as something of a surprise. More than 1,000 units for owner occupancy were added to the roster of vacant homes. The bulk of the increase stemmed from condominiums, where vacancies rose by 627 units compared to a year earlier (Fig. 13). As of June 1, 2018, 6,529 condominiums were vacant, which corresponds to a vacancy rate of 0.94%. So while vacancies of condominiums remained below the 1% threshold, they are still at their highest level since 2009.

Vacancy rates nonetheless moderate (condos) or low (SFD)

Vacancies have similarly increased in single-family dwellings, albeit starting from a lower level. As of June 1, 2018, 6,041 single-family homes were vacant, an increase of 378 units. Given the significantly higher inventory, however, the vacancy rate remained low at 0.43%. No region registered a vacancy rate above 1% except Pfannenstiel in Zurich (1.06%), and there the higher rate is probably due to the large number of very expensive homes. In the luxury segment, some regions still report oversupply, and marketing efforts typically last much longer.

Higher vacancies in the mountain regions

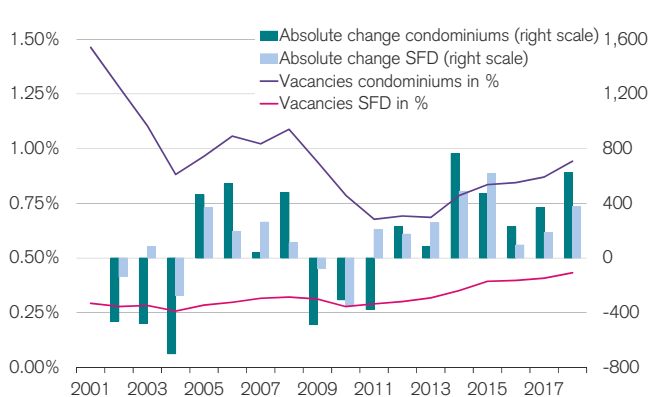
The increase in vacancies is attributable to, among other things, the lingering effects of the second-home initiative and the strong appreciation of the franc, which particularly unsettled foreign buyers. As a result, condominium vacancies are by far the highest in the mountainous tourist regions (Fig. 14). However, these effects are dwindling. The increase in vacant owner-occupied housing is particularly evident in the small- and mid-sized centers (incl. surrounding area), while a decrease was observed in rural areas. The relentless rise in prices means that even in the small- and mid-sized centers, the dream of homeownership eludes a majority of households.

No spillover of vacancies from the rental to owner-occupied segment

In view of the high oversupply of rental apartments, the question arises of whether the problem might spill over to the market for owner-occupied housing. However, a comparison of vacant rental apartments with the trend in vacant homes for owner occupancy reveals no such statistical correlation. Vacancy rates above the average for condominiums in the Olten/Gösgen/Gäu, Aarau or Freiamt regions – which all have very high vacancies of rental apartments too – may be coincidental and are not supported by trends in other regions.

Fig. 13: Gradually rising vacancies in owner-occupied housing

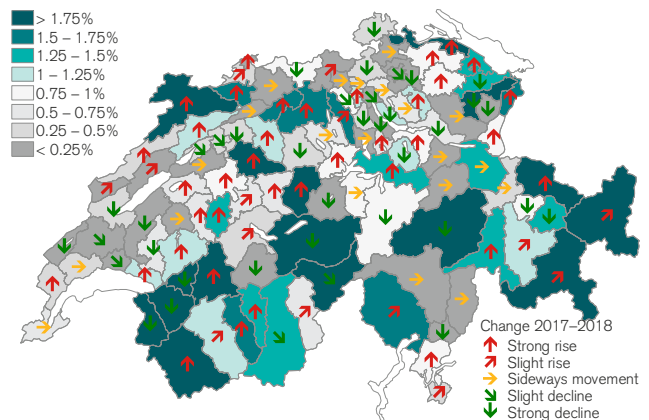
Vacancies in % (left scale) and absolute change in vacancies (right scale)



Source: Swiss Federal Statistical Office, Credit Suisse

Fig. 14: Moderate vacancy rates in the Mittelland

Regional vacancies of condominiums, as % of inventory, 2018



Source: Swiss Federal Statistical Office, Credit Suisse, Geostat

Supply and demand in near equilibrium

The latest rise in vacancies should not be overemphasized. Thanks to low mortgage rates, the desire for homeownership remains widespread and households are able to seek ways and means to accommodate the strict regulatory regime. This is evident in the shorter advertising periods described above.

Price growth in most regions

The supply does not appear to be too high at all; otherwise the prices for owner-occupied housing would not have risen markedly last year. Over the last 12 months, prices for mid-range condominiums rose by 1.7%, while prices for single-family dwellings rose by 3.4% (as of the fourth quarter of 2018). As we expected, price growth settled somewhat over the course of the year and is now largely homogeneous in the various price segments (Fig. 15). With the exception of the alpine areas and Canton Ticino, prices for owner-occupied housing rose in nearly all regions of Switzerland (Fig. 16).

Falling prices in Valais and Ticino

Prices tended to be falling in Cantons Valais and Ticino. In Valais, the reason was probably the sputtering market for second homes. The same phenomenon kept price growth weak in Canton Graubünden. The situation was quite different in Canton Ticino, though, where a sharp drop in immigration from Italy has been observed in recent years, which had an adverse effect on real estate prices.

Confirmed recovery in the high-price segment

The recovery in prices in the high-price segment was confirmed over the course of the year, but at 1.3% for condominiums and 3.0% for single-family homes, it was less pronounced than the pick-up in the segments for mid-range and simple homes. Still, the difference has narrowed, as is evident in the likewise lower advertising period in the luxury segment. For very expensive objects, with prices 50% or more above the median, marketing still lasts 25 days longer than objects in the mid-range.

Prices will continue to rise in 2019

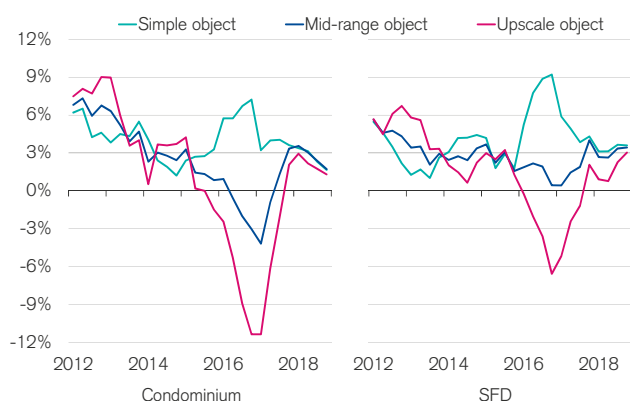
We expect the market environment to remain positive in 2019. The main driver will still be persistently very low mortgage rates. However, their impact will be considerably offset by the high price level and strict regulatory measures. Reining in construction activity is thus necessary in order to avoid greater imbalances in supply and demand. Consequently there should be only a small rise in vacancies, with ongoing moderate price growth. Given the dwindling economic stimulus, we expect price momentum to decline slightly, with an increase of no more than 2% on average, although the increase for single-family dwellings should be greater than that for condominiums.

Imbalances widen slightly

Rising prices magnify the issue of the imbalance between growth in real estate prices and incomes. The price corrections in 2016/17 narrowed the gap only temporarily, and as a result of the recent price increases, the imbalances have again widened somewhat. As long as mortgage rates remain so low, this trend should continue, so that regulatory pressure is also unlikely to ease.

Fig. 15: Prices rising in all price segments

Annual growth rates by price segment

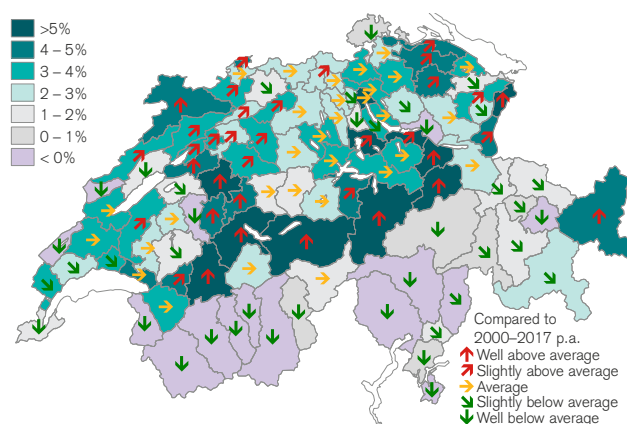


Source: Wüest Partner

Last data point: Q4/2018

Fig. 16: Prices up in a large majority of regions

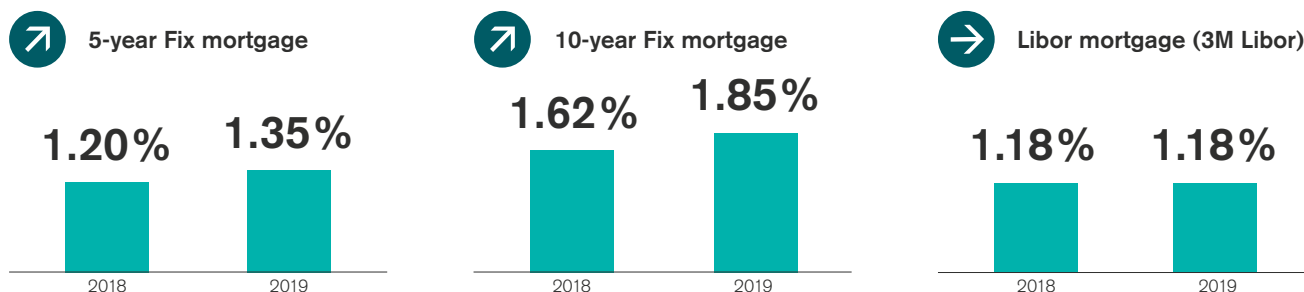
Annual growth rates for owner-occupied housing (mid-range), Q4 2018



Source: Wüest Partner, Credit Suisse, Geostat

Shortage supports price growth

Mortgage interest rates



Demand

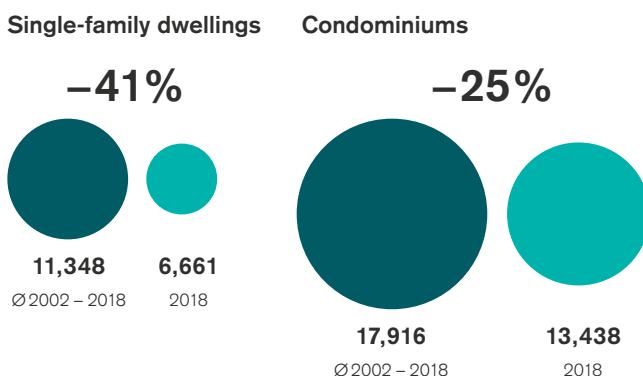


- Low mortgage rates and the economy continue to drive demand
- High price level and strict regulations weigh on demand

2019: Demand stimulus will be largely neutralized

Supply

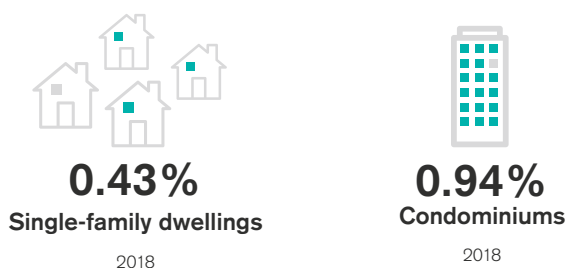
Building permits in numbers of housing units



Vacancies

- Despite recent increases, vacancies are still at a low (SFD) or moderate level (condominiums)
- Declining construction activity is necessary to avoid significant imbalances in supply and demand

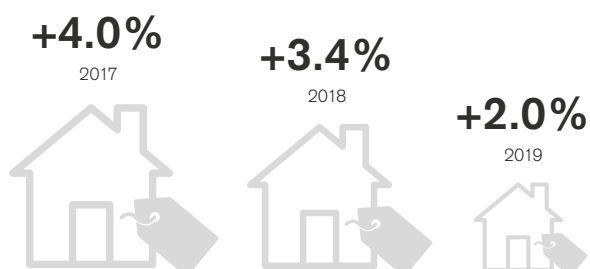
2019: Only minor rise in vacancies expected



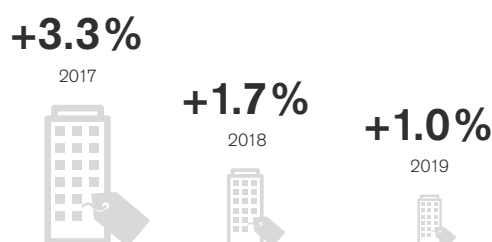
Price growth

Growth in transaction prices in %

Single-family dwellings



Condominiums



“It's the floor plan, stupid!”³

The oversupply on the market for rental apartments draws attention to quality of life issues. This includes the often neglected aspect of floor plans. New technologies allow users to evaluate floor plans in a quantitative, and thus objective, approach.

Oversupply calls for a refocus on quality of housing

The oversupply of rental apartments has shifted the balance of market forces. At present, tenants outside the major centers in Switzerland have greater leverage. Landlords are using every imaginable method to court them, providing additional incentives to sign a lease. Such a market environment forces landlords to reconsider the key to successful marketing: the quality of their product. If the quality and the value for money are right, then a deal should be guaranteed – at least, for a product that meets a basic need and for which there is great demand.

Floor plan quality often neglected

Surprisingly, the quality of a floor plan has never really been addressed in the real estate business, even though prospective tenants name it as the fourth most important factor in evaluating a home, after rent price, size, and brightness (Fig. 17). This may be because the Swiss housing market has been skewed in favor of landlords since the end of the 1990s. Further clouding the issue is the fact that floor plan quality is difficult to measure. People have very different ideas about what makes a layout good. Locational qualities are much more often a theme – perhaps because evaluating them is a less subjective process. However, this could change with the rise of digital technologies.

Technological breakthrough in floor plan measurement

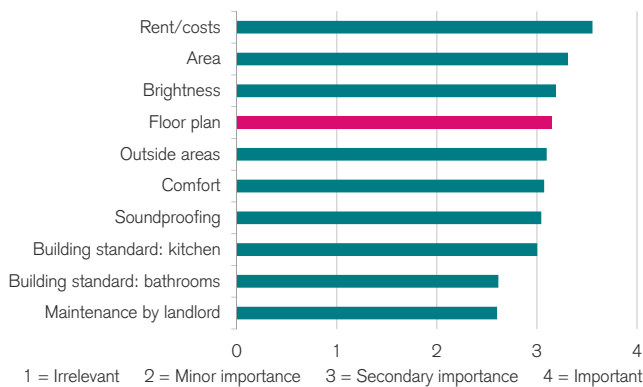
New technologies allow for a quantitative measurement of layout qualities, thus giving an objective yardstick to differentiate between good and bad floor plans. With the development of powerful computers and algorithms, floor plans can be analyzed in detail. Moreover, innumerable sensors are available that allow for an analysis of personal sensations in various types of spaces. These evidence-based studies can be used to issue more precise statements regarding the effects of spatial configurations on a person. One finding already acknowledged is that different individuals have differing expectations for their living space.

Floor plans are specific to target groups

This is why there is no one general floor plan for everyone. A home is an expression of a cultural way of life, a social structure, economic conditions, and construction technique. A person's lifestyle, gender, and age are all reflected in their priorities when considering home layout. Thus various factors are relevant depending on the lifestyle model.

Fig. 17: Top ten criteria for interior home design

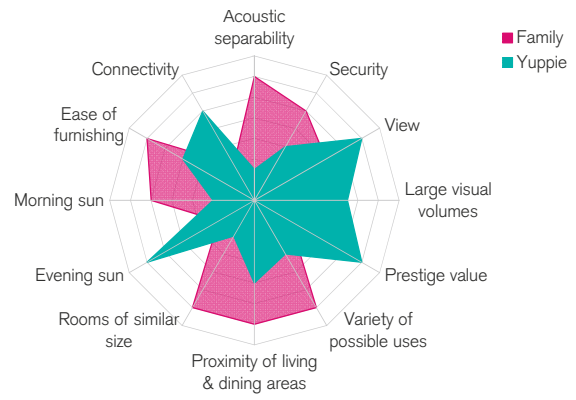
Survey of apartment-seekers in 2018, by decisive factors (n=513)



Source: NZZ Real Estate Barometer

Fig. 18: Family home versus yuppie apartment

Various weightings of interior factors (expert opinions)



Source: Archilyse, Credit Suisse

³ "It's the economy, stupid!" was a key slogan from Bill Clinton's US presidential campaign in 1992.

Priorities of families vs. yuppies

A good home for a family tends to have the following characteristics: high functionality, versatility of use and furnishing, a large kitchen, bright children's rooms and living rooms, morning sun, minimum 12 m² size for children's rooms, and a possibility to separate (also acoustically) sleeping from living areas (Fig. 18). An apartment for yuppies (young urban professionals), on the other hand, is more likely to be a prestige carrier. Other important factors include high connectivity (e.g. with open floor plans), fashionable kitchen, dining and living areas, versatility in furnishing, broad vistas within the apartment, a view, and evening sun.

Floor plan qualities

A well planned layout can significantly boost the quality of a residence. The most important characteristics include the apartment's orientation, atmosphere, lighting, flexibility of use, versatility in furnishing, and quality of outside areas. A good architect can design a good floor plan for every apartment in a development. For example, all apartments should receive evening sun, in other words, the rear units should not be overshadowed by the front units. Designing impressively coordinated floor plans with a deft balcony orientation and a clever bathroom layout, or creating an apartment with a high level of private space despite a minimal circulation area, is not only solid craftsmanship, but practically an art. The balance of length and breadth of each individual room, broad vistas, or the functional proximity of bedroom and bathroom are among the many desirable qualities of floor plans that we cannot enumerate exhaustively here.

Types of floor plans

Function of the floor plan

The arrangement, the location, and the size of the rooms in a building are all determined by the floor plan. In a nutshell, the floor plan gives functionality to the living space. A qualitatively good layout makes more of a certain number of square meters than a qualitatively poor one. So focusing on the size of an apartment is an insufficient parameter for its suitability. Floor plans must serve the needs of the inhabitants. However, functionality is not the sole criterion by which they are judged. There are many other requirements for home layout.

Fixed versus open

Nearly all floor plans can be assigned to one of two categories. In one of these – let's call it the “fixed floor plan” – the architect largely predetermines the use and function of the space. The arrangement of the rooms, their measurements, and how they relate to one another define how each room is to be used. The functions are clearly preconfigured and allow for a coherent use that precludes surprises. The second type can be called an “open floor plan”, and generally gives no indication of what should happen where, or how a room is to be used. Its usefulness is ultimately revealed in the use itself. Typically, the rooms are all of nearly equally size, giving rise to an ambiguity where rooms can be used in exciting or even surprising constellations.

Connecting versus separating

Functionality and ambiguity are two opposing readings of floor plans. This also applies to whether a layout is intended to separate the rooms, and thus the uses, or connect them. Different types of floor plans may be selected depending on this intention. For example, there is a type that joins all the rooms at a central space. This is often a hall or lobby or even the living room, which makes for highly efficient circulation. Other apartment types arrange the individual rooms around a core, which can consist of the kitchen or the bathroom or both, creating a circular effect.

Measurable architecture

In the following sections we examine several aspects of layout quality with the aid of ETH spin-off Archilyse. Archilyse is a proptech start-up that measures data-based architectural characteristics of properties and makes this data available to project developers, architects, and real estate companies. The Archilyse platform provides simulations and analyses of an apartment's view, the potential use of its space, how well connected it is by public and private transport, as well as static, thermal, and acoustic traits.

Measurable qualities of floor plans: connectivity and circulation

Variety of connections

The variety of connections among the rooms of an apartment is expressed as connectivity. This measure is closely related to circulation, which describes whether the individual rooms of an apartment can be accessed in a circuit. The extent to which rooms in a floor plan are joined together is one measure of the quality of home infrastructure. If the highly frequented rooms of an apartment such as the kitchen and living or dining area are directly linked, and thus mutually accessible (as in floor plan G, Fig. 19), the complexity of the route between the units is reduced.

Proximity of bedroom and bathroom

The bedroom and bathroom are directly joined by a door in floor plan G, but they are also usable independently. This indicates a good home infrastructure on the one hand, and greater comfort thanks to shorter access routes on the other. In floor plan H (Fig. 20), connections between these spaces are only possible via a hallway that connects all the rooms, but otherwise is of little use. The bathroom can only be reached by crossing the central hall. This increases the access route

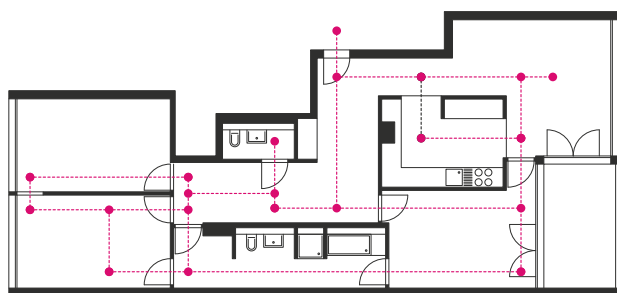
and reduces private space. Floor plan G nonetheless manages to separate the private from the public space, and thanks to its open plan it creates broader vistas (long lines of sight) and more interesting visual effects.

Simulate movement patterns

When planning emergency exits or fire protection regulations, routing algorithms are used to simulate movement patterns, and these in turn aid in finding the optimal space solutions. These algorithms are capable of reviewing simulated movement patterns for their length and angles. To this end, a grid is laid upon the geometry of the room and interpolation is used to identify the geometry of the shortest and/or most logical walkway. Archilyse uses similar algorithms to extrapolate the connectivity and circulation of a particular floor plan.

Fig. 19: Floor plan G: high connectivity

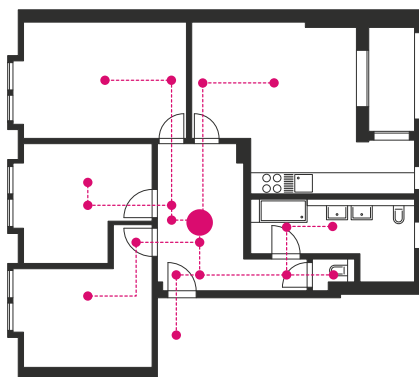
4.5-room apartment with 102 m²; dashed = possible routes



Source: Archilyse

Fig. 20: Floor plan H: limited connectivity

4-room apartment with 106 m²; dashed = possible routes



Source: Archilyse

Measurable qualities of floor plans: brightness

Brightness: one of the most important qualities

The floor plan details the distribution, arrangement, and orientation of the individual rooms of an apartment, and thus also largely determines the factors of sunlight and brightness, which potential tenants name as the third most important quality of a home after price and size (Fig. 17). Many studies confirm that the quality of light affects individuals' physical and psychological well-being. Windows allow light into a home. The fewer they are, and the narrower and lower they are, the darker it stays inside.

Light standards are even included in building code

Swiss building code contains certain specifications regarding distance between buildings and window size in order to allow sufficient daylight into apartments. For example, the window area of an apartment must be equal to or greater than one tenth of the floor area. The building code of Canton Bern even stipulates that in apartments for families, rooms with predominantly diurnal use (such as living rooms and children's play rooms) may not have a northern exposure.⁴

Neighboring buildings and distance between buildings must also be considered

Orientation alone is not the sole determining factor of a bright apartment. The distance between buildings, the arrangement of balconies, shade trees, etc. also play a role. To measure brightness, the address of an apartment is used to carry out a daylight simulation. The floor of the apartment, a floor plan, and information regarding neighboring buildings and trees enable a precise evaluation of the brightness of an apartment and/or a particular room.

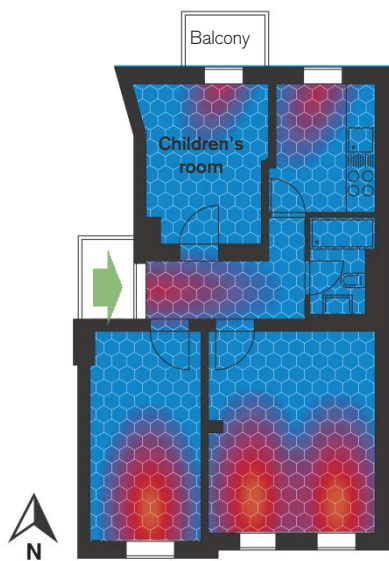
Balconies can also darken rooms

A brightness analysis for a 3-room apartment on the third floor (floor plan A, Fig. 21) indicates that the children's room with northern exposure has too little natural light because of a lack of direct sunlight. The small balcony next to this room blocks some of the light. Moreover, the balcony on the floor above and the neighboring building close by also reduce the daylight and darken the room, which has only one small window. The results from Archilyse found a mere 800 lumens/m² of natural daylight at noon and only around 200 lumens/m² in the evening. This is well below the minimum recommended brightness for kindergartens or schoolrooms, which is set at 300 lumens/m² towards evening.

⁴ Building code of Canton Bern, version June 24, 2009, Art. 64

Fig. 21: Floor plan A: child's room with poor light

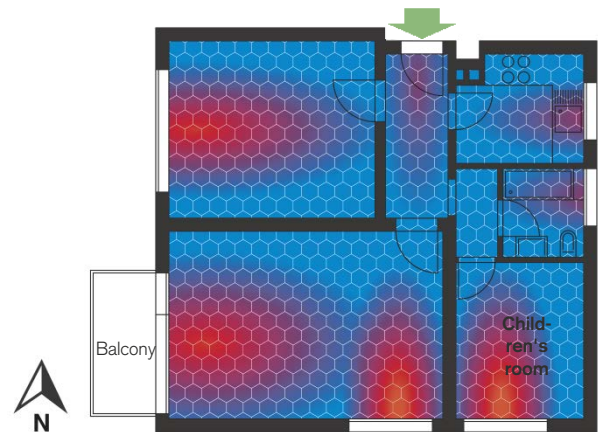
3-room apartment with 67 m²; red = direct sunlight



Source: Archilyse

Fig. 22: Floor plan B: child's room with optimal light, southern exposure

3-room apartment with 66 m²; red = direct sunlight



Source: Archilyse

Orientation and window size are key

Floor plan B shows a bright children's room with southern exposure, with a larger window and optimal light conditions (Fig. 22). The geo-referenced analysis of the floor plan indicates clearly that there is no hindrance to direct sunlight. As a result, this children's room enjoys around 4300 lumens/m² at noon and still some 700 lumens/m² in the evening. Thanks to its orientation, this room does not have blinding light in the morning nor direct sunlight in the evening. Archilyse simulates the brightness of the sunlight according to the season. The radiation intensity from every point in the sky can be calculated for a particular period (e.g. December). Subsequently, the radiation onto the building from each of these points is simulated to determine which rays enter the apartment and to what extent they are blocked by obstacles such as walls or buildings. Besides direct sunlight, indirect light from the sky is also considered. Thanks to geo-referencing, i.e. the embedding of the building into a corresponding 3D city model, even the shadowing from neighboring buildings can be included in the interior space analysis.

Flexibility is key for family apartments

Floor plans define the proportions of a room as well as the placement of doors, windows, and fixed installations. They are thus influential in determining the utility of an apartment. Furnishing options are often considered as a factor in a home's utility value. According to Criterion 18 of the Swiss Housing Assessment System (HAS), versatile furnishing options accommodate the personal needs of the residents and ensure a wide variety of use options for the home. Flexibility of use is particularly relevant with respect to the changing spatial needs of families (e.g. nursery to teenager's room).

Furnishing the dining area

The furnishing options of the dining area, for example, should allow for guests to be accommodated as well. For a 2-room apartment, the HAS recommends a dining area with at least two places for visitors and a room of at least 180 x 240 cm.

Limited furnishing options for elongated rooms

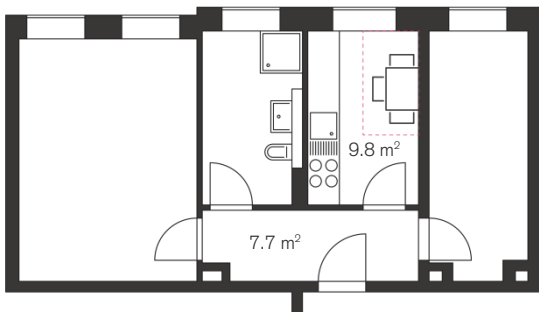
Floor plan C shows the kitchen of a 2-room apartment with 61 m², in which the maximum dining area (dining table and chairs) is 150 x 240 cm: too small according to the HAS recommendations (Fig. 23). The table for two can accommodate at most one extra person. This is due to the narrowness of the room, which limits the variety of furnishing options, and the size of the room – just 9.8 m². The foyer uses an unnecessarily large amount of space (7.7 m²), which is nothing more than circulation area. Floor plan D is of a similar size (62 m²) but its openness and the form of the room offer greater options for furnishing. There is room for a 210 x 270 cm dining table with four places for visitors (for a total of at least six people) in the eat-in kitchen (Fig. 24).

Specific evaluation of furnishing options

The technical process employed by Archilyse seeks all possible quadrilaterals in the given spatial geometry, with due consideration for door and window elements as well as additional spacing guidelines. Once the largest possible quadrilateral in a room or an area has been found, dining table sizes can be calculated. This process can be used for any area of a floor plan for which a certain measurement is required.

Fig. 23: Floor plan C: limited furnishing options in the kitchen

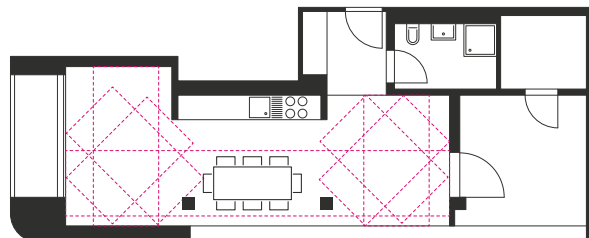
2.5-room apartment with 61 m²; dashed = maximum size of dining area



Source: Archilyse

Fig. 24: Floor plan D: flexible furnishing options in the kitchen

2.5-room apartment with 62 m²; dashed = maximum size of dining area



Source: Archilyse

Furnishing options for the bedroom

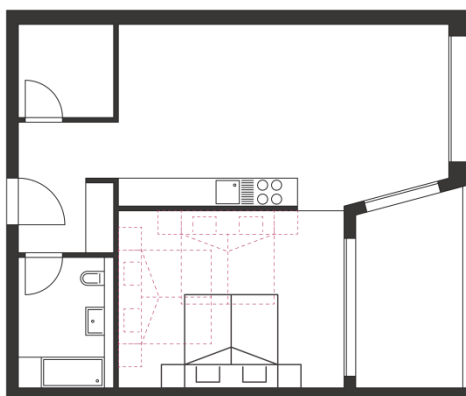
An apartment should have a versatile utility, and should be able to be furnished to meet various needs. Living spaces should thus be large enough and so proportioned that they allow for a variety of uses. The flexibility of use of an apartment can also be calculated, for example, based on the variety of furnishing options for the bedroom: how many ways can a double bed be positioned in the room? When answering this question, an additional 90 cm of space around the bed must be included to give access and freedom of movement. The issue is the number of possible positions for the bed given the specified measurements per room. At least one edge of the bed should touch a wall.

Number of bed positions

Floor plan E illustrates a bedroom that has three possible positions for the bed (Fig. 25). The more or less quadratic room allows for a greater flexibility than in the bedroom of the apartment in floor plan F (Fig. 26). Although it is larger, apartment F's polygonal, conic room form allows for only one possible position of the bed on the wall opposite the window. The more numerous the possibilities, the greater the options for furnishing and use of a room. The algorithms used by Archilyse can test a rectangle of any size (e.g. a double bed of 200 x 200 cm) for all possible furnishing variations in a room. Obviously this allows for doors and windows to be open (90 degrees) without touching the bed space. As a result, all possible bed positions can be identified.

Fig. 25: Floor plan E: flexible placements of bed

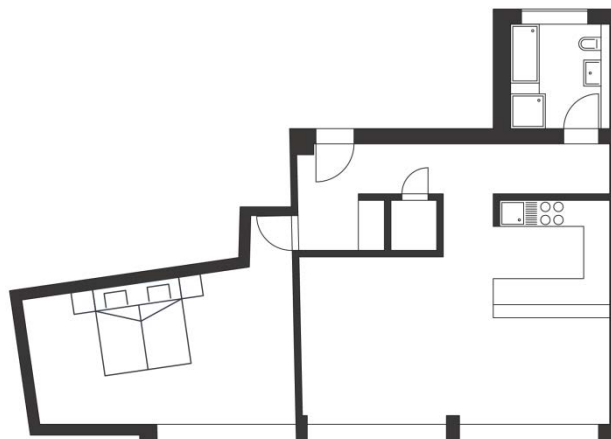
2-room apartment with 60 m²; dashed = space for double bed



Source: Archilyse

Fig. 26: Floor plan F: limited placements of bed

2-room apartment with 77 m²



Source: Archilyse

A room with a view

Home surroundings also important

The quality of an apartment is not only limited to its floor plan. Its inclusion in an attractive residential environment plays an increasingly important role. So the outside areas should also be considered in an evaluation. The connection between the apartment and the outside area is the view from the apartment. Many studies, including one by Rachel Kaplan⁵ confirm the relevance of a view to human well-being. These studies show that a view of trees or parks makes a great contribution to the satisfaction and quality of life for residents, while having further benign effects on other aspects of their well-being.

The view is relevant for value

The quality of an apartment's view is determined on the one hand by the floor plan (depth of the apartment, structure, window size, balcony, etc.), and on the other by the immediate vicinity of the apartment (bodies of water, parks, trees, streets, buildings). If an apartment has a good view of a lake, for example, it not only has a positive psychological effect on the residents, it also affects the sale or rent value, which can be up to 20% higher than a comparable apartment without a lake view. In contrast, nearby loud roads or train tracks can have a negative effect on the residents, and reduce the rent or sales value.

Simulations of potential views

In the past, there was no way to evaluate the view from an apartment but to visit the property. Now, new technologies can do this at the click of a mouse. Archilyse has developed a procedure to calculate and simulate the view from an apartment. Figure 27 shows a section of Zurich, for which a calculation of the view of trees from the buildings was made. The center of the image shows the Sihlfeld neighborhood, with parts of Albisrieden and District 4 also visible. Archilyse calculates and simulates the percentage of visual volume that falls on trees, for each floor of the buildings. A red to orange shading indicates a high visual volume of trees, yellow to green low volume, and blue very low volume. The map shows a particular concentration of trees around the Sihlfeld cemetery and along Schaufelbergerstrasse, while there is very little greenery visible along Militärstrasse in the Langstrasse neighborhood of District 4. The simulation also indicates whether trees would block the sunlight in summer and limit the brightness of lower floors of the building.

Simulations for every element of the facade

Figure 28 shows the tree simulation for the Hochhaus zur Palme, a 50-meter tall building designed by Haefeli Moser Steiger on Bleicherweg 33 in Zurich. Archilyse reproduces the view of trees from the 16-floor building, providing information for each element of the facade. The picture shows how extensively the view from the lower floors, and in particular from the Northwest side of the building, is shaped by a sequoia tree. Until two years ago, there were two trees, but one of these wonderful 120-year-old giants had to be taken down due to a fungal infestation.

Fig. 27: Room with a view – simulation for an individual building

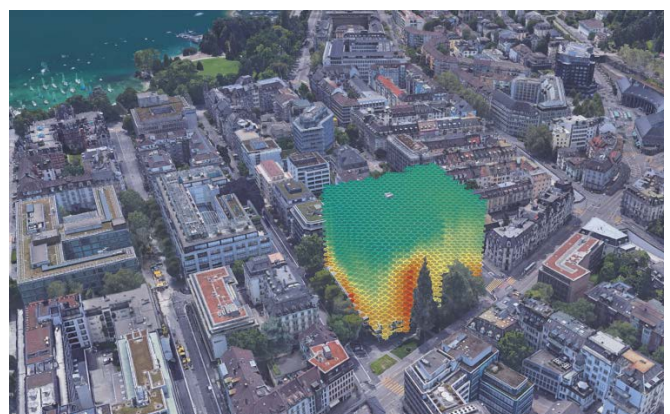
Sihlfeld neighborhood in Zurich



Source: Archilyse

Fig. 28: Room with a view – simulation for facade elements

Hochhaus zur Palme in Zurich



Source: Archilyse

⁵ Kaplan, Rachel (2001): The Nature of the View from Home. *Environment and Behavior*, Vol. 33 No. 4, 507 – 542.

View of landscape or lake? Simulation gives an idea

The so-called isovist simulation uses the available data on topology, topography, and location to geo-reference every building model. Archilyse uses datasets which contain, for example, all building heights, water features, individual trees, and parks in Zurich. When an address is entered for a view analysis, the software reconstructs the relevant building as a 3D model with the correct number of floors. For every horizontal point on a floor, the visible volume (360 degrees) of objects in the vicinity, such as trees or bodies of water, is calculated. The visual volume is divided into various areas to reveal, for example, that 25% of the view from a second-floor window in a particular building falls on trees. The view analysis can be used for other objects in the neighborhood, such as bodies of water, buildings, roads, railways, or parks. In this way, Archilyse can calculate whether an apartment has a view of a lake or of mountains. For a simulation of the actual view, all that is needed is the floor plan and the address. For example, the system could calculate not only the view of trees from the Hochhaus zur Palme, but also the view of a nearby lake.

Conclusion: neglecting the floor plan is passé

The technological instruments described above enable a quantitative measurement of floor plan quality. This in turn makes floor plan quality more easily comparable and more accessible for an objective assessment. In the future, layout qualities should thus assume more importance, especially since they are ultimately decisive as regards the risk of vacancy for a residence. Tenant needs would be better served by more discussion about the qualities of home structures, rather than urban development alone. Landlords, meanwhile, can benefit from more available information on how individual aspects of a floor plan, such as the quality of the view from a room, can contribute to the overall value of an object. Time will tell whether the real estate agent's mantra of the value drivers in the housing market – “Location, location, location!” – may have to be updated to include the quality of the floor plan.

“Rösti divide” in immigration

Immigration has stabilized thanks to the economic recovery, and is likely to pick up again in 2019. A “rösti divide”, a term used to refer to the cultural boundary between German-speaking and French-speaking parts of Switzerland, is clearly visible in the trends.

Decline in immigration halted

The solid economy supported demand for rental apartments in 2018 and terminated a phase of declining immigration to Switzerland that began in 2014. The falling trend was due to steady growth in numerous EU nations, which gave a boost to the labor markets there. In 2016 and 2017, the euro zone outpaced Switzerland in terms of employment growth (Fig. 29), while the unemployment rate there fell from 12.0% in 2013 to 8.2% in 2018. Including the Swiss citizens who entered and left the country, net immigration in 2018 roughly matched the previous year's level with an estimated 50,000 persons. Excluding Swiss citizens, who are more likely to emigrate in economically better times, the result is actually a mild increase of 2.5%.

2019: increase in immigration

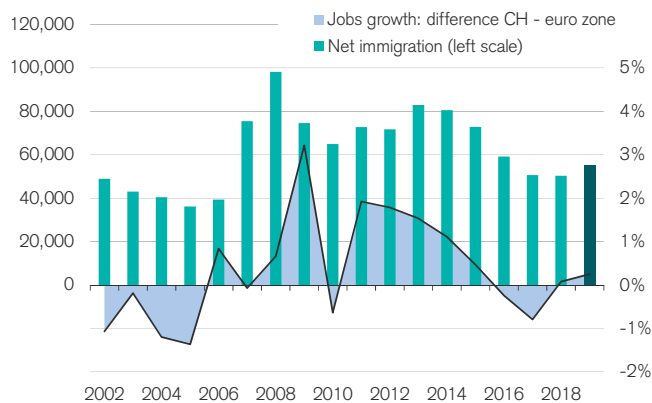
The Swiss economy should stay on course for growth in 2019, albeit at a considerably slower pace. We expect GDP growth to decrease from 2.7% in 2018 to 1.7% in the current year. At the same time, we expect net immigration to rise to a level of around 55,000 persons. Employment, which typically reacts to economic stimulus after a delay, is likely to increase at a somewhat greater rate in Switzerland than in the euro zone in 2019, and consequently attract additional workers from European nations (Fig. 29). Furthermore, certain political factors suggest that immigration will rise slightly: the Swiss Federal Council has raised the contingent for workers from non-EU countries by 1,000 for 2019. In addition, the safeguard clause relating to Bulgaria and Romania, which limited immigration from these countries to 1,000 B permits, expires at the end of May 2019.

Trend reversal in immigration from Germany and Italy

The trend in net immigration by Italian (+12% p.a.) and German citizens (+20% p.a.) had already begun to turn in 2018. Nonetheless, immigration from Germany in 2018 was still 41% below the average since 2010. There is no sign of a reversal in the trend of immigrants from Portugal, who make up the third largest national contingent in Switzerland after Italians and Germans. Net immigration from Portugal has collapsed in recent years. On balance, there was already net emigration in 2017, which continued and gained momentum in 2018. (Fig. 30).

Fig. 29: Economy stimulates a trend reversal in immigration

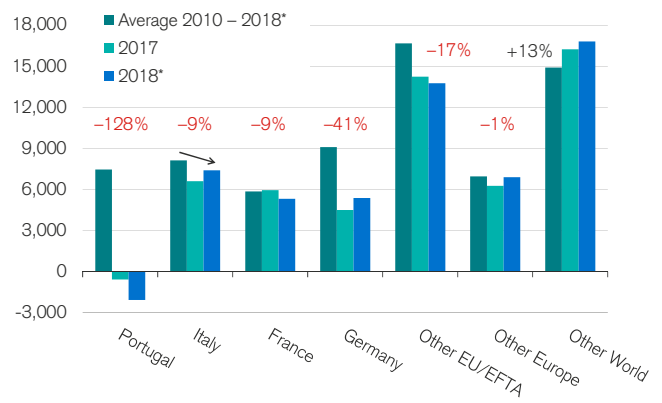
Net immigration of permanent resident population (excluding registry corrections, including net emigration of Swiss); 2018: extrapolation; 2019: forecast



Source: State Secretariat for Migration, OECD, Credit Suisse

Fig. 30: Portuguese turn their backs on Switzerland

Trend in net immigration by nationality (including registry corrections); * 2018: extrapolation



Source: State Secretariat for Migration, Credit Suisse

Portugal's economic mini-miracle...

The main reason for the reversal of the migration streams from Portugal was the positive economic development experienced by the highly indebted nation in recent years. Although the unemployment rate was a high 16.2% in 2013, the Organization for Economic Cooperation and Development (OECD) now estimates the rate at 6.9%, which is below the average for the euro zone as a whole (8.0%). One key driver of this development was a boom in the tourism sector. According to Eurostat, overnight stays in Portugal increased by 68% from 2012 to 2017 – far more than any other EU nation. Portugal's construction sector is also enjoying a strong tailwind.

...and structural problems in the Swiss hospitality and construction sectors

Two sectors account for the employment of a disproportionate share of Portuguese residents in Switzerland: according to estimates by the Swiss Federal Statistical Office (SFSO), 19.7% of Portuguese workers living in Switzerland were employed in the construction industry, and another 9.6% in hotels and catering. In recent years, however, the Swiss hotels and catering industry has been confronted with structural problems, and hotels were particularly hard hit by the franc shock. As for the construction industry, very few jobs were created from 2014 to 2017, due to, among other things, the moratorium on building second homes. The upturn in these businesses in Portugal likely motivated many Portuguese immigrants to take jobs in their homeland, or to start their own businesses there with the experience and savings they accumulated in Switzerland. However, the Portuguese economic miracle does not have a firm foundation. A rising debt burden due to higher interest rates, or a collapse in demand from tourists, are substantial risk factors and could trigger another wave of emigration to Switzerland.

A “rösti divide” that is actually a “port wine divide”

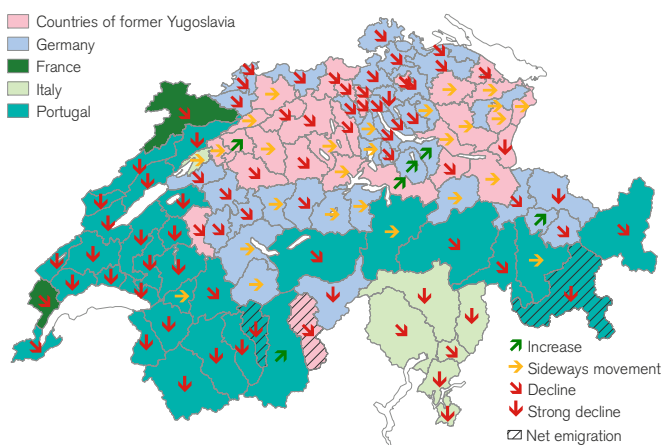
The return of the Portuguese alone probably triggered a decline of about 4,000 units in annual additional demand for rental apartments, relative to the average for the last ten years. The contraction in demand is particularly tangible in those regions of Switzerland where a majority of Portuguese citizens have settled (Fig. 31). In nearly all parts of Western Switzerland and several alpine regions, the Portuguese form the largest diaspora. In German-speaking Switzerland, on the other hand, immigrants from Germany and the countries of the former Yugoslavia are predominant. This was probably the main reason for the marked decline in immigration in French-speaking regions (-13.4% p.a., according to extrapolation) in 2018, while a trend reversal had already been initiated in the rest of Switzerland (+4.7%).

Conclusion: demand for rental apartments recovering from an interim low

On balance, we expect additional demand for rental apartments in Switzerland in 2019 to be at a similar level as in the previous year (Fig. 32). The mild recovery in immigration is contrasted by a normalization of the economy and an ongoing decline in asylum applications. The latter provided a certain support for demand for rental apartments in recent years, but only entered the migration data upon a positive asylum decision. As a result, the recovery in demand for rental apartments observed since 2018 is likely to persist. German-speaking Switzerland should be the primary beneficiary of this stabilization.

Fig. 31: Portugal's “economic miracle” drains demand

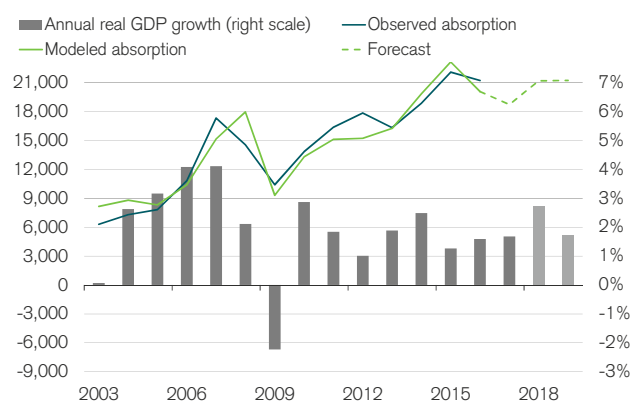
Shading: largest diaspora (2017), arrows: trend in net immigration (2018 vs. average 2013–2017 excluding registry corrections)



Source: Swiss Federal Statistical Office, State Secretariat for Migration, Credit Suisse, Geostat

Fig. 32: Virtually unchanged demand for rental apartments

Annual absorption of rental apartments and growth in real GDP



Source: State Secretariat for Economic Affairs, Swiss Federal Statistical Office, State Secretariat for Migration, Credit Suisse

Families discover the city

Urban centers were long considered less attractive for families. But now increasing numbers of young people are moving to the cities and staying – even after starting a family.

Cities long thought to be a less attractive place to live

The large Swiss cities are sought-after residential areas – but this was not always the case. In the 1970s a phase of urban flight set in, triggered by the global economic crisis and subsequent de-industrialization, but also by new societal demands for living space, and heightened mobility following the extension of the road and rail network. The exodus of many middle-class households meant a greater fiscal burden in the centers, which gradually became characterized by a population of the unemployed, poor and elderly. The city of Zurich, for example, lost more than 100,000 residents from 1960 to 2000. The populations of Basel and Bern, too, are still lower than they were in the 1960s (Fig. 33).

Re-urbanization shaped largely by immigration from abroad

Not until around the year 2000 did the trend revert to renewed growth in the major cities. This phase of re-urbanization has been shaped primarily by increasing immigration from abroad. Globalization of the employment markets has brought more and more foreign workers to settle in Swiss cities. This process has been encouraged by the agreement on the free movement of persons with the EU. Swiss citizens have still been leaving the cities in recent years, in net terms. The city of Zurich registered a tiny increase in Swiss citizens only in 2017 – for the first time since 1958!

On balance, families are still leaving the cities...

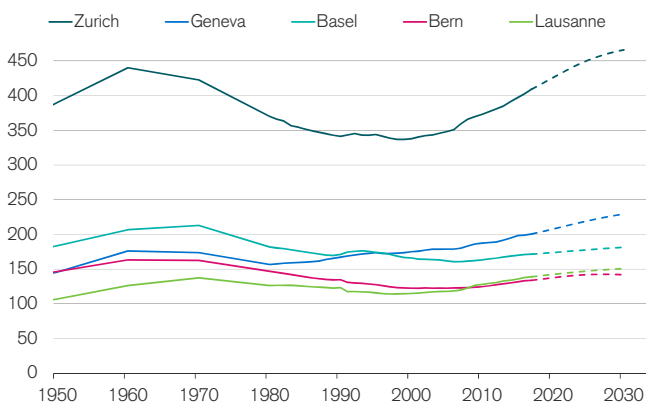
For many years, domestic migration to the centers typically followed a certain pattern: young students and trainees moved into the city. Some of them stayed when they crossed over into working life. But as soon as they began thinking about starting a family, they would leave the city. Their motivations include the pursuit of homeownership, a greater availability of larger and cheaper rental apartments, and an environment more adapted to raising children. Today, net migration by young families to the core cities is still decidedly negative.

...but their share of the population is much higher...

Nonetheless, the number of family households in the centers has risen disproportionately. In 1990, 16.0% of all households in the major centers were family households with children. By 2017, this figure had risen to 19.6% (Fig. 34). Meanwhile, the number had decreased in suburban communities over the same period, from 28.7% to 25.8%. This locational shift of family households was particularly evident in the three major cities of German-speaking Switzerland: Zurich, Bern, and Basel. However, the cities of Geneva and Lausanne report the largest share of family households among the major centers, with over 21% in both cases.

Fig. 33: Expected continuation of re-urbanization

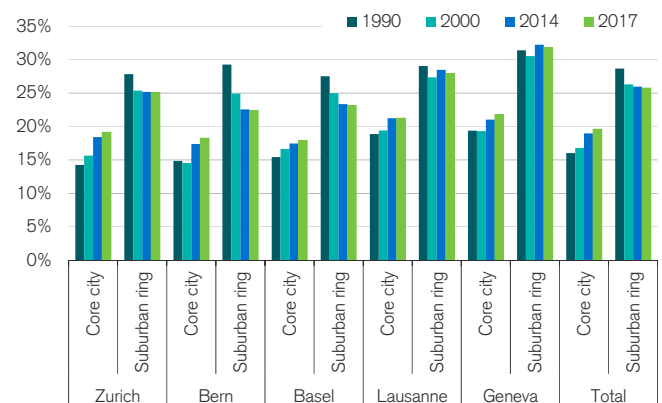
Population in thousands, 2018–2030: forecast



Source: Swiss Federal Statistical Office, Credit Suisse

Fig. 34: More families in core cities

Households with children aged 0 to 18 years as % of all households



Source: Swiss Federal Statistical Office, Credit Suisse

...because many families are staying

Contrary to what might have been expected, the increase in family households in the centers is not primarily due to immigration from abroad. Children aged nine or younger as a share of the foreign resident population in the five major centers did rise from 9.2% to 9.7% from 2010 to 2017, but the increase in this category was even greater among Swiss residents (from 8.8% to 9.8%). This suggests that an increasing number of Swiss young people are staying in the city after completing their education and training, and that they are not leaving once they have children. They have learned to appreciate the advantages of urban life and they benefit from the gains in quality of life at many different levels as a result of re-urbanization. The spectrum ranges from falling emissions and disamenities (air pollution, crime, traffic) to expanded public transport options and the cultural and leisure offering.

Egalitarian role perceptions promote re-urbanization

It is not only the improving quality of life that has caused a renaissance in the popularity of an urban family lifestyle. Another important driver is the gradual erosion of the traditional family model. Since 2010, the share of families that include a mother working at least 50% has increased from 39.6% to 46.1% across Switzerland (Fig. 35). Only 26.1% of mothers do not pursue some money-earning activity. Meanwhile, the share of men working part-time has climbed from 7.5% to 11.2%. These figures illustrate that the traditional role models are still well anchored in society, although they are easing. Those in a “non-traditional family” – whether by choice or necessity – will probably feel comfortable in the cities. Households with two working partners, or single-parent households, can find advantages in urban living: their commute is usually shorter, there is a greater variety of available work, and childcare options are more numerous – from daycare to full-day schools.

Sharp divide in rent prices in German-speaking Swiss suburbs

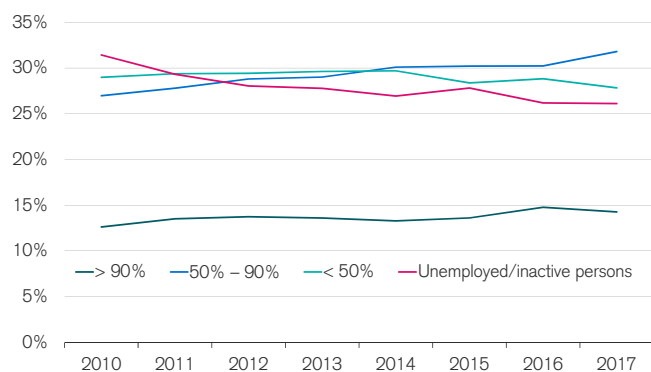
Of course there are also factors that make urban life less appealing for families. One of these is the lack of housing, which is reflected in high prices and rents. The vacancy rate for the five major centers combined is a low 0.46% (Swiss total: 1.62%), and the discrepancy between rent prices in the city and in the suburbs is substantial (Fig. 36). In the three large centers of German-speaking Switzerland, tenants can save more than 20% by moving from the center to a suburban town within a radius of ten kilometers from the city border. The differences are far less prominent in Geneva and Lausanne, where indeed more families live in the core cities (Fig. 34).

The return of the families is not automatic

If the densification of the core cities does not produce sufficient quantities of additional housing (see. following page), cities may again lose their appeal to middle-class families. The consequences: increasing urban sprawl, traffic, and segregation. But politicians are not the only ones who can address this situation. Real estate developers in the core cities must rediscover families as a target group. They can hardly go wrong by providing apartments with floor plans that suit families, that are near daycare centers, schools, and parks or playgrounds, and that offer moderate rent prices.

Fig. 35: Working mothers are working more

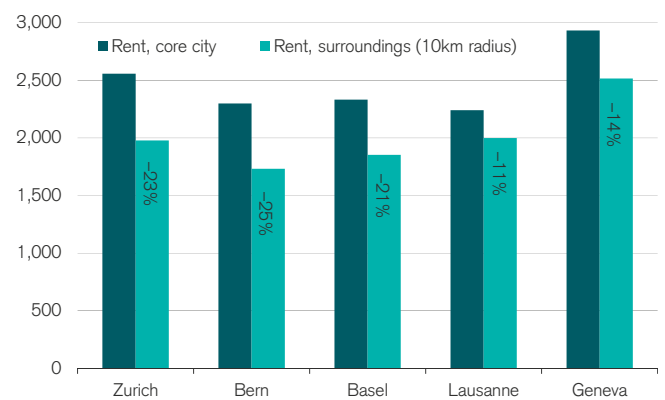
Women’s participation in the Swiss labor market: mothers with children aged 12 or less, share by working hours



Source: Swiss Federal Statistical Office, Credit Suisse

Fig. 36: Big difference in urban and suburban rent prices

Average monthly rent (net, in CHF) for a 4-room apartment (new, 110 m², medium standard, good micro location), Q2 2018



Source: Wüest Partner, Credit Suisse

Focus on the suburbs

In 2019, another batch of new rental apartments will be released onto a market that is already saturated in many regions. Construction is concentrated in the suburbs.

Building activity stays remarkably high

The number of approved rental apartments rose sharply in the years between 2010 and 2015, but has stabilized at a high level over the last three years. Building permits for a total of 27,000 rental apartments were issued in 2018 – 37% above the average for the years 2003 to 2018. Although this represents a year-on-year decline of 6.2%, it would be premature to see this as a trend reversal, since planning applications indicate that the number of planned housing units remained practically the same as in the previous year at just over 32,000 (Fig. 37).

Housing shortage in the centers is home-made

In a long-term comparison, there is a notable increase in construction permits across all types of buildings, with one exception: 6% fewer rental apartments were approved in the major cities in 2018 (Fig. 37). Compared to 2017, the decline climbs to 20%. This suggests that the housing supply in the five major centers will remain tight in the years to come. Investors have also become more circumspect regarding developments in rural regions. The higher forecast yields seem no longer to be sufficiently compensating the risk of vacancies. Accordingly, rural municipalities as a share of approved construction volumes fell from a peak of 23% to barely 19% last year.

Suburbs as a compromise

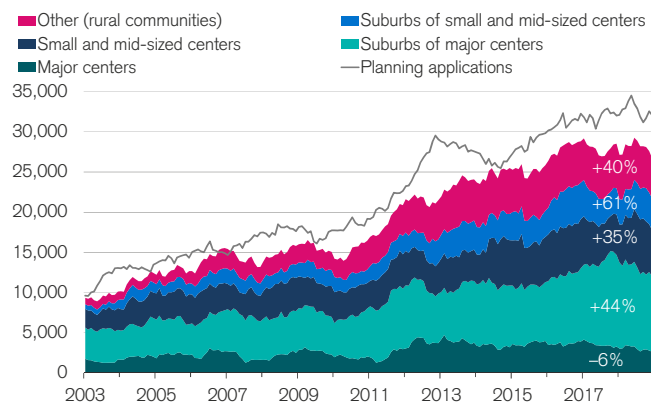
Suburban areas have emerged as a compromise between the rural areas with their oversupply and the core cities with their housing shortages and low yields. In the suburbs of the major cities, the number of approved housing units was recently slightly down, but was nonetheless 44% above the long-term average in 2018. Indeed, the figure was even 61% above the long-term average in the suburbs of the small and mid-sized centers. The regional hotspots of rental apartment building in 2019 are likely to be the catchment areas of the major cities Lausanne, Zurich and Basel (Fig. 38). An increase in building activity is also evident in Central Switzerland and Ticino. Building activity should be more restrained in many areas of Canton Bern and in the alpine regions.

Conclusion: the supply is structurally too high

Outside the major centers, building activity is likely to exceed demand through 2019 and beyond. This will be expressed through rising vacancies, increasingly in suburban areas too. The oversupply will thus probably remain, and even become more pronounced in certain locations. We expect to see higher vacancy figures especially in Cantons Ticino and Solothurn, in peripheral regions of Canton Aargau, in Laufenthal, Canton Uri, the French-speaking part of Canton Fribourg, and in Chablais.

Fig. 37: Building activity shifts to suburban municipalities

Building permits for rental apartments (moving 12-month total), by type of municipality; white numerals: change compared to average 2003–2018

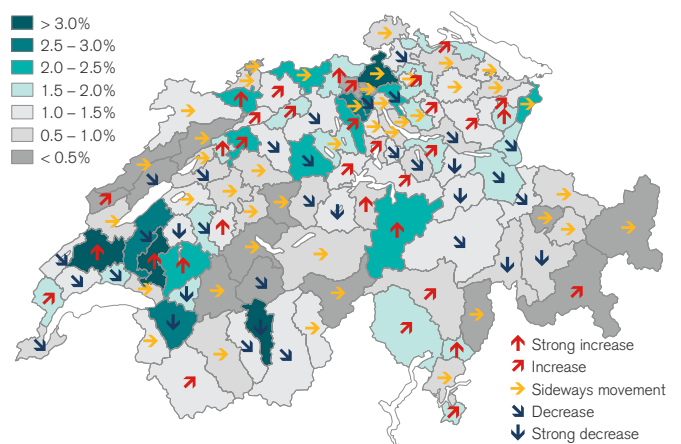


Source: Baublatt, Credit Suisse

Last data point: 12/2018

Fig. 38: Expansion mainly in the suburbs of Lausanne and Zurich

Expected increase 2019 as % of inventory of rental apartments; arrows: year-on-year trend



Source: Baublatt, Swiss Federal Statistical Office, Credit Suisse, Geostat

Quality prevents vacancy

The disparity between supply and demand has left its mark on the market for rental apartments. Locational quality is thus more important than ever.

An elevation profile of vacancies

Vacancies are not spread uniformly throughout the housing market. The disparities are evident during a drive down the A1 highway, across Switzerland from Bardonnex (GE) to St. Margrethen (SG). We created an elevation profile with the vacancy rates of the municipalities along the highway (Fig. 39). The drive begins in the Geneva suburbs with vacancy rates of 0.2% to 0.4% (incl. owner-occupied housing). Between Geneva and Yverdon-les-Bains are gently rolling hills. The vacancy rates here are typically around 1% or slightly less. The first major outcrops arise in Canton Fribourg, before the landscape drops into a deep valley towards the capitol of Bern (0.44%).

Mountain massif of vacancies between Kirchberg and Lenzburg

Then comes a climb to the mountain massif of apartment vacancies, with the highest peak between Niederbipp and Olten, where the vacancy rate averages nearly 5% and has risen sharply since 2013. Some municipalities report vacancies of more than 10%. Only at the threshold of Baden does the vacancy rate drop back below the 1.5% level. Further East, the centers of Zurich and Winterthur are two deep valleys before the next significant elevation in Canton Thurgau. Between Wil and St. Gallen comes a high valley before another steep rise towards the national border.

Good accessibility wards off vacancies

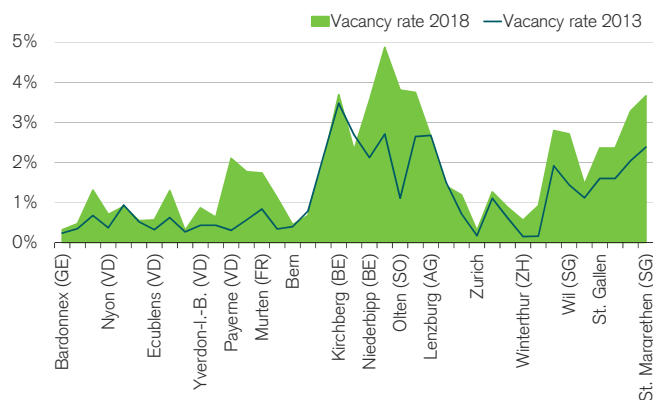
The topography of vacancies indicates that proximity to the centers is a key factor for the housing market. The differences between peripheral and central locations have accentuated further in recent years. This is proven in the shortfall in rental incomes reported in the real estate portfolios of institutional investors (Fig. 40): in a portfolio comprising 113,000 housing units, the average loss of rental income is 3.1% of potential gross rental income – for which vacancies bear most of the blame by a wide margin. In the best macro locations from a transport point of view, e.g. in large suburbs, the loss of rental income is just 1.4%. As the situation deteriorates, this figure rises considerably, to reach 6.0% in the worst locations. The same is true for accessibility by public transportation (PT).

Micro location is also decisive

The risk of vacancies is determined not only by the macro environment, but also by the location within the municipality. The “relative PT accessibility” indicator in Figure 40 measures the quality of the PT accessibility relative to other locations in the town. Here too, rental income loss is significantly lower in the best locations than in the locations with poor PT connections. The figures fluctuate between 2.8% and 5.7%.

Fig. 39: Elevation profile of vacancies in a West-East cross section

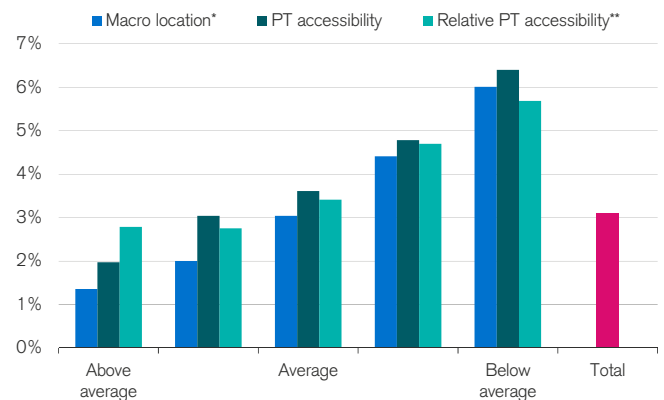
Vacancy rate in the municipalities along the A1 highway, incl. owner-occupied housing, summarized in classes to 10km



Source: Swiss Federal Statistical Office, Navteq, Geostat, Credit Suisse

Fig. 40: “Location, location, location” also applies to vacancy risk

Loss of rental income as % of gross expected rental income, Q3 2018; * Population accessibility with PT/private car; ** compared to all locations of the municipality



Source: REIDA, Federal Office for Spatial Development, Credit Suisse

Supply rate climbs above 5%

The competition for tenants is fiercer than ever. This is evident in the supply rate, which surpassed 5% in 2018 for the first time in 15 years (Fig. 41). In order to avoid longer-term loss in rental income – and thus also possible corrections to the property valuation – landlords are anxious to maintain the level of rent as far as possible. To this end, marketing efforts are multiplied, and attempts are made to attract new tenants with additional incentives such as free months and gift certificates. In some cases, apartments are rented with graduated rental prices. These graduated rent agreements allow for a contractual commitment by the tenant of at least three years.

Increasing use of additional incentives

Indeed, landlords today are increasingly using such incentives (Fig. 41). More than 1.1% of the advertisements promise gift certificates, other “gifts” or – by far the most common variation – remittance of a certain number of months of rent. These additional incentives are not used comprehensively, but rather specifically by certain landlords in certain regions. They are particularly present (in more than 3% of advertisements) in the Western Mittelland (Erlach/ Seeland, Oberaargau, Grenchen) and in Eastern Switzerland (Oberthurgau, Thurgau). In regions with low vacancies, such as Basel-Stadt or Zug, such offers are very rare, as would be expected.

Contractual rents down in 2018 for the first time

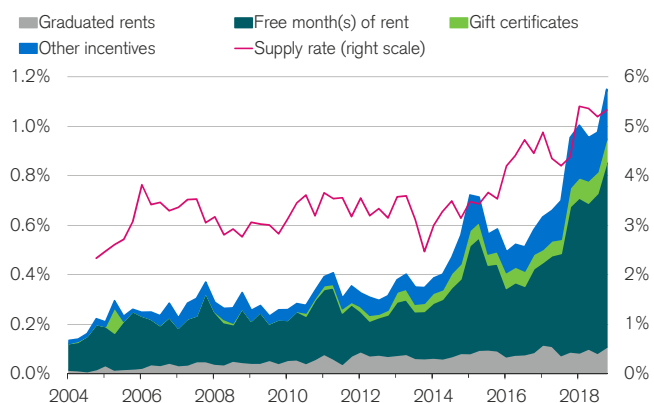
The record high supply rate (5.3%) and vacancy rate (2.5%) for rental apartments show that the increased marketing efforts and the additional incentives offered are not sufficient to reduce the existing oversupply. The gap between supply and demand is simply too wide. Ultimately, there is no way to escape corrections in rent prices. The increasing use of free months paints a clear picture. Advertised rents suggest the same, where market rents have been falling for two to three years already (Fig. 42). While neither measure has indicated lately that the decline in prices was accelerating, there is still a significant difference in the extent of the price erosion, according to the Wüest Partner Index (most recently –2.1% year-on-year) and the index by Homegate (–0.3%). With some delay, the actually signed rental agreements have also displayed a falling trend since the second quarter of 2018 (–1.2%).

Conclusion: growth in vacancies is decelerating, rent prices continue to decrease

The decline on the rental apartment market will likely continue in the current year. Nonetheless, some positive signals are discernible. The demand side is still in a mild recovery trend, and a 10% increase in immigration is forecast. Construction activity is unlikely to accelerate, but should stagnate at its (overly) high level. In the more rural regions where vacancies are high, such as in the Western Mittelland, a certain restraint can be observed. Thus vacancies should rise further in 2019, but at a somewhat slower rate. We expect an increase of 5,000 to 6,000 housing units (previous year: 7,000). As a result, rent prices should continue to trend downward, and advertised rents will likely fall another 1% to 2%.

Fig. 41: Rising supply rate necessitates additional incentives

Supply rate (right scale) and ads (German and French) with added incentives and graduated rents as % of total ads for rental apartments

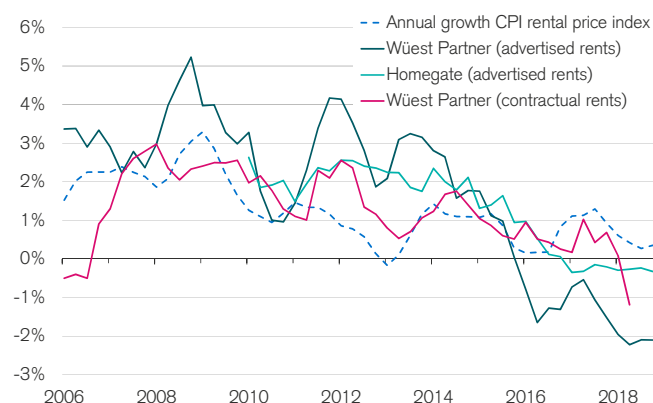


Source: Meta-Sys AG, Credit Suisse

Last data point: Q4/2018

Fig. 42: Contractual rents in the red since the beginning of 2018

Rental price indexes in comparison, annual growth rates



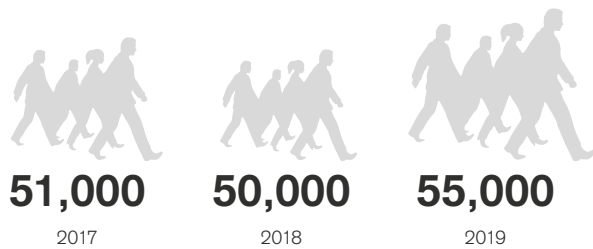
Source: Wüest Partner, Homegate, SFSO

Last data point: Q4/2018

Tenants keep up the pressure

➔ Demand

Net immigration

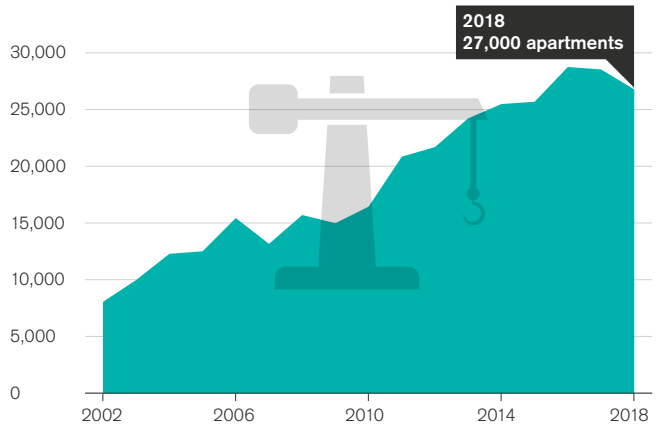


- Net immigration forecast to increase by 5,000
- Economic tailwind stalls

2019: Unchanged absorption of apartments

➔ Supply

Building permits: approved rental apartments

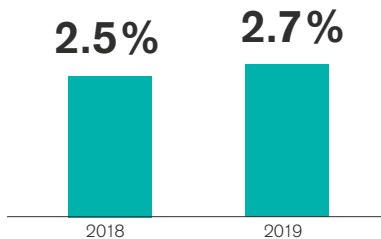


- Number of approved apartments down slightly
- Pipeline still full (except for major cities)

2019: Number of new rental apartments unchanged

↗ Vacancies

As % of rental apartment inventory

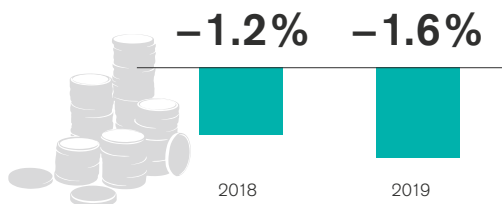


- Supply/demand gap remains wide
- Increase by 5,000 to 6,000 vacant apartments

Slightly slower increase in vacancies

↘ Growth in rental prices

Increase in advertised rents in %

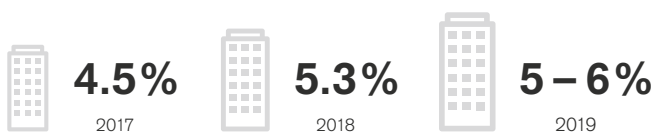


- Decrease in rents primarily outside major centers
- Ongoing heavy use of additional incentives

Continued decline in rental prices

↗ Supply rate

As % of rental apartment inventory



- Rise in supply rate up to 6%
- 10-year average: 3.7%

Tenants have greater leverage

➔ Performance

Total return on residential investment properties



- Slight value gains still possible in the centers
- Rising pressure on rental income outside the centers

High investment pressure due to low interest rates

Office demand in flux

The world of work is in transition. Providers of office space must thus prepare for new standards in terms of the flexibility and layout of office space.

New concepts of working reshape demand for offices

There are greater forces at work in the market for office space than might be assumed based on the relatively intact market data. Various trends, such as working from anywhere, space-saving workplace models, and advancing automation, are decreasing demand for office space. Other trends, such as a growing workforce, the increasing importance of services (tertiarization), and not least the advance of digitalization, offset the negative effects and ultimately produce a net increase in demand. What is not decreasing, on the other hand, are the changing expectations regarding office space, which in turn stem from the transformation of work formats.

Demand for office space becomes broader and more hybrid

Some of the large traditional tenants of office space, including banks, insurance companies and the telecommunications industry, are confronted with structural upheaval and will not be seeking additional space in the foreseeable future. As a result, demand for office space is less dependent on a small number of significant users, and more driven by a variety of sectors, with widely divergent requirements, that report greater need for office workspace.

Office staff replace industrial workers

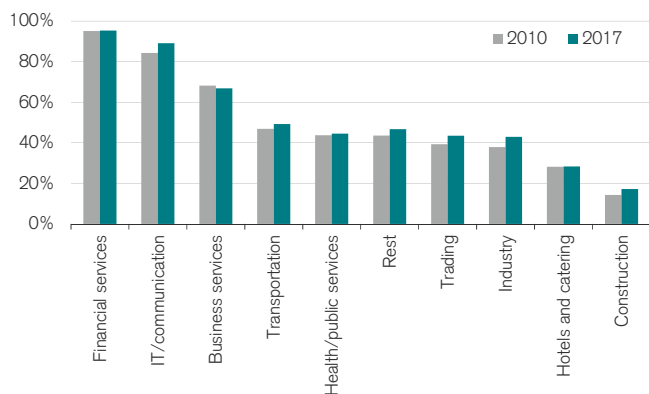
The greater need for office space stems not only from the current cyclical growth in employment, but also from structural changes. In many sectors, the share of office staff relative to industrial workers or craftsmen is steadily rising. In manufacturing, for example, this is because companies now sell not only machines and equipment, but also increasingly the services that complement them. Our calculations indicate that the share of office workplaces in manufacturing has been on a continuous rise from 38% to 43% between 2010 and 2017. Not only in industry, but in nearly all other sectors, the share of office workplaces needed is increasing (Fig. 43).

Digitalization and automation transform work activities

One of the drivers of the increasing share of office workplaces is digitalization. It takes over routine tasks, thus creating new working roles that very often require an office workplace. However, its influence extends beyond changes in job descriptions: digitalization of the economy disrupts work methods and processes; thus it also provokes a transformation of work formats (job sharing, part-time work, telecommuting) and working relationships (temporary work, flexible working hours, work via platforms).

Fig. 43: Rising share of office workplaces in many sectors

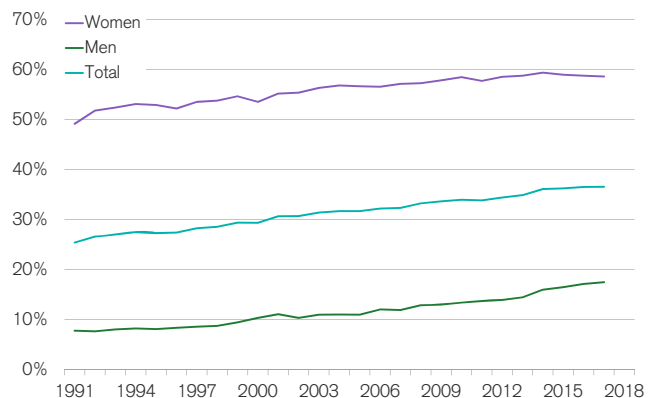
Share of activities per sector that are conducted from an office



Source: Swiss Federal Statistical Office, Credit Suisse

Fig. 44: Increasing part-time work

Part-time workers (employed up to 89%) as % of all workers



Source: Swiss Federal Statistical Office, Credit Suisse

Work models in flux

Work formats are changing

The shift in society, as well as in the economic world, towards greater spontaneity and flexibility is also changing the world of work. Atypical working relationships are becoming more widespread, among them part-time work, temporary assignments, job sharing, working on-call, or practicum work. Progress in communications and information technology provides solutions to the problems of coordination inherent in such work models, making them easier to deploy.

Increasing part-time work

According to the Swiss Labor Force Survey (SLFS), more than one third of workers in Switzerland had working hours of less than 90% in 2017. The share of part-time workers has risen steadily since 1991 (Fig. 44). The percentage of men working part-time has reached 17.6%, while the figure for women has been stable at around 59% for several years. Across all age groups, there are more men working part-time now than there were ten years ago.

More flexible working hours

Models for flexible working hours are likewise becoming more prevalent. They meet a great need of the workforce, because they promote a healthy work-life balance and the combination of a career with family commitments. Many companies respond by giving their staff members more personal responsibility. Nearly half of all employees in Switzerland have flexible working hours. The share of employees with flexible work models was just 40.9% in 2010, but by 2017, this figure had risen to 44.2%. The percentage expanded for both men and women, and rises sharply with increasing age.

Gig economies: great potential – still at a low level

Technological progress has had a profound effect on structures that took shape over decades. Thanks to cutting-edge technology, even small companies can easily access the global market; workers can offer their services worldwide via online platforms and thus become part of the so-called gig economy. When companies use the services of such freelancers, contractors or gig workers, company boundaries dissolve, or at least become blurred. However, like traditional outsourcing, the gig economy lends itself best to human resources that are not company-specific. It can also result in firms outplacing certain activities entirely, so that they must no longer offer workplaces for these tasks. When activities are outsourced globally, the domestic need for office space disappears altogether, and demand for offices in the home market falls. At present, however, not many workers earn their livings on such platforms. A survey of crowdworking platforms in Germany found that there were around 1 million crowdworkers, of which 250,000 were classified as active.⁶ This corresponds to about 0.7% of workers in Germany. The work volumes processed via platforms only made up an estimated 0.01% of total wages in 2017. Nonetheless, the potential of the gig economy should not be underestimated, as the example of Uber in the transportation sector clearly illustrates.

Rise of temporary work contracts

The State Secretariat for Economic Affairs (SECO) published a study about the trend in self-employed workers to examine what effect the gig economy is already having on the Swiss labor market.⁷ The survey found that the share of self-employed workers remained roughly stable at around 6.5% from 2004 to 2016. In contrast, the number of temporary work contracts has increased sharply in all age groups since 2010. At that time, 6.7% of workers had a temporary contract; by 2017 the figure had jumped to 8.0%. For young workers (aged 15 to 24), temporary work is most common with a 22.7% share, two-fifths of which is attributable to practicum work. This could be an indication that project-based work is gaining in significance and that companies increasingly seek to hire workers, and also managers, only for the duration of a specific project.

Working anywhere

The barriers to working from any location have fallen

Expensive office leases at central locations, traffic jams, long commutes, and the high cost of commuting all encourage the desire to be able to work from any location. For years, this desire was thwarted by technological barriers. Thanks to laptop computers for employees, the widespread availability of powerful broadband connections, and the emergence of cloud solutions, these obstacles have been largely swept aside. Working from any location is bound to become more prevalent, with a resulting decrease in the utilization of workstations. Companies thus have increasing incentives to shift from a territorially organized workplace model to an activity-based one, in which the task at hand determines the appropriate workplace. Those who work in a team can use a group space, and those who need to concentrate can find quiet areas, while telephone calls can be made in special booths for that purpose. The associated departure from fixed workplaces helps to save costs, but it can only be successful with the active or at least passive agree-

⁶ V. Mrass/Ch. Peters, 2017: Crowdworking-Plattformen in Deutschland.

⁷ SECO 2017: Die Entwicklung atypisch-prekärer Arbeitsverhältnisse in der Schweiz.

ment of the staff. Studies show that when implemented correctly, such multi-space concepts can improve employee motivation and raise work efficiency.

The limits of working at a distance from the employer

As the work environment and working hours become more flexible, staff members must exercise greater personal responsibility and discipline. Control and supervisory functions change or disappear altogether, which requires new organizational forms from both employer and employee. There can also be a danger of overworking or isolation. Another aspect is the difficulty of keeping the professional life separate from private life. In many cases, however, it is the loss of internal operational information due to a lack of informal contacts, and the lack of interaction, that brings home-office workers back into the shared office space of a fixed workplace.

The fixed workplace is still important

The knowledge that is missing from a home office, that cannot be replicated by new communication technologies or measures such as documentation or regular newsletters, is also called implicit knowledge. It is difficult to define and is typically diffused spontaneously through interactive exchange. The greater the shift from routine to non-routine tasks, thanks to automation and digitalization, the more the creativity of the employee is valued. Innovation has become the ultimate benchmark, and innovations usually arise from a multiplicity of interactions. Many firms react to this by concentrating their staff at as few locations as possible, in order to promote exchange among employees.

Behind apparent stability, plenty of change...

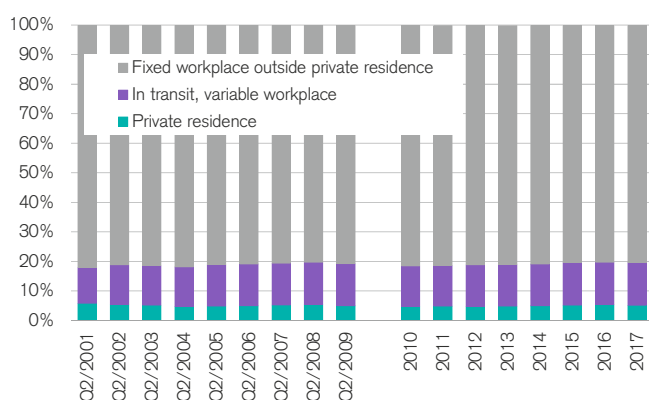
In Switzerland, 80.2% of all workers are regularly based at a fixed workplace outside their home (Fig. 45). This share has fallen only slightly, by less than 2 percentage points, since 2001. The share of those who regularly work from home has been stable around 5%. The problems mentioned above seem to be responsible for the fact that while the home office is preferred by many workers, it is still nothing more than a complement to the fixed workplace. There is also a slightly rising tendency for individuals to be working in transit or at various workplaces. Their share rose from 12.2% in 2001 to 14.5% in 2017.

...because second and third workplaces are on the rise

Although the predominance of a fixed workplace outside the home seems to be unassailable, workers spend increasingly less time at them, as second and third workplaces gain in importance. More than 1.2 million Swiss workers (28%) did occasional work from home in 2017. Of this, 70% was telecommuting, which enjoys rising popularity. In other European countries, up to one third of employees regularly work from home – especially in the information and communication sectors (Fig. 46), where more than 50% of employees use this work pattern at least occasionally in Switzerland. In the education and training sector, as well as in self-employed, scientific, and technical services, around 44%, or more than one third, work from home. Increasingly, work is being performed in other locations, such as train stations, airports, cafés, libraries, or shopping areas. Moreover, there is a growing offering of services for those who work in transit, such as shared offices or coworking spaces. These should be considered inspiring alternatives to a fixed workplace in the employer's office, however.

Fig. 45: Fixed workplace is standard for many employees

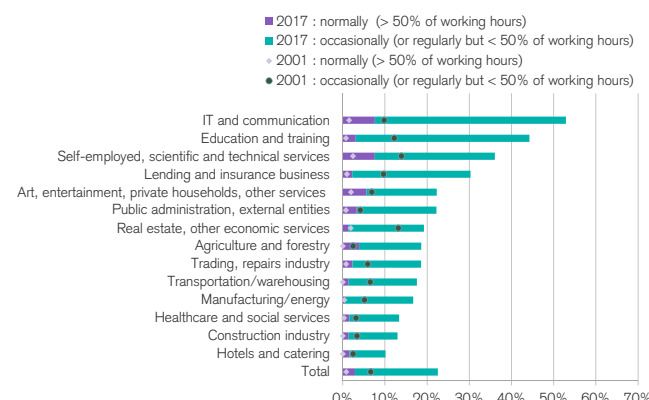
Regular workplace of the employee



Source: Swiss Federal Statistical Office

Fig. 46: Nonetheless, telecommuting is increasing

Share of employees working remotely



Source: Swiss Federal Statistical Office, Credit Suisse

Conclusions for providers of office space

Open office concept and desk-sharing promote efficiency and flexibility

In such a fluid environment (Fig. 47), office spaces must be both efficient and flexible. These two criteria regularly appear high in the list of survey responses. Flexible spatial structures allow employees to easily adapt the professional infrastructure to their working processes and to work as required for specific activities. Since it would be too costly to prepare separate spaces for every category of activity, the principle of fixed workplaces must yield to a desk-sharing model. In this process, the traditional workplace tends to be streamlined and/or downsized, and individual space is transformed into common rooms or central zones that are upgraded for the purpose.

Open, flexible, smart layouts

Only when the conflict areas associated with “open space” working – such as teamwork/privacy and noise level/concentration – are solved can the efficiency gains also translate into real, sustainable productivity gains. Fixed spatial structures must loosen up; spaces must be able to change their function in just a few steps. A room that housed a large table for collaborative discussion can be quickly converted into an auditorium for 30 people. To make this possible, the office furnishings must be highly mobile.

Communication becomes a key factor – but in a new way

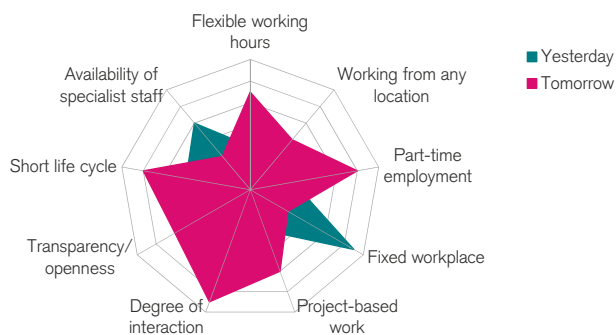
Despite or precisely because of increasing digitalization and the disruption of fixed spatial structures, personal discussion becomes even more important. Agile companies need new spatial concepts that recognize this development. The traditional meeting room contrasts with unconventional communication zones in which informal, rapid exchanges of ideas can take place in a comfortable atmosphere. Small libraries could be created, for example, or the canteen could be transformed into a cozy lounge outside of mealtimes. The creative possibilities are endless.

Greater flexibility in leasing contracts too

The need for flexibility should not be an afterthought when planning interior design, but deserves consideration when planning the building, the support column grids, piping systems, and so forth. Flexibility is also increasingly expected when negotiating lease conditions. For example, more than half of office tenants would welcome leasing contracts that do not exceed five years (Fig. 48). Moreover, the option of an early lease termination is growing in popularity.

Fig. 47: Changes in the world of work

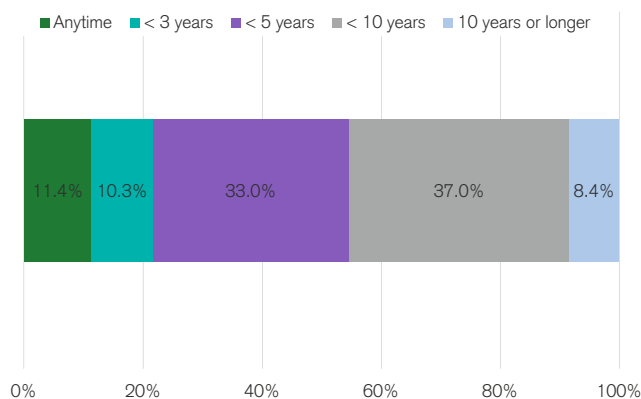
The world of work between yesterday and tomorrow; increasing from the inside to the outside



Source: Credit Suisse

Fig. 48: Demand for short leases

Responses to the question of the ideal lease term, Survey 2017



Source: Jones Lang LaSalle

Pick-up in demand

The economic upturn gave a significant boost to employment growth and thus stimulated demand for office space. We expect this demand to consolidate in 2019 at a level that is above the 10-year average.

Strong economy stimulated employment

A strong economy creates jobs, after a certain delay, and thus ultimately stimulates demand for office space. In the first half of 2018, jobs growth finally surged. At present, employment is increasing at a rate of 1.8% p.a. (as at the end of the third quarter of 2018). The rate has not been this high since the end of 2012, before the EUR/CHF minimum exchange rate was scrapped.

Higher employment in business services

A total of 68,400 new jobs were created over the last 12 months, and the services sector made the greatest contribution with 49,600 jobs, an increase of 1.7% (Fig. 49). The secondary sector (industry and construction) created just 18,800 jobs, but this nonetheless amounts to annual growth of 1.9%, the highest growth rate since 2008. In the tertiary sector, business services stood out with 22,000 jobs created, as did healthcare and social services with 15,200.

Declining employment in traditional office sectors

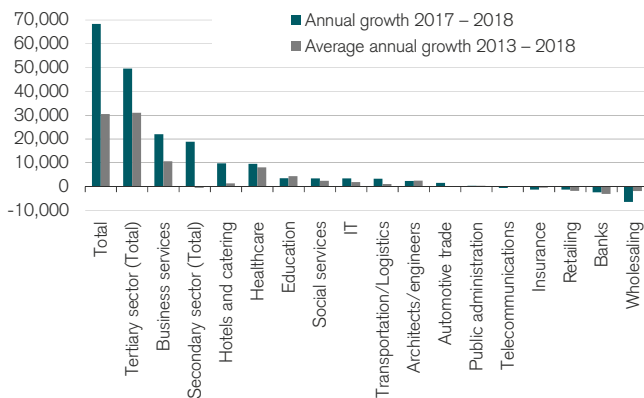
The growth drivers for office workspace are contrasted by four sectors (banks, insurance, wholesaling, and telecommunications) with large inventories of office space, where the number of employees has fallen by more than 10,000 over the last 12 months (Fig. 49). On balance, the additional demand for office space in the current cycle is thus lower than in previous growth phases. The banks, in particular, are exposed to persistent structural change and have cut their headcount by 2.2% over the last year. The main drivers of this phenomenon are digitalization, collapsing margins and rising regulatory costs. The planned repatriation of bank jobs, especially in IT, might be able to halt or even reverse the negative employment trend.

Companies again seeking more office space

On balance, the above factors result in greater demand for office space. While the additional demand for office space was a weak 215,000 m² in 2016 and still only a modest 325,000 m² in 2017, the estimated figure of 596,000 m² for 2018 represents a surge (Fig. 50). Structural effects such as ongoing tertiarization, as well as high demand for office space from the business services sector (responsible for 38% of total additional demand last year), were able to more than offset the diminished demand from financial services and trading. We forecast somewhat lower, but still respectable, additional demand of 403,000 m² in 2019.

Fig. 49: The business services segment creates jobs

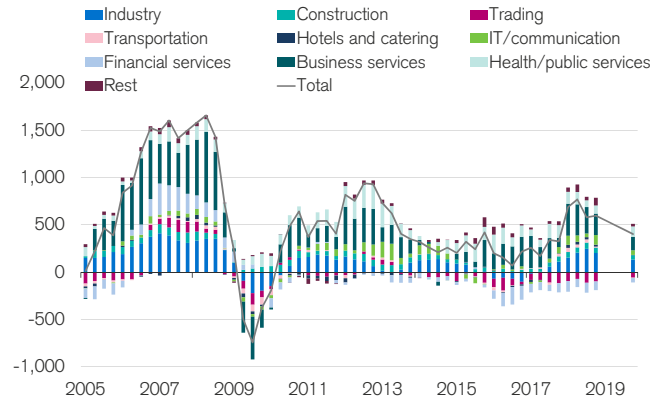
Annual growth in employment (full-time basis) in selected service sectors (at end-Q3 2018)



Source: Swiss Federal Statistical Office, Credit Suisse

Fig. 50: High additional demand for office space tapers off

Estimated additional demand compared to the previous year's quarter in 1,000 m²; estimate/forecast for Q4 2018 and 2019



Source: Swiss Federal Statistical Office, Credit Suisse

Supply of office space is growing moderately

While the volume of advertised office space in the central business districts of major centers is decreasing thanks to successful leasing, the recovery has yet to reach the outer office markets.

Volume of new construction permits is back below the long-term average

Developing real estate, including offices, remains an attractive investment due to persistently low interest rates, low financing costs, and the limited investment alternatives. In contrast, new construction permits for office property were slightly lower than the long-term average of nearly CHF 2 billion from 2014 to mid-2017 (Fig. 51). This reflects a somewhat more cautious investor stance in recent years, as lower demand and high levels of vacancies exerted pressure on the office market. The jump in approved new building projects in the summer of 2017 reflects the construction of Roche Building 2 in Basel; but this no longer features in the 12-month total of new building permits. On average, however, since the sharp expansion in 2011/2012, investment volumes have never fallen substantially below the level of the long-term average. Thus a recovery in the office market can only come from the demand side, especially since several large-scale projects that were approved earlier, such as The Circle at Zurich airport, are about to be completed and bring additional office space onto the market.

Supply situations differ in mid-sized and major centers

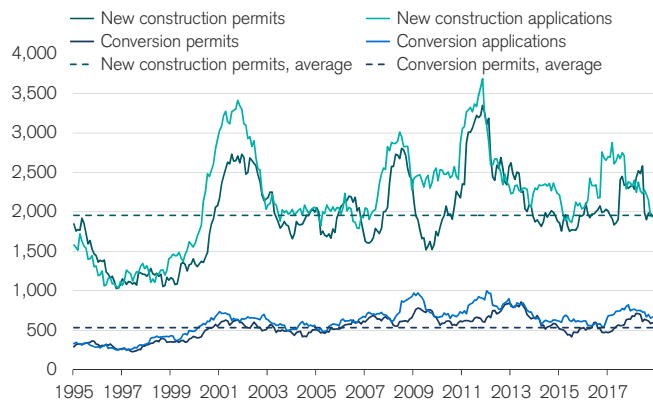
The state of the market for offices in individual mid-sized and major centers is much less homogeneous than, say, that on the market for rental apartments. Figure 52 depicts the individual office markets in two dimensions. The supply rate on the horizontal axis describes the availability of space (or the current extent of the oversupply). The vertical axis shows the expected increase in office space based on the investment amounts that have been approved in the last 24 months. Office markets positioned above the zero line enjoy a level of investment that is above the long-term average.

Major centers act as investment focal points

Around 40% of investments in office space are typically concentrated on the major centers. At the moment, Basel particularly stands out with high investment totals, due to the construction of Roche Building 2. In the west of Lausanne there are also large developments planned, most of which also include offices. In contrast, after a phase of high investment, development activity in Zurich and Bern has tapered off again. Geneva, too, has seen a slight easing in planned development.

Fig. 51: Moderate increase in office space

Building permits and planning applications, moving 12-month total, in CHF million

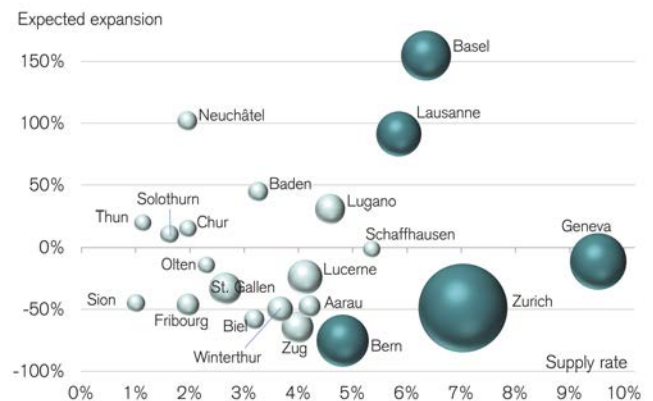


Source: Baublatt, Credit Suisse

Last data point: 11/2018

Fig. 52: Higher supply rates in the major centers

Size of circle: existing office space; expansion: building permits issued 2017/2018 compared to the long-term average, supply rate as % of inventory 2018



Source: Credit Suisse, Meta-Sys AG, Baublatt

Rather modest increase in office space in mid-sized centers

Investment volumes have receded in the six largest mid-sized cities (Winterthur, Lucerne, Zug, Aarau, St. Gallen, Lugano) in recent quarters. In contrast, the increase in office space is expected to be above the average in Neuchâtel, where a new office and commercial park is under development. In general, demand in mid-sized centers is strongly affected by the companies domiciled there. Company settlements play a particular role in locations that pursue a deliberate low-tax strategy (e.g. Zug, Lucerne, Schaffhausen). Demand is thus less dynamic in the mid-sized centers and is difficult to forecast. As a result, the supply rates are lower than in the major centers across the board – with the exception of Schaffhausen – because office projects in the mid-sized centers are rarely developed without a high pre-lease quota.

Swiss supply rate has increased further

The total amount of office space in Switzerland advertised for rent online in the second quarter of 2018 rose to 2.65 million m² (Fig. 53). This results in a supply rate of 4.9% based on the total inventory of office space. Weak demand for office space in recent years, and cheap financing, were ultimately responsible for the surge in supply rates to the current high levels. This is particularly the case in Geneva, where the supply rate is hovering below the double-digit percentages. On balance, the increase in demand has not been sufficient to keep the supply of office space constant. The anticipated resumption of demand growth is thus most welcome in order to counter this trend, not just stabilizing the amount of available office space, but actually reducing it.

Recovery in the center cities – floods of space on the periphery

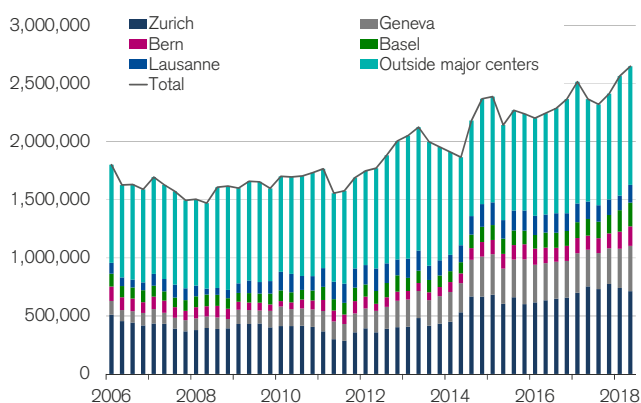
Unlike the trend in total space, volumes of space available for lease in the central business districts (CBD) of the five major centers have fallen compared to the previous year. The space available in the CBD has fallen by around one fifth (Fig. 54). The only center to buck this clear trend is Basel, where the supply of office space in the CBD is higher than it was a year ago. In some cases, the pick-up in demand has already caused tangible improvement in the middle business districts. However, the available space in the outer business districts has risen further, in some cases substantially, in almost all major centers. Many of the large-scale construction projects in recent years were realized not in the center cities, but further out, where development land is still available. In Lausanne though, the only market where the recovery has already reached the outer business district, intact absorption forces ensure that the supply rate is headed towards lower values in future. This should apply to Bern and Zurich as well, in terms of the expected increase in office space.

Growing shadow market for office space

In light of high vacancies, an increasing volume of available office space is no longer listed on the major real estate platforms. To avoid the stigma of a shelf-warmer, these properties are not listed continually, but only at certain times; and usually it is only a fraction of the available space that is advertised. There has been very little demand recently for large spaces of 2,000 m² or more. Throughout Switzerland, there are at least 430,000 m² that are being advertised only sporadically or through alternative channels (individual internet sites, real estate agents, business promoters, etc.).

Fig. 53: Supply of office space rises to 2.65 million m²

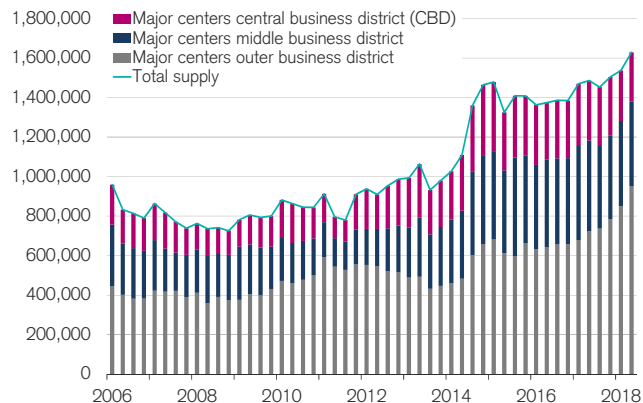
Total office space advertised for lease each quarter* (inventory and new buildings), in m²



Source: Meta-Sys AG, Credit Suisse *space advertised on the internet

Fig. 54: Supply of office space decreasing in the CBD

Total office space advertised for lease each quarter* (inventory and new buildings), in m²



Source: Meta-Sys AG, Credit Suisse *space advertised on the internet

Recovery at the core

Falling vacancies in the centers confirm the recovery in the core office markets. Rent prices, falling in many locations, should stabilize in the medium term, as soon as the recovery spreads more widely to the middle and outer business districts.

Vacancies falling in nearly all centers

The economic recovery and an associated increase in demand for office space have triggered a recovery in the office markets of the urban centers. In the city of Zurich, vacancies fell in 2018 for the fourth consecutive year and are now around 36% below the peak in 2014 (Fig. 55). Meanwhile, in the city of Bern, vacancies fell for the second consecutive year and are now 19% below the all-time high posted in 2016. In the city of Lausanne (including the Lausanne West district), vacancies also declined and were most recently 23% below last year's peak, while vacancies in Basel-Stadt fell only slightly and now stand 36% below the high posted in 2012. The picture is different in the city of Geneva, where after declining the previous year, vacancies are on the rise again.

Vacancies rise with increasing distance from centers

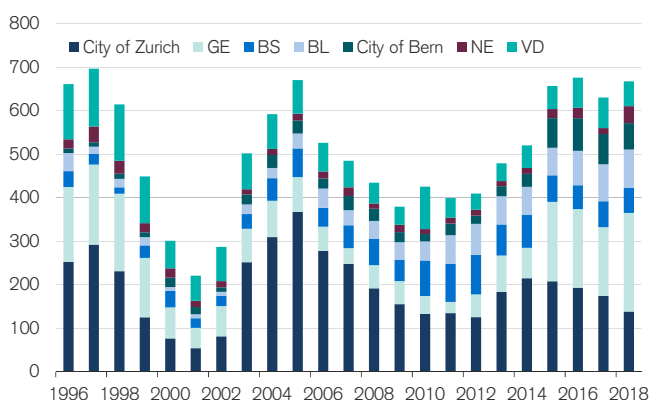
Wherever vacancy measurements also include the middle and outer business districts, conditions look quite different. Vacancies in Cantons Neuchâtel, Basel-Landschaft and Geneva, for example, have risen. In Geneva, sharp increases in Meyrin, Vernier and Plan-les-Oates have pushed vacancies for the canton as a whole to a new high that is actually 23% above the record set in the 1990s. Only in Canton Vaud did vacancies decline year-on-year for the canton as a whole. Because the vacancy situation in Canton Geneva has deteriorated considerably, the total amount of vacant office space in Switzerland did not decline further, as it did last year (Fig. 55). On the contrary, the total amount of vacant space in the partial survey, which covers around 44% of the national office market, actually rose 6% compared to the previous year, which is almost entirely due to locations outside central business districts.

The fall in rent prices should be over soon

After a phase of sideways movement, rent prices based on leasing contracts recently began trending slightly lower again in most regional markets. The sharpest decline was registered between April 2017 and April 2018 in the region around Lake Geneva, where rent prices fell 5% (Fig. 56). In the city of Geneva, rents fell 8% during this period, bringing the correction since mid-2013 to a total of 17%. Given the spike in vacancies in Geneva, rent prices will probably ease further. In the regions Zurich (-0.3%), Basel (-2.5%), and Bern (-1.4%), all rents edged down compared to a year earlier. One exception is the city of Zurich, where rent prices rose slightly (+0.6%). In the medium term, cyclical demand stimulus in most regions should put an end to the decline in rent prices.

Fig. 55: Falling vacancies in the cities

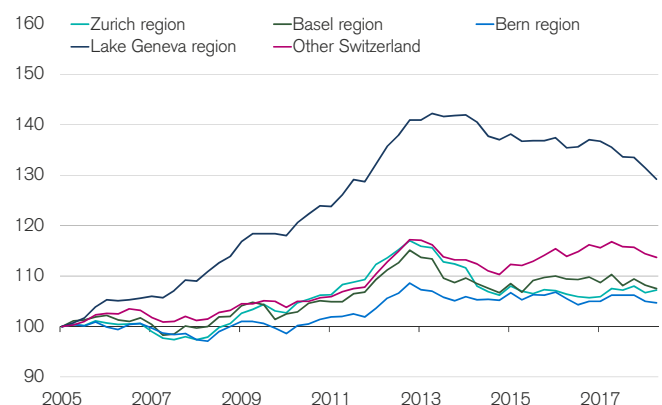
In 1,000 m²; partial survey covering around 44% of the Swiss office market



Source: cantonal statistical offices, Credit Suisse

Fig. 56: Rent prices slowly bottoming out

Hedonic rent price index based on contract conclusions, index: 2005 = 100



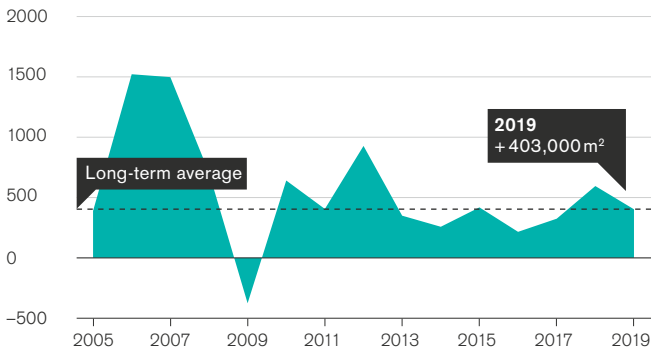
Source: Wüest Partner, Credit Suisse

Last data point: Q2/2018

A recovery for the office market

➔ Demand

Additional demand for office space (in 1,000 m²)

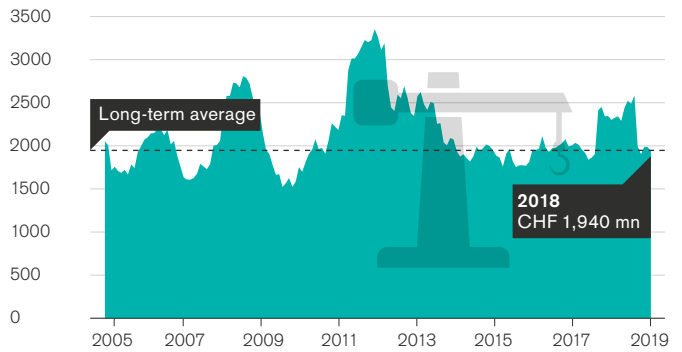


- Rising employment has lifted demand for offices
- Despite cooling economy, demand continues to pick up

2019: Demand to decline, but still above the average level

➔ Supply

Building permits for office space (in CHF mn)

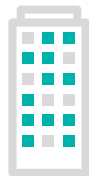


- Approved new volumes back below long-term average
- Volumes in the five major centers also just below long-term average

2019: Expected increase in space probably too high for a rapid reduction in oversupply

↘ Vacancies

- Decline in official vacancies expected (mainly reflects the situation in city centers)
- Decline forecast especially in Zurich and Bern



Decline in the cities, increase at cantonal level

➔ Growth in rental prices

Contractual rents

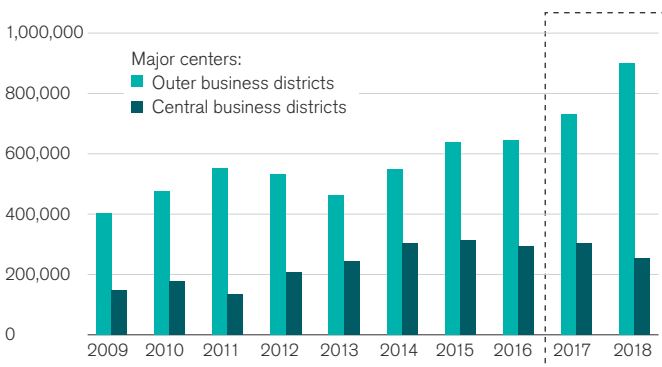
- Trend reverses to increasing rent prices in city centers
- Ongoing decline in peripheral areas



2019: On balance, rent price declines will bottom out

➔ Supply of listed office space

In m²

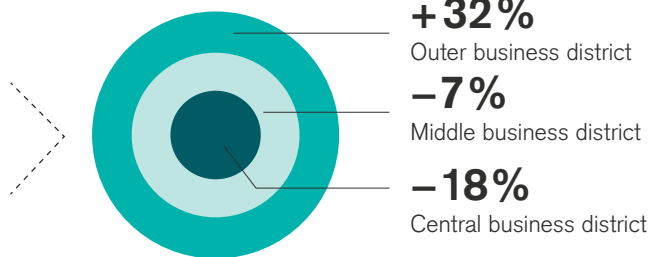


- Swiss supply rate climbs to 4.9%
- Divergent trends between central and outer business districts

Recovery extends from the market core outwards

Trend in supply of office space 2018

By degree of centrality, year-on-year



- Further recovery in office markets depends on length and momentum of economic upturn
- Mounting pressure on rental income in outer business districts

Widening price gap between centers and surrounding areas

Structure plans offer guidance

In May 2019, the five-year period for cantons to implement the revised Spatial Planning Act expires. Efforts towards inward development are to be strengthened and disproportionately large building zones downsized.

Urban sprawl continues to expand...

On February 10, 2019, Swiss voters rejected the Urban Sprawl Initiative, which aimed to freeze the area of building zones in Switzerland at the current amount. The vote thus indirectly lends support to the development policy outlined in the revisions to the Spatial Planning Act (SPA). Spanning party and cantonal boundaries, there is a broad consensus that fighting urban sprawl merits a high political priority. Since the 1980s, developed space in Switzerland has expanded by some 750 km² – largely in the form of housing and traffic surfaces (Fig. 57). This corresponds to nearly the size of Canton Solothurn.

...and raises costs

The costs of urban sprawl extend far beyond damage to the landscape's aesthetic appeal or loss of farmland. They also include a growing degree of fragmentation and a threat to the natural habitats for flora and fauna – with adverse effects for biodiversity and the entire ecosystem. Other costs are more economically tangible. In particular, a decentralized expansion of developed land leads to higher costs in terms of infrastructure and traffic.

Virtually no new building zones over the last five years

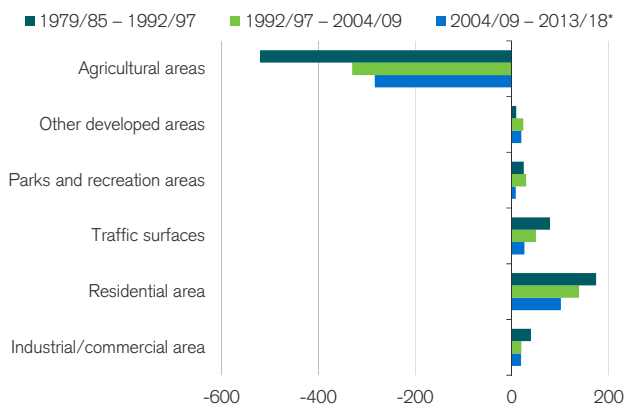
Promoting inward development is a key objective of the revised SPA, which has provided the Swiss cantons and municipalities with a framework for spatial development since May 2014. As part of a staggered implementation of the SPA, an important interim milestone will be achieved at the end of April 2019: as of this date, the cantons must have adjusted their structure plans to the new federal regulations. One central aspect is the management of building zones, which may only comprise as much land as will be needed over the next 15 years.

Initial signs of densification

Until the revised structure plans are approved by the Federal Council, there is a moratorium on the creation of new building zones. During this implementation period, the area of building zones may not be increased. The building zone statistics of the Federal Office for Spatial Development (ARE) confirm that the area of building zones did not increase from 2012 to 2017. At the same time, the population rose sharply during this period, so that the average building zone area per inhabitant fell from 309 m² to 291 m² (Fig. 58). The gap between the densely developed major centers (124 m²) and the tourist municipalities (662 m²) remains wide.

Fig. 57: Sharp expansion of developed land

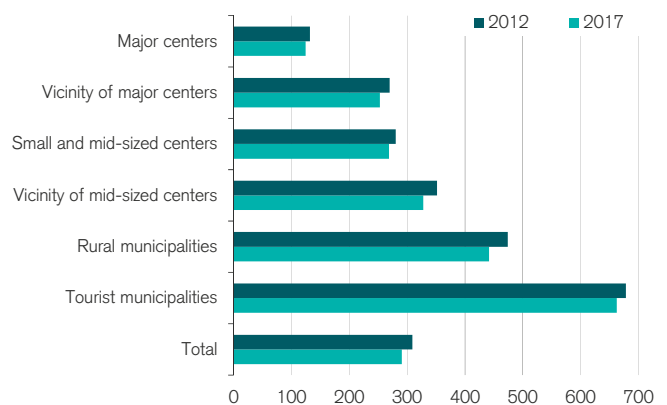
Change in developed and agricultural land in km², * extrapolation



Source: Swiss Federal Statistical Office, Credit Suisse

Fig. 58: No increase in building zones – densification sets in

Building zone area per inhabitant in m²



Source: Federal Office for Spatial Development, Credit Suisse

Building zones still sufficiently large, but in the wrong places

Despite the moratorium on new building zones, there was plenty of construction activity in recent years. Switzerland still has large tracts of undeveloped land within existing building zones. Depending on the method of calculation, these reserves of building land amount to 11% to 17% of the total building zone area, according to the ARE. Even without densification, they could accommodate population growth of another 1 to 1.7 million inhabitants. The greatest share of reserves in building zones are in the Western Swiss cantons of Valais, Geneva, Fribourg, and Vaud (Fig. 59). Particularly in Valais, but also in less densely populated cantons such as Jura, Fribourg or Glarus, building zone reserves offer great growth potential. At the other end of the spectrum are cantons such as Basel-Stadt and Zurich, where reserves of building land per inhabitant are considerably smaller.

Shortage of building land ahead, especially around Zurich

Based on our population scenario and assuming an unchanged per capita demand for space, we have sketched out an estimate for the various regions of how many years it may take before the building land reserves are completely developed (Fig. 60). The Zurich region is likely to reach this point first. In the city, but also in neighboring regions such as Limmattal, Knonaueramt, or Zurich Unterland, this could be the case in less than ten years if the building density is not increased. Reserves in these areas are comparably modest, and population growth is high. Without any rezoning to development land, and without increasing density, building reserves could be used up in less than 15 years in some regions of Cantons Vaud, Fribourg, Aargau, Thurgau, Lucerne, and Schwyz as well. According to the terms of the SPA, after adjusting their cantonal structure plans, these regions may again designate new development zones.

Federal government allows cantons some leeway in calculating need for development land

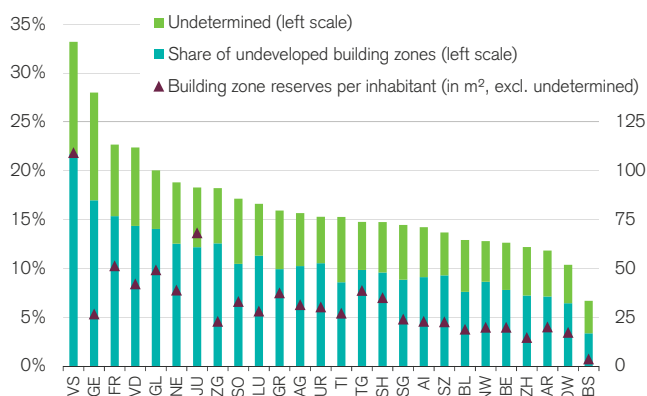
According to our scenario, the existing reserves of building land should meet the needs of 84 of Switzerland's 110 economic regions for at least 15 years. If this is true for an entire canton, the SPA stipulates that even after adjusting the cantonal structure plans, no new building zone may be approved unless an area elsewhere in the canton is declassified as a building zone. At the same time, the federal government allows the cantons some legislative scope in calculating their future need for development land. For example, they have the option of applying the federal government's population scenario or using their own.

Structure plans offer guidance

This scope has been used in a majority of the 15 cantonal structure plans so far approved by the federal government (as of January 2019). The structure plans are an officially binding strategic instrument to manage spatial and settlement development. According to the SPA, these must include specifications of the size and distribution of settlement areas, of inward development, and of measures to prevent disproportionately large building zones. The following examples illustrate how the cantons are implementing these stipulations.⁸

Fig. 59: Large building land reserves, especially in Western Switzerland

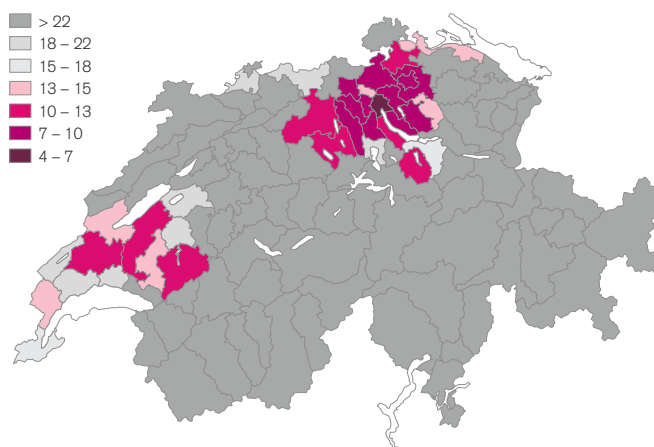
Building land reserves as % of total building land area and per inhabitant, 2017



Source: Federal Office for Spatial Development, Swiss Federal Statistical Office, Credit Suisse

Fig. 60: Building land is most scarce in Zurich and environs

Number of years until land reserves are fully exploited, without densification (Credit Suisse estimate, as of 2018)



Source: Federal Office for Spatial Development, Swiss Federal Statistical Office, Credit Suisse

⁸ See Kissling, S., "Trends in der kantonalen Richtplanung", in: Raum & Umwelt (Sept. 2017), Bern: VLP-ASPAN

Many municipalities must reduce development zones

Despite the leeway allowed in calculating the demand for building land, some cantons still need to adopt measures to reduce the area of their development zones. Of the 15 structure plans so far approved, only three (Uri and the two Appenzells) forecast less than 100% use of their development zones within 15 years, which is currently defined as a disproportionately large development zone. However, the structure plans from other cantons, such as Vaud, Aargau, St. Gallen, and Nidwalden, also include directives to municipalities to reduce their building zones. In Valais, the canton with the largest reserves of development land, the draft cantonal structure plan identifies municipalities with oversized building zones. A definite majority of municipalities are affected. These are required to designate a portion of their building land as on reserve, which may not be developed for a certain period, or to reclassify the land. Other cantons, whose structure plans are still in progress, will probably have to take similar measures – such as Canton Jura.

New building zones only under strict conditions

After approval of the revised structure plan, cantons may generally designate additional building land again. However, future classifications are subject to certain criteria. The priority is on developing vacant lots or underused spaces. Basically, new building zones are only permitted when the need for development exceeds 100% of reserves over the next 15 years, and the land will be developed within 15 years. If the utilization of building zones is less than 100%, there is a requirement to compensate by declassifying other zones. Several cantons define a settlement area in their structure plan (such as Zurich, Schwyz, Geneva, Aargau, and Basel-Stadt). New building zones may only be designated within these areas. Almost all the structure plans also contain minimum requirements for the transport connections of the newly zoned space and for building density. Moreover, several cantons stipulate that new building zones must have a development concept or a contractual agreement regarding the future use (e.g. Schwyz and Lucerne).

Residents getting closer

The structure plans also include statements on the spatial distribution of future population growth. For example, 75% of population growth in Canton Bern is expected to be located in the suburban areas and no more than 25% in rural regions. Similar formulations can be found in the structure plans of Cantons Lucerne, Schwyz, and Zurich. The structure plans also contain conditions for the municipalities regarding inward development. Canton Aargau, for example, specifies minimum densities for residential and mixed-use zones per municipality type. The numbers are higher for space that is still undeveloped than for already developed areas. Density is defined as inhabitants per hectare, so that the actual population potential is key and not simply the building density. Municipalities are responsible to adjust their land use planning and building code so that these objectives can be achieved by 2040. Similar conditions can be found in the structure plans of Cantons Bern and Lucerne. It will be interesting to observe what tools the municipalities employ to meet these goals.

Urban sprawl flows from cities to suburbs

Implementing the structure plans by the municipalities is likely to take a few more years. Even if some uncertainty must be expected during this period, there is no threat to an adequate longer-term supply of development land in Switzerland. The urban regions that are already densely populated face the greatest challenges. Here there is generally very little land remaining that is suitable for designation as building land, and rezoning often provokes political resistance. This means there is no way to avoid densification in the agglomerations. The greatest challenge to cities and suburban municipalities will be to create incentives to densification in their building codes and land use plans, while simultaneously ensuring a high quality of development. If they do not succeed, they may lose their appeal, or the divide in rent prices between the city center and the surrounding areas will widen further. In both cases, development pressure would shift to the outer suburbs and rural regions, further promoting urban sprawl.

Effects on landowners are varied

The new spatial frameworks also have an impact on landowners. Those who own farmland, hoping for rezoning to development land, are among the losers. The same is true for owners of undeveloped building land in municipalities with oversized building zones. In the worst case, they might be forced to accept a declassification with no compensation. Some of these landowners may attempt to develop their land before this door closes – similar to the situation observed in tourist regions before implementation of the law on second homes. Landowners may profit, however, from efforts to increase density if this involves, say, an increase in the maximum permissible ratio between building space and plot size.

Complex and time-consuming

Despite the increasing complexity of the building permit process in Switzerland, the procedure today is no more lengthy than it was ten years ago. Nonetheless, other countries seem to have exploited greater potential for improvements.

Calls for more efficient procedures

Properties do not spring up overnight. On the contrary, years may elapse between the planning and the occupation of an object – for major developments, the process may take more than a decade. Long development times are costly. This is why there are recurrent calls for more efficient procedures. The development process can be broken down into three steps: 1) planning, 2) building permit process and 3) construction. In this article we analyze the building permit process, since it lends itself to a comparison of various regional bodies and their processes.

Switzerland ranked 69th of 190 countries

The World Bank undertook just such a comparison. Its international study shows that Switzerland's building permit process is far from optimal.⁹ From 2009 to 2019, Switzerland dropped down the rankings from 32nd place to 69th, and is now directly behind Egypt and ahead of Zambia. This ranking nonetheless puts it squarely in the European mid-range. In Europe, the Scandinavian and Baltic states have markedly more rapid processes. Digitalization in these countries is further along in the political process, which probably explains much of their better ranking.

The permit process in Switzerland

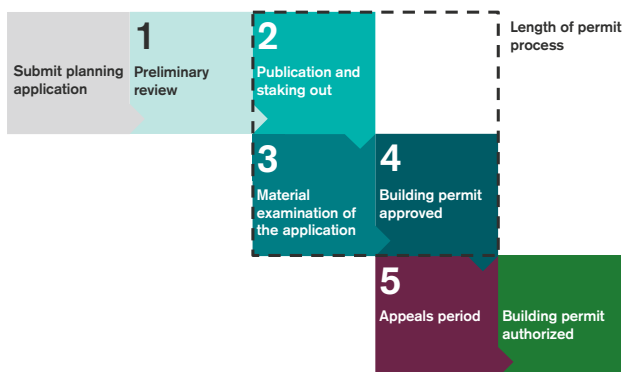
Building permit procedures in Switzerland are regulated at cantonal level. The application is handled by the relevant municipality on the basis of municipal law and ordinances. The process can basically be broken down into five steps (Fig. 61). Submitting the construction application initiates the preliminary review, in which it is determined whether all the necessary documentation is present. If it is not, the application may be suspended, which further prolongs the process.

Publication and objection period

Staking out the extent of the planned structure and publishing a public notice begins the actual permit process. Moreover, publication of the application begins the public disclosure period during which objections may be registered by qualified persons. These must be affected to a greater extent than the general public and must also provide evidence of a legitimate interest. This is usually the immediate neighbors. The number of objections in general has risen through the years. One key reason is the great pressure to develop properties, which increasingly results in conflict between neighbors.

Fig. 61: Complex building permit process

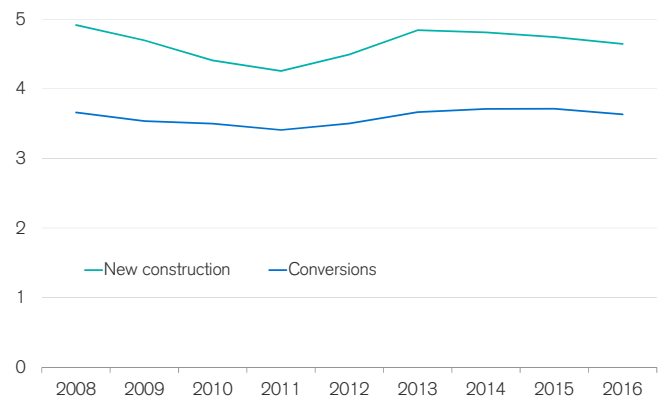
Schematic representation of the building permit process in Canton Zurich



Source: Credit Suisse

Fig. 62: Length of process relatively constant

Length of all building permit processes in Switzerland in months



Source: Baublatt, Credit Suisse; n=130,858

⁹ The World Bank, 2019: "Doing Business 2019, Training for Reform". The report uses the city of Zurich as a proxy for Switzerland.

Material examination

The cantons set their own time frames for the material examination of the application. In Canton Zurich, for example, four months are dedicated to new construction and larger-scale conversions. For smaller conversions, the examination period is two months. If the building project is of secondary importance and does not involve third-party interests, many cantons have an abbreviated procedure; in Zurich, this lasts 30 days. In practice, the actual time required to process an application depends heavily on the project itself (e.g. use, size, complexity) but also the number of objections to be dealt with.

Granting the permit and appeals

If a building project is not confronted by hindrances in terms of planning, construction technique, or environmental issues, a permit can be granted. However, there may be conditions. The increasing complexity of building regulations and number of specialist units involved prompted the City of Zurich to set up a hotline to support project managers with the conditions. Applicants can appeal the conditions. Persons who lodged objections that were rejected during the material examination also have the right to appeal. Such an appeal can delay the construction project considerably. When the permit is finally authorized, the applicant must begin construction within a certain time. In Canton Zurich, this period is three years.

Length of permit process is slightly shorter

In order to find out how long the permit process actually lasts, we systematically analyzed and evaluated all planning applications in Switzerland from 2008 to 2016. Including every type of use and every size of project, the average length of the permit process for new construction has decreased from 4.9 to 4.6 months (Fig. 62). However, there has been hardly any improvement since 2009. Conversions are generally approved more rapidly; here the average length of time is 3.6 months.

Fastest for single-family homes

The times mentioned above are only meaningful to a certain extent, because the actual length of the process depends heavily on the intended use. A shopping center, for example, is subject to very different requirements than a single-family home. It is also more likely to receive a larger number of objections. So it is hardly surprising that single-family dwellings are approved more quickly. Permits for construction of new single-family homes were issued after around 3.9 months, on average, in 2016 (Fig. 63).

Multi-family dwellings and mixed-use buildings take longest

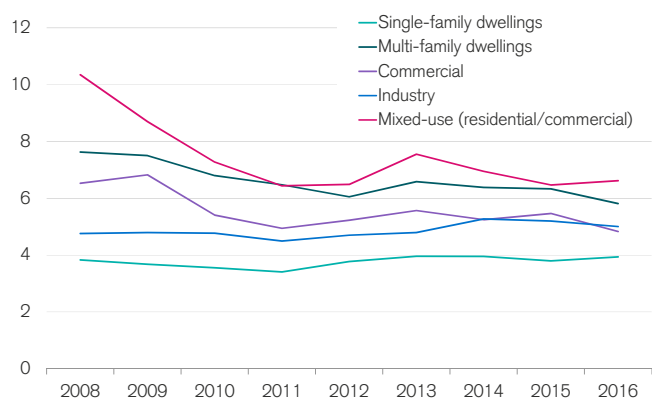
Permits for multi-family dwellings were issued after 5.8 months on average. The process takes even longer for mixed-use buildings that combine housing and space for services, averaging 6.6 months. In both cases, this is probably because such projects are often large and complex. Moreover, many of these projects are proposed in densely populated areas, which tends to spark conflict with existing residents and associations.

Commercial and industrial properties in the mid-range

Commercial space (4.8 months) and industrial properties (5.0 months) are approved more rapidly than multi-family dwellings, on average. This is mainly due to the location. Many of these projects are located in commercial or industrial zones, where there are no residents who could object to the development. In exceptional cases, particularly those involving controversial projects such as shopping centers, the entire permit process can consume much more time.

Fig. 63: Length of process depends on use

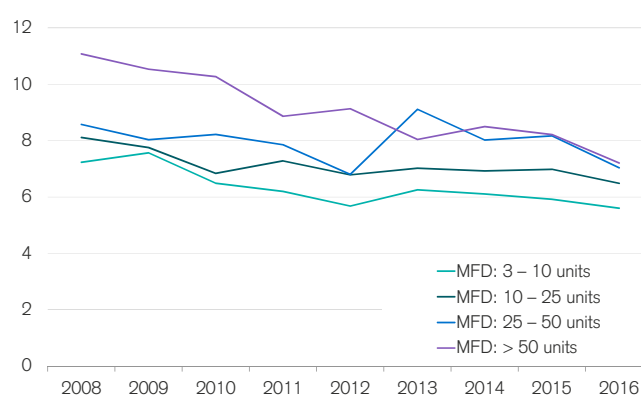
Length of building permit process in months



Source: Baublatt, Credit Suisse; n=96,825

Fig. 64: Large projects take longer

Length of building permit process in months, MFD projects by size of project



Source: Baublatt, Credit Suisse; n=18,053

Larger projects take longer

Approving major projects generally takes considerably more time (Fig. 64). Projects with fewer than ten apartments are approved after 5.6 months on average, while those with more than 50 apartments take 7.2 months on average. In recent years, the permit process has accelerated tangibly, especially for major developments. Differences depending upon the size of the project can be observed not only in residential buildings, but also in other formats.

Small municipalities move faster

In larger cities, significantly more time is required to approve construction of a multi-family dwelling than is the case in smaller towns (Fig. 65), which is most likely due to the higher population density and fewer reserves of development land in urban areas. In addition, projects are more likely to include high-rises. All this increases the likelihood of objections. The greater distance and anonymity between the parties involved also increases the bureaucratic obstacles, which apparently more than offset the greater efficiency and professionalism in larger towns.

Most cantons have a similar pace

While the fastest cantons require no more than five months to approve multi-family dwellings (with six to 30 apartments), it takes longer than eight months in five cantons (Fig. 66). The divergence is, on the one hand, due to different cantonal construction laws and approval procedures. On the other hand, process design (degree of digitalization, linking the interfaces involved, etc.) also plays a key role. Finally, characteristics of the projects themselves (size, location, etc.) further influence the time required for permit approval, which explains some of the cantonal differences.

Still great potential in digitalization

Faster processing of planning applications in recent years has been predominantly due to better coordination of the involved interfaces and increasing digitalization. However, Switzerland's fall in the international rankings shows that there is further potential to be exploited in the coming years. The authorities have noticed this too. The cantons are making greater efforts to digitalize the construction permit process, and the E-Government Switzerland initiative aims to promote digitalization and a focus on joint solutions.

A majority of cantons are tackling digitalization

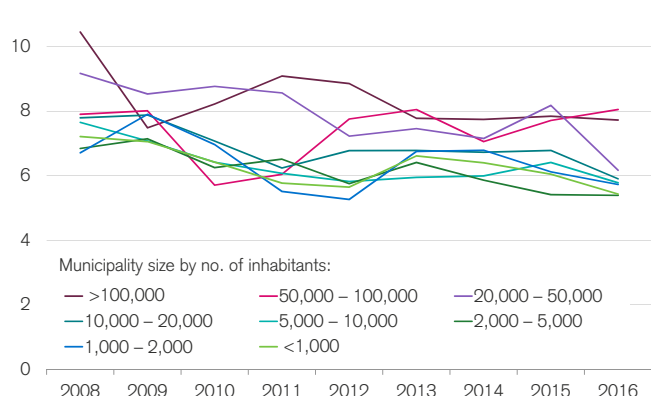
At the same time, the digital permit process has only been implemented to a limited extent. Cantons Uri and Lucerne are pioneers in this respect. Pilot projects are running in many cantons, some of which foresee a comprehensive implementation in 2019. The advance of digitalization will probably accelerate the approval process in the years ahead.

Potential is far from fully exploited

The efforts to date represent just the first steps of a necessary transformation. Previous solutions have focused mainly on making the necessary documents available digitally to all the relevant interfaces, and managing the entire process on a single platform. This leaves a great deal of digitalization potential unexploited. If construction regulations, zoning plans and the like were available in a machine-readable format in future, the entire planning and approval process could be significantly accelerated with a digital preliminary review.

Fig. 65: Small municipalities move faster

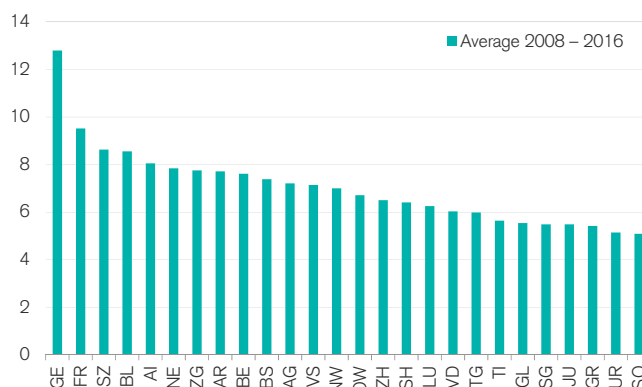
Length of building permit process in months, MFD projects by size of municipality



Source: Baublatt, Credit Suisse; n=21,830

Fig. 66: Process usually lasts from 5.4 to 7.9 months

Length of building permit process in months, MFD projects with 6 to 30 units



Source: Baublatt, Credit Suisse; n=12,081

Bleeding out

Online trade is chipping away at stationary retail business. Despite a flourishing economy, revenues fell flat. Depending upon the retail segment and how complementary it is to online trade, there is greater or lesser pressure to take action.

Despite healthy economy, barely any revenue growth in retail

The Swiss retail trade reported an estimated 0.5% increase in revenues in 2018, enjoying a tailwind from the Swiss economy (Fig. 67). The latter made a brief sprint, triggered by an economic upswing abroad that had an equally benign effect on the labor market. The unemployment rate plummeted to an average of 2.6% in 2018. Nonetheless, the robust labor market was unable to coax Swiss consumers to spend much more money. Consumer sentiment was only slightly above the long-term average in the second half of 2018. This was probably due, at least partly, to unsettling headlines about various geopolitical events at home and abroad.

Shopping tourism is less attractive

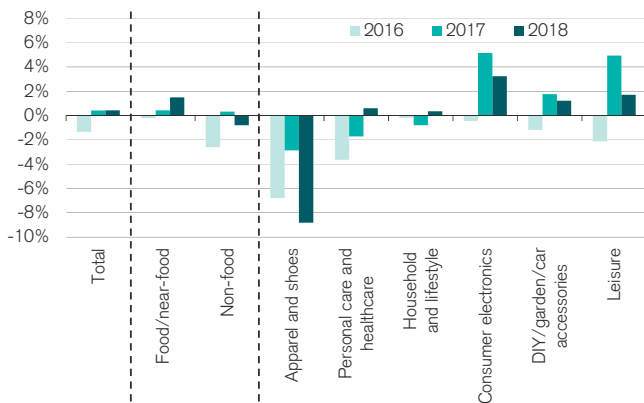
A general increase in prices had a discouraging effect on shoppers, as well as on available household income. Combined with relatively low wage growth, inflation managed to slightly erode purchasing power for the second consecutive year. On the other hand, the depreciation of the franc versus the euro in the first half of 2018 was a positive factor for the retail trade. The exchange rate development, as well as the fact that prices for consumer goods in Switzerland's neighboring countries rose more sharply there than here, made cross-border shopping less attractive than it was a year earlier. This is not to say that the price differences in certain product categories are not still substantial. In fact, the price gap to foreign markets steepened in the second half of the year when there was a marked appreciation in the franc.

Another year to forget for the stationary fashion industry

Last year witnessed some unusual weather conditions that had positive consequences for some segments, but sharply negative effects for others. The latter includes the retail apparel business, where weather factors and other extraordinary effects resulted in a painful contraction in sales estimated at 9%. Meanwhile, the leisure and do-it-yourself segments benefited from a warm spring and hot summer. All the other non-food segments, such as consumer electronics and household/interior design, also registered revenue gains in 2018. On balance, however, the collapse in clothing sales meant that revenues for the total non-food segment were lower than the previous year (-0.8% vs. 2017). The food segment was somewhat more dynamic, with sales up 1.6%, with the result that the food business once again outperformed non-food – as it did in 2016 (Fig. 67).

Fig. 67: Great discrepancies in retail sales

Nominal retail sales, year-on-year change



Source: GfK, Credit Suisse

Fig. 68: Growth only found in online channels

Nominal sales growth in retail trade



Source: GfK, Credit Suisse

2018: Credit Suisse estimate

Growth only found in online trade...

The big drop in apparel sales was due not only to the weather, but also to Zalando's renewed gains in market share, despite repeated profit warnings and thanks to the summer heat wave. The German online merchant sold an estimated CHF 800 million in Switzerland in 2018, which corresponds to nearly 10% market share. The boom in online shopping is ultimately the main reason for the disappearing revenue in stationary trade (Fig. 68). Online trade increased by 10% in Switzerland in 2017 – while total retail sales stagnated. As a result, retail sales in stationary stores are in a steady decline. Assuming that online trade increased at the same pace in 2018 as in 2017, it would mean that stationary retail sales lost another 0.5%. Thus store-based sales could not hold steady even in a phase of brisk economic growth.

...and foreign online traders benefit disproportionately

The rise of online trade particularly benefits foreign vendors. Their orders rose a disproportionate 23% in 2017. Foreign vendors, who profit from the substantial price differences between Switzerland and its neighbors, probably accounted for the greatest share of the increase last year too. Asian online vendors reported particular growth. AliExpress and Wish are two Asian players that have already climbed into the top dozen high-sales online vendors in Switzerland. The burgeoning online trade is also reflected in an increase in package volumes in Switzerland (Fig. 69). The surge of packages has swelled even higher since 2016. The Swiss Post delivered around 130 million packages in 2017. A record volume of packages in the pre-Christmas season suggests that a considerable increase will also be reported in 2018.

Further growth in online trade is on the cards

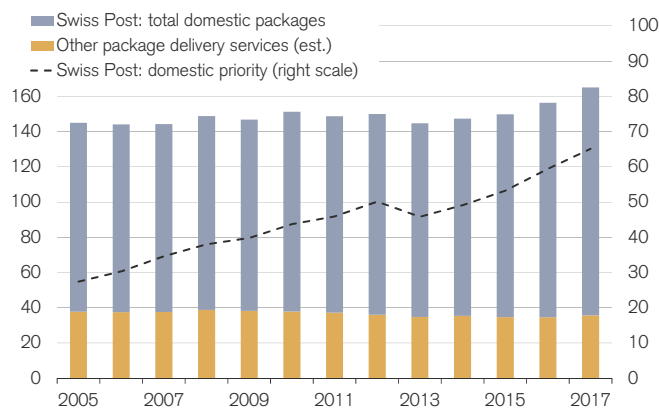
The rise in online trade is the third major challenge to confront stationary retail in recent years – after the slew of new shopping centers opened before 2010 and the surge in shopping tourism after the appreciation of the franc in 2010/2011. In contrast to the first two shocks, however, the boom in online trading is unlikely to fade away in a few years. On the contrary, revenue shifts to the online channel are almost impossible to reverse. Shoppers who have discovered the convenience of online shopping are unwilling to dispense with its advantages. The demographic aging of society alone is likely to ensure that online shopping accounts for an increasingly large slice of the retail pie. Figure 70 indicates that the share of individuals who shop online is much greater in younger generations. At the same time, the share is increasing more rapidly in the older generations. Moreover, Asian vendors, in particular, are only just beginning to target Europe as a sales market. Alibaba, for example, has announced construction of a massive logistics center with 380,000 m² of space not far from Brussels, in order to speed online deliveries to Europe.

The sector reacts with staff layoffs

Against this backdrop, it is hardly surprising that the stationary retail business is announcing restructuring plans and store closures, nor that more jobs have been cut than created in the recent past. In the first three quarters of 2018, employment in the retail business was 0.7% below the previous year's level. This trend is not new, but it has gathered strength over the last two years. By the end of 2018, there were barely 234,000 persons employed in the Swiss retail sector. This is about 16,000 workers less than ten years ago.

Fig. 69: Growing package volumes

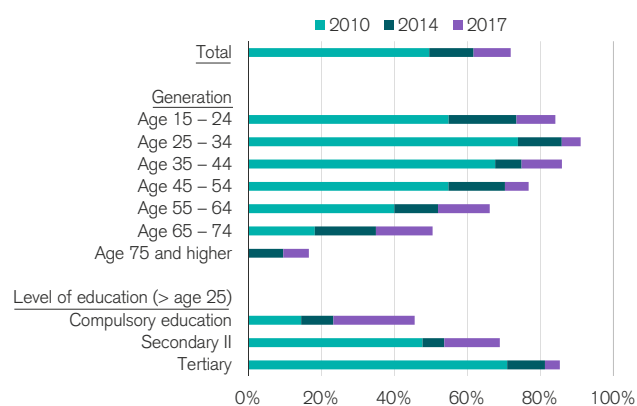
Package volumes in millions; percentage of priority packages



Source: GfK, Credit Suisse

Fig. 70: Further growth in online trade on the cards

Percentage of total population that make online purchases



Source: Swiss Federal Statistical Office, Credit Suisse

Competitive pressure is higher in Switzerland

An international comparison reveals that the Swiss retail industry is under considerable pressure due to the small size of the domestic market, the great price gap, and digitalization. Retail sales in Switzerland, adjusted for general inflation and economic performance, were lower in Switzerland than in nearly every other West European country between 2005 and 2017 – especially from 2010 onwards (Fig. 71). Rather than analyzing sales revenues per se, we observed the relationship between (nominal) sales and total wages. In the process, we accounted for differing economic conditions and overall inflation, so that we could draw conclusions about the retail sector's performance relative to country-specific economic indicators. Swiss retailers were able to compensate for some of the decline in revenues with lower purchasing costs thanks to exchange rates. Nonetheless, estimated gross revenues dipped slightly between 2010 and 2016, while total wages for the Swiss population rose 14% over the same period.

Varying degrees of suffering in retail floor space – depending on the segment

The difficult situation for retailers inevitably works through to landlords, in the form of lower demand for retail floor space, although the situation is a bit different depending upon the retail segment. Segments that are under less pressure from online trade are doing relatively well; this includes services, jewelry/eyewear, and hairdressing/cosmetics. These segments generate substantial sales growth, are expanding, and have no problems paying the rent, especially since they are raising their floor space productivity. In contrast, within the stationary retail trade, the fashion business has the greatest difficulty with these challenges. Its floor space productivity is falling at a pace that will soon make further corrections necessary. Changes and adjustments to the tenant mix are especially likely in the shopping centers and high streets where a disproportionate number of tenants are in pressurized retail trades.

High supply of space despite little construction activity

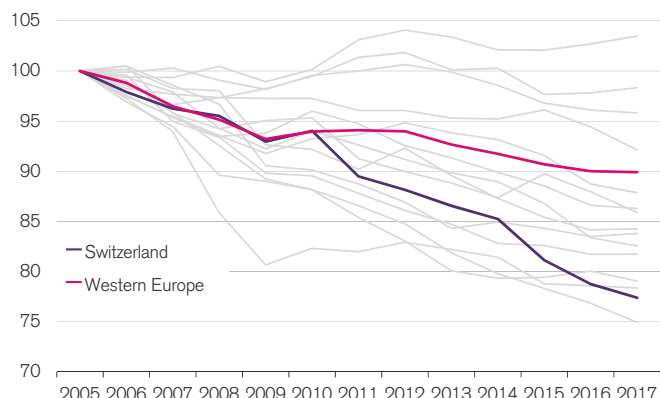
The frail condition of the market is reflected in restrained construction of new retail space. The amount of approved new retail space over the last 12 months was 30% below the long-term average. Retail space is often a by-product located on the ground floor of larger apartment buildings, which are still being produced at a brisk pace. Moreover, major players in the food retailing segment continue to optimize their branch network. Despite restrained construction activity, the amount of retail space available for lease is stuck at the high level achieved in 2014, an indicator of very weak demand.

Outlook for 2019: is the economic tailwind already past?

In 2019, the stimulus from the economy will probably be weaker than it was last year. While the labor market is still in good shape, economic growth is likely to cool off markedly. This clouding of the growth prospects heightens investor skepticism towards real estate shares that are oriented towards shopping centers and retail space in the European Union (EU). Despite positive revenue growth, such shares are losing value (Fig. 72). This suggests that fears about the effects of structural change in the retail sector have now reached real estate investors too.

Fig. 71: Weak trend in Swiss retail trade

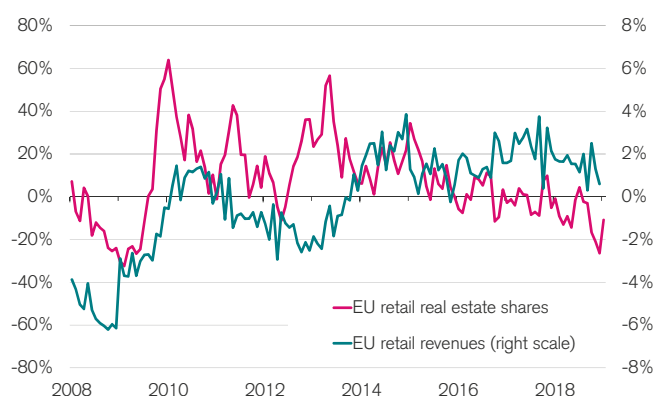
Revenues divided by total wages, index 2005 = 100; gray lines: individual West European countries; pink line: West European average



Source: Credit Suisse, Eurostat

Fig. 72: Investors punish real estate shares with retail space

Total return on retail real estate shares (left scale), Growth EU retail sales in %



Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Datastream, Credit Suisse

Last data point: 31.01.2019

City appeal threatens to fall

Online trade threatens to sharply reduce shopping frequency in the city centers. A loss of experience quality can only be prevented with a targeted strategy and proactive measures – and, unfortunately, only at selected locations.

Convenience is the last word

One of the things that is particularly futile to resist is convenience. Convenience is the most underestimated and least understood force in today’s world. Time and again, we fall under its spell when we are offered a way to complete a task more efficiently or simply. Milestones of convenience over the last century include labor-saving household appliances, prepared meals, and instant coffee. Today, we use all kinds of digital apps without a second thought because they make our lives easier, and we disregard the long-term consequences of the transparent shopper. Why should we assume that today’s consumers will still go to a store when they can order whatever they want with a few clicks from the comfort of their own home?

Online channels boast high convenience

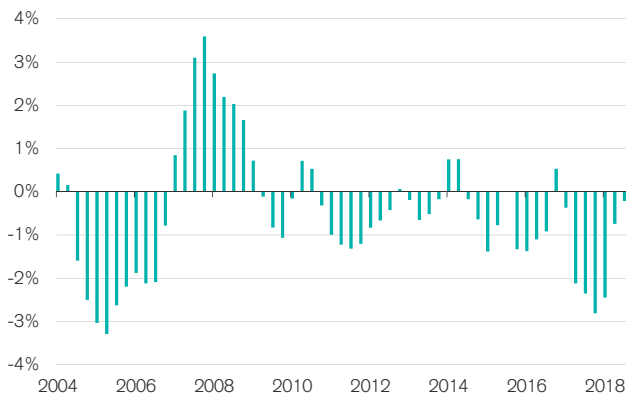
Online shopping serves several dimensions of convenience. Less time spent, no traveling required, easy home delivery, maximum flexibility in terms of opening hours, and simple payment in a click. The advantages of online shopping are so alluring that the pace of revenue shifts from stationary to online channels should actually be faster. But people are also creatures of habit, and dislike change. So they are also discovering online convenience at a leisurely pace. At the same time, this means that the revenue shift from stationary to online trade will likely continue in the years to come.

Falling contribution margins

The stationary trade has been battling falling returns for years. With every percentage point of sales that disappears, its coverage ratio declines as well. Most stationary vendors are still in a position of being able to compensate for falling sales with cost-cutting in other areas. But this situation can change quickly, as becomes evident when additional problems emerge, such as the effect of the wrong sort of weather on Swiss clothing sales, or uncertainties about Brexit in England. British retailers were reporting branch closures and restructuring on a weekly basis last year. Here in Switzerland too, adverse conditions in the apparel and shoe business in recent years left a long list of victims (Bata, Bernie's, Blackout, Charles Vögele, Companys, Jeans & Co., OVS, Pasito, Schild, Switcher, Yendi). Many retailers consequently find themselves on thinning ice. They are increasingly applying savings measures and cutting staff, as is evident in the steadily decreasing employment figures in retail (Fig. 73).

Fig. 73: Ongoing personnel cuts in retail

Retail employment, change versus previous year's quarter, 2-quarter average

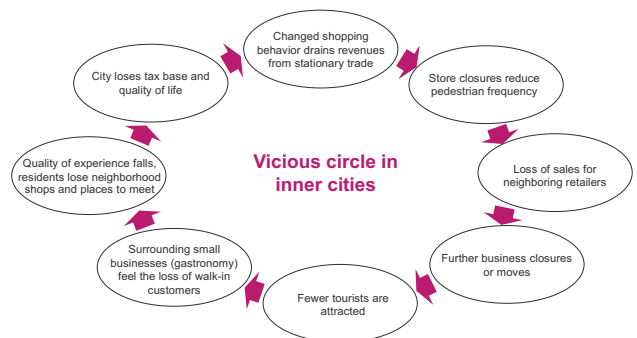


Source: SFSO, Credit Suisse

Last data point: Q3 2018

Fig. 74: Vicious circle in inner cities

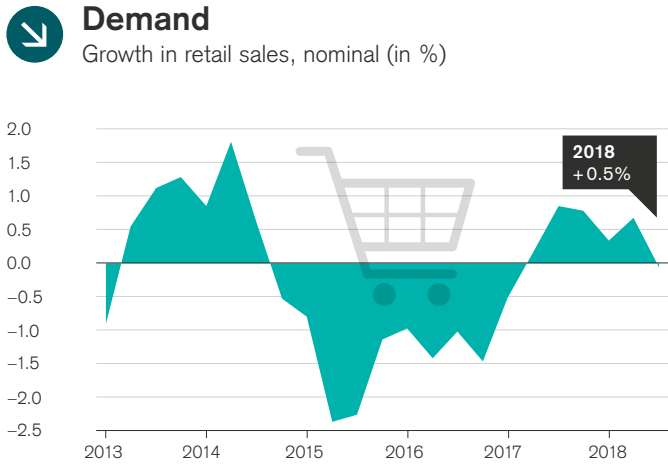
Locations outside high-traffic areas



Source: Credit Suisse

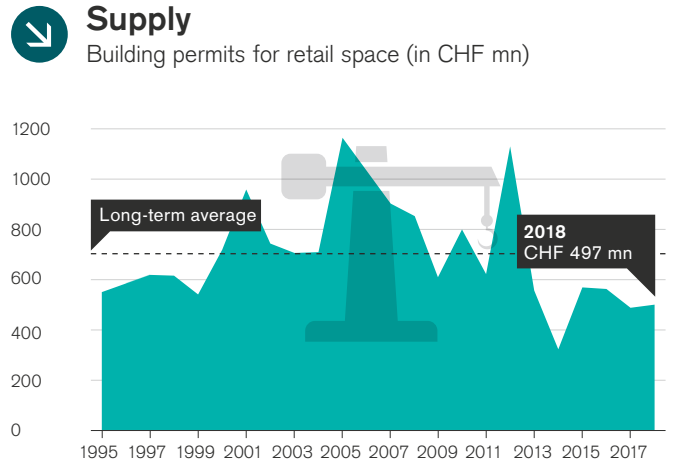
Omni channel: easier said than done	Cost-cutting also has its limits. Saving on staff can sometimes be little better than a shot in the foot. Knowledgeable advice is one of the few remaining advantages of the stationary retail trade. Job cuts thus diminish the substance of the business and illustrate how convoluted the situation is. Even the oft-cited escape route of the omni channel strategy is easier said than done. Few stationary vendors make a profit with their online channel. International online vendors employ hundreds of programmers to optimize their digital processes; how can a small stationary retailer keep up? The investments required for a self-sustaining online channel can often only be managed by big retailers, which in turn are only interested in top locations, those with the highest frequencies. There is no need for concern here; demand for such locations will probably only increase, from both on- and off-line vendors. But what will happen with the rest?
Vicious circle	As individual retail shops close, it initiates a vicious circle outside the most highly frequented streets (Fig. 74). It is becoming painfully difficult to find new tenants or renew existing leases, and the weak demand is exerting heavy pressure on lease prices. If a store remains shuttered for some time, frequencies suffer, which impacts sales in neighboring shops. As frequencies decline, the quality of experience also falls. Less lively locations are perceived as less safe, tourists are not attracted and also stay away. As a result, sales drop even faster, so that more shops and businesses are forced out of the neighborhood.
Act or react?	The problem with such a process is that it develops a momentum of its own. If the loss of frequency occurs in this phase, there is virtually no way to turn the tide. As a rule, the only remaining course is to manage the decline. So it is actually never too early to take preventive action. One important point is that the individual actors around a retail location (property owners, businesses, public sector) share a common fate. This is often overlooked by the actors themselves, or their level of pain is still low enough to function. If this realization comes too late, the window of opportunity may have closed.
Radical measures necessary	Some cities, such as Lucerne and St. Gallen, have drafted measures to counteract the creeping loss of appeal. These plans, some of which go into considerable detail, do have one flaw: they are insufficiently radical. If the greatest drawback of a high street compared to a shopping center is the lack of a comprehensive strategy and implementation, then this drawback must be overcome. An overarching management is a must, even though it means relinquishing independence in decision-making. Investors may likewise find the idea of pooling ownership rights radical, but most would rather be partial owners of a functioning operation than sole owners of sales floor space that is steadily losing revenues.
Frequency is the currency of tomorrow	Where visit frequency is high, business can be conducted – where not, even the most attractive shop will have to close its doors. Modern shopping is less and less of an organized event. The frequency factor thus deserves close attention. It is hardly surprising that retail sales have increased most clearly at junctions of public transportation. So the idea should be to concentrate frequency-bringers at selected locations. These include personal services that meet real needs of the population (such as medical services, personal care, take-aways), public service bureaus, and provision of everyday goods.
Bundling frequency-bringers at selected locations	These frequency-bringers should be concentrated with relatively high density at selected locations. To this end, not only building owners must review their portfolios, but city authorities must rethink their locations. In this environment, complementary retail outlets can be added to the tenant mix to make it unique. However, such bastions of stationary trade cannot be established all over. This means that difficult decisions are ahead in terms of evaluating the future viability of a location as well as its current tenant mix. This includes informed decisions against certain locations. City authorities should assume the role of initiator and/or coordinator here, especially since the current development calls for rapid action.

No relief from the pain



- Little urge to shop despite healthy jobs market
- Non-food revenues particularly hard hit by the rise of online trade

2019: Stagnating sales, further decline in non-food segment

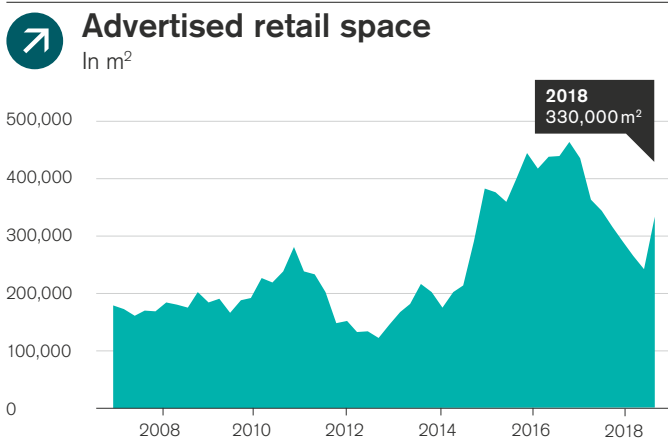


- Approved new volumes well below long-term average
- Retail space occurs mainly as a by-product of ground floor space in large-scale apartment complexes

2019: Expected increase in space less than that of a year earlier and historically low

Shopping formats in digital stress tests

Convenience shop	Department store	Shopping mall Urban Entertainment Center	Other	Shopping street (A location)	Shopping street (B/C location)
↗	↘	→	↘	↗	↘



- Despite low output of new buildings, space available for lease is growing due to intensifying structural change
- Retail space beyond the most highly frequented streets is increasingly difficult to lease

2019: Supply of retail space will rise further



- New and renewed leases outside the most highly frequented streets are increasingly possible only with lease concessions

2019: Ongoing structural change will put further pressure on rents

Sustainability increasingly important

Investor demand for sustainable investments is growing at an impressive rate. Property owners are confronted with the challenge of compiling sustainability data and creating reasonable benchmarks.

Surging demand for sustainable investments

Demand for sustainable investments has risen significantly in recent years. The Swiss Sustainable Finance platform estimates the volume of sustainable investments in Switzerland at around CHF 390 billion in 2017, an 82% increase year-on-year. Institutional investors such as insurance companies and pension funds hold a majority of sustainable investments (86%), while 14% are in the possession of private investors. Real estate and real estate investments account for some 22% of sustainable investments, making them the second most important asset class in the theme after equities with 27%.

Greater willingness to pay for sustainable space

The rapid development of sustainable real estate can be attributed to growing interest from both users and investors. Given the prevailing investment pressure in the real estate sector, sustainable properties can offer a decisive added value, since one can assume that they will maintain their value better over the long run than traditional properties. Various studies show that sustainable real estate can generate higher rental income as well as higher sales revenue. Moreover, there are further advantages associated with sustainable real estate, such as better accessibility and use, greater comfort, security, and health, as well as lower running costs thanks to more efficient use of energy and other resources.

Increasing regulation drives demand

An additional driver of sustainable real estate is the increase in regulatory requirements. On a global level, the United Nations' Sustainable Development Goals define a comprehensive framework that applies to the real estate sector in many aspects. These include, for example, sustainability goals regarding climate change and improved energy and resource efficiency. At national level, ordinances and disclosure and reporting obligations specific to real estate continue to increase. Many countries already require the energy efficiency of a property to be declared before a transaction can take place. The increasing requirements are reflected in building regulations and energy laws that are continually being tightened in order to achieve national and international climate goals.

Sustainability certificates and building labels serve as indicators

For many building users, sustainability is an important criterion when selecting space to lease. Large multinational firms, in particular, pursue a corporate policy specifically oriented towards sustainability. As a guide, they use the comprehensive ESG criteria, which address environmental, social and governance standards and aspects. In this process, sustainability certifications and building labels are important indicators which signal to what extent the space can be considered sustainable. LEED, BREEAM, DGNB, and Minergie are among the best established building credentials that represent sustainable construction.

Labels alone are not enough

Although sustainability labels are increasingly popular for commercial and private properties, they are not often easily comparable. Many labels were developed as a result of national initiatives, and have country-specific characteristics with emphasis on different points. So building labels alone do not offer a full sustainability valuation in the sense of the ESG criteria. Professional managers of real estate investments thus face the challenge of evaluating their property portfolio with relevant sustainability criteria that stand up to a comprehensive ESG review. Labels and certifications are just one aspect. For international real estate portfolios with properties in different countries, the challenge becomes that much more complex, since different standards apply.

ESG benchmarking to know where one stands

In the meantime, the Global Real Estate Sustainability Benchmark (GRESB) has become established as the leading initiative in the field of ESG valuation. The GRESB identifies the sustainability performance of real estate objects and portfolios worldwide according to uniform ESG criteria. To this end, it is oriented towards two leading international reporting standards: the Global Reporting Initiative (GRI) and the Principles for Responsible Investment (PRI). The participating real estate companies and investment managers can compare their sustainability performance with their benchmark group and with the overall global ranking (Fig. 75). Moreover, an annual benchmark survey indicates in which areas their sustainability performance can be improved.

Systematic evaluation and global establishment of GRESB

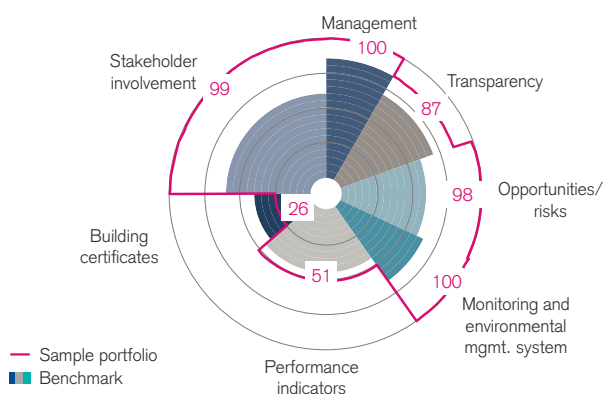
In 2018, as part of the GRESB, more than 900 leading real estate companies and real estate funds in 64 countries were examined in terms of their ESG and sustainability performance (Fig. 76). In the process, the GRESB assessed a total real estate value of more than CHF 3.5 trillion and around 79,000 properties. Depending on the size of the portfolio, its use and the country allocation, peer groups are evaluated and compared in a benchmark. This process ensures an objective comparison among the very diverse real estate portfolios. Differences in the use of the properties is of particular concern, since the application of ESG criteria in an office building can vary significantly from that in a building devoted to retail sales or logistics. So for example, the energy and resource consumption of an office building should be evaluated differently than that of space for logistics or commercial retail trade. Moreover, the GRESB ensures that real estate portfolios of the same or similar volumes are compared to each other, especially since many smaller real estate companies and real estate funds have only a limited focus on ESG and sustainability criteria. In this way, economies of scale for the participating funds are excluded.

GRESB as an evaluation platform for institutional investors

Many participating managers of real estate investments also use the GRESB to establish contact with their investors regarding ESG and sustainability performance. More than 75 institutional investors, who combined represent more than CHF 17.7 trillion in institutional assets, use the GRESB data and GRESB analysis tools to make an informed selection of sustainable real estate funds and thus optimize their risk-return profile and shareholder value. In this light, the GRESB represents both a systematic measurement of investment managers' ESG performance and an adequate evaluation on the investor side, which brings fresh momentum into the universe of sustainable real estate investment solutions. The benchmark creates transparency for ESG criteria, which allows for and promotes a successive optimization of their own sustainability performance. Developments in past years confirm the rise of competition in terms of one's own sustainability performance, which even the leading real estate companies and investment funds in the Swiss real estate market, as well as Swiss institutional investors, are increasingly unable to avoid.

Fig. 75: Comprehensive ESG evaluation thanks to GRESB

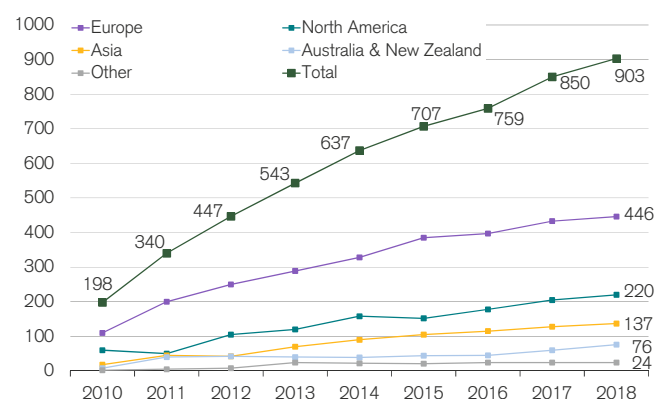
Performance in the main GRESB categories of a Credit Suisse sample portfolio



Source: GRESB

Fig. 76: Increasingly widespread GRESB benchmarking

Number of participants in GRESB assessments



Source: GRESB, Credit Suisse

Comprehensive ESG evaluation

In a comprehensive ESG evaluation, the GRESB examines the participating listed and non-listed real estate companies on the basis of the criteria management, transparency, opportunity/risk, performance indicators, monitoring and environmental management systems, stakeholder involvement, new construction/conversion, and building certificates (Fig. 75). In total, some 50 indicators are reviewed in these main categories. Besides questions on sustainability strategy and its implementation, and concrete responsibilities in the company (e.g. to what extent a monitoring and environment management system is present), quantitative performance indicators such as consumption of energy, CO₂, and water, as well as generation of waste, for individual properties play a key role in the benchmark.

Gathering the key data is a challenge

For many real estate managers, compiling all the required information and making it available is a challenge. However, only what is measured can also be managed. Figure 77 compares the end-consumption of energy and CO₂ emissions of a large portfolio. The transparency gained about one's own portfolio is a fundamental precondition for a systematic optimization over time. Since the GRESB was founded in 2011, ESG performance has become increasingly transparent. Real estate companies can also earn points with their sustainable engagement in the community, charitable initiatives, the creation of community centers or other social action connected with their real estate portfolio. Sustainability certificates and building labels are also part of the evaluation. However, they are simply one aspect of the overall ESG performance evaluation.

A good place to start: optimization measures in operations

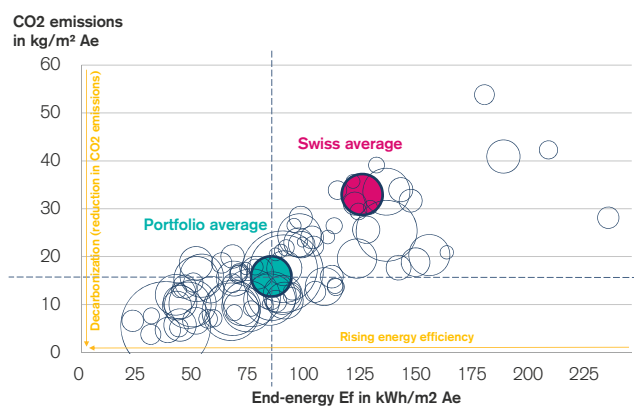
Simple optimization measures in a business can be a good launching pad for a sustainability strategy. They often reveal savings opportunities that are quite significant. For example, in the Sihlcity shopping center, optimizing heating curves and limits, optimizing timers, and using heat pumps produced savings of 1.68 million kWh p.a. With input from weather forecasts, buildings can be heated or cooled earlier, which translates into more economical heating and cooling cycles and helps to lower both heating and maintenance costs. From 2010 to 2016, the energy consumption of the shopping center complex was slashed by 19% and CO₂ emissions by 25% (Fig. 78). Of course, this also lowered energy costs. Such measures can produce rapid success, which supports progress along the adopted strategy. Moreover, they allow more time for collecting the necessary key data.

Making it possible to measure and optimize sustainability

The results of the annual ESG benchmarking are published in September. In addition to the overall GRESB score, participants are evaluated in terms of environment (E), social engagement (S), and corporate governance (G). Additionally, ESG performance is highlighted with a rating from one to five stars. Furthermore, comprehensive analysis instruments are available and benchmark comparisons are possible. The establishment of GRESB as a leading standard in the real estate sector for the systematic evaluation of sustainability performance and as a market benchmark has significantly raised the transparency of ESG criteria for investment managers of real estate. Thanks to the GRESB initiative, sustainability in the real estate sector can be measured and compared. Only in this way can ESG performance be systematically optimized and defined sustainability objectives be achieved.

Fig. 77: Comprehensive transparency down to object level

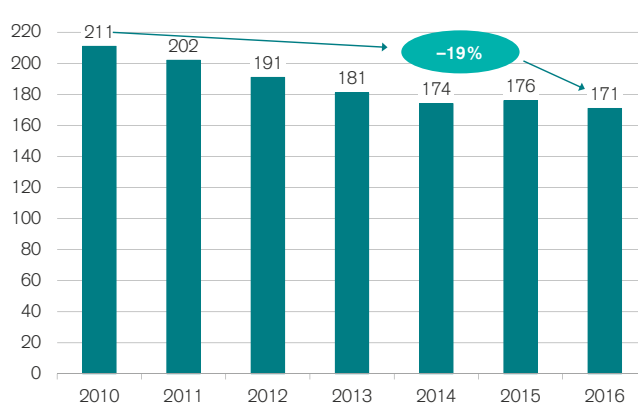
Benchmarking Energy end-consumption and CO₂ emissions



Source: Credit Suisse

Fig. 78: Optimizing operations can also lower costs

Energy consumption Sihlcity (kWh/m²)



Source: Credit Suisse

Real estate is indispensable

In the challenging market year 2018, valuations on indirect real estate investments corrected – though not to the extent experienced by other investments. As a result, the price-risk ratio for listed real estate funds now looks quite attractive again.

Defensive qualities of Swiss real estate funds

Real estate investors could not escape the downward spiral that dominated the markets in 2018. Shares of the Swiss real estate companies listed on the SIX stock exchange in Zurich turned in a total yield of –2.1% (Fig. 79). Real estate funds lost even more ground (–5.3%). However, the correction was even sharper for both the broad-based SPI stock index (–8.6%) and the real estate shares of the euro zone (–11.6%). Hence once again indirect Swiss real estate investments turn out to be relatively stable investments in times of heightened uncertainty.

Yield premiums at an interim high

There is still no end in sight to the era of negative interest rates. On the contrary, long-term interest rates slumped at the end of the year, so that yield premiums on funds (310 basis points) and equities (400 basis points) versus government bonds climbed to their highest level in two years. Thus real estate investments continue to ride a strong tailwind from interest rates.

Many capital market transactions in non-listed funds

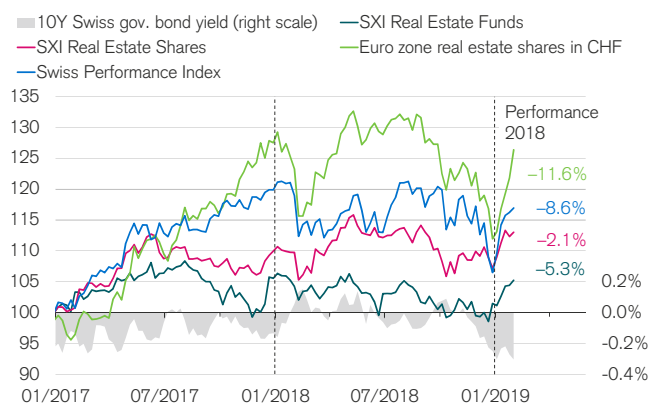
Capital market transactions for real estate funds listed in Zurich were unusually high in 2017. Capital increases, new launches, and new listings for a value of around CHF 3 billion were executed. This volume fell to CHF 990 million in 2018 (Fig. 80). However, it would be premature to assume that investor interest in real estate funds was waning, based on the negative performance and decreasing capital market transactions in the benchmark index (SXI Real Estate Funds). Rather, a considerable portion of the transactions shifted to small caps and non-listed vehicles. In 2018, around CHF 2.5 billion flowed into such funds, some of which are accessible only to qualified investors. On balance, the amount of capital taken up nearly matched the figure for 2017, which was one factor for the weak annual performance.

Setback quickly made up for again

As a result of the negative performance, agios on the listed funds also contracted markedly. On average, they were at 15.6% at the end of 2018 (2017: 28.3%) and were thus below the long-term average for the first time in nearly five years (Fig. 80). In contrast to today, interest rates at that time were still well within positive territory. At the beginning of 2019, investors took advantage of the favourable valuation - measured in terms of interest rates - as a buying opportunity, whereupon the average agio rose again to 20.6% by the end of January.

Fig. 79: Value corrections on Swiss funds and shares

Total performance of indirect real estate investments, index: January 1, 2017 = 100; 10-year Swiss government bond yield



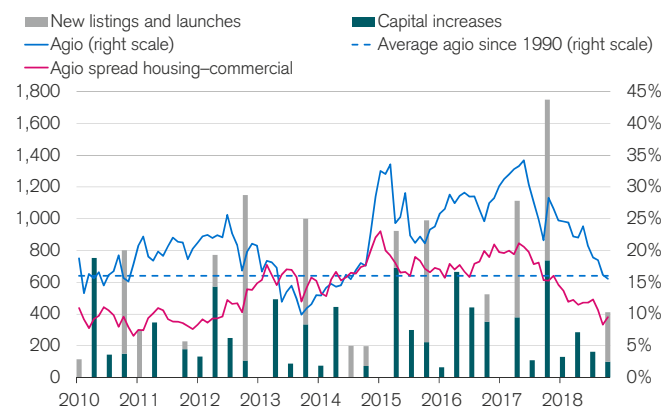
Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Datastream, Credit Suisse

Last data point: 01/2019

Fig. 80: Agio back to the long-term average

Trend in agios of listed real estate funds (right scale) and capital market transactions



Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Datastream, fund providers, Credit Suisse

Last data point: 12/2018

Real estate shares and funds with commercial focus are sought after

The narrowing trend in agio spreads between funds with a residential focus and those with a commercial focus continued in 2018. By the end of 2018, the agio premium for residential property funds was 9.5 percentage points (Fig. 80) – the figure has not been this low since 2012. Office space particularly benefits from the benign economic environment (page 35 f.), while the housing market remains in the grip of a growing oversupply (page 28 f.). Rising investor demand for vehicles with a focus on business properties probably explains at least part of the real estate companies' outperformance of funds (Fig. 79).

Vacancy trends of the different segments converging

The outperformance by commercial properties of residential space is also expressed in the trend in vacancies of the various funds. Shortfalls in rental income by listed real estate funds increased, on balance, compared to the previous year (from 5.0% to 5.1%). It was the third year of lost income for funds focused on commercial and mixed-use properties, and amounted to 5.4%. In contrast, the shortfall in income for residential funds rose from 3.8% to 4.9% between 2014 and 2018.

Investors pay increasing attention to vacancies

Within the category of residential real estate funds, investors are increasingly focusing on vacancies (Fig. 81). Funds with greater than average shortfalls in rental income (>7%) had a significantly lower agio, at 7.6%, than those with a lower-than-average shortfall (<4%), which had an average agio of 19.5% at the end of 2018. The decline in agio compared to the previous year was most pronounced, at 17.2 percentage points, for the funds with the highest vacancies.

Real estate shares react more sharply to business cycles...

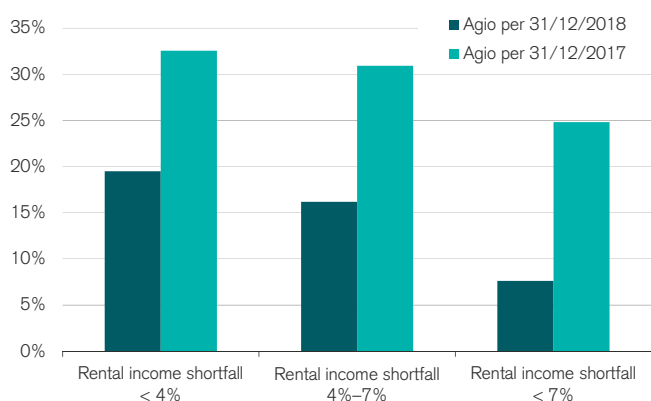
In a direct comparison of real estate shares and real estate funds, the momentum was thus greater on the side of real estate companies. They are less involved in the residential segment and benefit to a greater extent from the economic upturn. Compared to real estate funds, however, they are also more cyclical and would be considerably harder hit by an economic downturn.

... real estate funds, on the other hand, are more sensitive to interest rate cycles

At the same time, the longer the upturn lasts, the greater the probability that interest rates will rise. International market data indicate that in times of rising long-term interest rates, real estate investments significantly underperform the broad equity indices, on average (Fig. 82). In the past, this was equally true for Swiss real estate shares and real estate funds. The latter would react with much greater sensitivity to changes in interest rates. When interest rates are falling, they achieved a 6.1-percentage-point higher yield, on a long-term average, than in phases with rising interest rates. For real estate shares, the same spread was just 2.8 percentage points. Longer term, investors who expect a scenario of lasting low interest rates should thus prefer real estate funds. On the other hand, those who expect a lasting economic revival should overweight real estate shares.

Fig. 81: Investors are increasingly sensitive to vacancies

Real estate funds focused on residential properties: agios by extent of shortfall of rental income

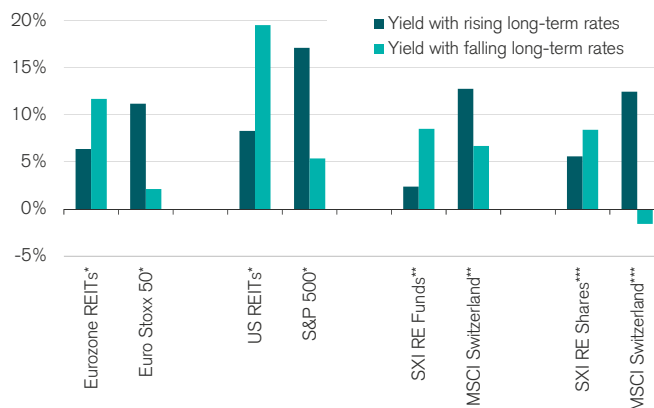


Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Fund annual and semiannual reports, Datastream, Credit Suisse

Fig. 82: Interest rates affect real estate funds more than real estate shares

Comparison of annualized yields on indirect real estate investments and stock indices; * Q1 1990 – Q4 2018, ** Q1 1995 – Q4 2018, *** Q1 1999 – Q4 2018



Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Bloomberg, Datastream, Credit Suisse

Focus on quality

Direct real estate investments remain popular, and their upward potential has not yet been fully exploited. Investors’ risk appetite, however, is reaching its limit.

Solid returns delivered in 2018

The run on “concrete gold” continued in 2018, without, however, picking up the pace. Planning applications indicate that investments in building construction for a total of CHF 46.6 billion were submitted (–7.5% year-on-year). According to the IAZI Investment Real Estate Index, prices for residential and mixed-use investment properties rose 2.4%, resulting in a still respectable total yield of 5.7% (average for the past 30 years: 4.7%). Rental income is still under pressure, although the outlook for office space has improved thanks to a cyclical recovery in demand.

Higher risk premiums in the countryside

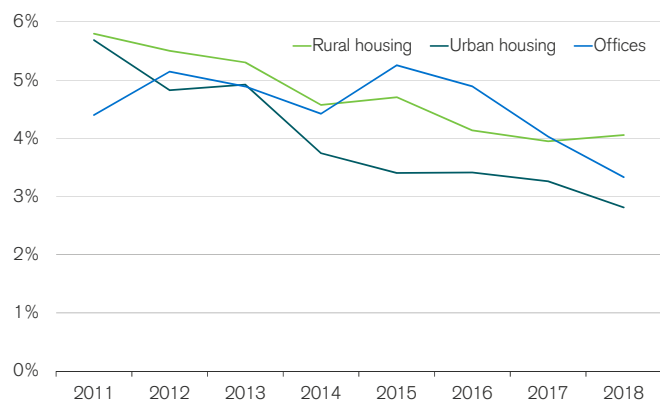
The persistently high demand for investment properties is reflected in constant pressure on initial yields. According to the transaction database of the Real Estate Investment Data Association (REIDA), gross initial yields on office space (3.3%) and urban housing (2.8%) hit new lows in 2018 (Fig. 83). The figure for housing outside the centers, on the other hand, rose slightly from 3.9% to 4.1%. The increase in the yield spread between urban and rural housing is probably the result of heightened risk awareness among investors, who are demanding a higher risk premium given the rising vacancies in rural areas. In other words: investors have begun a flight to safer locations.

“Hidden reserves” in the valuations create a buffer

Despite rising vacancies and falling rents on the market for rental apartments, and a low probability of further interest rate stimulus, the market values of investment properties should continue to rise in the current year and beyond. Even if the Swiss National Bank were to begin lifting benchmark interest rates towards the end of the year, a rapid downward correction is unlikely. This is due to the “hidden reserves” that are built into property valuations. The discount rates that determine the current value of future cash flows in the Discounted Cash Flow method have not fallen to the same extent as interest rates (Fig. 84). The difference between a typical market discount rate and the long-term swap rate has decreased slightly over the last two years, but was still well above the long-term average at an estimated 330 basis points (bp) in 2018. The sluggishness of the discount rates thus acts as a safeguard against sharp short-term volatility in market values.

Fig. 83: Rising urban-rural divide in initial yields

Gross initial yields on housing: transaction-based initial yields for institutional investors, median per segment

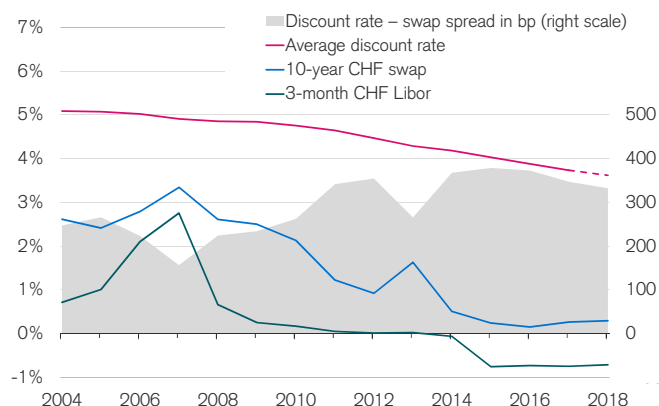


Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Real Estate Investment Data Association (REIDA), Credit Suisse

Fig. 84: Upside potential not yet fully exploited

Trend in interest rates and discount rates based on real estate funds evaluated by Wüest Partner; 2018: extrapolation



Source: Annual reports of various real estate funds, Datastream, Credit Suisse

Urban locations see strongest rise in value since 2010

The greatest gains in value over the last eight years were achieved on residential properties in central locations. In Zurich, the average gain between 2010 and 2017 was 4.8% (Fig. 85). The surge in the city gave a considerable lift to properties throughout the canton. Market values also climbed (by up to 4% p.a.) in other central regions, including Zug, Lucerne, Bern, and along Lake Geneva between Lausanne and Geneva. More modest valuation gains, of less than 2%, were reported in the more peripheral regions of Eastern Switzerland, Canton Jura, and many areas of Bern.

Locational quality pays off

While real estate investors must thus content themselves with increasingly lower initial yields on investments in urban residential properties, they have profited from significant value gains in recent years. And when these taper off eventually, they can still benefit from stable rental income, especially since the probability of vacancies falls sharply as locational quality rises (page 28).

Recipe for success: cost efficiency and...

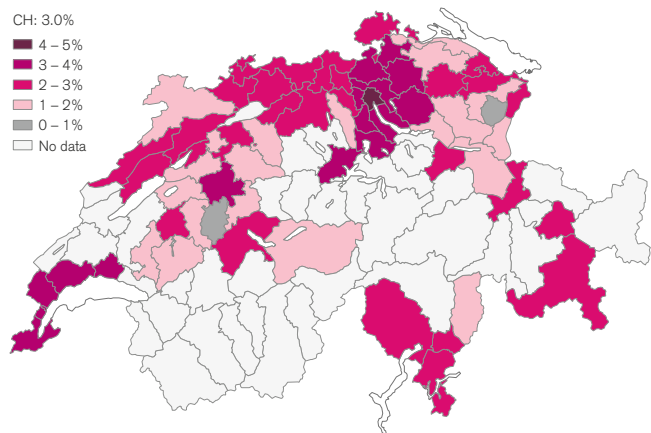
With gross initial yields well below 3% in some cases, however, greater cost efficiency is absolutely essential for long-term success. Professional investors with access to the relevant know-how and optimized structures have a distinct advantage. So it is not surprising that a surge in professional investors has been observed in the market for residential properties in recent years. According to data from the Swiss Federal Statistical Office, more than 57% of rental apartments were still owned by private individuals in 2000. By 2017 the figure had fallen to 49%, and for apartments built after 2000 it was only just over 39%. A majority of these apartments are owned by development and real estate companies (11.7%) or other firms (41.3%). Most of the latter are probably institutional investors.

...exploiting potential rental income

Another success factor is to fully exploit potential local rental income. This is possible when equipped with profound market knowledge and appropriately informed decisions in terms of price segment, building standards, floor plan, or apartment size. With the latter, a change in trend is emerging: while area per room had increased steadily over decades, the area per room has been falling in recent years in the major cities (Fig. 86) and has nearly stagnated in other municipalities. Investors are thus reacting not only to high demand for reasonably priced housing in central locations, but also to various social and demographic trends. Households have decreased in size over the years, and the most common type in cities is the single person household. Other trends, such as having multiple residences and families rediscovering cities (page 25) promote smaller housing units. Households are also opting more and more frequently for good locational quality, e.g. more expensive space. In return, they are prepared to reduce their consumption of floor space. The previously mentioned higher value gains in the urban regions consequently relate not only to investor preferences, but also to tenant preferences.

Fig. 85: Strongest value gains around Zurich

Trend in regional market values of residential investment properties, 2010 – 2017 (annualized)

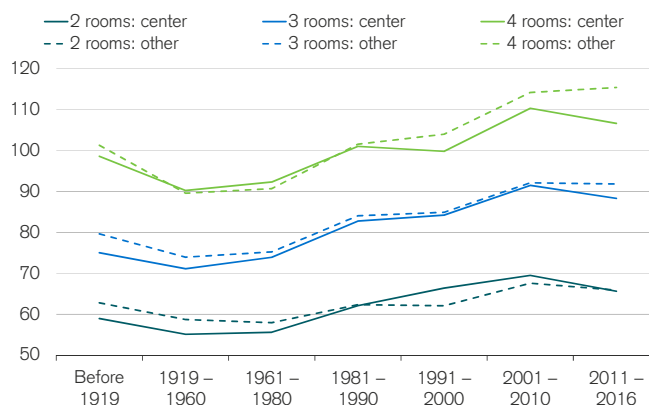


Past performance is no guarantee of future returns. Performance may be affected by provisions, fees and other costs, and exchange rate fluctuations.

Source: Meta-Sys AG, REIDA, Credit Suisse, Geostat

Fig. 86: Urban apartments are shrinking

Average apartment area (in m²) by number of rooms, year of construction and type of municipality (major center/other municipality)



Source: Swiss Federal Statistical Office, Credit Suisse

Real estate delivers returns

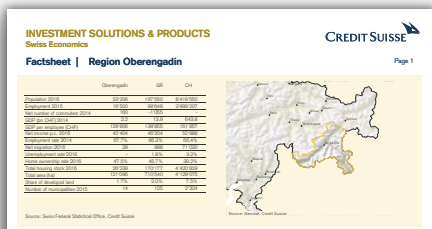
**Indirect investments:
focus shifts to
maintaining value and
yields**

After a difficult year 2018, indirect real estate investments in general and real estate funds in particular started the new year with attractive valuations. Already in January the majority of the lost ground was made up again. The correction in the previous year ultimately proved to be exaggerated, since yield premiums relative to fixed-income investments were steady at a high level or even moved back towards their long-term highs. Institutional investors typically have heightened investment needs in January, since they must invest the cash from year-end payments into tax-privileged second- and third-pillar accounts. Confronted with the dilemma of choosing an asset class that can generate positive returns at manageable risk in the prevailing environment, many investors have again opted for real estate, setting off a recovery in the sector. With few expectations of a change in interest rates, and a relatively benign economy, similar investment decisions will likely follow throughout the year, which would help real estate funds and shares towards a positive annual performance in 2019. Additional positive stimulus could arrive from further delay of the initial increase in benchmark interest rates by the Swiss National Bank. On the other hand, growing difficulties in closing new leases on the apartment market, and future increases in interest rates, are perceived as risk factors. So investors are likely to focus their attention on income yields and opt for real estate investments that promise solid and long-term returns. Given fundamentally better market conditions for office and industrial properties, the agio spread has already narrowed significantly between real estate funds with a commercial focus and those with a residential focus. We therefore expect a comparable performance by both types of funds over the course of the year. We identify an advantage for funds with low rental income shortfalls, good regional diversification, and manageable agios.

**Direct investments:
gradual onset of
normalization**

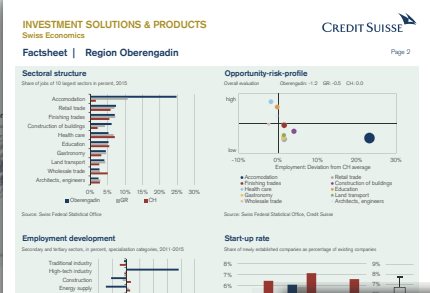
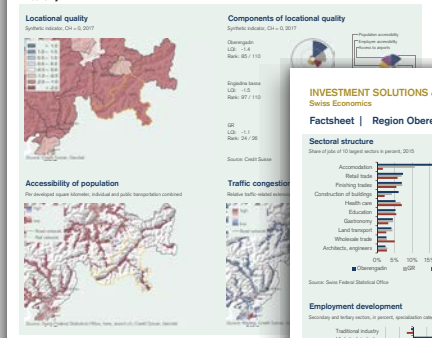
Despite the recently observed dip in planning for new developments, the volume of new buildings coming onto the market in 2019 will likely be comparable with last year's. While residential space will be confronted by a partially over-saturated tenant market, commercial space should be able to benefit in the near term from the current economic revival. On the transaction market, we expect a further rise in risk premiums for properties outside the most attractive locations. Regional mild price corrections cannot be ruled out in the cases of housing in rural regions and offices on the periphery. However, in the coveted central locations, prices may continue to increase slightly. Here, owners of existing properties should benefit from rising market values – even in the unlikely event of a rate hike by the Swiss National Bank in the fourth quarter. Beyond the current year, however, the current income from investment properties should move increasingly to the foreground. For the time being, value gains on the scale of those in recent years cannot be expected, especially in the residential market.

Factsheets : Regional real estate markets at a glance



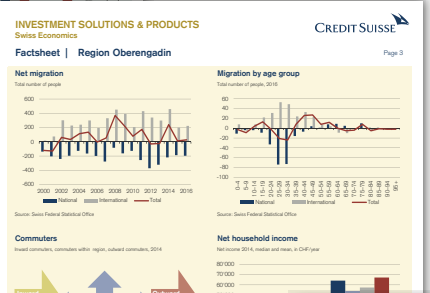
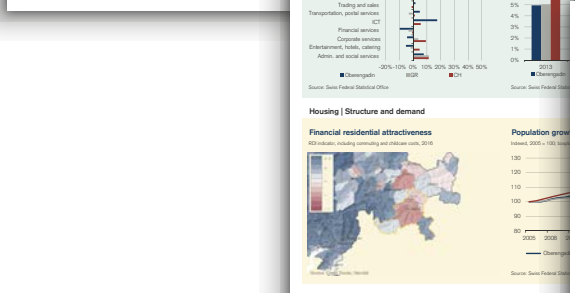
Periodically updated key indicators for the 110 economic regions

What are the locational qualities of the Oberengadin economic region? What sectors are particularly important for the region? How high are house prices in the region's municipalities? The Credit Suisse Factsheets answer these and many other questions concerning the regional economy, demographic developments and housing markets. Regularly updated statistics are presented in the form of meaningful diagrams, tables and maps.



Regional economy and demographic developments

Are you planning to tap into new locations with your company or would you like to gain a picture of an economic region? The Credit Suisse Factsheets offer you up-to-date statistics on topics such as locational quality, accessibility and population developments.



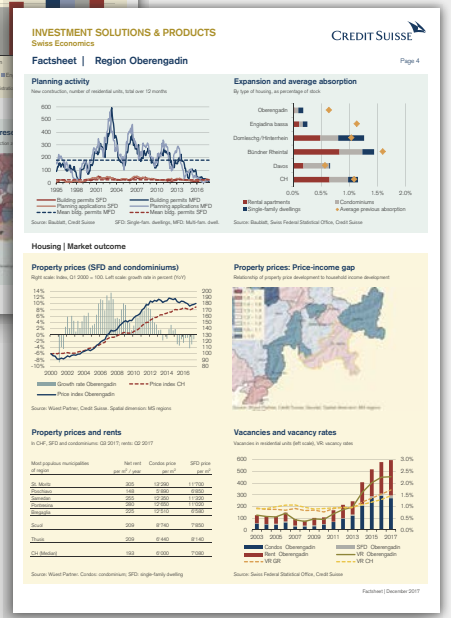
Regional housing markets

Are you planning to relocate or would you like to buy a home or investment property? The Credit Suisse Factsheets provide you with key facts about the regional housing market including indicators such as the age of existing housing, vacancy rates, planning activity and much more besides.



House prices and rents

Would you like to gain an overview of regional house prices and their development or compare the prices of different municipalities of the region? This information can also be obtained from the Credit Suisse Factsheets.



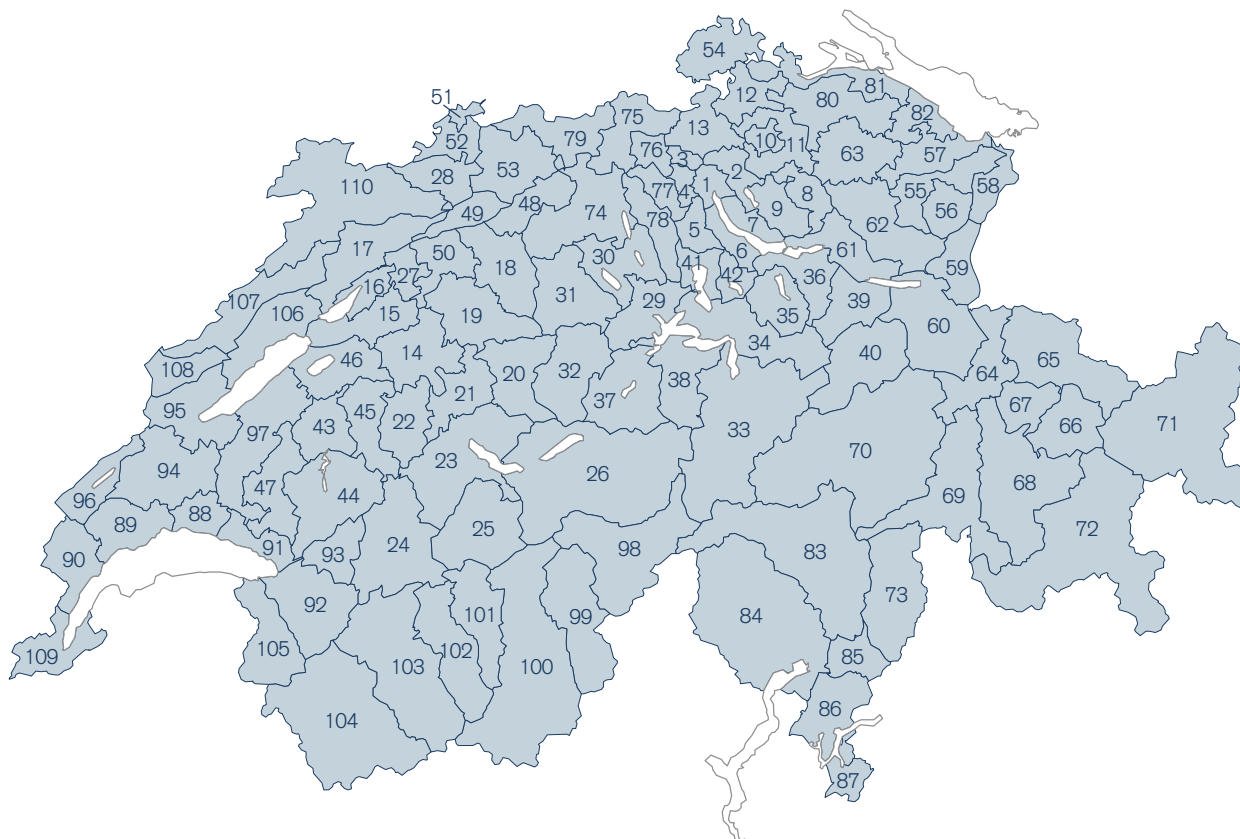
How to order individual Credit Suisse Factsheets:

Please contact your Credit Suisse client advisor to order factsheets on the individual economic regions in your preferred language (English, German, French or Italian). You will find a list of Switzerland's 110 economic regions on the next page.

Appendix : Switzerland's economic regions

Credit Suisse Swiss Economics has defined these economic regions on the basis of the Mobilité Spatiale regions used by the Swiss Federal Statistical Office. Political borders play less of a role in the definitions than economic phenomena, geographical and demographic features, and mobility patterns. Consequently, some of these economic regions straddle cantonal borders.

Switzerland's economic regions



1 Zürich-Stadt	23 Thun	45 Sense	67 Schanfigg	89 Morges/Rolle
2 Glattal	24 Saanen/Obersimmental	46 Murten	68 Mittelbünden	90 Nyon
3 Furttal	25 Kandertal	47 Glâne/Veveyse	69 Domleschg/Hinterrhein	91 Vevey/Lavaux
4 Limmattal	26 Berner Oberland-Ost	48 Olten/Gösgen/Gäu	70 Surselva	92 Aigle
5 Knonaueramt	27 Grenchen	49 Thal	71 Engiadina bassa	93 Pays d'Enhaut
6 Zimmerberg	28 Laufental	50 Solothurn	72 Oberengadin	94 Gros-de-Vaud
7 Pfannenstiel	29 Luzern	51 Basel-Stadt	73 Mesolcina	95 Yverdon
8 Oberland-Ost	30 Sursee/Seetal	52 Unteres Baselbiet	74 Aarau	96 La Vallée
9 Oberland-West	31 Willisau	53 Oberes Baselbiet	75 Brugg/Zurzach	97 La Broye
10 Winterthur-Stadt	32 Entlebuch	54 Schaffhausen	76 Baden	98 Goms
11 Winterthur-Land	33 Uri	55 Appenzell A.Rh.	77 Mutschellen	99 Brig
12 Weinland	34 Innerschwyz	56 Appenzell I.Rh.	78 Freiamt	100 Visp
13 Unterland	35 Einsiedeln	57 St. Gallen/Rorschach	79 Fricktal	101 Leuk
14 Bern	36 March/Höfe	58 St. Galler Rheintal	80 Thurtal	102 Sierre
15 Erlach/Seeland	37 Sarneraatal	59 Werdenberg	81 Untersee/Rhein	103 Sion
16 Biel/Seeland	38 Nidwalden/Engelberg	60 Sarganserland	82 Oberthurgau	104 Martigny
17 Jura bernois	39 Glarner Mittel- und Unterland	61 Linthgebiet	83 Tre Valli	105 Monthey/St-Maurice
18 Oberaargau	40 Glarner Hinterland	62 Toggenburg	84 Locarno	106 Neuchâtel
19 Burgdorf	41 Lorzenebene/Ennetsee	63 Wil	85 Bellinzona	107 La Chaux-de-Fonds
20 Oberes Emmental	42 Zuger Berggemeinden	64 Bündner Rheintal	86 Lugano	108 Val-de-Travers
21 Aaretal	43 La Sarine	65 Prättigau	87 Mendrisio	109 Genève
22 Schwarzwasser	44 La Gruyère	66 Davos	88 Lausanne	110 Jura

Source: Credit Suisse

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