

Swiss Real Estate Market 2017

March 2017

Tenants wanted



Single living
Living alone

Rental apartments
**Downturn progressing
at full speed**

Data centers
**The cloud has a home
too**

Imprint

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Management summary

Tenants wanted

Despite rising vacancies and increasing times on market, capital is flowing into the Swiss real estate market where it is primarily leading to the construction of rental apartments. In view of the high yield spreads to other investments, there are barely any alternatives for investors. However, the longer the run on real estate investments lasts, the more it will undermine its own basis and the search for tenants will become more difficult.

Owner-occupied housing Page 7

Home ownership – a fata morgana?

After 14 years, the price growth in the residential property sector is at an end. However, despite slightly falling prices, the ownership segment remains in calm waters. In contrast to the other markets, there is no oversupply prevailing or foreseeable. The promoters of owner-occupied housing recognized at an early stage that the high prices in combination with tightened financing guidelines were curtailing and partially deflecting demand. Despite a restrained expansion of supply, however, the market environment is also not getting any easier for owner-occupied housing. A growing number of households are no longer able to shoulder the financing of owner-occupied housing due to the increased financial requirements. The low mortgage interest rates are in this sense merely an optical illusion for many households. Demand in the current year will therefore continue to concentrate more on regions with prices that are still affordable as well as the low and mid-priced segments. While we expect a continued rise in prices in these regions, prices in the high-price regions and the high-price segment in general are expected to fall further – although at a lower speed. Altogether we expect a downturn in 2017 not exceeding 0.5%.

Special focus: Single living Page 16

Living alone

Single-person households are today the most common type of housing in Switzerland and this is likely to remain the case. The reasons for living alone are varied and not always self-chosen and there are also major differences in terms of the type and shape of single dwellings. An innovative residential concept has recently arisen from the trend toward single living in the form of micro apartments that are optimally tailored to the needs of many single households in terms of zeitgeist and requirements.

Rental apartments Page 21

Downturn progressing at full speed

The downturn in the rental accommodation market that set in last year will continue in 2017. The negative interest environment prevailing for over two years and the investment crisis resulting from this are driving the construction of rental apartments to very high levels – despite the fall in demand due to lower immigration. Thanks to the gradual recovery of the economy from the franc shock we do not expect any further decline in immigration. Nevertheless, the structural trend toward lower tenant purchasing power is set to continue because immigrants are increasingly coming from poorer countries and well-off Swiss households are switching to home ownership. Vacancies and time on market are set to increase further and marketing become more difficult. The cut-throat competition for tenants will therefore become more intense. While the risks in the market are therefore rising, tenants are finding it easier to find accommodation and increasingly also benefiting from lower rents. The oversupply will in future increasingly be felt in the agglomerations as construction activity is being stepped up above all in these municipalities. Housing altogether only remains scarce in the urban centers where the lack of land and a high regulatory burden are hindering the growth of supply.

Special focus: Rent regulation Page 30

Decades waiting for a rental apartment

Compared internationally, Switzerland's rental accommodation market works very well. It is based on a compromise between tenant protection and restrained market intervention. This model has come under increasing attack recently and there are calls for further regulations. However, excessive regulation of the rental accommodation market entails risks for tenants if the market forces are undermined. We pointed in the 2014 Real Estate Study based on the example of the rental accommodation market in Geneva to the unintended consequences for tenants. Another example is the rental accommodation market in Stockholm. While rents in the Swedish capital are affordable, this comes at the price of a shortage of housing on a scale hardly to be found in any other city. Anyone looking for a rental apartment in Stockholm above all needs one thing: patience. It can take up to two decades after applying before actually moving into an apartment.

Office property
Page 34

Unclear demand outlook

The savings pressure due to the strong Swiss franc is forcing companies to enhance their processes and reduce costs. This is affecting the office property market in the form of resource-efficient workplace models or cuts in jobs that are falling victim to either automation or outsourcing abroad. Despite these demand-curbing developments, economic growth should altogether suffice to generate moderate additional demand for office space again this year. Spurred on by the negative interest rates, expansion is now remaining at its present level and not being deterred by the oversupply. Construction is often being carried out for the investor's own needs, at very good locations and increasingly above all in medium-sized centers. The oversupply is barely likely to shrink in this situation. Vacancies are merely shifting and concentrating on poorly accessible or aging office properties. Altogether the downturn is slowing down, as can also be seen from the stabilization of advertised office space. However, rents are continuing to fall and the long-term prospects for the demand for office space are also uncertain. Digitalization is stimulating the automation of office activities and it remains to be seen whether new activities can offset loss of rationalized office jobs quickly enough.

The five largest office property markets in detail
Page 40

Each of the five largest office property markets has a slightly different character

On which districts has demand recently been focusing? How is the volume of advertised office space developing and how much space is still in the pipeline? You will find the answers to these questions in our analysis of the five largest markets which together account for 45% of all office property.

Special focus:
Digitalization
Page 51

From digital day to digital age

Every business leader has, sometime during the last few years, experienced his or her personal "Digital Day". The day he or she personally recognized that digitalization is not just a trend that could be built into their existing business, but is rather a trend that in all likelihood would fundamentally disrupt their own business model.

Retail property
Page 54

The crisis is getting worse

We do not expect any improvement in the marketing of retail property in 2017 despite a slowdown in the downturn of retail sales. The market remains firmly within the grip of the structural change. The dynamic online trade is skimming market shares every year and placing the sector before major challenges. At the same time a lot of money is flowing abroad – in both online and bricks and mortar retailing. Further portfolio and structural adjustments are therefore to be expected in bricks and mortar retailing, which means that the demand for retail space, which is largely based on the food/near-food segment, is correspondingly weak. The marketing situation only looks better in the large cities and at locations with excellent accessibility. The situation is not made any easier by the fact that as a consequence of the boom in the construction of rental apartments a number of additional retail and commercial properties are being developed as a result of regulatory requirements. It is only thanks to a considerable reduction in the expansion of space at shopping malls and specialist stores that the imbalances are not getting completely out of hand. Nevertheless, very long times on market have to be accepted and the weak demand is continuing to put significant pressure on rents.

Special focus:
Data centers
Page 62

The cloud has a home too

Data centers form the core of our modern IT infrastructure and play a critical role for many companies and organizations. The current developments surrounding Industry 4.0 and the Internet of Things (IoT) are increasing the requirements for IT infrastructure and will strongly drive the demand for data center space. This poses opportunities for investors who are not afraid of making targeted niche investments in their quest for yields and growth prospects. However, high building and location requirements and a relatively manageable demand group call for a detailed analysis of potential investment properties.

Real estate investments
Page 66

Attractive but no sure-fire success

Real estate investments will also remain very high up in investors' favor in 2017. Although the yield spreads to alternative investments have passed their peaks, demand for "concrete gold" should remain robust for as long as the negative interest rates prevail – particularly among institutional investors. There is simply a lack of alternatives to solve investors' yield problem without excessive risk. However, it is likely to become increasingly difficult to maintain the good performance of the previous years as according to the arbitrage theory, further capital will be fed into the comparatively high-yielding real estate market where it is consistently putting yields under pressure. It is only possible to evade this yield pressure through a switch to niche segments, a considered selection of investment properties or by investing in international real estate markets.

Owner-occupied housing

Home ownership – a fata morgana?

Home ownership has already been a dream beyond reach for some time for average earners in the urban centers and sought-after residential areas. This situation is now increasingly arising in peripheral regions as well because prices there have recently also risen sharply. Home ownership is for many households therefore increasingly resembling a Fata Morgana. The low mortgage interest rates are in this sense merely an optical illusion as the high property prices are largely not affordable for the average owner due to the tightened regulatory requirements. It therefore comes as no surprise that the regulatory requirements are coming under criticism and that both buyers and mortgage providers are seeking ways of nevertheless securing the funding. Options on the part of buyers include cutting back on space requirements, switching to less expensive areas and buying used properties. Meanwhile, mortgage lenders are attempting to take full advantage of the regulatory leeway.

Demand: New properties are too expensive for many

Demand for owner-occupied housing is being influenced by two contrary effects: on the one hand the extremely low mortgage interest costs that are stimulating demand and on the other the high imputed financing requirements that together with the high prices are in many cases preventing the acquisition of owner-occupied housing. Those who own their own homes are benefiting from temptingly low living costs thanks to the ongoing extremely low level of mortgage interest rates. As of the end of 2015, working homeowners on average paid mortgage interest of CHF 8,170 per year. Measured against gross income, the burden therefore lay at a very low 6.6%. The average mortgage interest rate has continued to fall since the end of 2015 so that the current interest burden is now likely to be even lower.

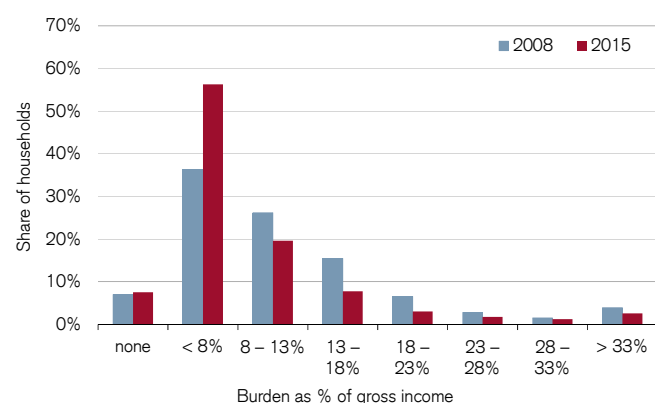
Temptingly low mortgage interest costs

Majority of households with interest burden of less than 8% of income

Although the mortgage interest burden is currently very low, there are some significant differences. 56% of homeowners have a burden of less than 8% measured against their income (Figure 1). For a further 20% it lies between 8% and 13%. Only 2.6% of all owner households had to bear a burden above the critical threshold of 33% at the end of 2015. The main cause of the large differences lies in different loan-to-value ratios. Despite tax incentives, 7.5% of all homeowners do not have a mortgage or have repaid this. The vast majority of homeowners are therefore able to finance their own four walls effortlessly. The low mortgage expenses, much of which are markedly lower than the rent for a comparable home, are also not going unnoticed by tenants. The desire for home ownership therefore remains unwaveringly high among many tenants and demand correspondingly strong.

Figure 1: Actual mortgage interest burden

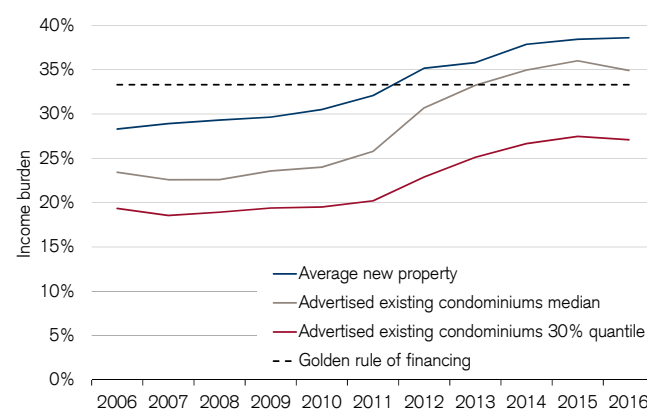
Mortgage interest burden as % of household gross income



Source: Swiss Federal Statistical Office, Credit Suisse

Figure 2: Imputed affordability

For average household as % of income under the following parameters: 5% interest, 1% maintenance, 80% loan-to-value ratio, repayment on two thirds within 15 years



Source: Credit Suisse

Average mortgage interest burden set to fall again in 2017

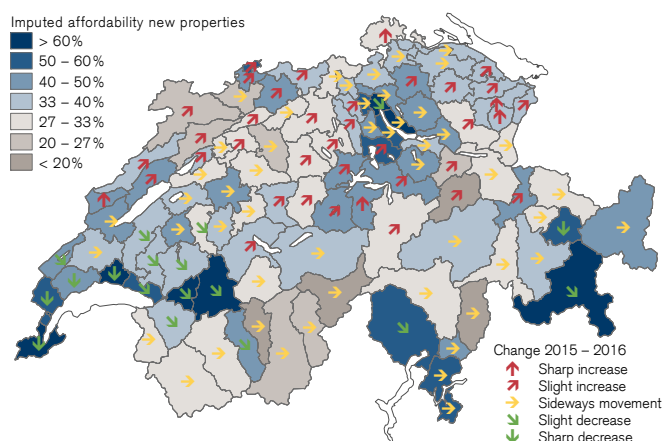
In 2017, mortgage interest rates on new mortgages will barely be able to build on the lows reached in the previous year any more due to the interest rate turnaround in the USA. Nevertheless, the average interest rate burden will fall again in the current year as many households are still able to renew their expiring fix mortgages at better conditions than when they originally took out the loan. This will be reflected in a further cut in the base rate as of June 2017. A comparison with the year 2008 illustrates how extraordinarily favorable the current situation is for homeowners. Back then, an owner on average had to pay CHF 12,000 for his mortgage, which was equivalent to 10% of his income (Figure 1). However, the rapid rise in the returns on ten-year government bonds in the USA from 1.36% last July to 2.60% in December at the same time reminds us that these cost savings are not set in stone.

New properties too expensive for the majority of households

However, despite an unbroken strong desire for home ownership, fewer and fewer households are able to afford this as the years go by. The reason lies in the price levels reached and the high imputed financing hurdles due to regulatory requirements. According to the imputed affordability criteria, an average new property is today out of reach for the average Swiss household. On a national average, almost 39% of gross income would have to be spent on this, which is above the critical threshold of one third (golden rule of financing) (Figure 2). The high prices around Lakes Geneva, Zurich and Zug are prompting households to switch to the surrounding regions. This has also resulted in accelerated price growth there. As a result, an average household in these regions is today also largely no longer able to afford any new properties. This is now the situation in 68 out of the 106 regions (Figure 3).

Figure 3: Imputed affordability of new condominiums/ single-family dwellings

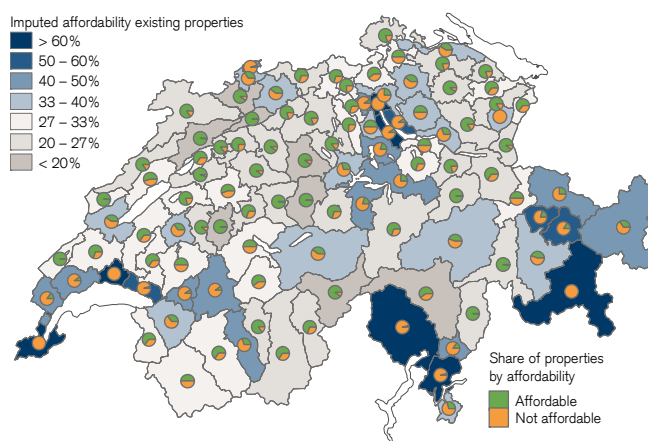
For average household as % of income under the following parameters: 5% interest, 1% maintenance, 80% loan-to-value ratio, repayment on two thirds within 15 years



Source: Credit Suisse, Geostat

Figure 4: Imputed affordability of existing condominiums

For average household as % of income under the following parameters: 5% interest, 1% maintenance, 80% loan-to-value ratio, repayment on two thirds within 15 years



Source: Credit Suisse, Geostat

Existing properties as an alternative

But this does not have to mean that the dream of home ownership is over. If a single-family dwelling or a modern, spacious condominium is too expensive, it is sometimes possible to fall back on existing condominiums advertised for sale. Although here too more than half of all properties advertised throughout Switzerland have since 2013 no longer been affordable for the average household (Figure 2). This is largely due to the large number of advertised properties in the high-price regions and the upper price segment. The imputed affordability of 30% of all condominiums advertised throughout Switzerland in 2016 (30% quantile) comes to no more than 27% for an average household.

Affordable properties are available but rare

The supply of affordable properties varies by region. While the imputed costs outside the high-price regions are largely bearable, the supply of affordable properties in the high-price regions is mostly restricted. For instance, around 80% of all existing condominiums are currently affordable for a household living in the Aarau region (Figure 4) but this is only the case for 10% of such properties for an average household in the Pfannenstiel region. Meanwhile, there are no suitable properties at all in the City of Zurich. It should also be noted that for existing properties additional costs for any necessary refurbishment also need to be borne in mind next to the advertised price. This can potentially result in substantial extra costs. Nevertheless, the assessment here

shows that the desire for home ownership can still be fulfilled for many households with an existing property.

Space consumption of home owners has increased sharply

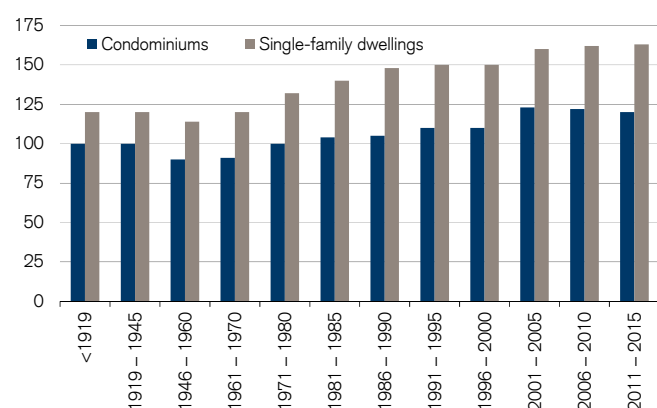
One of the factors responsible for today's high property prices is not least the sharp rise in space consumption in recent decades. Figure 5 illustrates the increasing size of condominiums and single-family dwellings by construction period. Single-family dwellings from the period between 1946 and 1960 have an average living space of 114 m². By contrast, the average size of single-family dwellings constructed between 2011 and 2015 is 163 m² – this despite the fact that the average household size has fallen considerably over the same period (see special focus on single living, p. 16 ff.). The key driver of this development is affluence. The considerably larger number of two-income households in particular has boosted household budgets further and increased living space consumption.

Significantly more living space per capita among homeowners

The average space available to households currently amounts to 114 m² in a condominium and 142 m² in a single-family dwelling. Per capita this corresponds to space consumption of 51 m² in condominiums and 52 m² in single-family dwellings. This is significantly more than with rental apartments (41 m²) and cooperative housing (37 m²). The major differences will largely be due to geographical factors. Living space in the urban centers where rental apartments prevail is scarce and therefore expensive. However, the greater space consumption also reflects the high importance attached by homeowners to their homes and the larger financial resources they frequently have at their disposal.

Figure 5: Home ownership living space by construction period

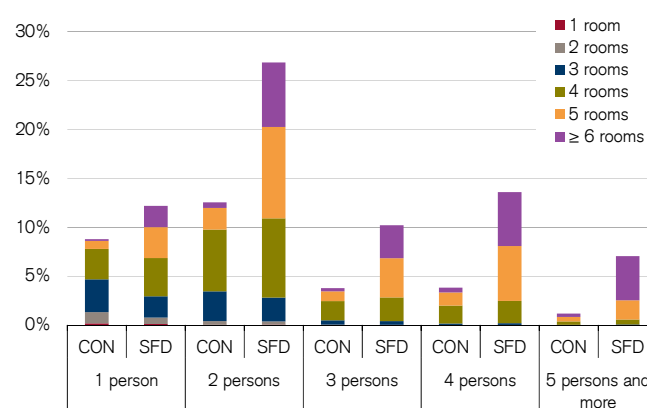
Average living space, in m²



Source: Swiss Federal Statistical Office, Credit Suisse

Figure 6: Homeowner household by size

As % of all homeowners; CON: condominium, SFD: single-family dwelling



Source: Swiss Federal Statistical Office, Credit Suisse

High prices curbing space consumption

However, the trend toward more living space among homeowners has no longer continued in recent years. While minimum growth was registered for single-family dwellings, the average space of newly constructed condominiums fell for the first time from 123 m² to 122 m² in the period from 2006 to 2010 and then shrank to 120 m² between 2011 and 2015. The sharp price rises of the past few years are primarily responsible for this. They are forcing households to make financial concessions when purchasing property, for instance in the form of lower space consumption. By contrast, increasing sensitization with regard to the urban sprawl barely appears to be bringing about any changes in behavior yet. Although according to a recent study by Lucerne University of Applied Sciences and Arts 10% of all households consider their space consumption to be too high¹, these households do not display any more readiness than the other parties surveyed to adjust their housing situation. This confirms the development of single-family dwellings. In regions where building land is cheap, many households prefer to opt for a generally larger single-family dwelling rather than a condominium. The ongoing high prices in combination with the high financing hurdles are set to continue to curb space consumption in the years to come.

Two-person households dominating home ownership

Not only space consumption but also the size of households has changed markedly in recent decades. At 39%, two-person households are today the most important demand group for own-

¹ See Lucerne University of Applied Sciences and Arts (2016): Wohnflächenkonsum und Wohnflächenbedarf

er-occupied housing (Figure 6). The share of single-person households is also remarkably high at 21%. We discuss this finding in more detail in [special focus: Single living](#) (p. 16). It is also frequently forgotten that throughout the country and among all household sizes the single-family dwelling still remains the more common type of housing as opposed to condominium ownership that has only existed since 1965.

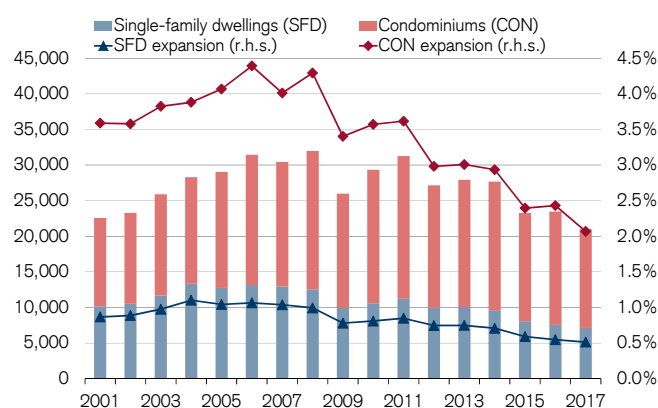
Supply: New construction activity returning to normal

Residential property construction decreasing further

The production of owner-occupied housing is continuing to decline. The net increase in condominiums and single-family dwellings is set in 2017 to be the lowest since measurements began back in 2001. Altogether we expect an additional 21,000 residential units (Figure 7). Compared with last year this represents a decline of 10.5%. Since the peak of 2011, a third fewer owner-occupied properties are now being constructed. However, it is only the ownership segment that is affected by the lower construction activity. Thanks to continued very strong rental apartment construction (see [chapter on rental apartments](#), p. 21 ff.) the net increase altogether remains at a very high level with an estimated 47,500 residential units.

Figure 7: Net increase and expansion of owner-occupied housing

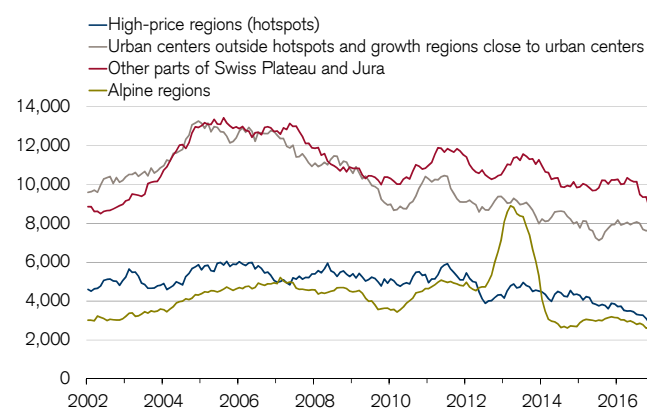
Net increase in residential units; right-hand scale: expansion as % of stock



Source: Credit Suisse, Baublatt, Swiss Federal Statistical Office

Figure 8: Owner-occupied housing building permits

By type of municipality, number of residential units, moving 12-month total



Source: Baublatt, Credit Suisse

Normalization of condominium production

The expansion rate of condominiums has fallen from 4.3% in 2008 to 2.1% in the current year (Figure 7). However, the sharp downturn needs to be put into perspective as the stock of condominiums back in 2007 only comprised around 450,000 units. In absolute terms the net increase fell less markedly but nevertheless clearly from 19,000 to 14,000 residential units (–29%). In view of a respectable 2.1% expansion, we must consider condominium production to be normalizing rather than collapsing.

Building land for single-family dwellings too expensive in many places

The construction of single-family dwellings is also declining. We expect expansion in the current year of 0.5% (Figure 7). Annual growth of single-family dwellings has meanwhile fallen short of the growth of new households for years. The single-family dwelling is therefore losing importance. However, it is not the case that there is no more demand for single-family dwellings. Instead the downturn is primarily attributable to the high building land prices. The construction of single-family dwellings does not stand a chance today in many places where the zoning ordinance also permits condominiums. However, in rural regions the single-family dwelling still remains the measure of all things thanks to lower land prices. For example, seven out of ten newly approved owner-occupied properties in the Canton of Jura are currently single-family dwellings.

Conversion of rental apartments into owner-occupied housing ...

One uncertainty factor for the future development of the supply of owner-occupied housing remains the high production of rental apartments. The reason for this lies in the continued very large number of construction projects for which the builders are leaving open the intended use or planning mixed uses. Out of almost 43,000 apartments approved in multi-family dwellings in 2016, the type of housing is not specifically determined for around 13,000. We expect around 60% of these to be used as rental apartments. However, as a growing oversupply is developing on the rental apartment market (see [chapter on rental apartments](#), p. 21 ff.), some investors could switch from rental apartments to condominiums. This is currently taking place not only with

new construction projects but occasionally also with buildings that have come onto the market in recent years but are still struggling with sales problems.

... and of owner-occupied housing into rental apartments

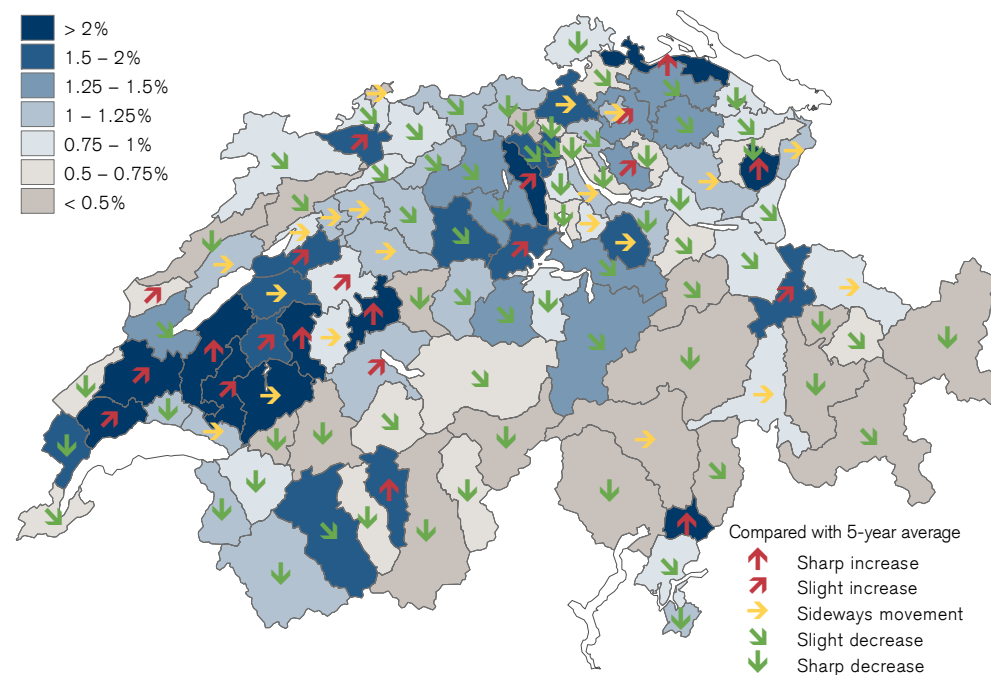
At the same time, a number of condominiums are presently being purchased for investment purposes and immediately let out by their owners. However, according to estimates no more than a fifth of all current loans are attributable to such 'buy to let' transactions. The true expansion in the supply of owner-occupied housing has therefore been lower in recent years. However, the rising number of vacancies in rental accommodation also entails an increasing letting risk for owners so that the number of these transactions is tending to fall.

Low construction activity for owner-occupied housing in the urban centers

The slowdown in construction activity is most distinctly manifested in the urban centers where property is most expensive (Figure 8). The decline here came to more than 31% in the last 12 months alone. A downturn of almost 58% has now been recorded since the peak of 2006. However, a different situation holds in the commuter municipalities surrounding the urban centers: A decline of just 2.1% was observed in the suburban municipalities and 3.3% in the per-urban municipalities within the year. The decrease in the other municipalities was also limited with the exception of the tourism municipalities (-20.9%). On a regional basis the future construction activity of owner-occupied housing is above all concentrated in the cantons of Vaud and Fribourg, in Central Switzerland, in Thurgau and in the west of Zurich – i.e. primarily in regions still retaining a comparatively moderate price level (Figure 9). Demand has thus shifted away from the high-price regions in recent years.

Figure 9: Planned expansion of owner-occupied housing

As % of stock of owner-occupied housing and compared with the five-year average (arrows)



Source: Credit Suisse, Baublatt, Geostat

Market outcome: Marketing becoming more expensive

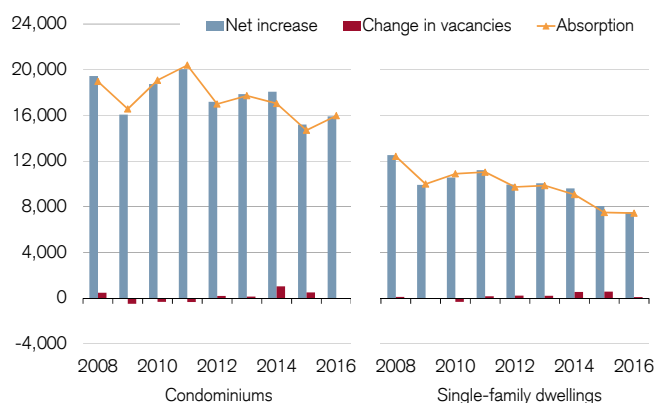
Supply and demand largely in balance

The owner-occupied property market is more or less in balance. Thanks to the swift reaction of project developers to saturation trends and regulatory slowdown measures, the additional supply has fallen almost in line with demand. This is reflected vividly in the absorption of condominiums and single-family dwellings that in the past few years has been practically equivalent to the net increase in residential units (Figure 10). Vacancies have therefore only increased marginally in recent years. Vacancies of condominiums even fell slightly in 2016 and currently lie at a low 0.83% (Figure 11). The vacancy rate of single-family dwellings is even lower at 0.39%. Unlike the rental accommodation market, there is still no sign of any oversupply of owner-occupied residential property. In view of a further decline in construction activity in the current year, it can

be assumed that the present balance between supply and demand will persist and there should barely be any increase in vacancies.

Figure 10: Absorption of owner-occupied housing

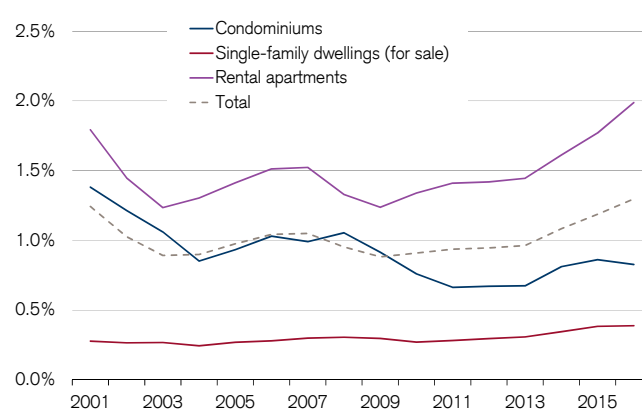
Net increase, change in vacancies and absorption in number of residential units



Source: Credit Suisse, Swiss Federal Statistical Office

Figure 11: Vacancies of residential property

As % of applicable stock



Source: Credit Suisse, Swiss Federal Statistical Office

Tourist destinations with higher vacancies

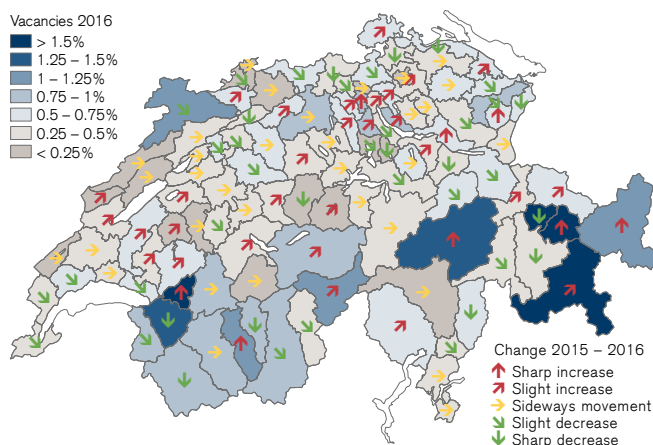
Contrary to the nationwide trend, vacancies in the high-price regions around Zurich have largely risen, although they still remain at a very low level (Figure 12). A different situation holds in the area around Lake Geneva where vacancies are in some cases already decreasing again while prices continue to fall. By contrast, vacancies in the Vaud hinterland and the Canton of Fribourg are largely increasing. Here too the levels are still not problematic. Vacancy levels of residential property are practically only worth mentioning at tourist destinations which are continuing to suffer from the consequences of the second home initiative and the strong Swiss franc. However, the oversupply triggered by the second home initiative and the legal uncertainty are likely to be of a temporary nature.

Abandonment of seller's market

A detailed analysis of properties advertised online reveals that the stable performance of the owner-occupied housing segment does not apply to all properties. Although the supply rate of existing condominiums fell within the year from 3.7% to 3.4% and that of single-family dwellings from 1.9% to 1.8%, the time on market rose significantly over the same period (Figure 13). The average time on market has risen from 84 to 121 days for condominiums and 78 to 108 days for single-family dwellings. What at first glance appears to be an astonishingly steep rise in time on market marks a gradual abandonment of the seller's market.

Figure 12: Regional vacancies of residential property

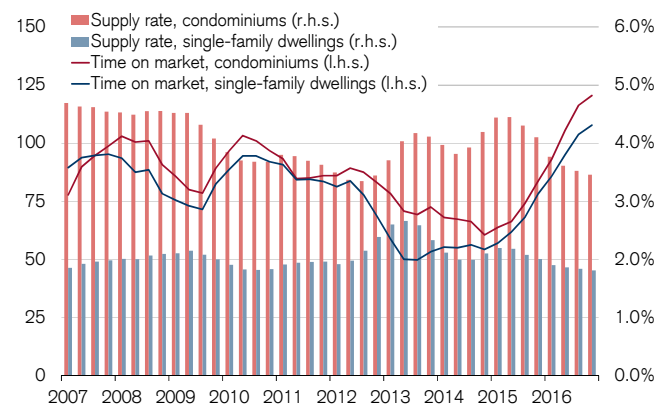
As % of stock of owner-occupied housing



Source: Credit Suisse, Swiss Federal Statistical Office, Geostat

Figure 13: Supply rate and time on market

Existing properties, supply rate as % of applicable stock; time on market in number of days



Source: Meta-Sys AG, Credit Suisse

Are price expectations to high?

For a long time it was customary for advertised properties to change hands at a higher price than originally advertised. The tightened regulatory requirements in recent years and the price levels now reached have meant that certain groups of buyers are no longer able to shoulder the financ-

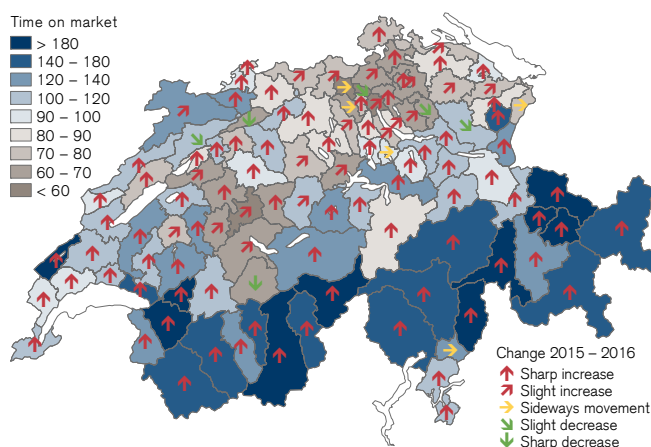
ing and have disappeared from the market as buyers. Many sellers have not yet sufficiently realized this shift away from a seller's market and have too high expectations regarding sale prices. The consequence lies in advertised properties that cannot be sold at the price offered and in some cases only find a taker after price reductions.

Greater marketing costs above all in high-price regions

Rising time on market is currently being observed almost universally for both condominiums and single-family dwellings (Figure 14). At present, owner-occupied properties in the high-price regions around Lakes Geneva, Zurich and Zug are on average being advertised for even longer than in the surrounding regions. For example, the average time on market of condominiums in the Pfannenstiel region is 86 days, compared with just 69 days in Zurich Unterland. This reflects the increasing difficulty of marketing expensive homes in the high-price regions. Longer time on market of residential property also serves to confirm the difficult current market situation in many tourist regions. For instance, condominiums in Arosa are at present advertised for an average of 190 days.

Figure 14: Time on market of condominiums (regional)

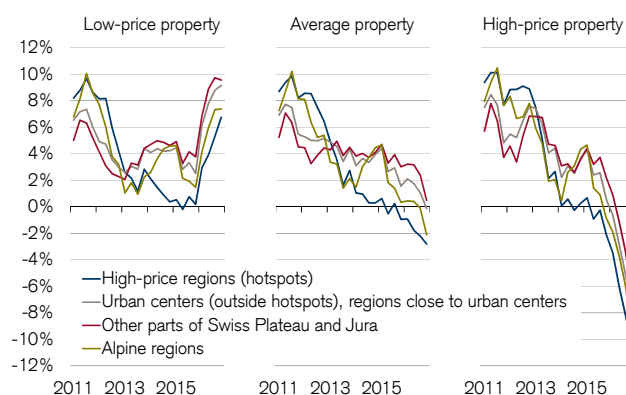
Existing properties, average in days



Source: Meta-Sys AG, Credit Suisse, Geostat

Figure 15: Price growth of owner-occupied housing

Annual growth by property standard and geographical aggregate



Source: Wüest Partner, Credit Suisse

End of the 14-year price rise

The longer time on market appears to be having an effect. The increase in residential property prices lasting for 14 years came to an end in the fourth quarter of 2016. Year-on-year property prices fell, although at -0.8% the downturn remained moderate. However, price performance varies not only regionally but also in terms of property standards. While prices are falling sharply in the high-price segment and partially in the medium segment, a significant price increase can be observed in the low-price segment. The shift in demand to lower price segments has pushed up the prices of low-price properties by 7% to 10% in the past year. Furthermore, within the low-price segment the high-price regions are at the lower end and the peripheral regions in the Swiss Plateau and the Alps at the upper end of the price growth spectrum (Figure 15). Meanwhile, the opposite development applies to the high-price segment: Price falls here are practically universal. The prices of high-price properties in the high-price regions have fallen by more than 10% in the last four quarters alone.

Low-price properties up, high-price properties down

In the medium segment the downturn of price growth is now also leading to largely falling prices. Prices in the high-price regions (-2.8%) and Alpine regions (-2.1%) are clearly going down. However, the picture in the urban centers and regions close to the urban centers is divided, as is altogether reflected in a decline of 0.1% . While price growth in the remaining parts of the Swiss Plateau and the Jura once again slowed down perceptibly, it remains in positive territory at 0.5% . The Lake Geneva Region and the Alps are the regions most strongly affected by the price falls (Figure 16). Since the spring of 2013, prices in the Canton of Geneva have decreased by almost 12%. Slight price reductions can also be observed in large parts of the Canton of Zurich and in isolated parts of Eastern and Central Switzerland. This contrasts with ongoing price increases particularly in peripheral regions. For example, prices in Schaffhausen went up by a further 3.3% in 2016.

Falling prices also to be expected for 2017

Owner-occupied housing prices are on average also set to fall in 2017. However, owing to the slowdown in construction activity, moderate to low vacancies and the friendly interest environ-

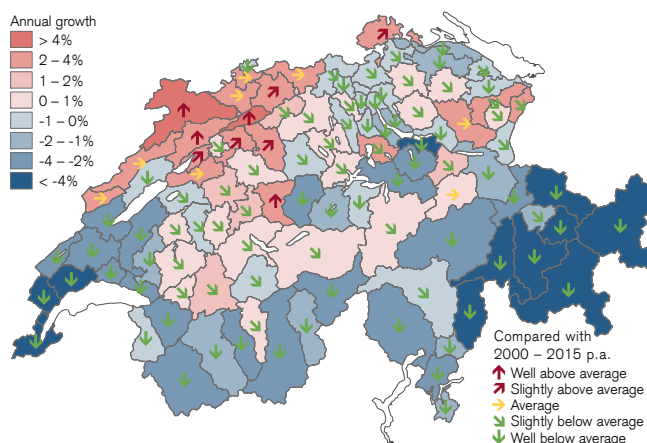
ment, we expect a slowdown with an average negative price growth not below -0.5% . As in the previous year, significant differences must be expected according to region and segment. Prices in the high-price regions and generally speaking in the high-price segment will also sustain the greatest falls in 2017. However, prices could rise again in 2017 in the low-price segment and outside the high-price regions and in many places also in the medium segment.

Ongoing imbalances despite end of price growth

The successful slowdown of price growth is keeping the residential property market on course for a soft landing. It is therefore to be welcomed in the interests of stable market performance as this is the only way for the imbalances that have arisen between the development of property prices and income to stabilize or even reduce. The price level is now no longer sustainable in 73 out of 106 regions. More marked price reductions, for instance in the event of a sharp rise in interest rates, cannot be ruled out in these regions (Figure 17). Having said this, the imbalances in the high-price regions have decreased somewhat thanks to falling prices. However, outside the high-price regions the ratio between property prices and income has recently deteriorated, thereby posing a risk to the stability of the price levels reached. The number of regions with a price level that is no longer sustainable in the long term has also increased by four within the year. As long as the extremely low mortgage interest rates prevail, an easing of the regulatory requirements would revive price growth and jeopardize the successful soft landing of the residential property market achieved so far, which cannot be in the interest of market players.

Figure 16: Price growth of residential property (regional)

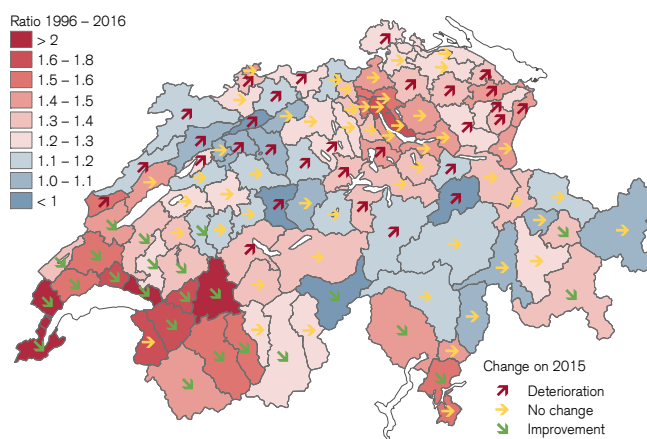
Q4 2016, annual growth of owner occupied housing (medium segment)



Source: Wüest Partner, Credit Suisse, Geostat

Figure 17: Regional valuation of property prices

Price growth of owner occupied housing in relation to income



Source: Credit Suisse, Geostat

Outlook for owner-occupied housing in 2017

Despite the end of the price increase lasting for around 14 years, the ownership segment remains calm and in doing so stands out from the other Swiss real estate markets that are increasingly being shaped by imbalances. In contrast to the other markets, there is no oversupply prevailing or foreseeable. The promoters of owner-occupied housing recognized at an early stage that the high prices in combination with tightened financing guidelines were curtailing and partially deflecting demand. Despite a restrained expansion of supply, however, the market environment is also not getting any easier for owner-occupied housing. Although mortgage interest rates remain at very low levels, a growing number of households are no longer able to shoulder the financing of owner-occupied housing due to the increased financial requirements. Demand in the current year will therefore continue to concentrate more on regions with prices that are still affordable as well as the low and mid-priced segments. While we expect a continued rise in prices in these regions, prices in the high-price regions and in the high-price segment in general are expected to fall further – although at a lower speed. Thanks to the halt in price growth, the owner-occupied housing market altogether remains on course for a soft landing. However, it will only be possible to sound the all-clear once price levels have returned to a sustainable level, which is not yet the case in many regions.

Level of mortgage rates

Background: ➔

Outlook: ➔

The interest rates for LIBOR mortgages will remain at their all-time lows in the current year. However, as in previous years, the interest rates of fix mortgages will stay volatile. Having risen toward the end of last year, we expect a sideways trend for 2017. The interest rates of fix mortgages therefore also remain at a very low level.

Demand

Background: ↘

Outlook: ↘

Thanks to the very low interest rates, the desire for home ownership remains strong. However, the high financial requirements due to the high prices and regulatory measures adopted are holding back demand. As a result, actual demand for owner-occupied housing is set to decrease further.

Supply

Background: ↘

Outlook: ↘

The production of new owner-occupied property will be lower in 2017 than at any time since measurements began back in 2001. We expect around 14,000 condominiums and 7,000 single-family dwellings to come onto the market in the current year.

Vacancies

Background: ➔

Outlook: ➔

Supply and demand are again set in 2017 more or less to balance each other out thanks to lower construction activity in the owner-occupied housing market. Vacancies of owner-occupied property will therefore remain at a low level. However, rising marketing costs must continue to be expected in the high-price regions.

Prices

Background: ↘

Outlook: ➔

The price fall will on average continue. However, we expect a slowdown for 2017 and a downturn in prices not exceeding 0.5%. The differences between the segments are set to remain large. Price falls will remain the norm in most high-price regions and in the high-price segment in general, although they should prove lower. The price growth in the peripheral and affordable regions should continue but likewise lose momentum.

Sustainability of prices

Background: ➔

Outlook: ➔

The imbalances between property prices and income remain large in the high-price regions but are displaying a declining trend. However, imbalances that today are still manageable are set to increase further in isolated cases in the peripheral regions. The greatest risk for the price level continues to be posed by an unexpected sharp rise in interest rates.

Special focus: Single living

Living alone

Single-person households are today the most common type of housing in Switzerland and this is likely to remain the case. The reasons for living alone are extremely varied and not always self-chosen and there are major differences in terms of type and shape of single dwellings. An innovative residential concept that recently arisen from the trend toward single living are micro apartments. These are optimally tailored to the needs of many single households in terms of zeitgeist and requirements.

Single-person households most frequently represented

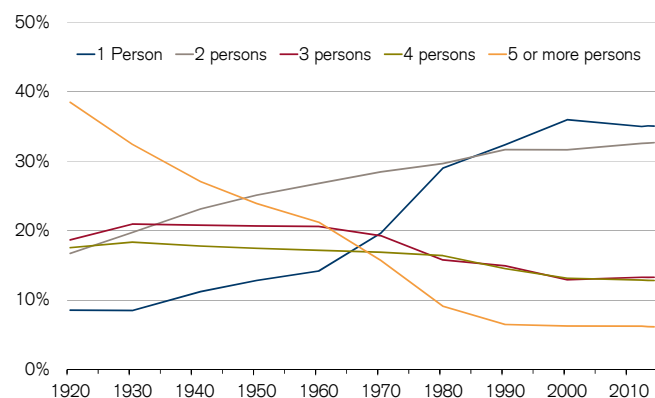
With a share of 35%, single-person households are today the most common household size in Switzerland and thus an important demand group on the housing market. Measured in absolute figures, more than 1.25 million out of a total of over 3.5 million households are single-person households. Figure 18 illustrates the impressive development of the past few decades. Back in 1960, single-person households were the least common type of household with a share of just 14%, before they started to triumph above all in the 1960s and 1970s.

Single-person households temporarily stagnating

Single-person households lost some weight again between 2000 and 2012 and have since been stagnating. This is above all due to demographic changes.² The life expectancy of men is catching up with that of women and therefore enabling more couples to share a household for longer in old age. Economic reasons also play an important role. The longer time spent in training and education and sharp rise in rents particularly in the urban centers have made it more common again for young people to stay at "Mom's Hotel". The high rents and property prices at a time when housing is scarce can also outbalance the benefits of single living among older people, thereby curbing a further increase in the share of single-person households. However, it would be premature to infer from this a turnaround in the trend toward single-person households. The share of such households is set to increase to around 38% by 2030 as the babyboomer generations are reaching an age at which single-person households are more common.

Figure 18: Share of private households by number of persons

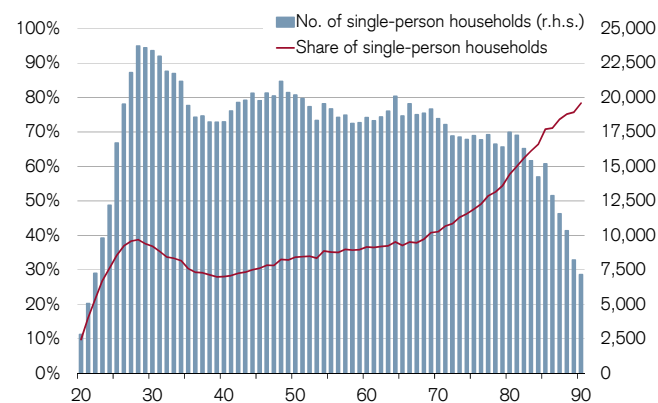
Development 1920–2014



Source: Swiss Federal Statistical Office, Credit Suisse

Figure 19: Single-person households by age

L.h.s.: share of all households; r.h.s.: quantity, 2014



Source: Swiss Federal Statistical Office, Credit Suisse

Disproportionately large number of senior citizens

This massive structural shift seen in the past few decades has significantly altered the demand for housing. However, single-person households are not homogeneous in terms of their characteristics and requirements on the housing market but can be broken down into different groups. More than 41% of all persons living alone are aged over 60. Single living in this age group is frequently not chosen deliberately but instead a result of the fact that a person's spouse or partner has died and any children have already moved out. The share of single-person households increases with age (Figure 19). It is already above 70% among 85-year-olds. A person's housing situation changes surprisingly rarely following the death of a partner. In the case of home

² See Statistical Office of the Canton of Zurich (2015): Einpersonenhaushalte verlieren etwas an Bedeutung

ownership, there is no desire to give up one's cherished four walls – the loss of the partner is enough of a change in itself. Financial considerations also play a part in the case of rental apartments. Owing to the prevailing tenancy law, the current market rent for a smaller home is in many cases higher than that paid for the existing larger one. Older single persons therefore very frequently live in (excessively) large homes.

Individualization supporting single living

The second significant group of single-person households comprises young adults. The share of persons living alone rises from 10% to almost 39% between the ages of 20 and 28 alongside an increasing participation in working life. Unlike in earlier times, single living for young adults is today in many cases no longer of temporary nature in a brief phase between leaving home and starting a family. It is instead a conscious choice in life in an increasingly individualized society.

Drivers of the increase in single-person households

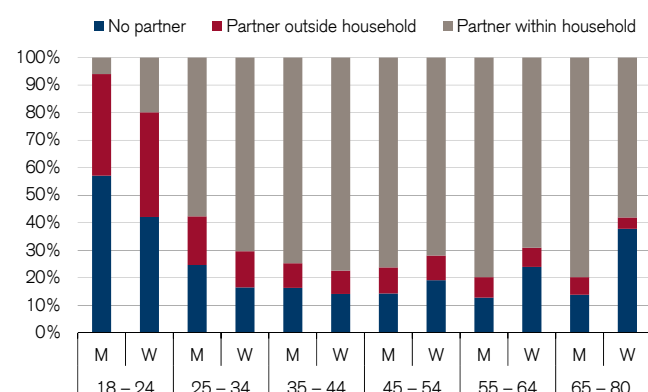
The increase in young single-person households is supported by several factors. First of all, the sharp rise in the participation of women in working life is causing traditional family and household structures to break down. Secondly, greater prosperity for the first time provides an increasingly broader share of the population with the possibility of living alone. Thirdly, more and more people are opting to lead an independent life particularly while they are still young. For example, according to the latest surveys by the Swiss Federal Statistical Office, 25% of men and 17% of women aged 25 to 34 do not have a partner. Furthermore, (re)urbanization is facilitating easier contact with like-minded people. Modern forms of communication play an important role here, thanks to which it is possible to make contact with other people at any time and from anywhere. The fact that the share of single-person households has declined slightly in recent years is not so much due to a move away from individualized forms of living as to demographic and economic factors.

Living Apart Together (LAT)

But it is not just singles who live alone. Young adults often do not live together with their partner despite being in a relationship. 13% of 25 to 34-year-old women have a partner but do not live together with them (Figure 20). This share is even higher among 25 to 34-year-old men at 18%. The share of persons in a relationship who do not live together with their partner decreases with increasing age. However, the individualized and mobile society is increasingly also leaving its mark on partnerships in later stages of life. Ten percent of all people over 35 years old do not live together despite being in a relationship. Almost two thirds of all "living apart together" (LAT) relationships are deliberately chosen and not attributable to external circumstances (e.g. job-related, long-distance relationship). In almost every second case the main reason cited for such LAT relationships is the partners' desire to ensure their independence. Almost half of all LAT couples also wish to continue living separately in the future.

Figure 20: Relationship status by age

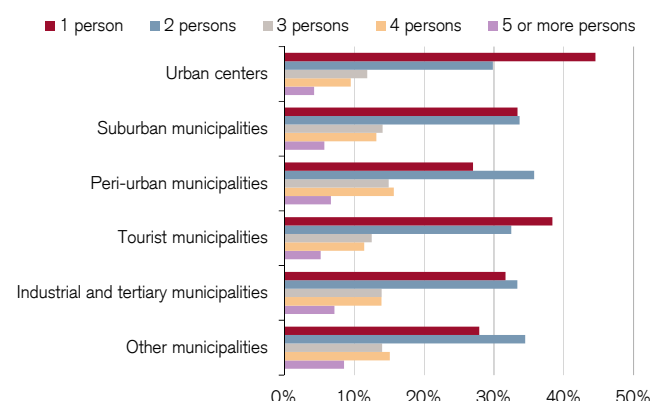
M = men, W = women, share in %, 2013



Source: Swiss Federal Statistical Office, Credit Suisse

Figure 21: Share of household sizes by type of municipality

Share in %, 2014



Source: Swiss Federal Statistical Office, Credit Suisse

Urban centers and tourism municipalities as focal points

Above-average numbers of single-person households are to be found in the urban centers that are very well suited to an individualized lifestyle. Thanks to many cultural and leisure facilities, singles are able to make contact with like-minded people here quickly and easily. On average, single-person households account for 45% of all households in the urban centers (Figure 21). The leader among the urban centers is Geneva with a share of almost 51%. However, at 38%,

the share of single-person households in the tourism municipalities is also strikingly high. There are isolated cases, such as St. Moritz with 49%, where singles can be found even more frequently than in most urban centers. The reason for this is that people working in the tourism industry are often only based there in the (high) season and live alone in small apartments during this period. The proper center of their lives, with families, friends or partner, is somewhere else.

Three-room apartments most frequent type of housing among those under 60

At 35%, people under 60 who live alone most commonly occupy three-room apartments (Figure 22). What at first glance appears to be a surprising result is explained by individualization and the satisfaction of one's individual housing needs. Living alone is no longer viewed merely as a short transition phase and should not involve making concessions. Besides a living room and bedroom, there is therefore frequent demand for a third room such as a study. With a share of 32%, two-room apartments are the second most frequent to be chosen, followed by one and four-room apartments with a share of 14% each. While the high share of four-room apartments will at least partially be attributable to involuntary living alone, for instance due to the end of a partnership, many single occupants will also deliberately be opting for so much living space. The fact that there are not even more single persons living in apartments with more than two rooms is primarily due to the high rent level in Switzerland. For example, in the City of Zurich apartments with more than two rooms only have a share of 39% among single-person households (Switzerland: 54%).

Large majority of those under 60 live in rental apartments

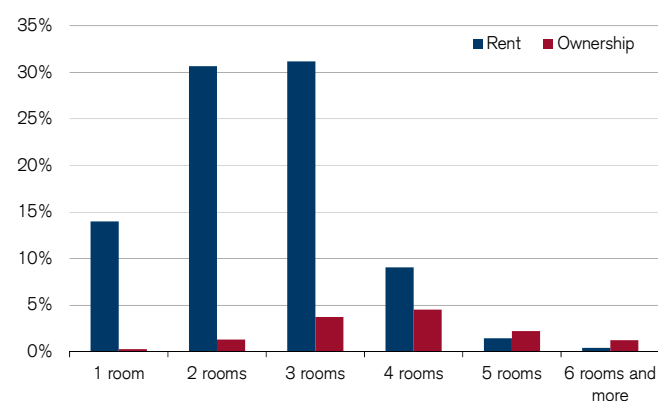
A large majority of all people under 60 who live alone, live in rental apartments, which per se does not come as a surprise (Figure 22). On one hand, home ownership particularly in the urban centers is unaffordable for many. At the same time the acquisition of residential property clashes with the flexibility desired by young people. However, somewhat surprising at 87% is the extent of the preference for rental apartments. On the other hand, LAT couples who deliberately choose to live alone and also wish to uphold this in the future are more prepared to buy their own home as long as their financial resources permit this.

Older single persons live in larger homes

The picture for single-person households aged over 60 looks somewhat different. While the three-room apartment is most popular at 36% here as well (Figure 23), 37% live in homes with four or more rooms. Furthermore, at 36% the share of home ownership is almost at the same level as the nationwide rate of home ownership. Here we can observe the phenomenon described above of older people frequently living alone without choosing to do so due to the death of their partner and not adjusting their housing situation accordingly.

Figure 22: Housing situation of single-person households, < 60

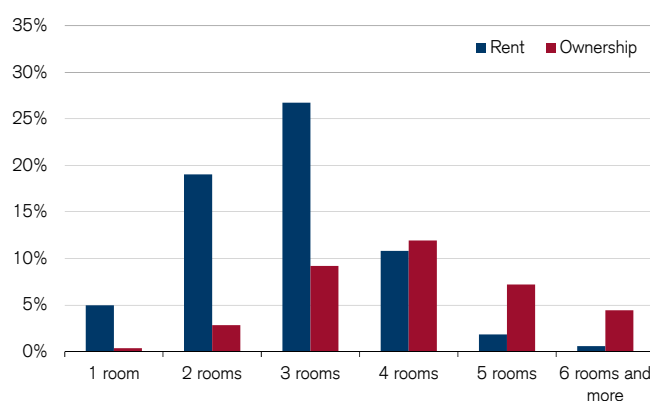
Share of all single-person households, below 60 years of age



Source: Swiss Federal Statistical Office, Credit Suisse

Figure 23: Housing situation of single-person households, 60+

Share of all single-person households, age 60 and above



Source: Swiss Federal Statistical Office, Credit Suisse

Trend toward micro apartments

The increase in single-person households has recently been accompanied by a revival of micro apartments that ideally meet the needs and requirements of singles. High living costs in the urban centers are shifting the focus of demand to smaller homes. Space-saving technological developments (digitalization, sharing economy) and a growing range of services delivered free of charge to the door (cleaning, catering etc.) have boosted the acceptance of small properties. These fit in perfectly with the new lifestyle of minimalism. Micro apartments are an attractive type of housing for investors as their rental income per square meter is higher than that of larger

apartments, the target groups are very diverse (students, job starters, divorced individuals, long-distance commuters, weekly commuters etc.) and private investors are keen to acquire such apartments for investment purposes.

Still in their infancy in Switzerland ...

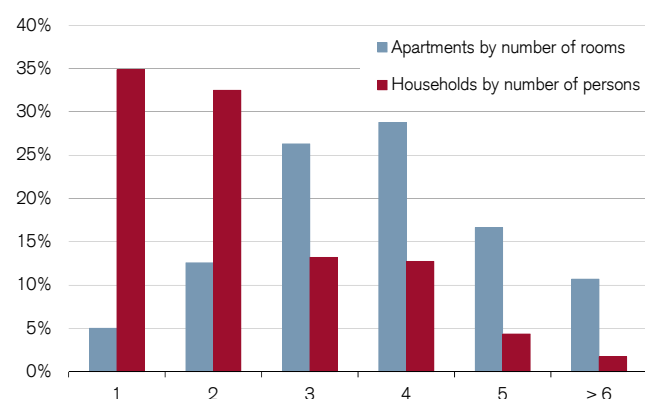
Micro apartments have not yet gained much of a foothold in Switzerland. 69% of all apartments that have additionally come onto the market since 2000 have four or more rooms. 1 and 2-room apartments account for just 11% of the entire net increase over this period. This contrasts with foreign countries, where the first companies are already specializing in micro living. These international projects typically comprise small apartments with 20 to 30 square meters of living space and occasionally even include apartments with significantly less than 20 square meters. Despite a minimal amount of space, the aim is to offer tenants a fully equipped apartment with a bathroom, cooking facilities and a sleeping and living area. This requires a functional interior that makes the best possible use of the confined space. Such properties are frequently fully or at least partially furnished. Other services are sometimes offered such as regular cleaning of the apartment.

... but supply is starting to respond

However, there has been a turnaround in in Switzerland in recent years. While in the first five years after the start of the new millennium, just 922 small apartments were constructed (Figure 25). In the last five years however, 2649 small apartments with less than 30 m² have been built. However, many of these will not yet be the new type of micro apartment with services. The major potential demand of this type of housing is also illustrated by Figure 24. Single-person households account for 35% of all households. However, apartments with one to two rooms that would be suitable for such households only make up 18% of the housing supply. Generally, this also applies to two-person households. In absolute terms there are just 1.6 million one to three-room apartments available to meet the needs of some 2.4 million small households (with one or two persons). The prevailing housing structure does not offer any adequate solutions for the growth of small households and essentially creates scope for more suitable offers.

Figure 24: Comparison of household and apartment sizes

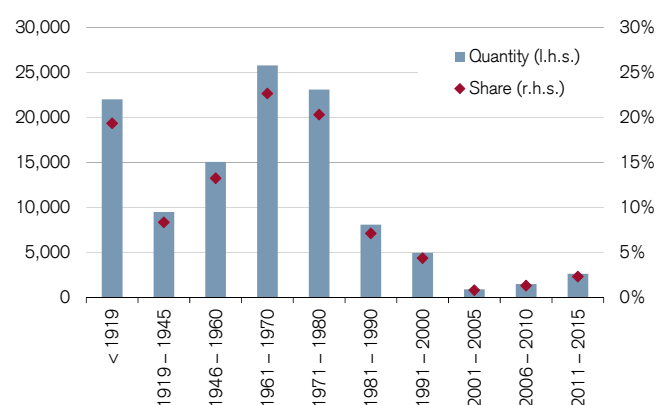
Apartments by number of rooms, households by number of persons



Source: Swiss Federal Statistical Office, Credit Suisse

Figure 25: Construction of micro apartments by construction period

Micro apartments defined as apartments < 30 m²



Source: Swiss Federal Statistical Office, Credit Suisse

Micro apartments as the solution to the space problem at central locations

A central location and very good public transportation connections are decisive for the success of micro apartments. There is also market potential for such micro apartments in Switzerland in cities such as Zurich and Geneva where housing is expensive even by Swiss standards and there is hardly any vacant living space available. Micro apartments combat the space problem in the urban centers by enhancing space efficiency and offering a complete apartment on a reduced space. Demand is therefore set to increase further in the future. However, micro apartments are not without controversy. In absolute terms the rents of micro apartments are comparatively low thanks to their small living space. However, owing to their design, equipment and high share of installations in relation to the living space they are more expensive than conventional apartments per square meter. Furthermore, some critics point out that a prolonged stay in micro apartments can also lead to stress caused by the confinement. Successful concepts therefore serve to expand the limited private space with the provision of communal areas such as roof terraces with barbecue facilities, communal kitchens, play areas and trendy laundry rooms that create informal contact opportunities.

Multilocal living also supporting the development of micro apartments

Micro apartments are also gaining importance due to the increasing trend toward multilocal living. According to a study by ETH Zurich, 28% of the Swiss population today lives multilocally,³ i.e. they have two or more homes at their disposal. As before, the most important reason cited for this is "leisure" (68%). In this case the household often has a vacation home. However, a substantial number of people today also live multilocally owing to cohabitation with their partner in more than one home (53%) or for work or education-related reasons (24%). Today it is no longer unusual for someone to live in a small apartment in Zurich during the week for work-related reasons (pied-à-terre) and to spend the weekend in Basel where he has grown up and where his family, friends and partner are based.

Cluster apartments as an alternative

Not for every single-person household, single living meets all the living needs. While one's own four walls with bathroom facilities and at least a kitchenette are desired, there is also a wish not to forgo living together with other people. So-called cluster apartments offer an attractive alternative here for single-person households. The idea behind this concept is to group several small apartments with bathroom facilities and a kitchenette around semi-public rooms for communal use such as a kitchen, living room, hobby room or roof terrace. The individual clusters do not necessarily have to be limited to single-person households. The combination of the different clusters with the communal rooms not only facilitates communication and interaction with the 'cohabitants' but can also be attractive financially. For example, a single-person household might have exclusive personal use of 35 m² of living space, pay rent for 50 m² but ultimately be able to make use of 95 m². Particularly in cities, where housing is expensive and the number of single-person households is high, cluster apartments can offer an attractive supplement to conventional forms of housing.

Micro and cluster apartments remain niches

While innovative new types of housing such as micro and cluster apartments expand the range of options available to single-person households, they ultimately comprise niches that work at individual specific locations. Urban centers with high rent levels and low vacancies primarily come into question here. Investors need to conduct a detailed review of potential locations for such niche products in terms of their suitability. The rental price segment also needs to be kept in mind when planning new housing for single-person households. Viewed purely on the basis of income, 43% of all single-person households in Switzerland could afford a rental apartment with a monthly net rent of CHF 2,000.⁴ However, very few will actually be prepared to spend a third of their income on housing. The upper limit for many tenants will instead lie at 20% to 25% of their income. Only 4% of all single-person households at present actually pay CHF 2,000 or more in rent each month. The current rent level is primarily shaped by older existing properties and should therefore not be drawn on as a benchmark for the rents of new properties. Particularly in the urban centers with their varied range of services tailored to single-person households, the willingness to pay per square meter is higher due to the price levels prevailing there. This applies in particular to new types of housing such as micro and cluster apartments which thanks to their compact space usage make city living also affordable for medium-sized budgets and at the same time offer an attractive niche for investors.

³ See Schad et al., ETH Wohnforum – ETH CASE (2015): Multilokales Wohnen in der Schweiz

⁴ Assumption that rent may not amount to more than one third of gross income.

Rental apartments

Downturn progressing at full speed

Having for years concentrated on the residential property market, the focus of market observers and the media is now increasingly shifting to the rental accommodation market. The negative interest environment prevailing for over two years and the investment crisis resulting from this have given rise to a veritable run on residential investment properties. The high interest particularly on the part of institutional investors in this asset class has triggered a construction boom. At the same time, there has been a sharp decline in immigration and consequently the demand for rental apartments. While the risks in the market are therefore rising, tenants are finding it easier to find accommodation and are also increasingly benefiting from lower rents.

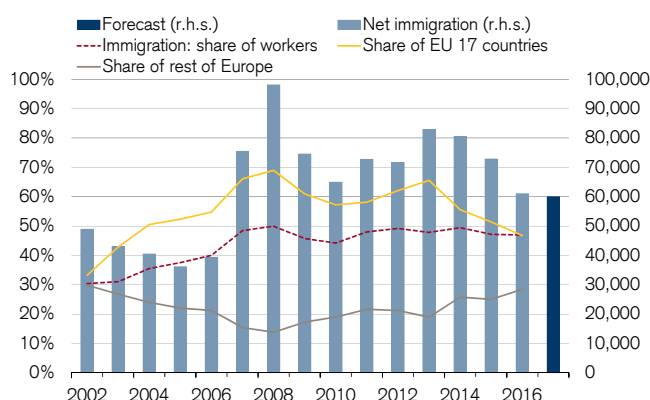
Demand: Sharp decline

Immigration at lowest level since introduction of full free movement of persons

The ongoing decline in immigration is curbing the demand for rental accommodation. With an estimated net migration of 61,000 persons, immigration fell in 2016 for the third year in succession and reached its lowest level since the introduction of the full free movement of persons with the 17 EU countries back in 2007 (Figure 26). This downturn is largely attributable to the 17 EU countries. After accounting for 65% of net migration back in 2013, the share of these countries fell continuously to reach just 47% in 2016, with almost all of them contributing to the decline. The strong migration from France, Italy and the eight Eastern European EU countries prevailing until 2015 has now slowed down significantly. The reasons for the decreasing immigration momentum can be found in both Switzerland as the target country and the countries of origin (Figure 27). In Switzerland, the franc shock in 2015 created a dent in the economy (2015 GDP growth: +0.8%) that was reflected in the past year by the expected delay in zero growth of employment. At the same time, the trend toward a falling unemployment rate continued within the EU.

Figure 26: Net immigration

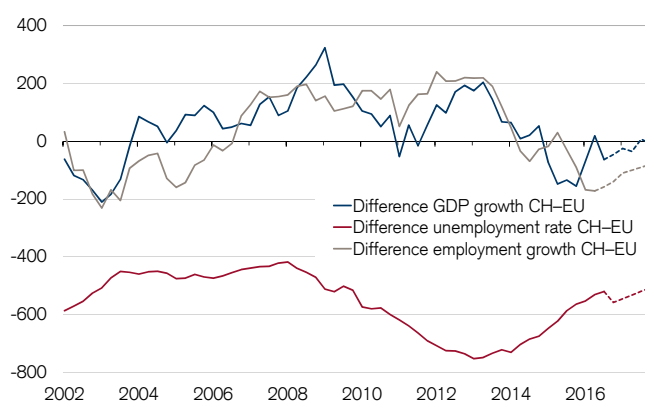
Right-hand scale: Net immigration of usual resident population (excluding register corrections, including net outward migration of Swiss citizens)



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

Figure 27: Economic performance of Switzerland versus the EU

Difference in basis points (>0: indicator position higher in Switzerland than in the EU)



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

2017: Slower decline in immigration

We expect the trend toward falling immigration to slow down markedly in 2017 so that immigration only decreases marginally on the previous year, as the Swiss economy has picked up again (2017 GDP forecast: +1.5%) and employment should also increase again slightly in 2017 (+0.5%). At the same time we expect a further fall in unemployment for the EU (Q4 2016: 8.9%), although at a slightly reduced speed. As well as cyclical factors, some regulatory circumstances also speak against a continued sharp decline in immigration: The full free movement of

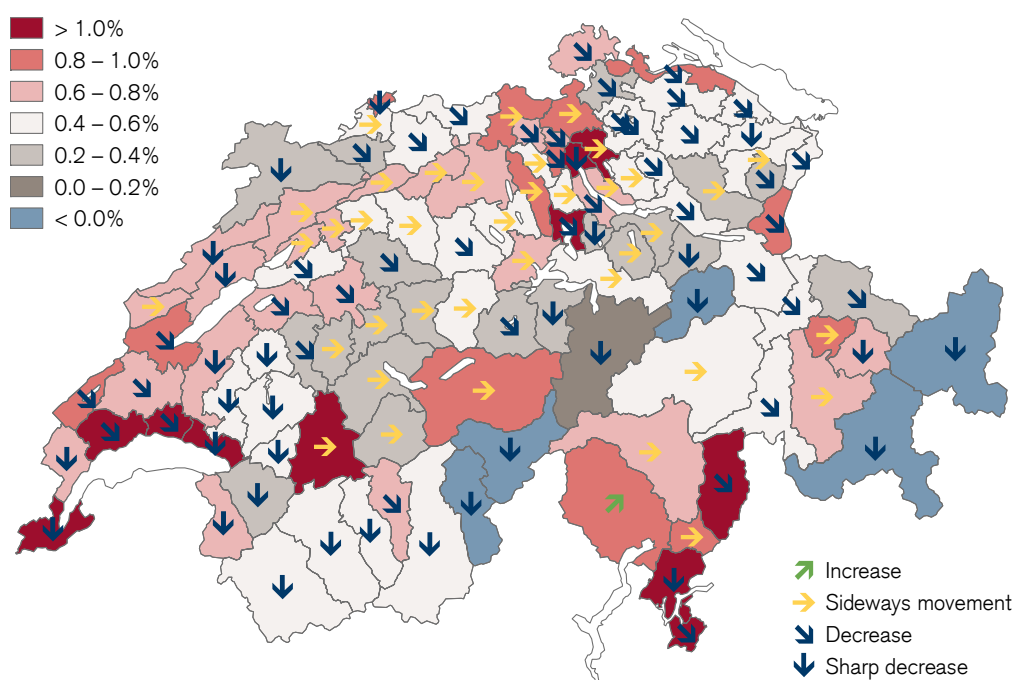
persons with Romania and Bulgaria has been in force since 1 June 2016. This has already triggered a sharp rise in net migration from these countries (from 1,700 persons in 2015 to 3,300 in 2016). The expansion of the free movement of persons to Croatia as of 1 January 2017 will not yet carry any weight as this remains subject to quotas and priority for Swiss nationals until 2023. Further factors that are set to boost immigration in 2017 are the increase in third country quotas by 1,000 persons and the continued high number of pending asylum decision processes (see below). Altogether we expect net migration of around 60,000 persons for 2017.

Decrease in immigration broadly supported regionally but with varying degrees of intensity

If we consider last year's net migration of foreigners at a regional level, what initially strikes us is that with the exception of five alpine regions all the economic regions still have positive balances of migration (Figure 28). However, compared with the average for the years 2011 to 2015, a significant increase in net migration was only seen in 2016 in one of the 110 economic regions (Locarno). In 38 regions it was in line with the long-term average, while the balance of migration developed negatively in 40 regions and very negatively in 31 regions. Certain regional patterns become apparent here: Immigration declined in particular in almost all French-speaking regions. There is also a pronounced negative trend in Eastern Switzerland and the regions to the west of the City of Zurich. All the regions of the major centers likewise recorded a decline (Lausanne, Berne) or a sharp decline (Zurich, Basel-Stadt, Geneva). By contrast, immigration remained stable in 2016 in large parts of the northwestern Swiss Plateau (parts of the cantons of Aargau, Basel-Landschaft, Solothurn and Berne).

Figure 28: Net migration of usual foreign resident population in 2016

As % of usual resident population in 2015; arrows: trend in comparison with 2011–2015 average



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

Sharp decline where many Portuguese, Spaniards and Germans live ...

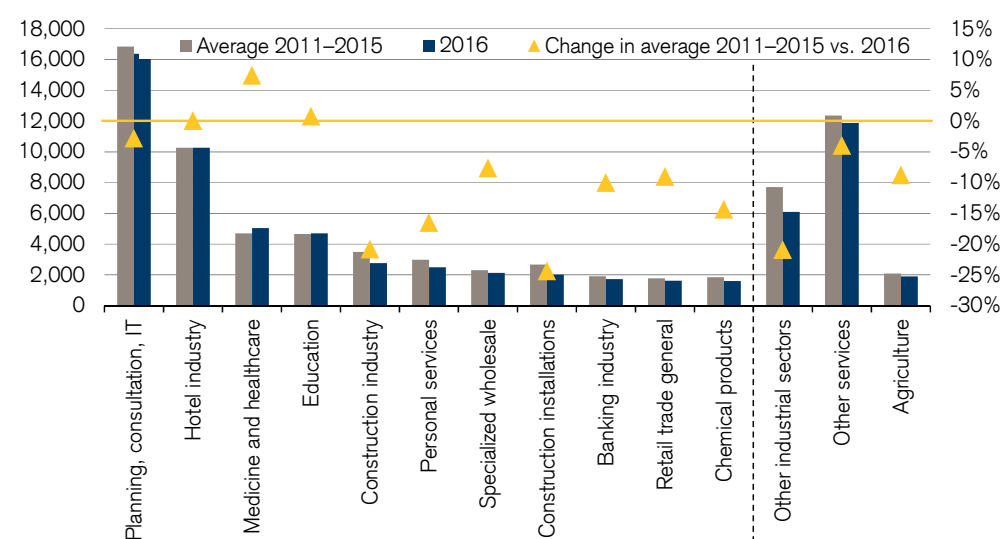
Part of the geographical pattern of the decline in immigration can be explained by the immigrants' countries of origin. Measured in absolute figures, Portugal accounted for by far the greatest drop in the number of immigrants in 2016 compared with the period from 2011 to 2015 (–8,400 persons). As the Portuguese largely settle in French-speaking Switzerland (more than half of the resident Portuguese population of Switzerland lives in one of the five cantons Geneva, Vaud, Valais, Neuchâtel and Jura), this decrease is particularly noticeable there. There was likewise a significant decline here in immigration from Spain (–2,200) and France (–300). A continued downward trend in immigration from Germany can also be observed (–4,100). This is particularly noticeable in the cantons of Thurgau, Schaffhausen, Basel-Stadt and in parts of the Canton of Zurich and Central Switzerland. The share of the total foreign resident population made up there of German citizens amounts to up to a third. The fact that only two of the five Ticino regions recorded a fall in immigration is due to the fact that a relatively large number of Italians are continuing to relocate to Ticino. However, here too the peak has been passed.

... and where the sector economy is suffering

Differing cyclical developments in individual sectors also help to explain the number and origin of immigrants. With the exception of the hotel industry, medicine and healthcare as well as education, all sectors in which large numbers of immigrants work generally hired fewer immigrants in 2016 than on average in the years 2011 to 2015 (Figure 29). With a decrease of up to 24%, the decline in the construction industry and building installations, personal services and the other industrial sectors was particularly strong. This picture largely reflects the development of these sectors over the past year. The decline in employment in the construction industry – among other things as a delayed consequence of the halt to the construction of second homes – will be partly responsible for the decrease in immigration in particular from Portugal and Spain. We only expect a slight downturn in construction employment for 2017 (2017 forecast: –0.5%), while further bloodletting is anticipated in the case of the hotel industry that is struggling with structural weaknesses and the strength of the franc (2017 forecast: –1.0%). The tourist regions in particular must therefore be prepared for a continued decline in immigration.

Figure 29: Immigrants in employment by target industries

2016 and 2011–2015 average: number of immigrants in employment (left-hand scale); right-hand scale: change in %



Source: State Secretariat for Migration, Credit Suisse

Wave of refugees countering decreasing immigration with delay

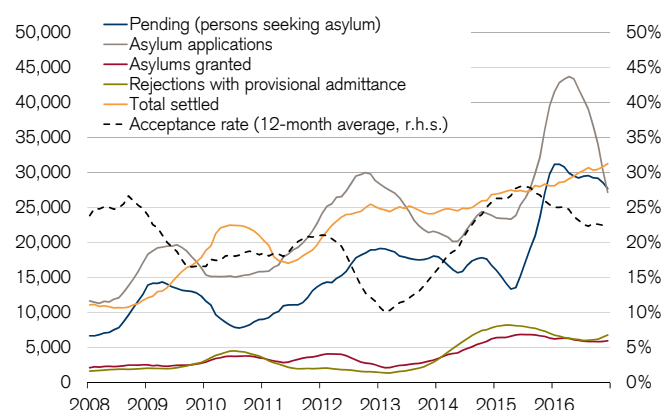
Switzerland was not a major arena of the European refugee crisis in 2015. Nevertheless, a sharp rise in asylum applications was also registered here (2015: 39,500). The situation eased significantly in the course of 2016, among other things due to the closure of the Balkan route, so that the number of asylum applications fell to 27,000. However, the number of asylum applications that are still being processed (asylum decision process) still remains very high (Figure 30). Despite a falling acceptance rate, the number of asylums granted could therefore increase further in the course of 2017. The number of temporary refugees seeking asylum is also set to remain high. While the latter do not appear in the statistics for foreigners used for the above analyses, they often remain in Switzerland on a long-term basis and therefore also influence the demand for housing.

Mass immigration initiative without dampening effect

Almost three years after the acceptance of the mass immigration initiative, its implementation was approved by parliament on 16 December 2016. In order not to jeopardize the bilateral agreements with the EU, the implementation law forewent both quotas and a protective clause as well as consistent priority for Swiss nationals. However, companies from industries with above-average unemployment must report vacancies to the employment agencies and invite applicants registered there to an interview. At least in the prevailing atmosphere of moderate unemployment we do not expect this change in the law to dampen immigration. However, the latter remains in the focus of politicians. Although the Swiss People's Party has decided to forgo a referendum against the implementation of its popular initiative, such a referendum could nevertheless emerge. The same applies to an initiative directly aimed at abolishing the free movement of persons with the EU. The RASA initiative intended to completely reverse the mass immigration initiative is also pending. It is expected to be presented to the electorate at the end of 2017 or start of 2018 together with a counterproposal of the Federal Council.

Figure 30: Development of asylum processes

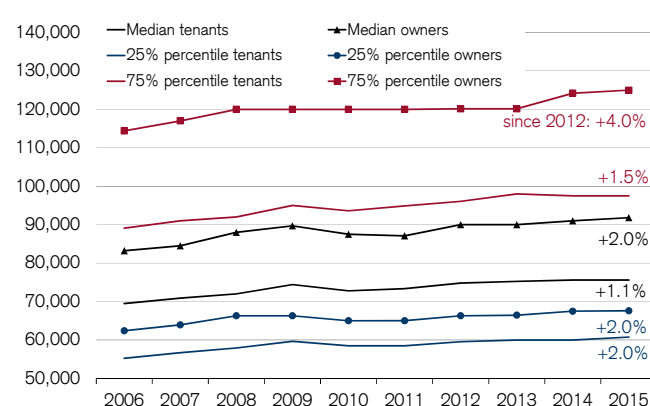
12-month totals; pending asylum processes at month-end



Source: State Secretariat for Migration, Credit Suisse

Figure 31: Gross income by type of housing

Persons in employment with minimum workload of 80%, percentiles of gross income



Source: Swiss Federal Statistical Office, Credit Suisse

Shift of purchasing power from rental to residential property market

A second burden for the rental accommodation market is growing out of the declining quantitative demand for rental apartments driven by immigration. This comes on top of a qualitative change that has been impairing the market for some time. Demand is being increasingly dominated by lower income groups, partly because the purchasing power of immigrants is generally falling due to new countries of origin (see chapter on direct real estate investments, page 68) and also because the record low mortgage interest rates of the past few years have tempted many affluent former tenants into home ownership. According to our estimates, the rate of home ownership for first homes now comes to 39.1%, up from 34.6% in 2000. A comparison of the development of gross incomes between tenants and owners (Figure 31) shows that the incomes of owners in the years after 2012 shaped by low interest rates have risen more sharply than those of tenants, particularly the higher incomes. As long as the period of low interest rates continues, more and more high-income tenants will switch to the ownership segment. This will continue to exert a negative influence on the demand for rental apartments of the mid- and high-priced segments, particularly with fewer and fewer affluent immigrants stepping into the breach.

2017: No slowdown of rental apartment construction in sight

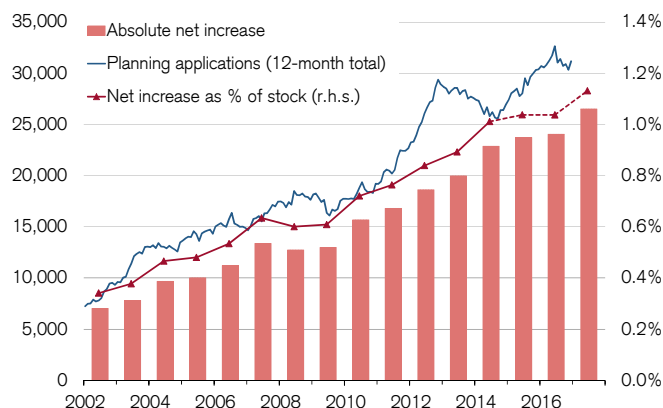
Despite falling demand, an estimated 24,000 rental apartments came onto the market in 2016 (Figure 32). The stock of rental apartments will accordingly have again grown by over 1%. Furthermore, planning applications were submitted for a record number of over 31,000 residential units. We therefore expect an increase in the net addition to over 26,000 rental apartments in 2017. This renewed upturn will primarily be observed in the suburban and peri-urban municipalities surrounding the major centers. Although planning activity slowed down slightly at a very high level in the second half of 2016, in view of the construction companies' large amount of work in hand and the lively planning activity, the high level of construction activity looks set to hold out even beyond 2017.

Increasing focus on agglomerations

Expansion should increase further in 2017 in particular in the suburban and peri-urban municipalities surrounding the major centers, i.e. essentially in the agglomerations surrounding the urban centers (Figure 33). Following a temporary slowdown, Western Switzerland is set to return to the focus of builders. We expect the greatest expansion in proportion to the stock of rental apartments for the regions away from the urban centers such as Gros-de-Vaud, Glâne-Vevveyse and Sense. In Vaud above all the regions of Leuk and Sierre should make gains, while there are no longer quite as many projects being planned in the Martigny region as in the previous year. Expansion generally remains low in the cantons of Jura and Neuchâtel. In German-speaking Switzerland we expect the greatest expansion for the extended Zurich agglomeration, while development in the city and the lakeside regions is likely to be stable. Rental apartment construction should generally slow down somewhat in Aargau with the exception of the regions of Aarau and Freiamt. The focus in the western Swiss Plateau is tending to shift to Solothurn, while a sideways movement is largely to be observed in the Canton of Berne. The picture in Eastern Switzerland is heterogeneous. We expect a strong expansion of construction activity throughout the entire Rhine Valley, in Central Graubünden and in the Domleschg.

Figure 32: Net increase and planning applications for rental apartments

Net increase and planning applications in residential units (left-hand scale); net increase as % of rental apartment stock (right-hand scale); 2015–2017: estimate/forecast



Source: Credit Suisse, Swiss Federal Statistical Office, Baublatt

Unchecked planning activity in many regions despite high vacancy rates

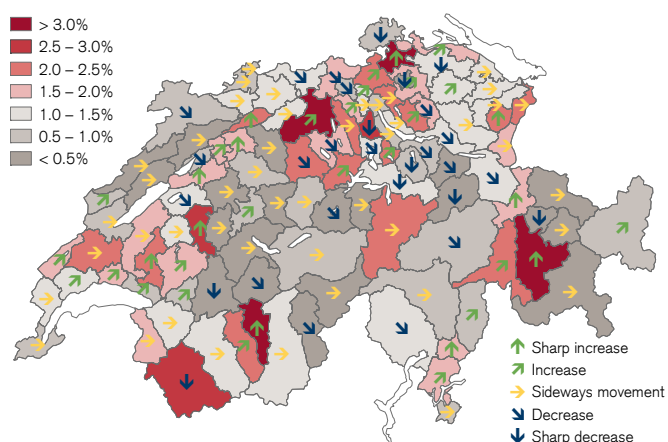
Not even above-average vacancy rates compared with the levels normally seen over the long term in each region seem to be deterring investors from further project developments. Figure 34 illustrates the development of expansion in regions with high and very high vacancy rates (compared with the historic norm). Among the 30 regions with very high vacancy rates, a correction of the excessive expansion is only visible in 13 regions (shown in bright red). These largely comprise regions in Alpine areas, in the Rhine Valley and in isolated parts of the Swiss Plateau. However, the expansion is set to increase further in 17 regions in 2017 despite vacancy rates already well above the regional average. This applies to the Aargau regions of Aarau, Brugg-Zürzach and Mutschellen, large parts of the Canton of Solothurn and individual regions around Berne and in the Canton of Fribourg. The expansion problem is altogether much less pronounced in Central Switzerland and in the far west of the country – from the Jura down to Lake Geneva. A correction of the excessive expansion is also not to be expected in the near future in 15 regions (shown in dark orange) out of the 28 with vacancy rates classified as slightly high so that the vacancy rates in these regions are likewise set to increase unchecked.

Consequence: cut-throat competition for tenants

The ongoing construction activity is a direct consequence of the continued negative interest rates. These are making the returns on residential real estate seem so attractive in comparison with other investment opportunities that investors are continuing to invest capital in residential property (see chapter on direct real estate investments, page 66 ff.). This is giving rise to cut-throat competition for tenants from which the latter are increasingly set to benefit. Owing to the high prices and consequently lower returns in the urban centers as well as the limited opportunities for expansion there, many investors have moved to more peripheral regions. Because only some of the tenants are following, the higher vacancy risks are particularly emerging in these regions. The focus of construction activity is therefore shifting somewhat more toward the urban centers and their well-connected agglomerations again.

Figure 33: Expected expansion of rental apartment construction in 2017

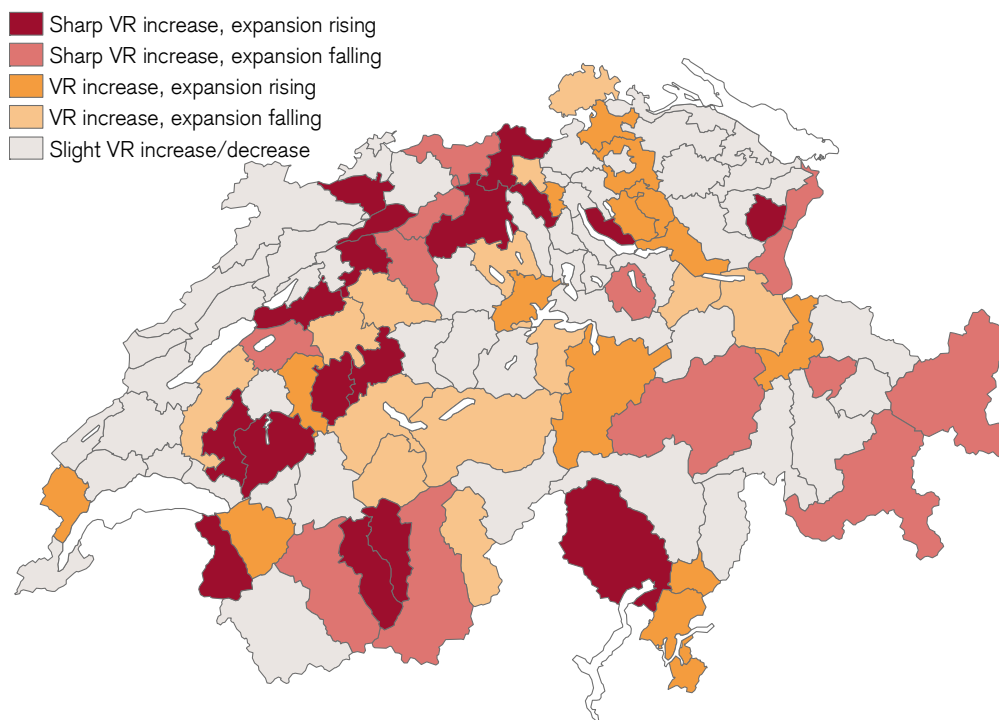
Expected expansion as % of rental apartment stock; arrows: trend in comparison with previous year



Source: Credit Suisse, Baublatt, Geostat

Figure 34: Expansion of rental apartment stock in regions with higher vacancy rates

Expected expansion rental apartment stock in 2017 compared with the five-year average; vacancy rates of rental apartments (VR) in 2016: deviation from regional long-term average (2001–2016); sharp VR increase: increase > 1.0 percentage points, VR increase: increase > 0.4 percentage points



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

Rental accommodation market coming under pressure from two sides

Market outcome: The downturn has started

The accelerated fall in demand alongside a simultaneous continued high level of investment activity is increasingly leaving its mark on the rental accommodation market. The vacancy rate has risen from 1.77% to 1.99% as of mid-2016 (Figure 35), which represents the sharpest increase and the highest level of the past 15 years. The major centers still remain barely affected by vacancies. Tenants outside the major cities are increasingly benefiting from greater choice and have good chances of finding a suitable property without too much outlay. The supply rate of rental apartments has surged upwards out of its previous fluctuation range during the last year. Four percent of the rental apartment stock was advertised to let on online portals at the end of 2016 (average of the past ten years: 3.4%). An advertisement remained online for an average of 43 days – nine days longer than one year previously. The time on market of a quarter of the apartments exceeded 121 days. The situation is set to intensify further in the current year. While housing absorption will barely rise due to the downturn in migration, even more new homes will come onto the market than last year. We therefore expect the rise in vacancies to accelerate further and the absorption times to get longer.

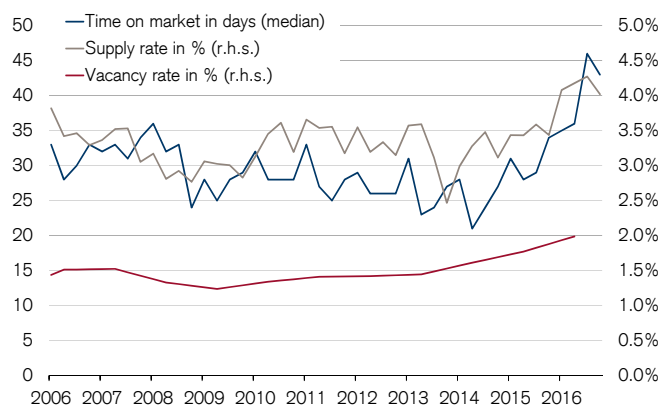
Postponement of rent adjustments by means of incentives

When landlords find themselves exposed to increasingly difficult market conditions, they normally start by intensifying their marketing efforts. Secondly, the marketing strategy is often changed – and sometimes also the marketing partner. If this fails to pay off, so-called 'incentives' are deployed of the sort we have already been observing for some time in the commercial property market. In the case of rental apartments these range from vouchers of cleaning and removal companies or grocery stores and gifts such as e-bikes or tablet computers to waiving one or more monthly rents on conclusion of a new rental contract. Landlords attempt in this way to postpone rent concessions for as long as possible. By carrying out a targeted search with the relevant keywords in more than 2.5 million online housing advertisements, we have been able to confirm such a trend toward additional incentives since 2014 (Figure 36). However, advertisements with incentives do not comprise a mass phenomenon as so far such additional incentives have been found in less than 0.5% of advertisements. Nevertheless, their effective number could be somewhat higher as it is difficult to capture all these advertisements. The decline in identified incentives in the past few quarters could suggest that additional incentives are already

no longer sufficient and landlords now have no choice but to make concessions with rents. Advertised rents have indeed fallen since 2015 and were 1.0% down on their prior-year level in real terms at the end of 2016. However, incentives in the marketing of rental apartments could potentially become more frequent again in 2017 if a lot of new homes come onto the market.

Figure 35: State indicators of the rental accommodation market

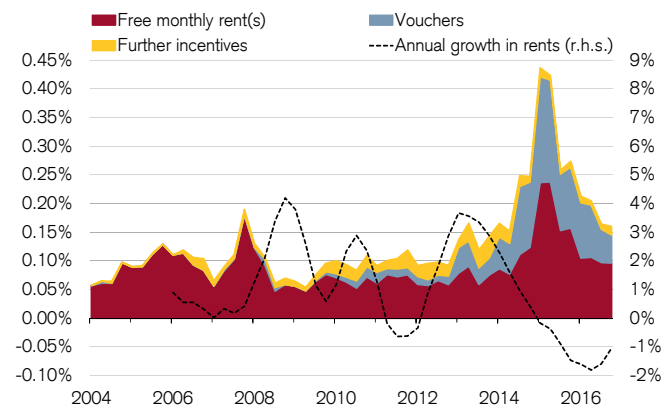
Supply and vacancy rates as % of rental apartment stock



Source: Meta-Sys AG, Swiss Federal Statistical Office, Credit Suisse

Figure 36: Deployment of incentives in marketing

Share of advertisements with additional incentives and real growth in rents (median advertised rents, moving four-quarter average)



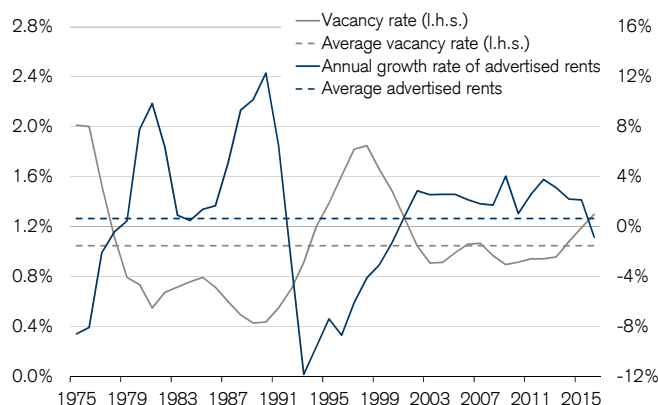
Source: Meta-Sys AG, Datastream, Credit Suisse

No way around rent reductions

In the long term there is no way in the current market situation around lower rents, which are being brought about by the market mechanism (Figure 37). At 1.3%, the vacancy rate (ownership and rental apartments) in the last year was 0.25 percentage points above the 40-year average that can be viewed approximately as the equilibrium value. At the same time, the growth of real advertised rents has continuously slowed down in the past three years and is now in negative territory. However, we are still a long way from the situation in the 1990s when the vacancy rate rose to over 1.8% and for a brief period advertised rents even fell by more than 10% each year. Nevertheless, both vacancies and rents are set to distance themselves further from their equilibrium values in the course of 2017.

Figure 37: Development of vacancies and rents

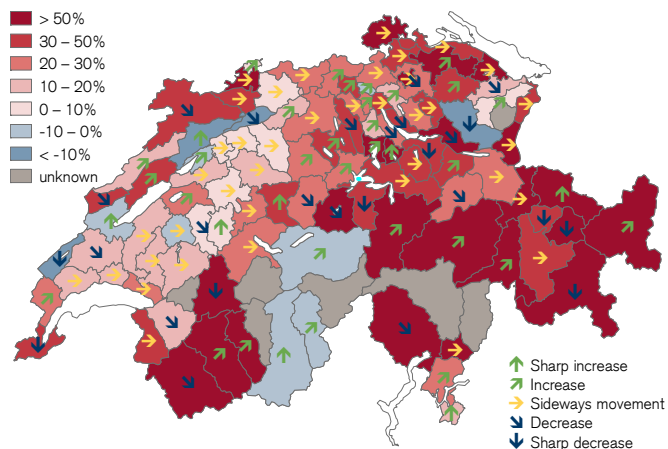
Advertised rents (adjusted for quality, real) and vacancy rates (incl. ownership)



Source: Swiss National Bank, Wüest Partner, Swiss Federal Statistical Office, Credit Suisse

Figure 38: Time on market and rents

Coloring: deviation of average time on market in 2016 from long-term regional average (2006–2016), arrows: annual growth of advertised rents in 2016



Source: Meta-Sys AG, Credit Suisse, Geostat

Easing spreading to the urban centers – although only weakly

The correlation described between vacancies and rents can also be observed in a cross-section comparison of the regional trend (Figure 38). Instead of the vacancy rate, the variable we view here is the regional time on market shown as the deviation from its long-term average. Homes are typically advertised for longer in rural regions than in urban areas. This view is therefore helpful for identifying imbalances that can ultimately influence the development of rents. What is

initially noticeable is that the time on market only lay below its long-term average in 11 regions. These are predominantly rural areas, mostly with a high starting level. Apart from three exceptions, all these regions recorded rising or stagnating advertised rents in 2016. By the same token, rents in regions with a sharp increase in time on market (with some exceptions, particularly in the Canton of Graubünden) are tending to fall or stagnate. The time on market in all five major centers is also now above its long-term average. Although homes in these cities are still absorbed relatively quickly by the market, this points toward a certain easing of the shortage prevailing on these markets. The average time on market in 2016 ranged from 22 days (Zurich) to 34 days (Basel-Stadt). At the same time there was no further increase in the advertised rents in these cities, which in the case of Geneva even fell sharply.

Tenants in an increasingly better position ...

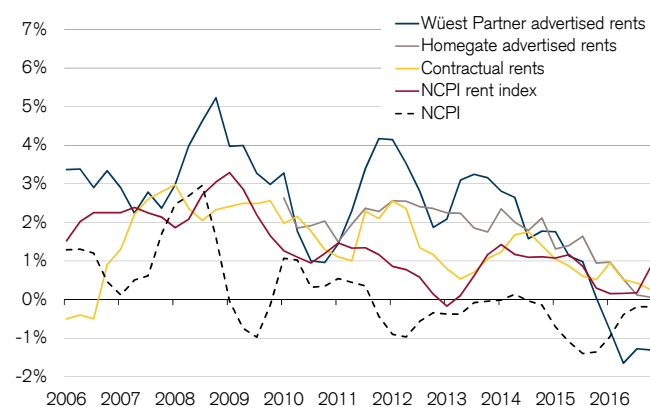
Figure 39 shows that the disparity between demand and supply on the rental accommodation market is increasingly also being reflected in a stagnation or even decrease of the growth in rents. Nominal effective contractual rents maintained their prior-year level (+0.3%) until the second quarter of 2016. The rent index of the Swiss Federal Statistical Office that comprises new and existing rents even rose again slightly (+0.8%). With a view to advertised rents, estimates ranged at the end of 2016 from -1.3% (Wüest Partner) to +0.1% (Homegate). The year-on-year decline of the growth in rents increases when real values are viewed as opposed to nominal ones. Following a sharp drop of 1.1%, consumer prices in 2016 only fell slightly (-0.4%) and could even increase again slightly in the current year (0.5%).

... especially in the higher price segments

The momentum in rents has decreased particularly sharply in the higher price segments (Figure 40). The year-on-year downturn at the end of 2016 among the most expensive 10% of advertised homes (90% percentile) even came to 1.9%. Similarly to residential property, the marketing of rental apartments in the high-price segment has become challenging – partly because too many high-price apartments have been built and also because the demand for rental apartments has changed structurally in the direction of lower purchasing power (see chapter on direct real estate investments, page 66 ff.).

Figure 39: Rental indices in comparison

Annual growth (nominal), NCPI: National Consumer Price Index



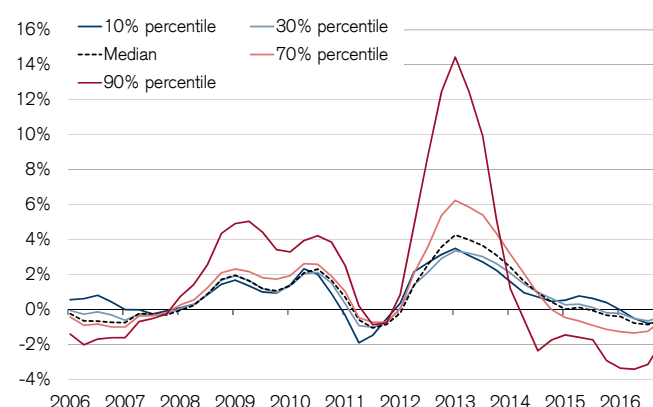
Source: Wüest Partner, Homegate, Datastream, Credit Suisse

Downward pressure on rents should increase further in 2017

As the gulf between supply and demand is widening further, we expect a slight fall in contractual rents for 2017. Tenants with existing rental contracts are also set to benefit from a further reduction in rents from the end of 2017/start of 2018. We expect the base rate to be lowered from 1.75% to 1.5% as of 1 June 2017.

Figure 40: Advertised rents by rental price segment

Annual growth (nominal), moving four-quarter average (not adjusted for quality)



Source: Meta-Sys AG, Credit Suisse

Outlook for rental apartments in 2017

The downturn in the rental accommodation market that set in last year will continue in 2017. The monetary policy intended to eliminate imbalances (i.e. above all the strength of the franc) by means of negative interest rates has created a new source of imbalance in Switzerland: The ultra-low interest rates are distorting asset allocation and leading to an excessive production of rental apartments. This can be seen in the lack of any response on the supply side to the fall in demand that intensified last year. Having said this, the continuing recovery from the franc shock and the economic upturn resulting from this should mean that net immigration in 2017 is only marginally down on the previous year and the fall in demand therefore will be limited. On the other hand, the expansion of rental apartment stock is set to accelerate further compared with the previous year. Landlords therefore face further rises in vacancies and time on market. The oversupply will also be increasingly felt in the agglomerations. Housing only altogether remains scarce in the urban centers themselves where the lack of land and a high regulatory burden are limiting the growth of supply. However, tenants are finding it easier to find accommodation in many parts of the country and are benefiting for the first time in years from lower rents. Thanks to a further cut in the base rate that we are expecting for June 2017, a large number of tenants who are not planning to move house will also benefit from rent reductions.

Demand

Background: ↘

Outlook: →

Net immigration should continue to slow down in 2017 owing to the economic recovery in Europe. However, we expect a balance of migration only slightly below that of the previous year at 60,000 persons. The high residential property prices and regulatory measures are also preventing many tenants from switching to home ownership. Demand for rental apartments should be most stable in the lowest price segments, i.e. above all in the agglomerations surrounding the major centers.

Supply

Background: →

Outlook: ↗

The boom in rental apartment construction triggered by the negative interest rates is continuing. Over 26,000 new rental apartments are set to come onto the market in 2017 – around 2,000 more than in the previous year. The development of planning applications suggests that the strong expansion of rental apartment stock will at least continue into 2018.

Vacancies

Background: ↗

Outlook: ↗

In view of a slight fall in demand and an unchecked growth in supply, we expect a renewed sharp rise in rental apartment vacancies in 2017. Locations outside the larger towns and cities as well as apartments in the high-price segment are set to be most affected. While the markets in the major centers should ease slightly, there can still be no talk there of an oversupply.

Rents

Background: →

Outlook: ↘

The growing oversupply is having a dampening effect on the rents of newly agreed contracts. These are therefore set to go down slightly, with advertised rents even falling significantly. We also expect a further cut in the base rate from 1.75% to 1.5% for June 2017. Landlords are therefore likely to face a rising number of requests for rent reductions in the second half of the year.

Performance (total return)

Background: ↘

Outlook: ↘

Falling rents and growing vacancies are increasingly leaving their mark on rental income. This is being accompanied by higher marketing and refurbishment costs. The pressure on cash flow returns is therefore set to increase in 2017. On the other hand, in view of the negative interest rates and consequent high yield spreads, demand for residential investment properties remains high so that the capital growth returns are likely to stay slightly positive. Altogether, however, we expect overall returns to be somewhat lower than in the previous year.

Special focus: Rent regulation

Decades waiting for a rental apartment

Compared internationally, Switzerland's rental accommodation market works very well. It is based on a compromise between tenant protection and cautious market intervention. This model has come under increasing attack recently and there are calls for further regulations. However, excessive regulation of the rental accommodation market entails risks for tenants if the market forces are undermined. We already pointed in the Real Estate Study 2014 based on the example of the rental market for housing in Geneva to the unintended consequences for tenants. Another example that we present below is the rental housing market in Stockholm. The consequences of rent regulation in the Swedish capital are reflected in a shortage of housing hardly to be found in any other city. Anyone looking for a rental apartment in Stockholm above all needs one thing: patience. It can take up to two decades after applying before actually moving into an apartment.

The rental accommodation market in Sweden

Housing construction controlled by the communes

Sweden is a prototypical example of a welfare state. The country has a generous social compensation scheme, a free healthcare system and an extensive network of childcare facilities. The housing situation of its citizens is of high importance. Having a roof over one's head is considered one of the most elementary basic needs. For sociopolitical reasons, Sweden therefore put municipalities, the so-called communes, in charge of housing construction back in the 1930s when there was a great housing shortage. Today, approximately 36% of all Swedes rent their homes, of whom around half live in apartments owned by non-profit municipal housing companies that are partially funded by the state. The main objective is the provision of attractive and high-quality homes for all social groups regardless of ethnic background, age, income and family situation. The idea is that lower social classes are also able to afford to live at a top location. One of the goals of this policy is to promote social cohesion and reduce the gap between rich and poor. Based on the sociopolitical considerations that take clear precedence in Sweden, it therefore appears to make sense to regulate the rental accommodation market and rents in particular.

Rents negotiated collectively

According to Swedish law, a tenant is entitled to rent an apartment for as long as he likes as long as he abides by the rules. Examples of a breach of the rules in tenancy law are disadvantageous use, disruptive behavior and a wide range of contract infringements such as failure to pay the rent. According to this law, a maximum rent set by SABO, the umbrella organization of the municipal housing companies, is imperative as free fixing of the rent would undermine this law: For example, the landlord could raise the rent so much that the tenant was no longer able to pay it and had to leave the apartment. The rents (new and existing rents) are therefore agreed in annual negotiations between the property owners and the local tenants' association. The process is comparable with collective bargaining negotiations on the labor market. Two factors are decisive for setting the rent. First there is the value generated by a property: This can include the type of property, features, surroundings, quality of property management and in certain municipalities also the location. For example, a higher rent can be charged for a penthouse apartment with a large terrace than for an apartment on the first floor with a tight layout. Secondly, cost increases for the maintenance and management of the property are also taken into account. Based on these factors the surcharge on the total rent of all properties in the portfolio is determined. The additional costs are then distributed among the individual apartments and the rents increased accordingly. This process is referred to in Sweden as the utility value system and governed by the Rent Negotiation Act. The criteria for determining the value of a property can also vary between the municipalities. In Malmö, for instance, the location of a property is taken into account, while in Stockholm identical apartments cost the same irrespective of whether they are situated on the outskirts or in the city center.

Upper limit on rents

The other half of rental apartments, i.e. those that are privately owned, are also affected by the fixing of rents. Their rent may not exceed the utility value rent by more than 5%. A new tenant is

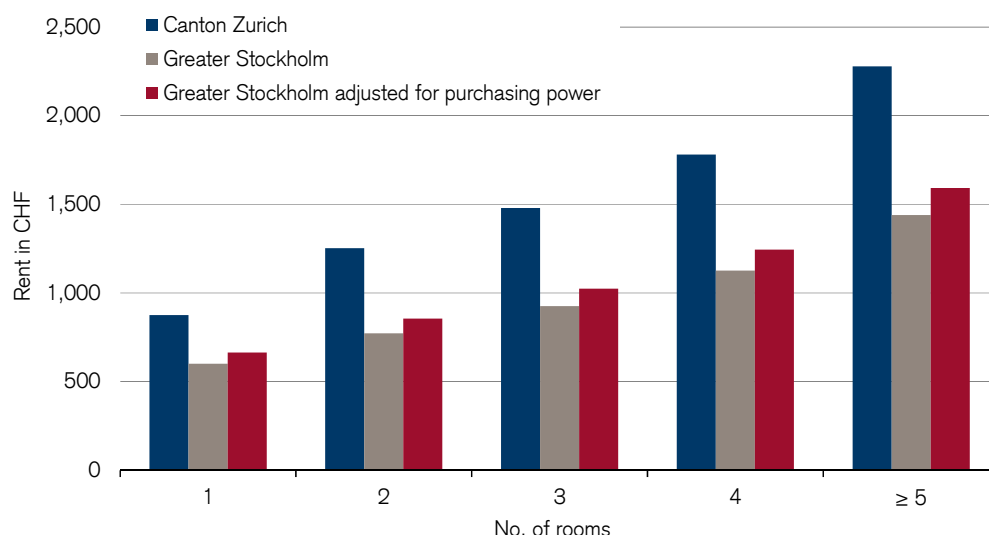
Rental apartments in Stockholm almost unobtainable but very inexpensive

entitled to request a comparison six months after moving into a private rental apartment. The rent paid so far is then compared with that of similar properties in the area. Comparable properties are restricted to rental apartments owned by the municipal housing companies and with rents set according to the utility value system. If the rent paid so far is higher, then it must be reduced.

Sweden's housing policy is reflected in significantly lower net rents. While consumer prices in Switzerland are generally almost a third higher than in Sweden, the gap between rents in the City of Zurich and those in Stockholm is even larger (Figure 41). The average monthly rent for a three-room apartment in the Canton of Zurich in 2014 was CHF 1,479 per month, while a similarly sized apartment in the Greater Stockholm area only cost around CHF 926. Even after adjusting the rents in Stockholm to take account of the higher purchasing power in Switzerland (CHF 1,024), there still remains a large difference. However, the rents kept low in Stockholm by regulatory factors nevertheless come at a price from an economic perspective that is reflected in some serious market distortions including rationing.

Figure 41: Comparison of rents in Zurich and Stockholm

Average net monthly rents for one to five-room apartments, 2014



Source: Swiss Federal Statistical Office, Credit Suisse

Consequences of rent regulation

Shortages and rationing as direct consequences

Owing to the fixing of rents that is also binding for private property owners, a de facto maximum rent prevails on the rental accommodation market. Anyone looking for a rental apartment in Sweden either submits an application to a commune or tries his luck on the private rental accommodation market. However, this requires patience. Owing to the intervention in rents, older apartments are very cheap and therefore popular. This means that nobody gives up his apartment because he won't find another one for the same price. Apartments that have become too big, for example after the children have moved out, also do not appear on the market again, a phenomenon referred to as the remanence effect. This leads to an insufficient supply and rationing on the municipal market that is reflected by long waiting lists. In the Stockholm region, it takes an average of eight years after submitting an application before the rental contract is received, and in the city center it can even take as long as 20 to 30 years. The number of apartments brokered in each of the city's districts amounts to fewer than 20 per year. Almost half a million people currently have an apartment application pending in Stockholm – against a population of 1.4 million. It comes as little surprise that the situation is so precarious especially in the Swedish capital. One of the reasons for this is the fact that the location of the property is taken into account insufficiently when setting the rent. As the market rent at exceptionally good locations is considerably higher than the regulatory maximum rent, there is a greater surplus demand in the urban centers and the waiting lists are therefore longer. It is also interesting to note that some older apartments in the city center cost less than apartments in the agglomerations, which would undoubtedly not be the case if the location was considered adequately.

Too little construction activity for lack of incentives

The shortage is itself a direct consequence of rent regulation as the latter results in low construction activity for lack of incentives. The supply of rental apartments has therefore been unable to keep up with the growth of demand, particularly for apartments in Stockholm. Investments in the construction sector are at a low level: Between 2000 and 2014 they averaged just 3.4% of gross domestic product (GDP). In the neighboring countries of Denmark and Finland, the GDP shares of construction investments over the same period were almost one and a half times (4.9%) and twice as high (6%) respectively. According to SABO, approximately 150,000 homes were built between 2008 and 2013 – around 126,000 too few in view of the ongoing growth of the population. A total of 436,000 new homes will be required by 2020, particularly in the cities since there is no surplus demand on the countryside.

Capped rents compensate risks too little

Owing to the de facto maximum rent, neither the municipal housing companies nor real estate investors have sufficient financial incentives to build new rental apartments. Although it is possible with new properties to set the rents outside the utility value system during the first 15 years, the long-term return for investors is limited on the upside. Due to its high cost-benefit ratio, the construction of new rental apartments is simply not attractive. Let alone risks, as a regulated rental accommodation market entails the risk of rents in future changing to the landlord's disadvantage. Such underlying conditions are not conducive for investment decisions. Furthermore, housing construction is left too much to the passive municipalities that are frequently unable to fulfill their promises regarding the number of homes to be built.

Forced into home ownership

Rent regulation makes the construction of owner-occupied housing considerably more attractive for project developers as greater returns can be achieved from selling than from letting. Furthermore, the maximum rent makes the conversion of rental apartments into condominiums very appealing. It increases the return of property owners but at the same time reduces the supply of rental apartments. State-sponsored conversion programs have also not improved the shortage of housing. Increasing numbers of municipal rental apartments were converted into condominiums between 2007 and 2014. This was caused by additional tax incentives that boosted the demand for owner-occupied housing. Not least, the shortage of rental apartments is forcing people – for lack of alternatives – into home ownership, which has contributed to a run on condominiums and corresponding rise in property prices. The prices for residential property in Sweden went up by 67% between 2004 and 2014. In the UK they increased by 42% over the same period, in Switzerland by 37% and in Germany by 24%. A decline of 2% was recorded in Spain and in Ireland by as much as 26%. Price growth in Sweden is so strong that there is now talk of a real estate bubble.

Emergence of secondary and black markets

Even the labor market is affected by the precarious situation on the rental accommodation market. Owing to the impossibility of finding an apartment within a reasonable time, Swedish job seekers are either very limited geographically in their search for work or having to accept long journeys to work when changing jobs. As a consequence, profiteering and fraud are not uncommon in the private housing market: The lack of housing in the urban centers means that housing no longer required is not being returned but hoarded. Apartments are illegally sublet at rents exceeding the contractual rent, with the difference being pocketed by the existing tenant. Furthermore, subsidiary payments in the form of “key money” are often paid upon the conclusion of private rental contracts, either directly via bank transfer to the previous tenant or indirectly through acquisition of the furnishings at exorbitant prices. This takes place despite such forms of enrichment being prohibited by tenancy law. The victims are generally young people and newcomers unable to rent an apartment due to the lack of housing, and spending years moving from apartment to apartment as subtenants. Rent regulation also indirectly exerts a negative impact on Sweden's economic activity and attractiveness as a business location. For example, companies settling in the Stockholm economic region are at a disadvantage because their employees are unable to find housing. Start-ups recently launched a public appeal for the housing problem to be solved as they were having difficulties in attracting staff for Stockholm.

Further causes of the shortage

However, the unfavorably designed tenancy law is just one of several causes that have interacted to bring about the precarious shortage of rental apartments. The conditions on the construction market have also contributed decisively to this. The municipalities play a central role in the construction of new homes in Sweden. They plan and finance the public infrastructure and own a large portion of the building land, which de facto gives them a planning monopoly. The planning and land-use designation process for construction projects is correspondingly slow and arduous. Thanks to simplifications in the planning process in recent years the duration from the

planning of a project to the completion of construction has been reduced from eight to ten down to five to six years, which is still long in comparison with other countries. In Germany the process lasts just three years. There are no incentives, particularly of a financial nature, to implement a sufficient number of construction projects. The standards and norms pertaining to building regulations are set very high. This applies above all to the quality, durability of materials, size of the components and compatibility with other products. The municipalities also have far-reaching rights to have a say in construction. These rights vary from municipality to municipality, thereby fragmenting the market and impairing the transparency of the process, which hampers market entry for new construction companies. The consequence of this is an oligopoly of four large companies in the construction industry that not only implement projects but also produce building material. They accordingly have a competitive advantage over smaller and new competitors. Not only the high standards anchored in tenancy law exert an influence on construction prices: The oligopoly also means that there is generally little competition prevailing on the construction market and therefore that residential construction prices are higher. In view of rent regulation it is therefore difficult to implement investment properties profitably.

Regulation may not ignore the incentive effect

A certain amount of tenant protection is justified ...

Regulating rents can be entirely justifiable not just sociopolitically but also from an economic perspective. Intervention into market structures can be justified partially by market failure. Property owners have more power in setting the rent as tenants are unilaterally confronted with transaction costs in the form of search and removal costs when moving house. Landlords can take advantage of this cost asymmetry and demand higher rents. This results in tenants on a completely free market paying excessive rents. A certain degree of tenant protection is therefore legitimate. With the Swedish system tenants are represented by an organization with greater powers of negotiation, thereby partially eliminating market failure. According to SABO this also brings benefits for landlords: They can efficiently negotiate rent increases for all the properties they own at one go. However, the Swedish rental accommodation market illustrates clearly the undesirable effects that rent regulation can have if it is not designed optimally. In the worst case, such regulation will thwart the achievement of the original objectives because the unintended consequences, such as waiting periods lasting for years, are ultimately borne by the tenants. For example, the subsidiary payments often demanded upon the conclusion of private rental contracts exceed the financial resources of the poorer sections of the population. Moreover, the private landlord can pick out his tenants where surplus demand is as high as it is in Sweden. He will naturally opt for the wealthier tenant as the latter poses a considerably lower risk of default.

... but economic incentives should not be neglected

All this implies that tenant protection needs to be designed in an incentive-friendly manner. This could be achieved in Sweden by for instance including the location of the property in the calculation of rents. The focus of efforts must also lie on constructing as many homes as possible. An abundant supply creates competition and forces landlords to offer tenant-friendly conditions. The utmost caution is therefore called for when regulating rents as the prices are then no longer able to exercise their function of eliminating the shortage. Interventions in rents can only work if the regulation includes periodic adjustment opportunities to the market rent. Such adjustments make most sense before the conclusion of rental contracts because both contracting parties are in a relatively good negotiating position at this time. Switzerland has such a system and would be well advised to preserve it and to expand further rather than restrict the adjustment opportunities. Sweden has recognized that the utility value rent approach is not conducive in its present form. The location of apartments has been accorded more weight since 2011 for determining an appropriate rent: If in a city demand significantly exceeds supply, thereby resulting in waiting periods of several years, rents may be increased by 5% each year. In order to bring supply and demand back into balance, further efforts are required, particularly also with a view to supply.

Office property

Unclear demand outlook

The office property market is in a difficult situation. On the one hand the low interest environment is continuing to create incentives for investments in office properties. New properties are therefore still being erected on a lavish scale despite the prevailing oversupply. Construction is largely being carried out for the investor's own needs or at very good locations, thereby putting pressure on landlords of older existing properties. At the same time, the demand side remains problematic. While new demand is appearing on the market, it is barely able to offset the weakening absorption power of traditional recipients of office space. The latter are endeavoring to enhance their usage and reduce their space requirements. Meanwhile, the projected automation of office activities is hampering the long-term investment planning of real estate investors.

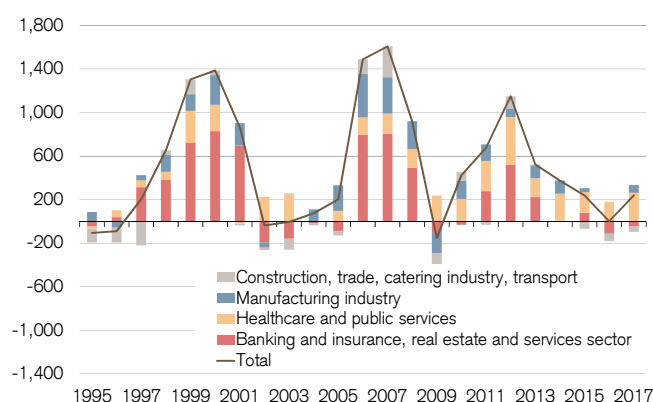
Demand structure undergoing change

Demand for office space should increase again in 2017

The overvalued Swiss franc and the sluggish performance of the European economy have increased the savings pressure on Swiss companies. Employment growth therefore stagnated in 2016. Although employment in the corporate services and healthcare/public services sectors continued to rise, losses in financial and insurance services, construction and industry altogether resulted in zero growth. The number of full-time jobs fell in 2016 for the first time since early 2010. By contrast, part-time work once again recorded impressive growth rates, primarily in the service sector. While the growth in workplaces should therefore be somewhat higher than employment growth, the trend toward shared workplaces is set to continuously marginalize this effect. We expect a slight recovery of employment in 2017 with growth of 0.5% in terms of full-time equivalents. On this basis we forecast additional demand for office space in 2017 of 240,000 m² (Figure 42). While this is low in comparison with the boom years, compared with the sluggish growth of 2016 it represents a positive development. As in the preceding years, growth in 2017 is likely primarily to be shaped by healthcare and public services. Furthermore, demand for office space from the corporate services sector and from industry should pick up again. However, the structural changes in the financial services industry will continue this year to push down demand for office space. This is particularly weighing down on the financial centers – above all Zurich, Geneva and Lugano that have the poorest growth outlooks among the 15 largest office property markets (Figure 43). The regions of La Sarine (Fribourg), Neuchâtel and Aarau have the best prospects for 2017.

Figure 42: Additional demand for office space

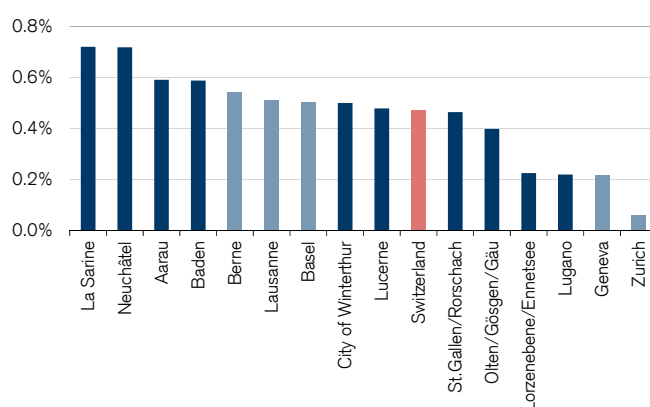
Estimated additional demand in 1,000 m²; 2016 and 2017: forecasts



Source: Credit Suisse, Swiss Federal Statistical Office

Figure 43: Regional forecast of office space growth

Forecast growth in demand of the 15 largest office property markets as % of existing office space, 2017



Source: Credit Suisse, Swiss Federal Statistical Office

Locational attractiveness remains high

Positive momentum for the demand for office space could come in the medium term from a solution to the mass immigration initiative (MII) and Corporate Tax Reform (CTR) III. The preferential treatment of job seekers from Switzerland and the forgoing of quotas for foreigners will enable the MII to be implemented in a business-friendly manner. The labor market should not

suffer any negative consequences from this. The locational quality of the Swiss economy will still remain at a high level when compared internationally despite the rejection of CTR III at the ballot box. Until a new reform capable of achieving a majority has been drawn up, internationally accepted and attractive corporate taxation can for the time being only be achieved by cutting ordinary tax rates. Certain regional shifts in locational quality are to be expected from such cuts, with the City of Basel and the Lake Geneva Region gaining attractiveness while Zurich is likely to lose attractiveness.

Increasing acceptance of the home office

The rise of the sharing economy and modern workplace models as well as increased demands placed on employers by Generation Y are changing the demand structure. The home office that has already been in existence for some time partially does justice to these trends. Not least thanks to increasingly efficient communication and information technologies, the share of employees partially working from home rose from 19.4% to 21.5% between 2010 and 2015. The home office as a regular form of work is also receiving growing acceptance among employers: 13.0% of persons surveyed in 2015 counted working hours performed at home as regular working hours, while 1.5% classified the home office as overtime and 7.0% did not have work done at home counted as working hours. Back in 2010 the share of regular working hours was just 9.5%. However, the drawbacks of this form of work (e.g. isolation, restricted infrastructure) should not be underestimated. The growth potential of home office activities is therefore limited and the office property market is not likely to change fundamentally due to the impact of the home office alone.

Coworking – the new type of office

A young but promising workplace model comprises so-called coworking spaces. Freelancers and young entrepreneurs as well as increasingly also employees of established companies rent office space meant for joint use. Exchange and networking within the community form a core element of this concept. Around 90 coworking spaces exist at present throughout Switzerland and their number has increased continuously in recent years. Most of these coworking infrastructures are currently located in urban areas of Zurich and Winterthur, followed by Berne and Basel. Coworking spaces today offer a total of around 2,000–3,000 workplaces, thus corresponding to less than 0.2% of Swiss office space. This is a low share compared to more developed coworking markets. The USA, for instance, already had a coworking share of office space of 0.7% back in 2014. In order to reach a similar level within five years, the supply of coworking workplaces in Switzerland would have to grow by approximately 1,600 per year. A coworking share of office space of up to 2% is forecast by 2020 in the USA.

High potential demand for coworking spaces

The US coworking market is presently dominated by the two largest providers Regus and We-work with a share of 80%. With 26 locations, Regus is also already one of the largest providers in Switzerland and Wework is also known to be potentially entering the Swiss market in the near future. This work model could receive additional impetus from the “Work Smart Initiative” launched in 2015. Several large employers – including AXA, Swisscom, SBB and Swiss Post – are planning to rent workplaces in coworking spaces in the future and themselves to offer workplaces for external staff. The initiative is set to exert a positive influence on both demand for and the supply of coworking spaces. The demand potential is generally considered to be high in Switzerland, with 12.4% of all workers in Switzerland describing themselves in the third quarter of 2016 as self-employed. This means that 580,000 people engage in productive work for their own account for at least one hour a week and in many cases are dependent on a flexible workplace. Investors should therefore include coworking providers in the group of potential tenants when planning and marketing office properties. In view of their often trendy layout, coworking spaces could also be a sensible way of making use of the increasing amount of empty commercial space at ground floor locations.

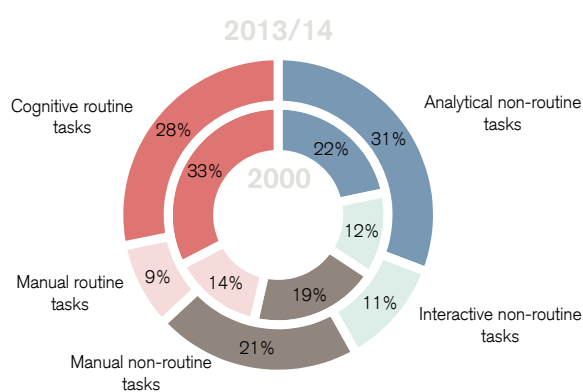
Automation changing spectrum of tasks

The past has shown that long-term forecasts on the development of the labor market are extremely difficult. Particularly when automation is taken into account, the range of employment forecasts is enormous. While it is undisputed that some activities are set soon to become automated, what is not clear is how many new jobs will arise from the creative destruction process. The following analysis therefore does not aim to shed light on how many jobs will in future disappear or be created due to automation. Instead it serves to take stock of the current labor market. The core question is which jobs are substitutable if tasks that are today still done by humans are soon taken over by computers. However, according to recent research, it will not be entire jobs but merely individual tasks that are automated. Based on the methodology of Dengler/Matthes/Paulus, we have been able to distinguish five different task categories by

means of the occupational classification of persons resident in Switzerland and active on the labor market (task-based approach). The differentiation of the various tasks is based on the logical assumption that routine tasks of both a manual and cognitive nature can be substituted by a computer while this is not (yet) the case for non-routine tasks. However, this does not mean that all jobs primarily comprising routine tasks are set to disappear. Instead, the job profile is likely to change in the future. We are talking here about a development that it has already been possible to observe retrospectively. Measured in terms of the respective main tasks, the share of jobs largely consisting of routine tasks fell throughout Switzerland between 2000 and 2013/14 from 47% to 37% (Figure 44). Conversely, the share of jobs with analytical non-routine main tasks rose from 22% to 31%. This development is set to continue in the same direction as automation progresses. As jobs that primarily consist of cognitive routine tasks on average entail the greatest demand for office space among the five task groups, this development will not leave the office property market untouched.

Figure 44: Change of main job tasks

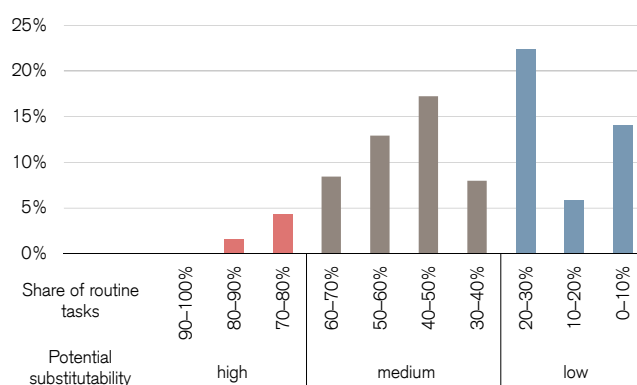
Share of jobs according to their main activity, persons resident in Switzerland



Source: Swiss Federal Statistical Office, Federal Employment Agency, Credit Suisse

Figure 45: Automated substitutability of jobs

Share of workers according to potential substitutability of their jobs, 2013/14



Source: Swiss Federal Statistical Office, Federal Employment Agency, Credit Suisse

Potential consequences of automation

Which jobs ultimately fall victim to automation will largely depend on the frequency of non-routine tasks. Based on the task shares of a job it is possible to assess how high the potential substitutability is. Research work considers the potential substitutability to be low if no more than 30% of the activities of a job can be carried out by a computer. Around 42% of workers in Switzerland currently pursue such jobs (Figure 45). If, however, more than 70% of the activities can be automated, the potential substitutability is deemed to be high. Around 6% of all workers will fall into this category. If these highly substitutable jobs were all to disappear, this would not radically shake up the office property market.

Can a fifth of office property be compensated with new jobs?

But what would be the consequences if not only highly substitutable jobs but also the routine tasks in all jobs were to be rationalized to a certain degree? If we calculate a scenario in which a share of routine tasks of no more than 30% is tolerated and all routine tasks exceeding this threshold are automated, this would correspond to a demand for office property requiring replacement across all professions of an estimated 7 million m². With a maximum permitted routine share of 20% this would rise to 11 million m², around a fifth of the entire supply of office space. The urban centers would be particularly affected as it is there that most routine tasks are carried out. However, the new technical opportunities will also enable a large number of new non-routine tasks to be created. Determining their space potential is much more difficult. The crucial question is this: Could these new non-routine tasks offset or – even better – overcompensate the fifth of office space becoming surplus to requirements? The speed of the transformation process in particular will play a major role in answering this question and balancing out the demand for office space. The speed of the structural change will at least be decisive in determining whether there are even sufficient workers available with the new skills required for the new jobs.

Supply: Remarkably stable

Expansion persisting unwaveringly at long-term average

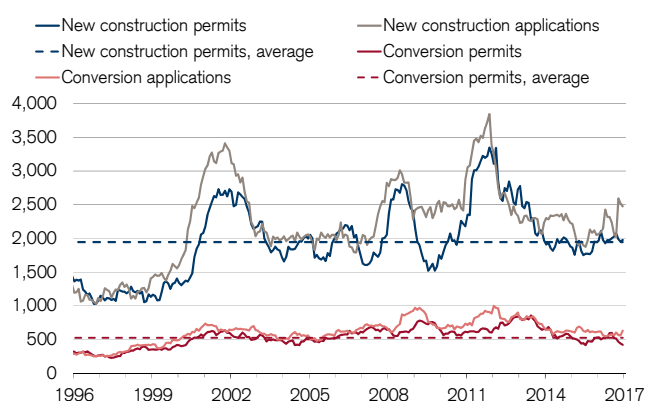
Capital is continuing to flow into real estate projects owing to the low interest rates and consequent lack of investment alternatives. The total sum of approved construction projects once again lay within the range of the long-term average of just under CHF 2 billion in 2016 (Figure 46). The expansion of space has therefore remained at a comparable level since the end of 2013. About half the approved construction sum is planned for investors' own needs. Some of these projects will already be ready for occupancy or approaching completion, thus entailing relocations from existing offices. Investment activity remains subdued in the major centers where cumulated building permits are 14% below the long-term average. Above all in Zurich (–31%) and Geneva (–67%) there is less planning activity. Capital is instead being invested more in medium-sized urban centers (+33%). Building permits outside the urban centers are roughly in line with the long-term average (+6%). As the vacancy situation has not only got worse for commercial properties but now also for rental apartments, investments in office properties will have become more attractive again on a relative basis. At CHF 2.5 billion, planning applications are currently pointing toward a general acceleration of expansion. However, the fact that applications have reached their highest value since the summer of 2012 is largely attributable to the receipt of the application for the second Roche tower in Basel.

Supply slightly down at a high level

The total of office space advertised online decreased slightly during 2016 compared to the previous year (Figure 47). This is somewhat surprising in view of the low additional demand and ongoing expansion. One reason may be that only few new larger properties came onto the market in the major centers in 2016. Around a quarter of the advertised properties are new buildings – only slightly more than at the end of 2015. However, with somewhat more than 2.2 million m² of space and a supply rate of 4.2%, supply remains at a high level when viewed historically. As with expansion, the advertised supply is also moving away from the major centers that altogether recorded a fall in supply. This development was significantly influenced by the outer business districts of the office property markets of Geneva and Berne as well as the extended business district in Lausanne that together absorbed on balance 110,000 m² in 2016. By contrast, the amount of advertised office space outside the major centers increased by 103,000 m² after having no longer risen since 2013.

Figure 46: Planned expansion of office space

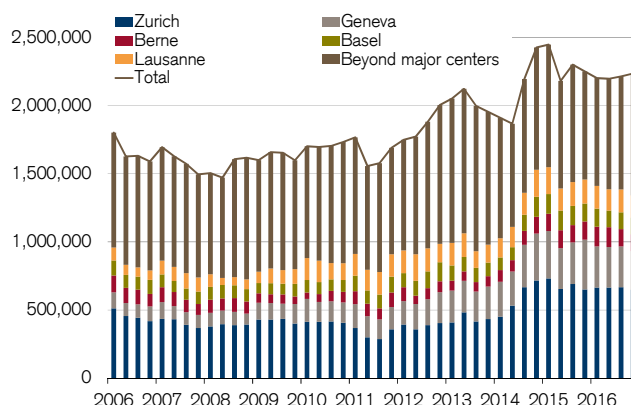
Building permits and planning applications, moving 12-month total in CHF mn.



Source: Baublatt, Credit Suisse

Figure 47: Advertised office space

Advertised office space: quarterly totals in m²



Source: Meta-Sys AG, Credit Suisse

No speedy decline of supply in sight

There is no reduction of supply in sight for 2017. As some properties still under construction have already been advertised, no significant rise in the supply rate is to be expected in 2017. Supply is set to expand less as a result of large new properties in the next few years and is instead likely to be shaped by existing properties becoming vacant due to corporate relocations to new properties often built for the investor's own use.

Market outcome: Marketing costs rising further

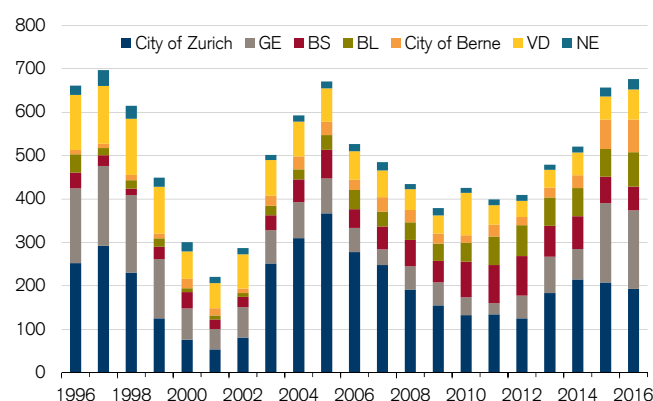
Downturn slowing down

Similarly to the supply figures, the vacancy data available for 2016 (partial survey covering around 43% of office space) has also remained relatively stable at a high level (Figure 48). Cumulative empty office space increased by 2.9% on the previous year after having risen by over

26% a year earlier. While the City of Zurich and the Cantons of Geneva and Basel-Stadt reported a fall in vacancy figures, there has been an increase in vacant space in the Cantons of Vaud and Basel-Landschaft as well as the City of Berne. Contractual rents responded at an early stage to the growing supply and increasingly uncertain demand situation (Figure 49). They are declining in German-speaking Switzerland since 2012 and in the City of Geneva since mid-2013. Rents only continued to rise further in the City of Lausanne, with a temporary peak in the fall of 2015. At –3.5% year on year, rents once again fell most sharply in the City of Geneva in the second quarter of 2016 and they were also down by –1.3% in the City of Zurich. In Berne and Basel, which have supply rates under the Swiss average and a downward trend, rents rose on the previous year. However, successful letting in the major centers shaped by surplus capacities was mostly achieved in 2016 by offering special conditions in the form of a rent-free period or other incentives. These discounts are not reflected in contractual rents which is why the development of the latter paint too positive a picture.

Figure 48: Vacancies of office properties

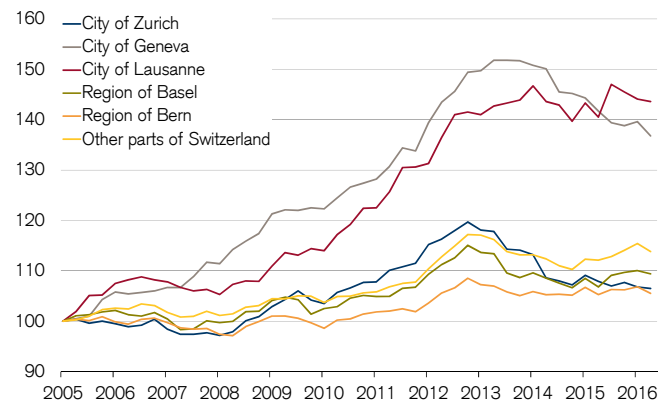
In 1,000 m²; partial survey covering around 43% of the Swiss office property market



Source: Cantonal statistical offices, Credit Suisse

Figure 49: Regional rent price trend

Hedonic rent index based on contractual rents, index 2005 = 100



Source: Wüest Partner, Credit Suisse

Time on market of office properties increasing further

Not only the falling rents point toward a challenging marketing situation. The development of the time on market of properties advertised on the internet is also pointing steeply upwards. The average number of days on the market almost doubled between early 2014 and the end of 2016 and currently amounts to over 150 days. The marketing costs will therefore have risen further for landlords and agents. In order to understand which locational and property factors are decisive for the time on market, we have carried out a more detailed analysis of the supply data with an econometric model. According to these calculations, properties remain advertised for longer at places where accessibility by individual motorized transport is good but public transportation connections are comparatively poor (e.g. in urban centers away from the main public transportation routes). Larger properties are also more difficult to let, as are those with above-average rents when compared with the local rent level. The geographical component is likewise extremely significant. Assuming identical locational and space factors, offices in the regions of Zurich and Central Switzerland remain vacant for considerably less time than in the Lake Geneva Region and Ticino.

Public transportation connections set to remain crucial for the time being

Investors and developers have long identified public transportation connections as a crucial locational factor. According to the model, an office with otherwise comparable features will have half as long a time on market with optimal public transportation connections than at a location with average public transportation connections. Only the emergence of driverless cars could reduce the significance of public transportation connections again. There can be no doubt that autonomous vehicles will enhance the efficiency and practicality of individual motorized transport and cover many journeys faster than public transportation. The Federal Office for Spatial Development expects passenger transport to increase by 25% between 2010 and 2040. Growth of 18% is predicted for individual motorized transport. As the expansion of the road infrastructure will be unable to keep pace with this growth, congestion times are set to rise disproportionately and make public transportation more attractive. A marked increase of 51% is therefore forecast for public transportation by 2040. It is likely to take quite a while before a highly efficient use of the infrastructure is made possible by autonomous vehicles. Until then the public transportation connections will remain an extremely crucial locational factor for office properties.

The 15 largest office property markets at a glance

Figure 50 summarizes the performance of the 15 largest office property markets. 63.5% of Swiss office properties are located in these top 15 office property markets. The share for advertised properties is even higher: 74.2% of all advertised properties are attributable to this group, which suggests a concentration of supply in the urban centers. Particularly the five major centers are pushing the nationwide supply rate of 4.2% clearly upwards. They have a share of 60.0% of all advertised properties but a share of office space of just 44.1%. Many of the regions listed have a supply rate below 3.0%. This has prompted investors to diversify their activities regionally and increasingly switch to medium-sized centers. The expected expansion is likely to be above average particularly in the regions of La Sarine, Lucerne, Lugano and Aarau.

Figure 50: Existing and advertised office space in the 15 largest office property markets

Existing and advertised office space (existing and new constructions) in m² in Q4 2016; 2016 area-weighted average rents (net) in CHF/m²; expected expansion and price trend for 2017

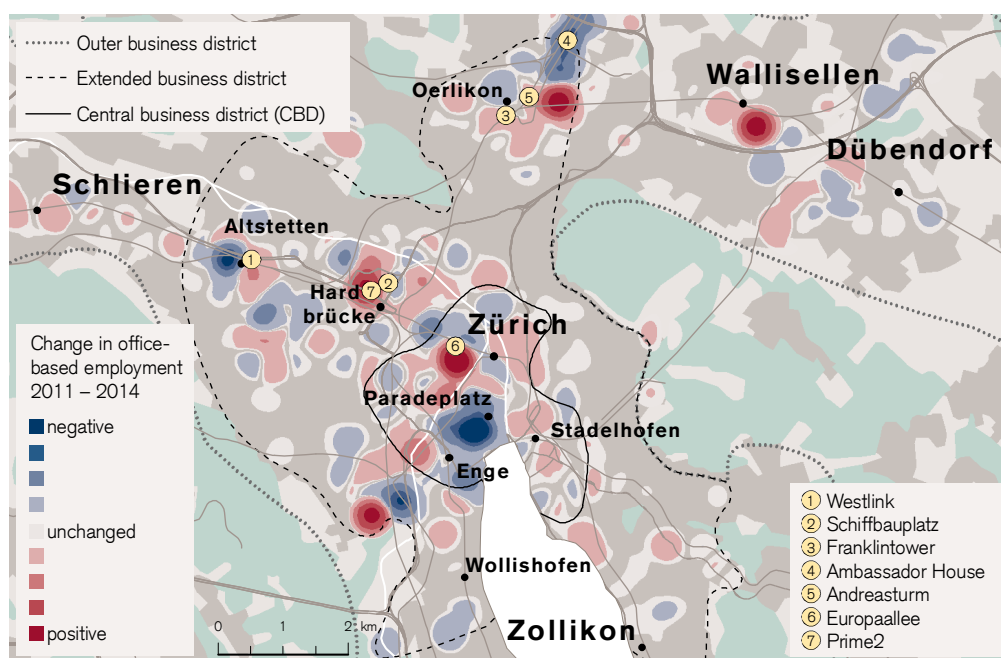
Office property market	Existing office space	Advertised office space	Supply rate	Expected expansion	Average rent	Price trend
Zurich	10,037,599	648,581	6.5%	↘	259	↘
Geneva	4,081,178	284,995	7.0%	↘	431	↘
Berne	3,433,471	121,902	3.6%	↗	271	→
Basel	3,236,968	122,609	3.8%	↗	214	→
Lausanne	2,568,998	163,635	6.4%	↗	269	↘
Economic region						
Lucerne	1,582,156	65,855	4.2%	↗	185	
St. Gallen/Rorschach	1,430,485	29,676	2.1%	↘	186	
Aarau	1,343,237	48,643	3.6%	↗	169	
Lugano	1,274,781	38,753	3.0%	↗	231	
Lorzenebene/Ennetsee	1,261,864	39,475	3.1%	→	240	
City of Winterthur	763,101	14,394	1.9%	↗	253	
La Sarine	723,794	20,994	2.9%	↗	226	
Baden	694,249	30,801	4.4%	↘	237	
Neuchâtel	637,209	12,644	2.0%	↗	155	
Olten/Gösigen/Gäu	578,710	17,285	3.0%	↘	143	
Switzerland	53,003,528	2,237,188	4.2%	→	267	→

Source: Meta-Sys AG, Credit Suisse

Zurich

Figure 51: Geographical development of Zurich office-based employment

Change in office-based employment, absolute per ha, 2011–2014



Source: Swiss Federal Statistical Office, Federal Office of Topography, Credit Suisse

Only isolated growth remaining

Demand on Zurich's office property market has slowed down markedly in recent years. Following strong growth of 17% between 2008 and 2011, office-based employment in Zurich only increased by 1.7% between 2011 and 2014 and has barely regained momentum since. Altogether the demand for office space will accordingly have risen by around 170,000 m². From what was once virtually widespread employment growth, only isolated growth remained in the three-year period up to 2014 (Figure 51). The consolidation of the jobs of some major corporations at inexpensive locations with good accessibility has resulted in a temporary decline in the demand for office space in the central business district (CBD). Demand has grown in both the extended and outer business districts with between 80,000 m² and 100,000 m². From a small-scale perspective, locations beyond the Sihl from Europaallee past the Binz to Üetlihof gained office-based employees, largely at the expense of the city center. Other growth hotspots resulting from new buildings lay in the area around Hardbrücke station, on the Richti site and on the former Leutschenbach industrial estate.

Financial services sector pushing down demand for office space

Demand for office space in Zurich will altogether have barely increased in the past two years. The structural changes in the financial services industry are exacting their toll in terms of demand for office space, with Zurich particularly strongly affected with its high employment share of 13.6% in the financial sector. While expanding sectors such as healthcare are able to offset the declining demand for office space on the part of banks, there is a lack of growth industries with the potential to trigger a significant expansion. We therefore only expect additional demand of a few thousand square meters for the Zurich office property market in 2017. Moreover, implementation of CTR III is set to reduce Zurich's lead on other urban centers in the location competition. A reduction of the ordinary tax rates would result in considerably larger revenue shortfalls from ordinary tax payers in Zurich than elsewhere. The Canton of Zurich therefore intends only to reduce the cantonal tax on profits from 8% to 6%. The effective corporate tax burden (Federal Government, canton and municipalities) in the City of Zurich would be around 18.2% and thus remains on the rear ranks. The Lake Geneva Region and Basel-Stadt will be able to attract companies with significantly lower ordinary taxes following successful implementation of the reform.

Further stabilization of supply and vacant office space

The low additional demand forecast for 2017 only corresponds to a fraction of the current advertised office space. At 6.5%, the supply rate on the Zurich office property market at the end of 2016 was the highest of the German-speaking urban centers. Although the total amount of advertised office space has reduced somewhat since peaking at the start of 2015, it recently remained at a high level of 649,000 m² (Figure 53). Despite some successful re-letting, the advertised supply ultimately results in a zero sum game as the office space vacated elsewhere by

the new tenants quickly appears in the advertised supply. Around half the advertised office space is located in Zurich's extended business district, where the supply rate is a high 7.6%. However, many of these properties have been newly constructed and by no means are all of these offices ready for occupancy. It is also interesting to note that large properties in particular are in some cases no longer advertised via the online portals but only via project homepages. The official vacancy figures of the City of Zurich give some cause for hope. The amount of empty office space fell slightly for the second year in succession and came to 193,000 m² as of June 1, 2016. The decrease primarily took place in the CBD where almost 16,000 m² less office space was vacant than in 2015. The city center office market is therefore gradually recovering from the sharp increase in office space in 2014. The rents of empty office space have fallen by a sharp 8% to 14% in the expensive city center, Enge and Seefeld districts since 2014. The largely attractive properties will have attracted new demand thanks to the lower rents. However, the amount of vacant office space has increased in areas outside the center, especially in Altstetten and Seebach. Altstetten is now the area with the most vacant office space and Seebach that with the highest vacancy rate.

Intense competition leading to falling rents

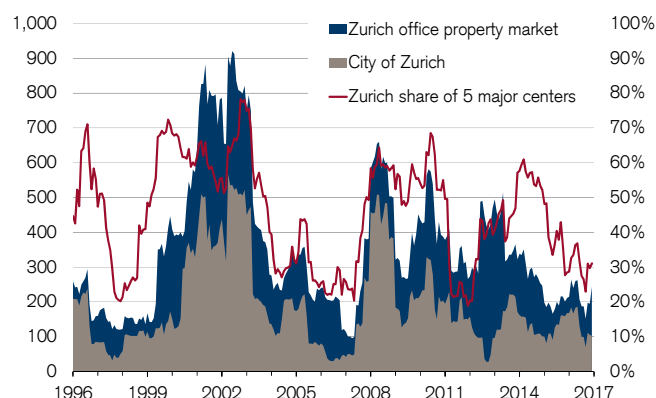
The stabilization of supply did not reduce the intensity of competition. The median number of days on the market increased by 55 days to 153 days in the CBD. At 202 days, existing space in the outer business district is on the market for longest, 48 days more than at the end of 2015. The marketing situation will therefore have intensified further, thus leading to a wide range of concessions granted on rental conditions. Even without taking account of these multiple additional benefits, transaction rents have already been falling since 2012. Rents in the City of Zurich fell by 1.3% year on year in 2016 and the decrease in the overall region amounted to 0.6%. The current rent level is 11.0% below the peak of 2012, which means that Zurich has experienced the greatest relative rent adjustment of all the major centers.

No swift decrease in supply to be expected

Rental performance and the expansion of supply are set roughly to balance each other out in 2017 as only a small number of larger projects will be completed. These include the WestLink project and the office building at Schiffbauplatz that both have high pre-letting rates. Investors have for two years been taking a more cautious stance on the Zurich office market. The 12-month total of building permits has since been fluctuating at a level of around CHF 244 million, which is approximately CHF 108 million below the long-term average (Figure 52). The only prestigious construction project to be approved in 2016 was the Franklin Tower in Oerlikon that should already be ready for occupancy in 2018. The Ambassador House, Andreasturm and construction site B on Europaallee are scheduled for completion in the same year. The Circle should be ready for occupancy in the following year. Furthermore, planning approval is currently being sought for a replacement construction called Prime2 on the Welti Furrer site with 18,000 m² of office space. We therefore do not expect any decrease in the supply of office space in the medium term.

Figure 52: Approved construction projects for office space

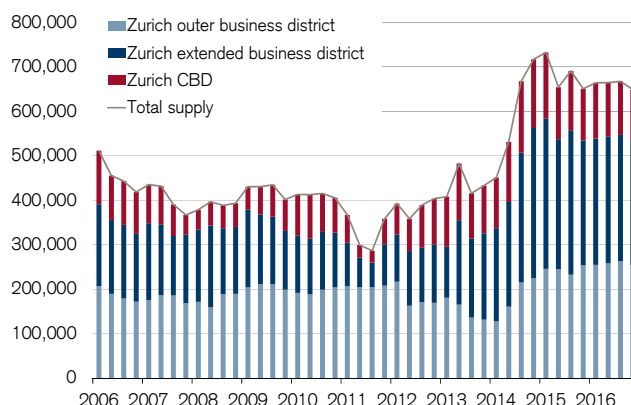
12-month total in CHF mn.; share in total of major centers (r.h.s.)



Source: Baublatt, Credit Suisse

Figure 53: Trend in advertised office space*

Advertised office space: quarterly totals (existing and new constructions) in m²



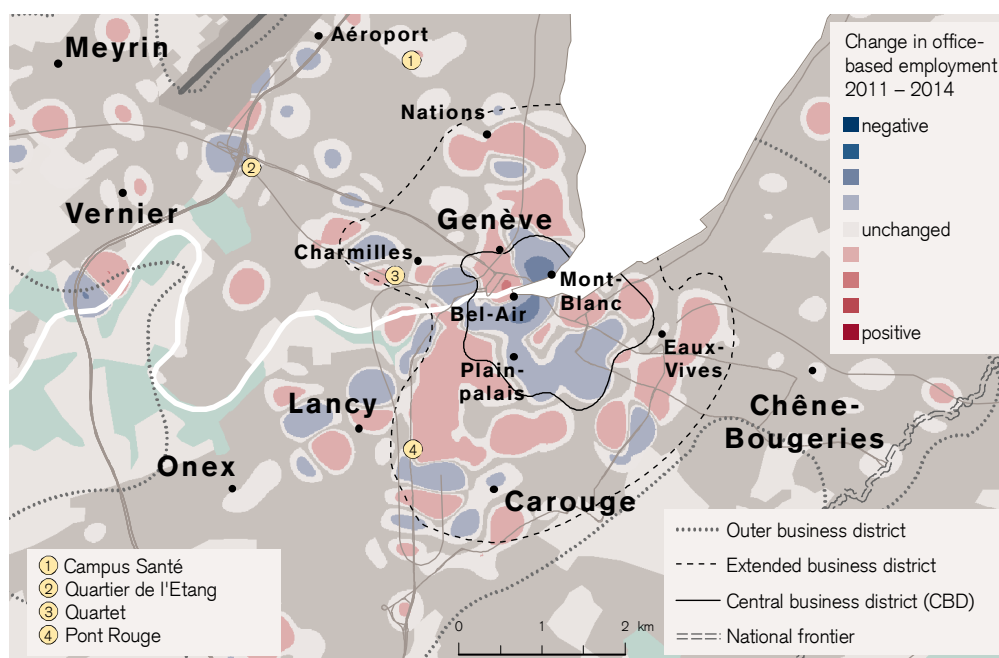
Source: Meta-Sys AG, Credit Suisse

*excluding The Circle

Geneva

Figure 54: Geographical development of Geneva office-based employment

Change in office-based employment, absolute per ha, 2011–2014



Source: Swiss Federal Statistical Office, Federal Office of Topography, Credit Suisse

Decline in demand for office space in the CBD

The Lake Geneva Region with Geneva as its most important center was for many years an influential driver of Swiss economic performance. However, due to economic challenges and location-related uncertainties (MII, CTR III), this trend has lost momentum since 2010. Between 2011 and 2014, office-based employment in Geneva only grew by 1.7%, resulting in estimated office space growth of 70,000 m². Locations that saw a strong rise in employment are therefore few and far between (Figure 54). Demand for office space has increased in particular in the extended business district, while demand in the central business district (CBD) was down by up to 50,000 m². In contrast to other major centers, this development is due less to location optimizations by companies, as hardly any major shifts were observed on the Geneva office property market. The main cause will instead be the consequences of the structural change.

Additional demand should remain low in 2017

Geneva's sector structure is shaped by the banking sector and wholesale with employment shares of 7.2% and 6.9% respectively. Both sectors are affected by structural changes and have recently sustained a decrease in demand for office space. Although Geneva also has some other attractive service sectors, the growth in office space will altogether have been limited to around 10,000 m² in the past two years. We also expect low additional demand below 10,000 m² for Geneva's office property market in 2017. However, among other things the rising number of cross-border commuters that is currently continuing to record a linear increase 6,000 cross-border commuters each year in the Canton of Geneva shows that the momentum of the local economy has not ground to a halt. In terms of its identified locational qualities, Geneva will remain an attractive office location in the long term. With the implementation of CTR III, corporate taxes in Western Switzerland – the location of a large number of companies enjoying privileged taxation – are set to fall particularly sharply. The ordinary tax rate on profits is ultimately to be reduced in Geneva from around 24% to 13.49%. This would put Geneva in tenth position in future in the ranking of the overall tax burden.

Supply remains at a high level

Despite subdued employment momentum, the advertised supply on the Geneva office property market has not risen further (Figure 56) but instead decreased markedly by 81,000 m² since the peak of 2015. However, at 7.0%, Geneva still has the highest supply rate of all the Swiss urban centers. While the rate is at its highest in the outer business district at 8.6%, an estimated 6.9% of all space in the CBD is also available for rent. At –30.5%, supply has primarily declined in the outer business district. The reason for this is the extremely subdued investment activity in recent years owing to which there are currently hardly any new larger properties coming onto the market so that the supply of properties is not expanding further. Just 7.7% of the Geneva supply of office space therefore comprises new buildings.

Vacancies shifting to old stock

The weak momentum of the Geneva office market is also reflected in the official vacancy figures. Vacant office space remained at a high level of 181,000 m² in the Canton of Geneva in June 2016 despite low construction activity. However, with vacancies in the year before having risen by 162%, the stabilization is to be viewed positively. Vacancies increased above all in the City of Geneva and in Lancy, while in Meyrin, Vernier and Versoix there was less vacant space. Vacant space shifted significantly (–40,000 m²) in the past year from newer buildings constructed after 2010 to older buildings erected before 1970. Older existing properties are set primarily to be affected by vacancies as the shift continues.

Rent adjustment continuing

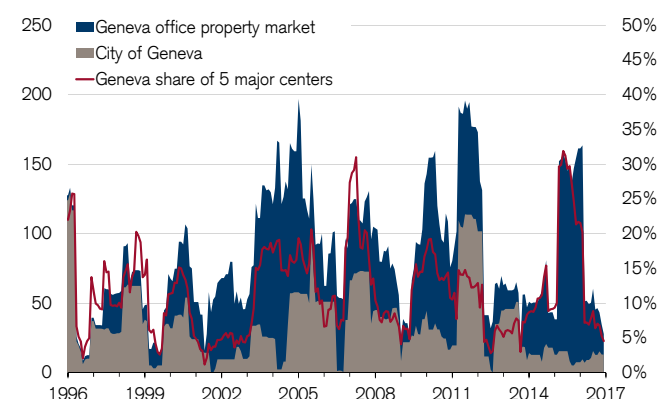
Despite the stabilization of vacant and advertised office space, the marketing situation remains challenging. One indicator is the high average number of days on the market that has risen in all three of Geneva's business districts above the threshold of 150 days. The number of days on the market has increased in the extended and outer business districts by around 40 days since 2015. The fraught situation is also reflected in rents. Even the advertised rents that paint a too positive picture due to measurement difficulties have fallen by an impressive 8.1% in the CBD since culminating in 2012. Contractual rents reveal a similar picture: Rents in the City of Geneva decreased by a further 3.5% year on year as of the second quarter of 2016 and are now 9.9% below the peak of mid-2013. Despite these adjustments, rents in Geneva remain the highest in Switzerland. Meanwhile, rents are set also to remain under pressure in 2017 owing to the lack of demand.

Deceptive calm in construction activity

With the exception of the new Campus Santé in Grand-Saconnex that will be opened at the end of 2017 with 40,000 m² of gross floor space, construction activity on the Geneva office property market has remained subdued. The uncertain demand outlook has prompted investors to take a cautious stance. At CHF 28 million, planned expansion is also 67% below the long-term average, and the share of approved office properties in the five major centers amounts to just 4.2% (Figure 55). Approvals in the City of Geneva remain at a comparatively low CHF 13 million. However, the calm is deceptive. The number of planning applications submitted suggests that expansion on the Geneva office property market could soon pick up again. In the suburban municipality of Vernier, a planning application has been submitted for an office building in the future l'Etang neighborhood with a total construction sum of CHF 90 million. Up to 500 jobs are to be created in the new neighborhood. The Quartet project intended to provide 15,000 m² of office space at a central location could bring change to the CBD. Larger amounts of office space are being created as part of the Pont Rouge project, the first stage of which is already under construction with 30,000 m². A fresh breeze should then definitely arrive with the opening of the CEVA rail link and the development of the station areas. This could trigger a wave of location optimizations in Geneva.

Figure 55: Approved construction projects for office space

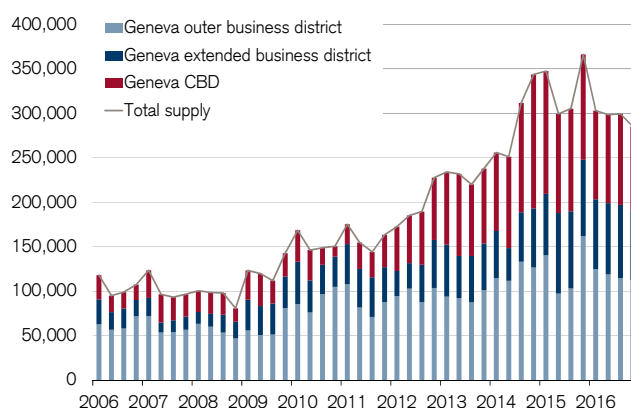
12-month total in CHF mn.; share in total of major centers (r.h.s.)



Source: Baublatt, Credit Suisse

Figure 56: Trend in advertised office space

Advertised office space: quarterly totals (existing and new constructions) in m²

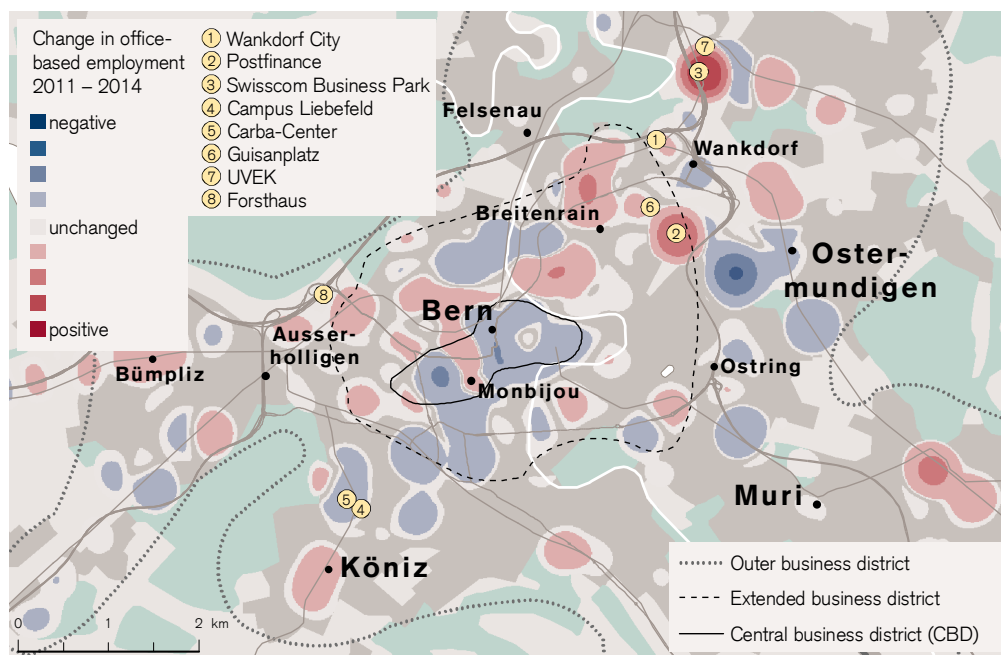


Source: Meta-Sys AG, Credit Suisse

Berne

Figure 57: Geographical development of Berne office-based employment

Change in office-based employment, absolute per ha, 2011–2014



Source: Swiss Federal Statistical Office, Federal Office of Topography, Credit Suisse

The office market is growing mostly in the northeast

Berne's office property market is growing less strongly but as before primarily on the fringes. Office-based employment increased by 2.8% between 2011 and 2014, which resulted in an estimated additional demand for office space of 100,000 m². Demand for office space grew exclusively in the extended and outer business districts with over 60,000 m² each (Figure 57). The Berne office property market is primarily expanding in a northeasterly direction, with Wankdorf as the new center. Decisive growth poles were the head office of PostFinance, the Swisscom Business Park in Ittigen and the Swiss Federal Office of Information Technology and Systems in Zollikofen, while the office market is also growing in the south, in Liebefeld. The Federal Administration has moved onto the Liebefeld Campus, the newly built Carba Center will soon be fully let and a further office building is to follow. Meanwhile, Berne's central business district (CBD) underwent a contrary development and lost employment: An estimated 3.8% less office space was required in 2014 than back in 2011. The fall in demand was largely caused by public administration and financial services providers that relocated their activities away from the city center. The greatest additional demand came from architects and engineers, followed by advocacies.

Demand remains tentatively stable

Demand for office space will have increased by low five-digit number of square meters since 2014. Healthcare and corporate services in particular should have boosted the demand for office space. The sector structure dominated by public administration is accompanied by subdued but stable growth prospects. Healthcare and the IT sector offer the greatest development potential. We expect organic growth of additional demand of around 15,000 m² for Berne's office property market in 2017. Measured against existing stock, this is the highest growth of all the major centers. In the longer term, however, Berne could lose locational appeal to other major centers following implementation of CTR III. Berne is one of the cantons with a large share of tax revenue attributable to companies subject to ordinary taxation. A reduction of the ordinary tax rates to the level of the least expensive cantons would accordingly result in larger revenue shortfalls from the ordinary tax payer. The Canton of Berne is considering scenarios with a profit tax burden of 16.37%. While this would make Berne a more attractive business location than Zurich from a tax perspective, it would fall considerably behind the other major centers in the tax ranking.

Decline in advertised space apart from in the CBD

With a total of 122,000 m² of advertised existing and new office space, the Berne office market that is known for its stability currently has the lowest supply rate (3.6%) among the major centers (Figure 59). The amount of advertised office space has fallen by a total of 8.8% since the end of 2015. Particularly in the extended business district there is barely any space currently available for rent. However, Berne's supply of office space has above all declined in the outer

business district, where there are 23,000 m² fewer available than at the end of 2015. By contrast, advertised office space in the CBD has risen strongly by 67.8% (+16,000 m²). The consolidation of offices of the Federal Government and government-related companies outside the CBD is progressing further and means that offices at attractive city center locations are coming onto the market. In view of the low supply rate, the official vacancy figures of office and practice premises in the City of Berne are at a comparatively high level. As of June 2016, 99 properties with total space of 75,000 m² were empty. Much of the vacant office space consists of existing properties that are difficult to let and have already been empty for over a year. Although vacancies have risen by 10% on the previous year, the increase is manageable compared with the doubling in the previous year. We expect vacancies to decrease again for the first time in the next year.

Short time on market

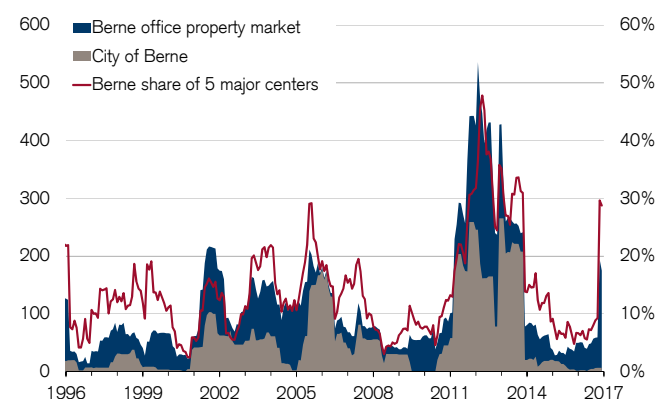
Despite the increased supply in recent years, there can at present hardly be any talk of a over-saturated market in the center of Berne. This is confirmed by the short time on market, which in Berne's CBD and extended business district amounts to just 70 and 83 days respectively and has even decreased on 2015 in the CBD. By way of comparison, none of the business districts in any of the other major centers has a time on market of less than 110 days. The average duration only comes to 150 days in Berne's outer business district, although this in itself is not unusual for the peripheral area. Contractual rents rose slightly (0.2%) year on year in the entire Berne region as of the second quarter of 2016. Berne's rents have been fluctuating at a stable level since mid-2013.

Consolidation of Federal Government generating a lot of momentum

We initially expect a further decrease in the supply of office space. The comparatively low supply on the Berne office property market is only set to rise significantly following completion of the second development phase in Wankdorf City and the consolidation of the Federal Government in the area around Guisanplatz. The new wave of expansion is already taking shape with an approved construction sum of CHF 175 million that is well above the long-term average of CHF 118 million (Figure 58). At 26.4%, the share of expansion in Berne among all the five major centers is almost double the long-term average. The decisive factor behind this momentum is the new construction of the administrative building of the Federal Department of Environment, Transport, Energy and Communications (DETEC) in Ittigen with a construction sum of CHF 150 million. Six hundred new jobs are to be created in an initial expansion phase at the new administrative center. In a second phase the site is to be extended with around 2,200 jobs to become one of the larger sites of the Federal Administration. As a further step toward consolidation, a second administrative building is to be erected by 2021 on the Meielen site in Zollikofen. Meanwhile, Berne's city government is planning to bring together its construction-related administrative departments with 370 office workplaces at the Forsthaus location. Owing to this continued concentration of locations and a low level of building permits of CHF 7 million in the City of Berne, the market in the city center is likely to remain dominated by existing space. The restructuring of Berne's office market is thus continuing apace.

Figure 58: Approved construction projects for office space

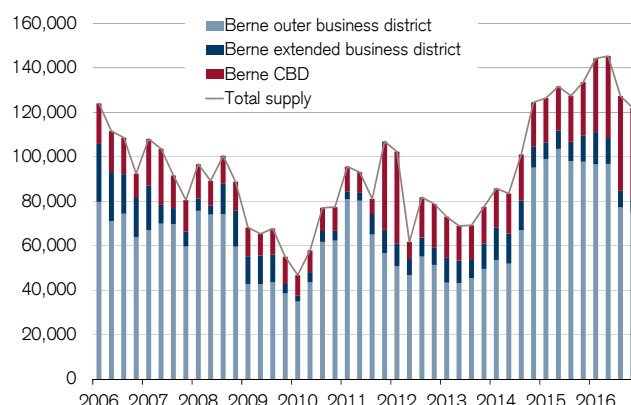
12-month total in CHF mn.; share in total of major centers (r.h.s.)



Source: Baublatt, Credit Suisse

Figure 59: Trend in advertised office space

Advertised office space: quarterly totals (existing and new constructions) in m²

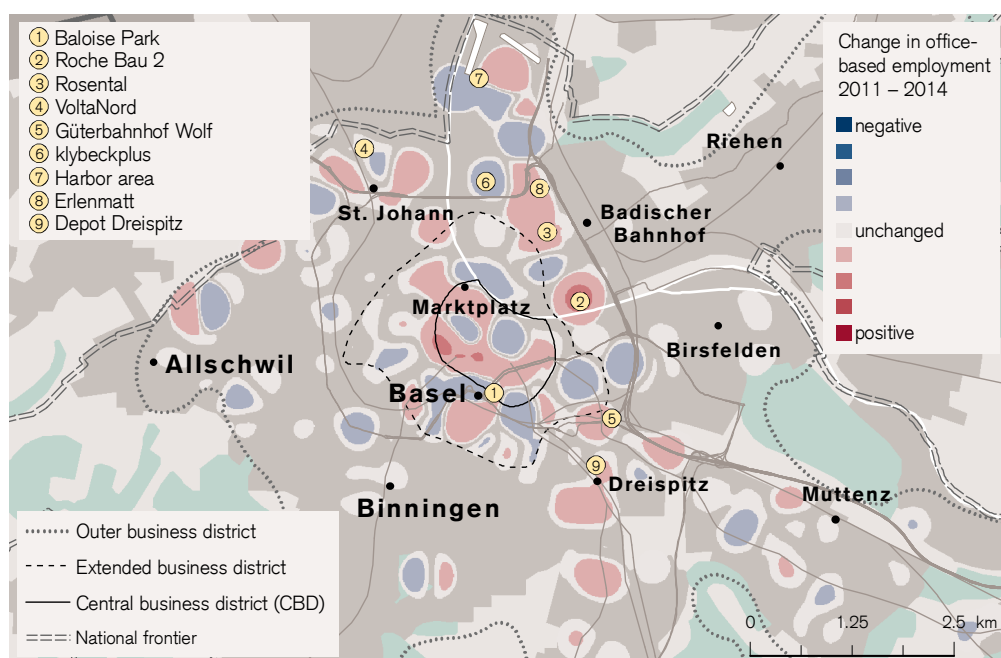


Source: Meta-Sys AG, Credit Suisse

Basel

Figure 60: Geographical development of Basel office-based employment

Change in office-based employment, absolute per ha, 2011–2014



Source: Swiss Federal Statistical Office, Federal Office of Topography, Credit Suisse

Employment growth broadly based

The location promise of the two pharmaceutical multinationals has injected renewed self-confidence into Basel as a business location that has given rise to multifaceted growth. The increased momentum is among other things reflected in the growing number of cross-border commuters working in Basel-Stadt, which has risen by 3.0% per year since 2011 after previously remaining constant for many years. Between 2011 and 2014, office-based employment on Basel's office property market grew by 2.8%, thereby increasing the demand for office space by an estimated 90,000 m². The growth in office space was broadly based with five sectors each generating additional demand of around 20,000 m². However, demand for office space has decreased in the chemical industry, legal and tax consultation and insurance. From a geographical perspective, demand for office space increased in all three business districts and at 3.6% most sharply in the outer business district, namely in Kleinbasel (Figure 60). Around a third of the demand growth in this district came from the pharmaceutical industry. While demand for office space declined in the central business districts (CBD) of some large and medium-sized urban centers between 2011 and 2014, Basel's city center also recorded growth. Demand for office space in the CBD was up in 2014 by an estimated 20,000 m² compared to three years previously.

Underlying conditions promise further growth potential

Led by the pharmaceutical industry, Basel's sector structure offers some of the greatest medium-term growth potential in Switzerland. We expect organic growth of additional demand of up to 20,000 m² for Basel's office property market in 2017. Moreover, CTR III should serve to strengthen Basel's locational quality from a business perspective. Basel-Stadt intends to reduce its profit tax rate from 22.2% at present to 13.0%. In addition, the relatively high current tax rate on capital of 5.25 per thousand is to be cut to 1 per thousand. This will enable Basel-Stadt to jump 19 places in the cantonal ranking of fiscal attractiveness from bottom position at present to number eight. In the Locational Quality Indicator Basel-Stadt even rises to second position among the cantons.

Supply largely consists of new properties

The office space advertised on the Basel office property market has declined continuously since the end of 2014 and currently amounts to approximately 123,000 m² or around 3.8% of existing office space (Figure 62). While advertised office space has decreased in the CBD and the extended business district, it has remained constant in the outer business district. The supply rate in Basel's CBD is particularly low at 2.0%. Most of the advertised office space is concentrated on the extended business district that at 7.0% has Basel's highest supply rate. An exceptionally high share of Basel's supply is attributable to newly constructed or planned office properties, while only 45% of the advertised supply comes from existing office space. Existing office

space in the extended business district even only accounts for just 16%. By way of comparison, at least 48% of supply is always attributable to existing office space in the other major centers.

Low vacancy rate in the city canton

As a large share of advertised office space is attributable to properties under construction or only at the planning stage, the vacancy rate of office properties in Basel-Stadt was a low 2.5% as of 1 June 2016. Vacancies in Basel fell by 6,000 m² on the previous year to 55,000 m² and are now therefore at their lowest level in seven years. The temporary construction-related additional demand from Baloise contributed to this. However, these properties are set to become vacant again with the completion of the Baloise Park in 2020. The consolidation of Roche on the Wettstein site in the next six to seven years should also gradually cause up to 70,000 m² of existing office space to come onto the market. We are therefore expecting higher vacancies in the city canton in the future. Unlike the city, the amount of empty office space in Basel-Landschaft rose by almost 16,000 m² to 79,000 m² after having more or less stagnated since 2011.

Constant time on market and rising rents

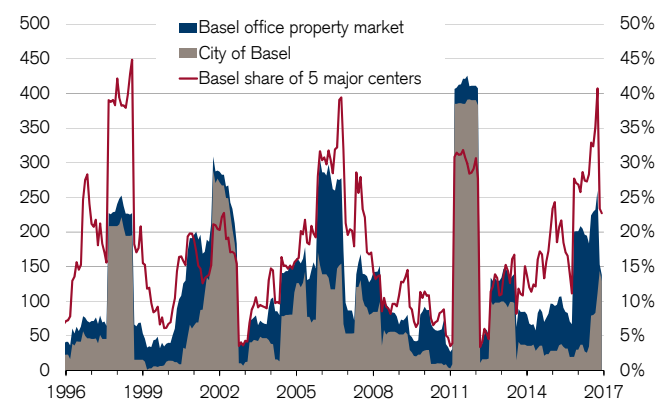
The Basel office market currently conveys a stable impression, as confirmed by the sideways trend in the average number of days on the market for office space compared with other major centers. The time on market in the CBD and outer business district amounts to over 160 days, while in the extended business district it is considerably lower at 113 days. The fact that there is no oversupply prevailing on the Basel office property market is reflected in the development of rents. According to the hedonic rent index, contractual rents in the Basel region rose by 2.4% year on year as of the second quarter of 2016. The Basel market thus avoided the decline in rents observable above all in the major markets of Geneva and Zurich.

Building permits set to reach record peaks in 2017

New office buildings are known to be set for construction on a considerable scale on Basel's office property market in the next few years. However, at CHF 138 million, the 12-month total of building permits is currently not very much higher than the long-term average of CHF 134 million (Figure 61). This total is boosted by the new construction of the Baloise headquarters at Aeschengraben. As indicated by the planning applications, the expansion is set soon to reach a record high. Further planning applications for the Baloise headquarters are awaiting review and the second Roche tower (Building 2) with an investment sum of CHF 550 million is likewise pending approval. Basel-Stadt has various underused sites that could potentially be developed for the further expansion of office space (Rosental, VoltaNord, Dreispitz, Güterbahnhof Wolf, Klybeckplus, Klybeck-Kleinhüningen harbor area). Despite growing progress on the Erlenmatte site, the urban development potential for implementing new uses and even creating completely new urban neighborhoods should not therefore diminish too quickly. However, developments of this kind take time, as illustrated by the planned "Am Depot Dreispitz" tower that has recently seen a lull in activity.

Figure 61: Approved construction projects for office space

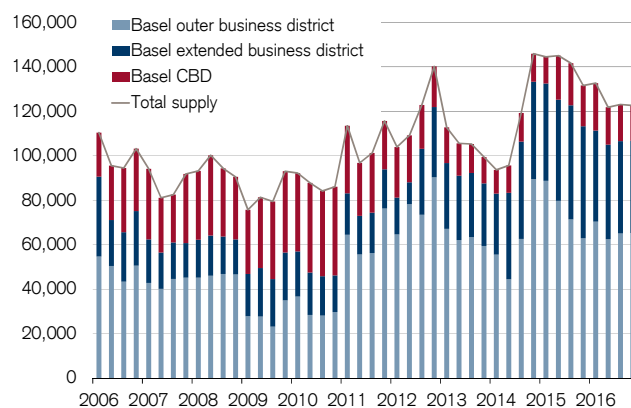
12-month total in CHF mn.; share in total of major centers (r.h.s.)



Source: Baublatt, Credit Suisse

Figure 62: Trend in advertised office space

Advertised office space: quarterly totals (existing and new constructions) in m²

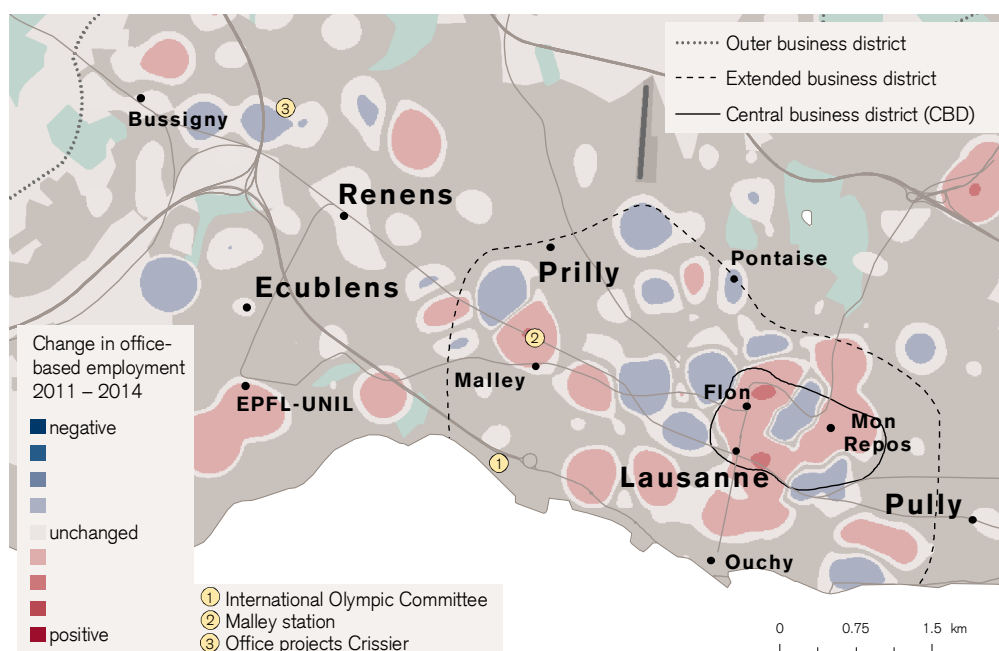


Source: Meta-Sys AG, Credit Suisse

Lausanne

Figure 63: Geographical development of Lausanne office-based employment

Change in office-based employment, absolute per ha, 2011–2014



Source: Swiss Federal Statistical Office, Federal Office of Topography, Credit Suisse

Lausanne with greatest employment growth of all major centers

The Lake Geneva Region was for many years until 2010 one of the core drivers of Swiss economic performance. The loss of momentum following this has since shaped the regional trend in the form of reduced demand for office space and a high supply level. However, the Lausanne office property market is much less affected than Geneva and at 3.4% recorded the highest growth in office-based employment of all the five major centers between 2011 and 2014. This will have generated an estimated additional demand of 85,000 m² of office space (Figure 63). The growth was broadly based with public administration, corporate management and management consulting, architects and engineers and recruitment agencies. Decreases were primarily observed in the financial sector and associated activities. Employment growth was relatively homogeneous across the three business districts, whereby in contrast to other major centers above all the central business district (CBD) experienced very positive development. This will be due to the fact that Lausanne is less affected by efforts to consolidate and centralize business and administrative locations than other major centers. However, the greatest gains in terms of office space were made by the extensive outer business district with around 40,000 m², followed by the CBD with approximately 26,000 m².

Improvement of Lausanne's locational quality

Lausanne's diversified sector structure can hardly escape the current economic challenges and uncertainties and employment growth will have been lower in 2015 and particularly in 2016. Employment in the service sector of the entire Lake Geneva Region even decreased by 0.1% by the third quarter of 2016. The sector structure shaped by healthcare and education promises slightly above-average growth potential in the medium term. We expect additional demand of a good 10,000 m² for Lausanne's office property market in 2017. Corporate taxes are set to fall particularly sharply due to CTR III in the Canton of Vaud. Vaud's voters clearly approved the reduction of the ordinary tax rate on profits from 21.7% at present to 13.8% in March 2016. Vaud is expected to come fifth in the cantonal ranking of the overall tax burden in the future and therefore has no need to fear for its locational quality compared internationally.

Slight reduction in oversupply

Thanks to the relatively robust performance, the advertised supply of office space has stabilized in the past few quarters and was recently even reduced slightly. The 164,000 m² currently advertised correspond to a supply rate of 6.4% – the third highest in Switzerland after Geneva and Zurich (Figure 65). The comparatively high supply rate on the Lausanne office market is primarily attributable to the outer business district where 10.4% of office space is currently available for rent. This is equivalent to 75% of the entire supply in Lausanne. As before, at 24,000 m² the most space is on offer in the Bussigny-près-Lausanne Business Village – although only in planning. Advertised office space across the entire office property market has fallen by 7.5% since

the end of 2015. Unlike the outer business district, there has been a significant reduction in space in Lausanne's CBD and extended business district, thereby underlining the intact demand picture for the core of the Lausanne office property market. At 4.1%, the supply rate in the CBD is one of the lowest among the Swiss major centers. New properties are extremely rarely advertised. At 11.3%, Lausanne's share of new properties is therefore almost as low as Geneva's. The high supply of property that has already prevailed since 2010 and was originally driven by construction activity has caused investments in new office buildings to become a rarity. Despite the high supply of existing office space, the vacancy figures are comparatively low although they have recently risen somewhat. Vacant office space increased by 10,000 m² in the two city districts of Lausanne and Ouest Lausannois in 2016 and at 39,000 m² has now returned to the level of 2014. At 8,000 m², the greatest increase outside the city was recorded by the district of Morges. The number of empty properties increased within the year from 103 to 119 on the Lausanne office property market. Because construction activity has slowed down sharply in the past few years, we do not expect a further rise in vacancies in the current year.

Highest time on market of all the major centers

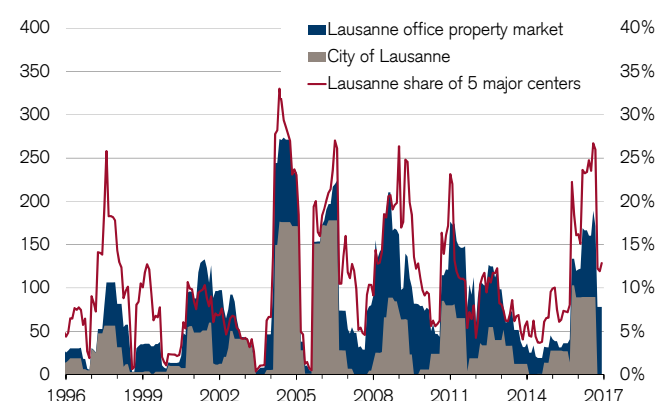
The prevailing oversupply and slight increase in vacancies are leaving their mark in marketing. With the exception of the outer business district, the time on market in Lausanne is the longest of all the major centers and amounts to more than 165 days in all business districts. The rent price trend also points toward a highly competitive situation: Contractual rents have fallen by 2.3% since the end of 2015. However, at 43.6%, Lausanne has recorded the highest growth in contractual rents of all the major centers since 2005, higher even than Geneva. In view of the weak demand trend and their high level, rents are likely to remain under pressure.

Expansion continuing in the west of Lausanne

With the construction of the new headquarters of the International Olympic Committee that will bring together around 600 employees, construction activity in Lausanne has picked up again somewhat. Hardly any activities were observed in 2014 and 2015. Approved construction projects currently amount to CHF 78 million so that the expansion is slightly stronger than the long-term average (Figure 64). Only a comparatively negligible volume of this are attributable to the City of Lausanne; most of the expansion will accordingly take place in the agglomeration municipalities. The most expensive development comprises two office buildings in the municipality of Crissier. The restructuring of the area around Malley station has also been approved by the voters. The new neighborhood is in future to offer space for 630 new workplaces and 420 new residents. There is no lack of further project ideas in Lausanne. Site developments are being planned in particular around the regional railway stations offering an outstanding quality of public transportation connections. Supply in the extended and outer business districts is therefore likely also to remain characterized by high supply rates in the future.

Figure 64: Approved construction projects for office space

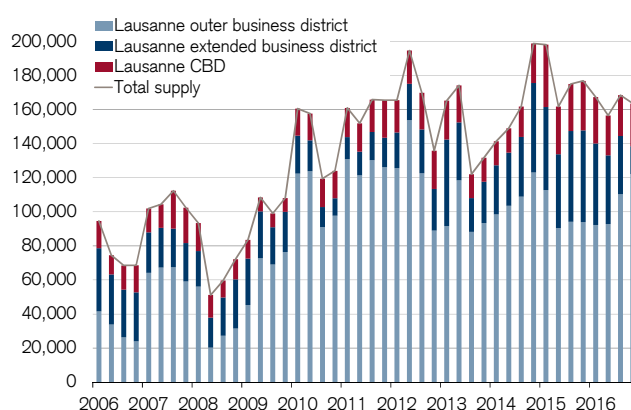
12-month total in CHF mn.; share in total of major centers (r.h.s.)



Source: Baublatt, Credit Suisse

Figure 65: Trend in advertised office space

Advertised office space: quarterly totals (existing and new constructions) in m²



Source: Meta-Sys AG, Credit Suisse

Outlook for office property in 2017

According to our estimates, the Swiss economy is set to expand by 1.5% in 2017. Economic growth therefore continues to lack the momentum it had before the abandonment of the exchange rate floor. The savings pressure due to the strong Swiss franc is forcing companies to enhance their processes and reduce costs. This is affecting the office property market in the form of resource-enhancing workplace models or cuts in jobs that are falling victim to either automation or outsourcing abroad. Furthermore, additional property is coming onto the market owing to the ongoing structural changes in the financial sector. Altogether, however, economic growth should suffice to generate moderate additional demand for office space again. The Swiss National Bank is very likely to leave interest rates in negative territory so that investments in office properties remain attractive. Expansion should therefore remain around its present level but increasingly shift to the medium-sized centers. However, the oversupply is barely likely to shrink in this situation, which means that tenants will continue to enjoy a comfortable negotiating position. Office properties at very good locations should remain popular among investors, while the marketing situation of poorly accessible or aging office properties will deteriorate further.

Demand

Background: ➔

Outlook: ➔

Increasing employment growth should steer additional demand for office space back into slightly positive territory in 2017 with around 240,000 m². As in the previous three years, the growth in demand will be largely attributable to healthcare and public services. This positive development will be additionally supported by the subsiding of locational uncertainties. However, space optimization and the trend toward automation are curbing demand.

Supply

Background: ➔

Outlook: ➔

The prevailing low interest rate level is continuing to make investments in new office properties attractive so that approved construction projects remain at their long-term average of CHF 2 billion. In view of the subdued demand outlook, the expansion is likely to be too high to bring about a trend reversal in terms of vacancies. Having said this, Swiss supply remained stable in 2016 despite the weak demand at 2.2 million m². There is no sign of a recovery for 2017.

Vacancies

Background: ➔

Outlook: ➔

The vacancy rate that as a partial survey covers 43% of the office property market has risen for the fifth year in succession – although less sharply than in the preceding years. Owing to the somewhat more positive employment prospects and the shift of expansion away from the major centers, vacancies should move sideways at a high level in 2017 in the regions under observation. Among other things also because they are increasingly occurring in the business districts outside the city centers that are not as well covered by the partial survey.

Rents

Background: ➡

Outlook: ➡

Rents for office space should continue to decline in 2017, particularly in major centers with high supply rates such as Geneva, Zurich and Lausanne. While the contractual rents in some urban centers are going up, they will tend to be upwardly distorted due to promotional concessions by landlords that are not depicted.

Performance (total return)

Background: ➔

Outlook: ➔

The ongoing high yield spread to other asset classes and the lack of investment alternatives are upholding the demand for office properties. This is particularly the case at prime locations which are therefore continuing to gain value. Away from the prime locations the subdued demand is starting to affect sale prices. Falling rents, higher vacancies and increased marketing costs are also putting pressure on earnings. Altogether we expect a slight growth in yields but at the same time an increasing split of the market between prime locations on the one hand and the rest of the market on the other.

Special focus: Digitalization

From digital day to digital age

Every CEO, every Chairman of the Board and every member of executive management has, at some point during the last few years, experienced his or her personal “Digital Day”. A day of enlightenment. The day he or she personally recognized that digitalization is not just a trend that, like sustainability, for example, could be built into their existing business, but is rather a trend that in all likelihood will fundamentally disrupt their own business model.

The quest is not for digital strategies, but strategies for a digital world

Contributing to this realization are the innumerable applications for digitalization at virtually every stage of the value chain, and the many IT-driven innovations that have revolutionized the global markets. Corporate executives are realizing that long-established business formulas are losing their relevance with the dawn of a new era – a digital era. This means they must address the task of transforming their existing business model into a digital business model.

The disruptive nature of digitalization

What sets digitalization apart from other trends – even other megatrends – is its disruptive nature. Digitalization is revolutionary. A particularly apt illustration of the difference between traditional innovation – which leaves the underlying conditions unchanged – and disruptive innovation is provided by iTunes, the first globally successful digital music distribution service. The development of the CD was a ground-breaking technical innovation. It banished vinyl records into a niche market, but left the value chain intact. Manufacturers of consumer electronics sold CD players instead of record players, while presses adapted to the new format and remained part of the business, just like record dealers. And very little changed in the business relations between artists and music publishers. The market remained basically the same. The iTunes Music Store, on the other hand, not only made presses and dealers obsolete, it also swept away the necessity of purchasing an entire album to own one piece of music.

The real estate business is a digital latecomer

Switzerland's real estate business is a relative latecomer to the digitalization party. Electronic real estate portals such as homegate or ImmoScout24, however, have been active since the turn of the century and quickly gained a large following. The direct link between buyer and seller is one of digitalization's greatest achievements. Airbnb and Uber are just two examples of companies that have used digital technology to perfect this intermediary function. The real estate industry, however, has only just embarked upon the transformation process. Very few real estate companies have a holistic digital strategy for all their business activities; much is still piecemeal. Many were convinced that the real estate market was an analog sector based upon bricks and mortar and thus there was no need for action. But digitalization affects real estate because it reshapes the way we live and work. Others thought it was enough to digitalize distribution channels and perhaps the products, since selling over the internet and building certain sensors into their products was adequate for the digital transformation. But digital technologies are not developed simply to allow established companies to do more rapidly or efficiently what they already do. Digital technologies radically alter business processes, they penetrate every aspect of a company and transform value chains. Just over a year ago, after “fintech” and “insurtech”, it was the real estate business' turn to address digitalization, as illustrated by the numerous so-called “proptech” companies springing up lately. Many of these start-ups aim not only to create new products, but to shake up entire market structures.

A new digital world

The digital revolution is underpinned by two key developments. Increasingly small microchips already allow huge amounts of data to be stored and processed at low cost. At the same time, connecting this information via the internet has made it accessible at any time, from any place. The effects have fundamental significance. Consider how connecting various actors through building information modeling (BIM) has radically changed the planning, construction and management of buildings⁵. Only then does it become possible to link buyers and sellers on digital platforms. These two developments can effect massive reductions in transaction costs. Sites such as Amazon and eBay, with their professional and semi-professional traders, function according to these principles. In the same way, Airbnb and Uber also provide private lodging and private taxi services. The entire Sharing Economy can only function economically thanks to lower

⁵ See Credit Suisse (2016): Swiss Real Estate Market 2016: Banished from paradise, p. 32 ff.

search and transaction costs. Whether vacant offices, spare rooms, unused devices or other services are being traded is almost of secondary importance.

The essence of digitalization

The emergence of such marketplaces or platforms with their centralized information management allows for a highly efficient allocation. Goods and services can be made available in precisely the required amounts, in the right place and at the right time. Intermediaries are often unnecessary, since even small volumes can be handled efficiently. Cutting out the middleman is probably one of the key services offered by the internet. The demise of the intermediary role promotes a type of democratization or dehierarchization. Throughout history, the diffusion of knowledge was tightly controlled, with the value of the information transmitted to unequal extents from physician to patient, from attorney to client, from teacher to student, from car dealer to buyer. The internet has leveled this hierarchy. Education, which was suddenly made available anywhere on the globe with internet access, is a prime example. There are similar cases in the real estate sector. Crowdfunding, for example, allows lower income consumers to invest directly in real estate – an option previously available only to the wealthy.

Conclusions for the digital transformation

What conclusions can be drawn for companies willing to be part of the transformation? What proficiencies must they develop? What guidelines should be followed to thrive in a digital world? The most pressing need for analog companies is to maximize their digital capability. This involves consistent digitalization of the entire set of operations along the value chain. Only when every process is digitalized can process automation be effective. For example, when tenant complaints are processed completely digitally, process times can be drastically reduced. At the same time, some steps can be outsourced, even in cases to the clients themselves, when for example tenants submit damage claims by an electronic form. A company that is not fully digitalized cannot fully benefit from the advantages of digitalization. Moreover, it is vital to leverage all the data collected in the process. Only those who know their clients can offer optimal, individualized services. Such knowledge plays an increasingly decisive role. Many firms are sitting on a data gold mine that they are unable to exploit due to an inability to leverage the information.

It's the software ...

On the road to digitalization, most firms need not concern themselves with hardware. Today, companies access computing capacity with big global providers that benefit from huge economies of scale (see [special focus on data centers, p. 62 ff.](#)). For this reason, maintaining their own server architecture pays off for only a handful of companies, and is often a waste of time. This makes concentrating on software all the more worthwhile. In a digital world, the focus is increasingly shifting towards client-oriented services. Landlords, for example, can complement their core business with software-supported services related to the rented space, thus generating additional business and at the same time getting to know their tenants better. There are various ways to approach this process: acquiring or participating in proptech companies, establishing subsidiaries or joint ventures, launching digital projects or engaging comprehensive consulting services. The key is to create a culture that embraces digital innovation within the organization while reducing apprehensions.

Discerning between hype and a lasting trend

One of the greatest difficulties in the transformation process to a digital world is determining whether a new technology is a fad or a sustainable trend. Blockchain technology – one of the most widely discussed technologies of the recent past – doubtless belongs to the second category. It is said to have a high level of disruptive potential, which is why we are introducing it here. The best-known existing application is the crypto-currency bitcoin, which is based on the blockchain technology. But we now know that every business activity that involves contracts and processes can be automated with a blockchain and “smart contracts”, and so be settled with greater speed and security.

Blockchain – the next game changer?

A blockchain consists of a series of encrypted information that is linked together, creating a history. This type of digital ledger makes it possible to retrieve and compare all transactions completed in the past. The chain is distributed around the world via a network of private computers, obviating the need for a central server. This network is crucial, because part of it is involved in authenticating newly added links in the chain. The decentralized structure means that manipulating the blockchain transaction history would require an extreme effort, and is virtually impossible. Thus the blockchain is a network in which each user can add something, but no one can remove anything, so that the entire history is replicated with each transaction. The uninterrupted and immutable history gives the system integrity. The Arpanet, the forerunner of

the internet dedicated to military purposes, was already designed on a decentralized network structure, since these are very difficult to attack.

Blockchain cuts out the middleman

Traditional transaction settlements require a central, independent authority that vouches for the validity of the transaction. When purchasing goods by credit card, for example, this authority would be the card issuing company. A major advantage of blockchain technology is that it can function without this entity. Verification is carried out automatically through the decentralized blockchain system. Say, for example, that a municipality's land register was stored on a blockchain; interested buyers could research the ownership structure of a property in seconds, complete a sale in minutes once the parties agreed, and have the transaction verified within a few hours.

Blockchain technology applications for the land register

With the land register stored decentrally on a blockchain, most of the centralized services offered by administrative bodies would become obsolete, or at least more efficient. This in turn would have a positive effect on transaction costs. A study of the US market concluded that if property records were linked to blockchain, improvements in actuarial risk could drive a 75% reduction in claim losses and legal costs⁶. For example, using blockchain would obviate the need for a notary's certification, which under present practice protects the rights of all involved parties. Various countries have taken the initiative and begun to migrate their land registers on a blockchain. In Sweden, for example, the entire process of transferring a property from seller to buyer currently takes at least a month. The introduction of blockchain is expected to bring massive efficiency gains. In Ghana and Honduras, on the other hand, the emphasis is on preventing manipulation and corruption.

Smart contracts thanks to blockchain

A blockchain can be used for more than verifying transactions; it also has applications in closing contracts and managing ownership rights. A smart contract is a new form of contractual agreement that is drawn up and executed without judges or attorneys. These web-based computer protocols verify contracts and provide technical support for the performance of a contract. Computer algorithms determine which conditions lead to which action. They can monitor contracts in real time, for example, and enforce the rights of the contracting parties automatically. This excludes the possibility of human error. Say the conditions for the transfer of a good, such as an apartment, are not fulfilled because one party is behind in payments: the use of the apartment can be prevented by blocking building technology until the outstanding payments are made. The contractual agreements run automatically – including their monitoring. The use of smart contracts can drastically reduce the operational risk for the contracting parties.

Potential impact on the real estate industry

Blockchain has the potential to revolutionize real estate sales and management. Some market observers already believe that in the future, real estate objects will be traded with the same ease as securities. Blockchain and smart contracts can speed transaction processes and save verification costs and the involvement of (government) authorities and intermediaries. Thanks to greater transparency and the fact that authentications would be very difficult to manipulate, cases of fraud would decrease, which would lower the risk costs. Even the management of rental objects can be simplified with smart contracts. Before property trading can be completely automated, however, there are a number of hurdles to overcome and, especially, regulations to revise, which is why the introduction of promising blockchain technology may still be several years away.

⁶ See Goldman Sachs (2016): Blockchain – Putting Theory into Practice

Retail property

The crisis is getting worse

The Swiss retail trade is in a state of upheaval. Online trade is skimming market shares every year and placing the sector before major challenges. At the same time a lot of money is flowing abroad – in both online and bricks and mortar retailing. The demand for retail space is therefore extremely restrained and largely based on the food/near-food segment. It is only thanks to the likewise reduction in the expansion of space that the imbalances are not getting completely out of hand. Nevertheless, letting is proving very difficult and the weak demand is putting significant pressure on rents. The (old) world only seems still to exist at locations with high foot traffic. Tenants are increasingly gaining the upper hand at the other locations.

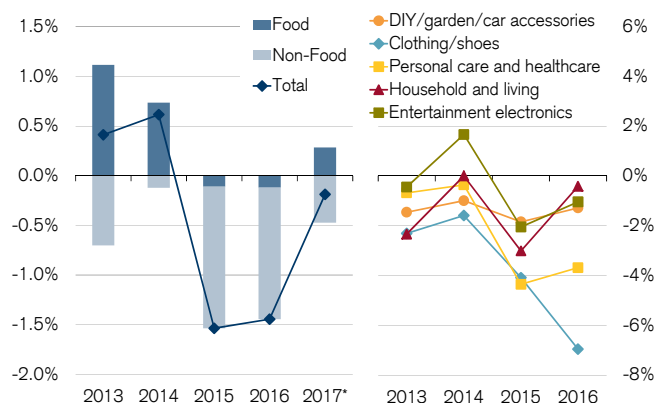
Cross-border and online shopping dampening demand

Renewed downturn in retail sales

2016 was another difficult year for the retail sector. With retailers already having sustained a fall in sales in 2015 (–1.5% in nominal terms), there was another marked reduction in nominal sales in 2016 of –1.4% (Figure 66 l.h.s.). As in the previous year, the food/near-food segment proved the mainstay with sales performance only just in negative territory (–0.2%). However, retailers in the non-food segment suffered a downturn of –2.9%. The clothing retail segment took a very deep fall with a decline in sales of –7.0% (Figure 66 r.h.s.) while consumers in Switzerland also spent considerably less money on personal care and healthcare (–3.7%). Meanwhile, the fall in sales in the entertainment electronics, household and living, and Do it yourself (DIY)/garden/car accessories segments proved significantly lower.

Figure 66: Retail sales by segment

YoY change (calendar-adjusted), nominal; left: growth drivers



Source: GfK, Credit Suisse

Figure 67: VAT revenue and online cross-border purchases

In CHF million, 2016: estimate



Source: Swiss Customs Administration, GfK, Verband des Schweizerischen Versandhandels

Cross-border shopping stabilizing at a high level

Although the purchasing power of the Swiss population increased slightly in 2016 due to the negative inflation, this did not result in increased retail spending. Instead sales declined while consumer sentiment in 2016 remained below average due to the tense labor market situation. Another reason for the restrained sector development was cross-border shopping. Shopping tourism may well have tailored off slightly as suggested by the decrease in VAT revenue from cross-border private travel (–6%) (Figure 67). However, this decrease appears to have been offset by a rise in online cross-border shopping. The cross-border online trade already grew by 23% to around CHF 1.35 billion back in 2014/15. According to estimates by iBusiness, Zalando and Amazon are set to have generated around CHF 1 billion of online sales in Switzerland alone in 2016. It can be assumed that the impressive growth held up in 2016. This means that a total of some CHF 10 billion will have flowed abroad last year, which is equivalent to 11% of Swiss retail sales.

Population growth as consumption pillar crumbling

Because population growth as an important pillar of consumption lost strength somewhat in the last year, sales growth also lacked momentum from this source. The balance of migration was 15% lower in 2016. Furthermore, immigration is continuing to change structurally so that an increasing share of immigrants is coming from countries of origin with lower purchasing power (see chapter on direct real estate investments, p. 68). Both these developments are reflected by lower retail sales. We expect a stabilization of the balance of migration in 2017 with an ongoing shift toward immigrants with lower purchasing power.

Online trade in the fast lane

Just like online trade from abroad to Switzerland, online trade within Switzerland is also in the fast lane (Figure 68). As well as the CHF 1.35 billion that the Swiss population spent on cross-border online shopping in 2015, around CHF 5.3 billion went to Swiss online retailers. The online share of retail sales in 2015 accordingly amounted to 5.5%. According to our estimates, this share will have risen to 6.1% in 2016. It would be even higher if it were not for the strong and comparatively online-resistant food sector. Only around 2% of food is purchased online. Outside the food sector the online market share has long been in the double-digit percentage range and will continue to grow dynamically. The online share of all retail sales is already set to reach almost 11% by 2022 (Figure 68).⁷ The increasing internet and smartphone affinity of older members of the population, the so-called “silver agers”, and the growing purchasing power of “digital natives” and “millennials” will ensure a continuous rise in the consumer strength of online shoppers so that more money flows into the online channel. The trend toward the mobile internet is also contributing strongly to the growth of the online trade because this enables purchases to be made at any time and from anywhere (“mobile commerce”). Half of online sales are soon likely to be generated via the mobile internet.

Online trade: Dynamic market with many new ideas and concepts

The booming online trade poses an enormous challenge for the retail business. The pace is extremely high particularly in those areas in which major foreign players have made inroads. Major providers benefit from economies of scale that smaller competitors can do little to counter, particularly after having waited too long. The user-friendliness and functions of user interfaces have to be constantly developed further, thereby entailing high software investments. A second important investment area is logistics. Speed and efficient processes are crucial. A high level of attention is also necessary: New ideas and concepts, for instance in terms of consulting, the handling of customers and delivery, are constantly being developed and tested. There is no universal recipe for success. However, those offering short delivery times and attractive delivery and return conditions and supporting mobile shopping are certainly backing the right horse. Moreover, the bricks and mortar business and linking the two channels also should not be neglected, which likewise entails investments. The assumption that many online shops in Switzerland are loss-making therefore does not seem too far-fetched.

Figure 68: Online and bricks and mortar retail sales performance and market share of the online trade

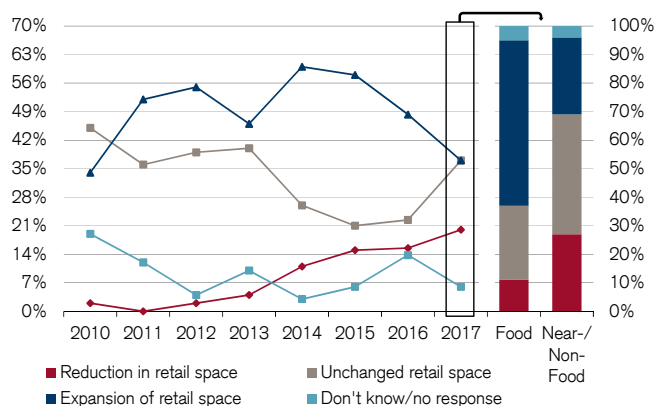
Index: 2008 = 100 (l.h.s.); 2016, 2019 and 2022 forecast (r.h.s.)



Source: GfK, Verband des Schweizerischen Versandhandels, Credit Suisse

Figure 69: Planned change in retail space

All retailers (l.h.s.); 2017 planning by segment (r.h.s.)



Source: Fuhrer & Hotz

⁷ See Credit Suisse (2017): Retail Outlook 2017: Schweizer Detailhandel im Umbruch

Weak demand for retail space in 2017

This state of affairs does not bode well for the demand for retail space. Although the Swiss economy is set to display renewed sound growth of 1.5% in 2017, private consumption will continue only to increase modestly at just 1%. We do not expect any positive momentum from either population growth or consumer sentiment. This also applies in view of the ongoing shopping tourism and the purchasing power that is likely to stagnate due to a return to positive inflation. Employment is the only area we expect to improve. Nominal retail sales should therefore also decrease in 2017, although only marginally at -0.2% (Figure 66 l.h.s.). In view of a continuous growth in online trade, sales generated in bricks and mortar retailing will consequently shrink further. This will impair space revenue so that demand for retail space will once again prove poor. Further portfolio and structural adjustments are to be expected in bricks and mortar retailing that could potentially lead to reductions in space, branch closures or even bankruptcies. Above all the non-food segment is set to be affected by this. We only see momentum on the part of food/non-food retailers and in isolated cases on the part of foreign providers on course for expansion or venturing into the market.

Increasing skid marks in demand for space

Indications of the direction of the demand for space are once again provided by the survey of retailers carried out by Fuhrer & Hotz concerning their retail property planning (Figure 69). Each year the share of retailers planning to expand their retail space is declining while the share intending to reduce or leave it unchanged is increasing. In the recent survey on retail property planning for 2017, more retailers than at any time since the survey was launched back in 2009 claimed to be planning a reduction in retail space. At the same time, fewer retailers than at any time since the 2009 recession year announced their intention to increase their retail space. The segment-specific differences are also reflected in the planning for 2017. The situation in the food segment appears much less dramatic than in the near/non-food segment. Nonetheless, retailers in the food segment for the first time also claimed to be planning a reduction of retail space.

Also no recovery in sight in the medium term

There is also not likely to be much change in the challenging demand situation in the medium term, particularly since Switzerland's retail property market has already been saturated for years. Furthermore, the retail trade is no growth industry but instead a sector undergoing upheaval due to the fierce competition between different providers and channels (both online and bricks and mortar). Momentum is therefore only coming from population growth. As long as the Swiss franc fails to depreciate markedly, no decrease in cross-border shopping can be expected. On the contrary: The cross-border online trade will continue to boom, as will the online trade within Switzerland, because the price differences and product range of foreign providers are often unbeatable.

Boom in residential construction creating additional supply of space

Continued low planning of retail space ...

Signs of the crisis in the retail property market already emerged back in 2013/14 when only a small number of planning applications were submitted. What initially looked like a breather after a frenzy of expansion lasting for more than a decade soon turned out to be a reflection of the poor profitability situation in retailing. Challenged by the appreciation of the Swiss franc and facing competition from the online trade, planning activity has not recovered to this day. Retail space amounting to CHF 525 million was approved in 2016 (Figure 70), a quarter less than average construction permits since 1995. The distinction by type of retail property shows that considerably fewer sales outlets, shopping malls, specialist stores and gas station stores are being planned. Compared with the long-term average of over CHF 450 million, the approved actual construction sum of these retail properties has fallen by half to CHF 220 million. The decline in sales performance and the imminent challenges are causing both retailers and investors to take a more cautious stance in particular toward larger investment projects with an investment sum in excess of CHF 20 million.

... and distortion due to boom in rental apartment construction

The fact that the expansion of retail space has not collapsed even more is above all attributable to the construction of retail properties in mixed-use buildings. These include retail and small business properties of the sort typically found on the ground floor of a residential complex or administrative building. Their share of the total number of approved retail properties has risen from a long-term average of 37% to 58% in 2016. In absolute terms, approvals for such properties amounting to CHF 305 million have been granted recently, while the historic average lies at CHF 270 million. There has been a sharp increase in approved retail properties particularly in

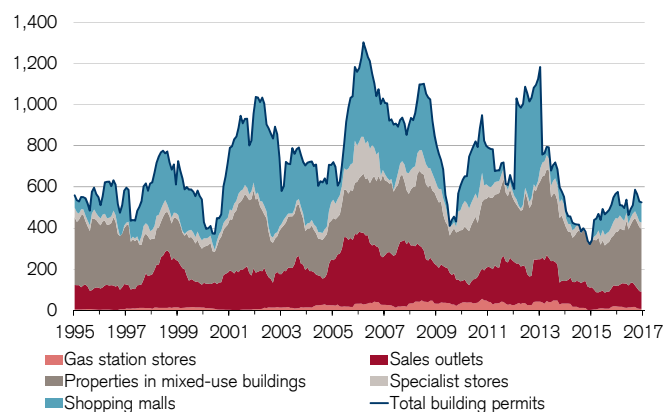
residential buildings, while fewer such properties are planned in buildings with office and other uses. The boom in rental apartment construction due to the low interest rates is therefore the key factor behind the remaining planning activity (see chapter on rental apartments, p. 24). Without this, rental property planning would lie at a considerably lower level.

Excessive planning activity due to rigid regulatory requirements

Because the retail property market is saturated, the demand for space is being curbed by the upheaval in the retail trade and not all new construction projects have sufficiently high own requirements or foot traffic, the letting of these properties often calls for a lot of patience and hard work. Particularly in the case of large building complexes it currently takes a long time for the new properties to be absorbed by the market. At the beginning there is a lack of passing trade, the right tenant mix still needs to be established and the attention of potential customers needs to be drawn to the properties on offer. The fact that despite this so many retail properties are being planned on the ground floors of new construction projects will be partly attributable to statutory provisions. In many places, for example, noise protection regulations prevent the construction of apartments and only permit commercial properties. Zoning ordinances are another example, such as the revision of the Building and Zoning Ordinance of the City of Zurich only published in 2014 which includes the promotion of “ground-floor public areas” among its priorities. Investors are thus often obliged to plan uses in ground floor locations aimed at injecting life into the applicable sites. Because this takes too little account of developments on the demand side, the desired injection of life into the sites will all too often prove more difficult than many would like. Problematic marketing situations, long vacancies and an ultimately bad press detrimental to the image of new building complexes are the consequence of this.

Figure 70: Planning by retail property type

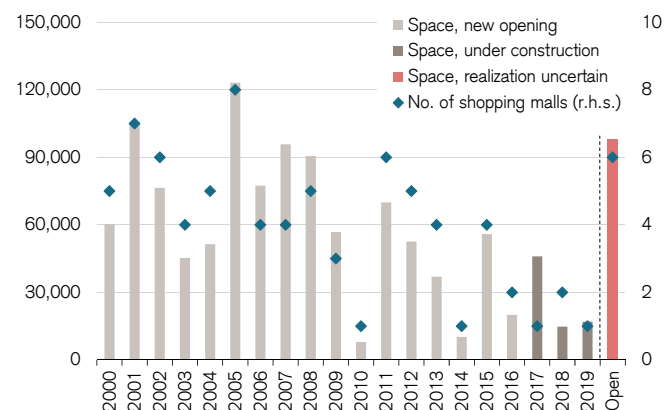
New construction/extension, moving 12-month total in CHF mn.



Source: Baublatt, Credit Suisse

Figure 71: Expansion of space in shopping malls

Expansion in shopping malls (new constructions), in m², ≥ 7,000 m²



Source: Credit Suisse, GfK, Wüest Partner

Only very few new shopping malls

Due to the low planning level in recent years, only a small number of new shopping malls are coming onto the market (Figure 71). Following almost 50,000 m² of new retail space in 2015, including the Tissot Arena in Biel with just under 30,000 m², 2016 saw the creation of around 20,000 m² across two malls with the PostParc in Berne and the Lipo Park in Schaffhausen. The Mall of Switzerland in Ebikon will be added in the current year – a project whose origins stretch back more than a dozen years. The last shopping mall of this size (for the time being) will expand the rental property market by around 46,000 m² in September 2017. Two further malls with a total of around 15,000 m² are already under construction and set to open in the coming year and “The Circle” at Zurich Airport will open its doors in 2019. However, the number of projects still in the pipeline is altogether increasingly thinning out as hardly any more new projects are being embarked upon. At present a further six malls with nearly 100,000 m² are still being planned but their realization is partly uncertain.

Increased focus on revitalization of shopping malls

While the construction of new shopping malls has slowed down, new conversion and extension projects to existing malls are consistently being embarked upon. Such revitalization projects are necessary: As shown by the sales performance of shopping malls, at –3% they sustained an even greater drop in sales than the overall market in 2015. Adjusted for the number of space the downturn even came to 6%. However, the shopping mall concept should not therefore be called

into question too early. What it instead shows is that shopping malls are also unable to avoid the structural change.

No simple explanation for the sales performance of shopping malls

In order to understand better the sales performance of shopping malls, we have made use of an econometric model. We have attempted to explain the sales performance and space revenue on the basis of a number of characteristics of shopping malls (e.g. proximity to frontier, parking spaces per m² of retail space, year of construction, recreational facilities, public transportation connections, reachability of resident and working population and catchment area taking the competition into account). The analysis only yielded few significant results for space revenue. Significantly higher space revenue was observed for properties located directly at railroad stations (Railcity). Better accessibility by public transportation, the number of parking spaces per m² of retail space and the population catchment area (without taking competing malls into account) also exerted a slightly positive effect on space revenue. Sales performance only appeared to be negatively influenced by the time since the last conversion or year of construction. In other words, the further back the construction or conversion of a shopping mall lay, the greater the fall in sales.

There are many routes to success

The lack of any clear results from the analysis will be attributable on the one hand to the limited data sample but also to the lack of any obvious correlations. There therefore does not appear to be any universal success recipe for shopping malls. Rather, it is the sum of various individual circumstances that determines the success of a shopping mall. Nevertheless, the results fit in well with our assessment with regard to sales performance. Many of the malls are showing their age and often unable to keep up with the new modern shopping malls in terms of architecture, daylight, openness, catering and recreational facilities. In order to be able to survive in an omni-channel consumer world, investments are therefore necessary particularly for older shopping malls. Furthermore, the role of shopping malls will have changed in recent years. While they used to be pure consumption temples, their focus has shifted increasingly to experiences, catering and recreational facilities aimed at attracting customers and utilizing synergies.

Marketing remains challenging – but not the same everywhere

Trend toward rising vacancies continuing

The marketing of retail properties has become more difficult again, something the subdued expansion of new real estate projects and shopping malls is also unable to change. Sales performance is too weak and the challenges for bricks and mortar retailing are too great for this. The amount of vacant retail space has therefore risen for the third time in succession. As of 1 June 2016, a total of 89,600 m² of retail space was vacant, up 3,200 m² or 3.7% on the previous year (Figure 72). This is the second highest figure since 2000. There was only more vacant retail space recorded in 2005.

Are major centers able to come to grips better with vacancies?

The rise in vacancies seems fairly mild in view of the market situation. Particularly the decline in vacancies by 7,000 m² in Basel-Stadt comes as a surprise in view of the canton's proximity to the border and the ongoing high level of cross-border shopping. Vacancies in the cities of Zurich and Lausanne are also down by almost 3,000 m² and 2,000 m² respectively, while the City of Berne and the Canton of Geneva reported marginally higher vacancies. One reason for this could be conversions that cause properties to disappear from the statistics for vacant shops. Increased marketing efforts and concessions granted on rental conditions will also have resulted in successful lettings. Such efforts particularly strike a chord in the major centers that essentially have a more dynamic market. It can specifically be observed in the major centers that retail properties are frequently rented by micro firms in the service sector and converted into office properties with the aim of ensuring minimum visibility for the company in question. Another explanation could be that the partial survey only covers around a third of the market but includes all the large cities (around 18% of the market). According to the Real Estate Investment Data Association (REIDA), a below-average number of properties are vacant specifically in the major centers⁸ – unlike in the medium-sized centers and suburban municipalities that are only poorly represented in the official vacancy study and in which an above-average quantity of retail properties are vacant. What can, however, be concluded from the vacancy study is the following: Year-on-year vacancies in the major centers fell by 10,500 m² as of 1 June 2016, while in the other areas

⁸ See Credit Suisse (2016): Swiss Real Estate Market 2016: Banished from paradise, p. 59

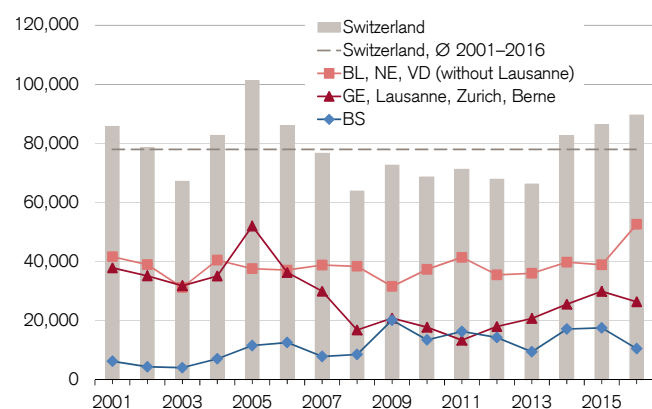
(cantons of Neuchâtel, Basel-Landschaft and the Canton of Vaud excluding Lausanne) they rose by 13,700 m².

Advertised retail space remains at a high level

The ongoing marketing difficulties are confirmed by the amount of advertised retail space. Advertised retail space for a long time fluctuated in the range between 100,000 m² and 150,000 m² (Figure 73). It only briefly climbed above 150,000 m² after the financial crisis. However, the structural change to bricks and mortar retailing brought about by the online trade and cross-border shopping led to a sharp increase in advertised retail space in the course of 2014. Almost 220,000 m² were advertised in the fourth quarter of 2016, which is approximately 60% above the average since 2006. The situation is not consistent among the major centers. While advertised retail space in Zurich, Berne and Basel-Stadt is at a similarly high level compared with the average since 2006, more properties were advertised in Lausanne and particularly in Geneva. Lausanne's stock of retail space was around 20% above the average since 2006, while Geneva even saw more than a doubling. In addition, considerably more advertised retail space was also registered in the regions outside the major centers (+60%) than in the preceding years.

Figure 72: Vacant retail space

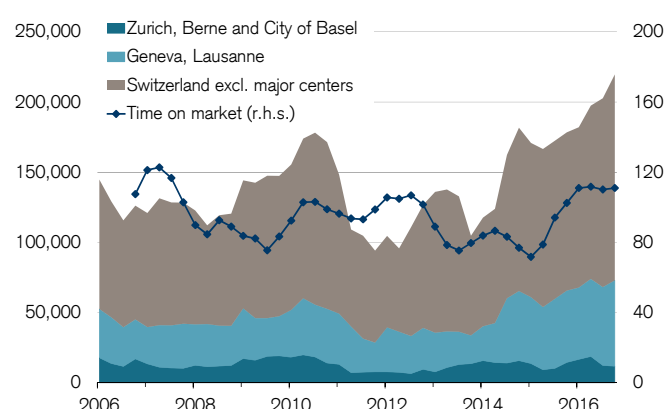
In m², on 1 June, partial survey of around 33% of the retail property market



Source: Various statistical offices, Credit Suisse

Figure 73: Advertised retail space

Retail space in m² (l.h.s.) and time on market in days, smoothed (r.h.s.)



Source: Meta-Sys AG, Credit Suisse

Long times on market

The increased stock of retail space is reflected on the one hand by the rise in the number of advertisements, with a record number of 1,480 advertisements reached at the end of 2016. At the same time, the number of days that an advertisement has to be placed on the market (time on market) has also gone up. Because it is no longer as easy to find tenants for retail properties, advertisements in 2016 were placed on online portals for around 16 days longer at 111 days than the average since 2006 (Figure 73). Due to more effective marketing strategies such as lower rents, shorter contract terms or other concessions (such as extensions or free rents) stabilization could be observed in 2016.

Ongoing pressure on rents

The very challenging marketing situation is increasingly being reflected in the development of rents on the retail property market. This can be seen in both advertised and contractual rents. Advertised rents according to Wüest Partner fell for the third year in succession with a decrease of -3.2% in 2016, while the contractual rents of institutional investors also bear witness to a negative development of rents. According to the REIDA, the median rent at the end of 2016 for newly agreed rental contracts in 2016 was CHF 320 per m² and year, down from CHF 340 per m² and year in 2015 and CHF 350 per m² and year one year before.

Location, location, location – or foot traffic, foot traffic, foot traffic

Viewed across the market as a whole, more and more retailers are in a better negotiating position, something the various indicators leave no doubt about. However, how strong the position of retailers during contractual negotiations actually is depends on a large number of factors. In the case of large properties and anchor tenants such as grocery stores, for instance, the retailer is in the stronger negotiating position. If, however, the retail property is situated at a high traffic location, the landlord retains the upper hand. Higher rents should continue to result above all from contracts concluded years ago and now approaching expiry. In the current market situation in which retailers are scaling down their branch networks, locations with high foot traffic are pre-

ferred as the sales performance at such locations is more capable of defying the challenges. In contrast to the overall market, retail outlets at railroad stations (Railcity) accordingly increased sales by 2%. Adjusted for the change in floor space the growth amounted to 1.6%.

Outlook for retail property in 2017

We do not expect any improvements in the marketing of retail property in 2017. The market remains firmly within the grip of the structural change. Although the growth of retail sales should only remain marginally in negative territory, the online trade is continuing to grow dynamically so that further portfolio and structural adjustments are to be expected in bricks and mortar retailing. The demand for retail space is correspondingly weak. The marketing situation only looks better in the large cities and at locations with excellent connections. The reduced planning of new properties is helping to support the market. However, demand is so weak that vacancies and the stock of retail space are rising or stagnating at a high level – despite a below-average expansion of space. Rents are therefore set also to remain under pressure.

Retail sales

Background: ↘

Outlook: →

The Swiss economy is gaining momentum again and forecast to grow by a robust 1.5% in 2017. However, private consumption is set only to increase modestly at 1%. No positive momentum is likely to result from the population trend, consumer sentiment and purchasing power that will stagnate due to a return to positive inflation. We also do not yet expect any abating of cross-border shopping. Employment is the only area we anticipate to improve. We expect nominal retail sales growth only to remain marginally negative at -0.2% in 2017. Food sales should rise slightly by 0.5%, while non-food sales are likely to fall again (-1.1%).

Demand for retail space

Background: ↘

Outlook: ↘

In view of the strong expansion in online trade, sales generated in bricks and mortar retailing will decrease further. This is impairing space revenue. Further portfolio and structural adjustments are therefore to be expected in bricks and mortar retailing that could potentially lead to reductions in space, branch closures or even bankruptcies. Above all the non-food segment is set to be affected by this. The demand for retail space will accordingly remain weak.

Supply

Background: →

Outlook: →

Retail property planning is stagnating at a below-average level. Approved construction projects in 2016 came to CHF 525 million, which is around a quarter below the average since 1995. Particularly the planning of sales outlets, shopping malls, specialist stores and gas station stores has declined. However, retail properties are being increasingly planned in mixed-use buildings due to the boom in rental apartment construction. There are only few new shopping malls in the pipeline. However, because planning often stretches over years or even decades, more properties will be coming onto the market in 2017 than in the year before, particularly with the fourth largest shopping mall in Switzerland opening its doors.

Vacancies

Background: ↗

Outlook: ↗

As of 1 June 2016, a total of 89,600 m² of retail space was vacant, up 3,200 m² or 3.7% on the previous year. This is the second highest figure since 2000. There was only more vacant retail space recorded in 2005. Because we see no signs of an improvement in the marketing situation, vacancies are set to rise again in 2017.

Rents

Background: ↘

Outlook: ↘

It is clear from both advertised and contractual rents that rents are under pressure. At -3.2%, the growth of advertised rents in 2016 declined. The contractual rents of institutional investors also bear witness to a negative development. In view of the ongoing fraught marketing situation, rents are set also to remain under pressure in 2017. The downward potential is only likely to be limited at locations with excellent accessibility.

Special focus: Data centers

The cloud has a home too

Data centers form the core of our modern IT infrastructure and play a critical role for many companies and organizations. The current developments surrounding Industry 4.0 and the Internet of Things (IoT) are increasing the requirements for IT infrastructure and will strongly drive the demand for data center space. This poses opportunities for investors who are not afraid of making targeted niche investments in their quest for yields and growth prospects. However, high building and location requirements as well as a comparatively compact demand group call for a detailed analysis of potential investment properties.

Data centers: the core of modern IT infrastructure

Industry 4.0 and IoT drive demand for modern data centers

A data center refers to a centralized storage facility for the management and processing of data. While data centers originally were largely operated by individual companies and government organizations themselves, an increasing trend toward a service and cloud-based model can be observed today. A growing share of IT infrastructure previously operated in-house is outsourced to specialist providers that maintain the IT infrastructure or provide facilities for the company server. Having only a few years ago consisted in the letting of space at the data center (colocation), the core business of data center operators is now shifting strongly toward the cloud business. The property essentially remains the same but instead of data center space, turnkey computing and storage capacities are offered as service packages. The services (IaaS, PaaS and SaaS, [see below](#)) are provided directly by the data center operator or in many cases also by a specialist cloud operator that rents space in the data center. The range of IT services offered varies in terms of the degree and scope of outsourcing. The following list briefly summarizes the main services offered:

Colocation and server housing: Space for the company hardware is rented at the data center, including the provision of power, cooling, security and access control. Access and service are in many cases offered around the clock.

Infrastructure as a Service (IaaS): The entire IT infrastructure is provided by the data center. Users pay according to the performance actually used and benefit from a flexible range of resources while operating the platforms and applications themselves.

Platform as a Service (PaaS): The user is provided with a platform in addition to the infrastructure. This allows it to develop and test new applications quickly without having to worry about the establishment and maintenance of the environment.

Software as a Service (SaaS): Instead of the actual infrastructure, specific software products are offered as a service. Software licenses are held centrally so that the user can subscribe to them instead of having to purchase the licenses himself. Conventional web browsers can serve here as the interface to the client.

Industry 4.0 and IoT triggering explosion of data volumes

The combination of digital and conventional technologies is constantly progressing and radically changing the way in which we produce, consume and communicate with each other. An increasingly larger range of goods is connected with the internet and generates data that has to be processed and evaluated. A prime example of this is the automobile industry where networked vehicles are already generating vast quantities of data today. When one day autonomous vehicles will be on our roads, the requisite data volumes will rise even more sharply. For example, the sensors of a driverless car are set to generate up to one gigabyte (GB) of data per second. The annual total volume of data generated is expected to climb from 145 zettabytes (ZB) in 2015 to up to 600 ZB in 2020.⁹ By way of comparison, one ZB is equivalent to 1,000 billion gigabytes (GB) or around 36 million years of film in HD quality. The volume of data generated will boost the demand for data centers and the quantities of data managed there will increase sharply. As [Figure 74](#) illustrates, the volume of data managed in external data centers is set to more than double by 2020 and rise to over 15 ZB. This is equivalent to an average annual

⁹ See Cisco (2016): Cisco Global Cloud Index: Forecast and Methodology 2015 – 2020

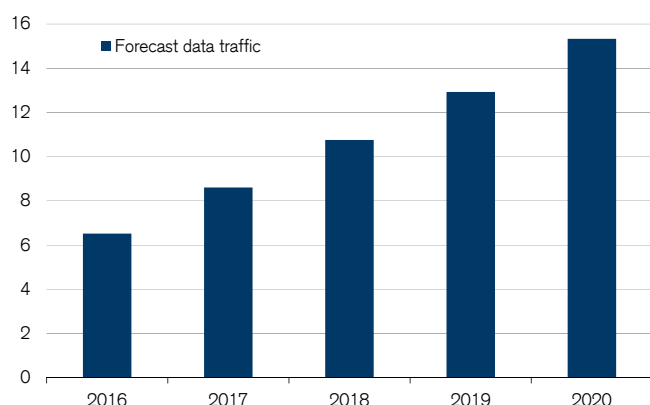
growth of 23.8%. Although the data will in future also be stored more efficiently due to technical advances, this will not halt the demand for new data centers as the expected growth in data volumes is simply too great for this.

Cloud facilitates focus on core competences

The outsourcing of IT applications to cloud providers reduces the overhead costs and tied capital of a company as it no longer has to operate the expensive IT infrastructure itself. Without outsourcing, existing systems often cannot be operated at full capacity because processes need to be guaranteed at peak times as well. This makes reserves necessary. If, however, the computing power is procured as a service, only the actual performance required is paid for. Diversification with different clients enables cloud operators to utilize servers more efficiently. The cost benefits, which also include savings on IT infrastructure specialists, and the greater flexibility of the cloud are appealing to an increasing number of IT managers. A growing share of annual IT expenditure is therefore no longer set to be invested in classical infrastructure but instead spent on the procurement of IT services (Figure 75). Global expenditure on cloud services should thus already account for around 14% (2016: 8%) of total IT expenditure by 2020. The outsourcing of IT should enable companies to concentrate on their core competences, which poses a core success factor in a rapidly changing world.

Figure 74: Data volumes within data centers

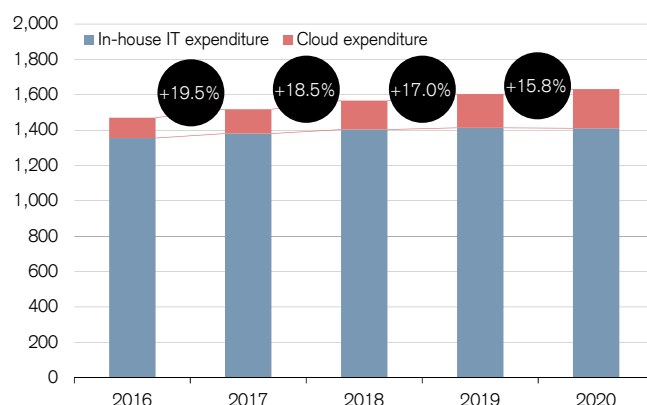
Forecast of global data traffic within data centers 2016–2020, in ZB p.a.



Source: Cisco, Credit Suisse

Figure 75: Global IT expenditure for cloud services

Forecasted expenditure of IT departments in USD billion, growth of cloud expenditure in %



Source: Gartner, Credit Suisse

Security and flexibility requirements pose challenges for data center operators

The constant growth of data volumes and simultaneously increasing requirements in terms of security, flexibility and availability entail major challenges for data center providers. One of these is the fact that at around three to five years the life cycle of the servers used within data centers is considerably shorter than that of a data center property which is estimated to be about 25 years. Also not to be underestimated are the continuously high investments that are essential for the ongoing operation of a data center. Future technological changes must as far as possible already be taken into account during the construction of a data center and call for the greatest possible flexibility. These challenges have among other things led to a global consolidation in the sector and further cemented the dominance of the major providers such as Amazon, Microsoft, IBM and Google. Owing to the increasing market power of the dominant cloud providers, data center operators must expect falling margins. Around 68% of the computing power available globally within data centers is set to be attributable to these so-called hyperscale providers by 2020, up from around 39% at present.¹⁰ The trend toward larger data centers is particularly pronounced in North America and Asia, while such trends are also emerging in Europe.

Switzerland: Attractive location but not a European data center hotspot

Switzerland: attractive data center location compared internationally

Thanks to a stable political and economic environment and an excellent and broadly diversified energy supply, Switzerland is able to position itself as an attractive location for data centers. The high attractiveness of the location is reflected in the Data Centre Risk Index in which Switzerland

¹⁰ See Cisco (2016): Cisco Global Cloud Index: Forecast and Methodology 2015 – 2020

comes third after Iceland and Norway.¹¹ The index identifies and assesses various risk factors from energy supply, political stability and corporate fiscal attractiveness through to natural disaster risks for the operation of a data center.

Data centers seek proximity to urban centers

As well as access to a reliable power supply, the available bandwidths for data exchange, the accessibility of the location and the risk of natural disasters play a role in the selection of a specific location. Figure 76 illustrates the locations of Swiss data centers as well as the earthquake risk zones that reflect some of the natural disaster risks to be taken into account. A large portion of the data centers lies in the proximity of the urban centers where the likelihood of earthquakes in the Swiss Plateau is low. However, some centers are also located in Basel where there is an increased earthquake risk. Even more important than the risk of a natural disaster are geographical proximity to customers and direct connections to international networks in order to guarantee a fast data transfer. The availability of the IT systems is of immense importance for many companies, as downtimes are extremely costly. For this reason the data centers are classified according to their availability and downtimes by various organizations. A common standard deployed here is the Tier Classification Standard of the Uptime Institute. The categories range from Level Tier I for a data center with an average availability of 99.671% to Level Tier IV with an availability of 99.995%, which is equivalent to just 26 minutes' downtime per year. Figure 76 illustrates the security standards according to which data centers in Switzerland are constructed. However, most of the data centers are not officially certified but meet the requirements according to their own calculations. At present the Swisscom data center in Wankdorf is the only one in Switzerland that has been officially certified with Level Tier IV.

Data centers are expensive construction projects

The many and stringent security requirements for data centers place high demands on the building design. For state-of-the-art data centers with the highest standard of security (Tier IV), connections to two independent power sources and access control with security systems of the sort customary at airports are provided as standard. Availability can be further enhanced with a second, redundant data center in a different geographical region. In order to further reduce the risk of a power outage, back-up systems are available to safeguard operation of the servers including cooling. Owing to the high power demand, efficient cooling systems are required for the operation of data centers. One possibility is to feed the heat generated through operation of the servers into a district heating grid. Modern facilities are cooled with ambient air so that conventional cooling systems are only provided for emergencies. Data centers are also equipped with automatic fire extinguishing systems, for example to reduce the oxygen content in case of fire and thereby combat the fire without causing damage to the infrastructure. Data centers also differ from other constructions in terms of room height and structural design. According to the Uptime Institute, standard payloads in the data center industry range from 730 to 1,220 kg per m². By way of comparison, 300 kg per m² are the norm for office buildings in Switzerland. The complex requirements and infrastructure needs call for a highly specific design that is reflected in disproportionately high construction costs. While the average construction costs of an office building amount to around CHF 2,800 per m² of gross floor space, they amount to two to three times as much for a data center. Timely planning and cooperation with a provider as well as specification of the security standard already during the planning stage are key elements. Owing to the specific design, conversion of a property planned as a data center, as with many specialist properties, is only possible with a high cost outlay. Dismantling will in most cases make more sense. The conversion of existing buildings into data centers is quite feasible as shown by the example of HIAG Data: Two new data centers are planned in Menzikon and Biberist in the former halls of an industrial plant. However, this is likely to be an exception. For larger state-of-the-art data centers, new constructions on greenfield sites are generally envisaged.

Switzerland: No European data center hotspot

Despite attractive underlying conditions, Switzerland is in the international competition only to a limited extent able to keep pace with the largest locations in Europe. Major investments primarily flow into the data center hotspots surrounding Amsterdam, Frankfurt, Paris and London. In this connection the availability and price of extensive property sites as well as access to major network hubs are likely to play an important role. Alongside green.ch and a number of smaller providers, above all Swisscom has established a strong position on the Swiss market. However, Swisscom's data centers are also small when compared with the infrastructure of international providers so that barely any comparable economies of scale can be achieved. International providers such as Equinix and Intexion are already present on the Swiss market with some data

¹¹ See Cushman & Wakefield (2016): Data Centre Risk Index 2016

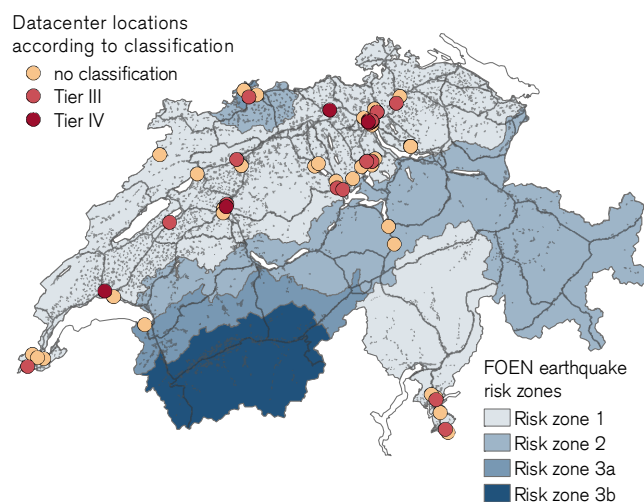
centers. However, niches continue to exist for local providers. For example, HIAG Data (a HIAG Group company) is working on a healthcare platform in collaboration with Microsoft and Noser Health, with HIAG Data providing the IT infrastructure and platform as a service in the aforementioned data centers.

Invest in data centers and benefit from the global trend

The forecasts regarding future data volumes paint a clear picture: The demand for data centers is increasing rapidly throughout the world. It should be noted here that the trend toward IT outsourcing is still in its infancy in Switzerland and at a much less advanced stage compared with North America and Asia. Large investors have the option of making a direct investment in a data center property. Investors with smaller budgets who also wish to invest in the data center niche must make do with investment opportunities abroad as only a small proportion of the listed real estate funds and equities in Switzerland are invested in data centers. Abroad, however, data center real estate investment trusts (REITs) can be found that invest directly in data centers and to some extent also operate them. Apart from one exception from Singapore, data center REITs listed on the stock exchange can so far only be found in the USA. One example is the Equinix (EQIX) REIT that operates 146 data centers throughout the world, including six in Switzerland with locations in Zurich and Geneva. Data center REITs have been extremely profitable in recent years and have outperformed the return of the FTSE Global Real Estate Index by an average of over 109% since 2014 (Figure 77). However, it should be noted that the expectations concerning the future growth of the cloud market is likely already priced in. Should this growth unexpectedly prove lower, price corrections cannot be ruled out.

Figure 76: Locations of Swiss data centers

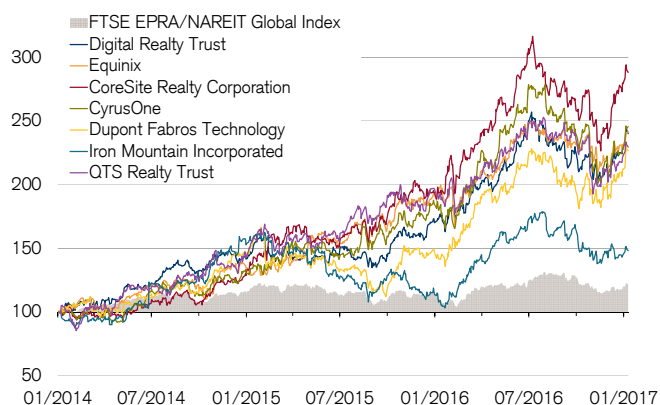
Construction standard according to security classification (as per own account)



Source: Federal Office for the Environment (FOEN), Credit Suisse, Geostat

Figure 77: Performance of data center REITs

Total return in USD, index: 2014 = 100



Past performance is no guarantee of future results. Performance can be impaired by commissions, fees and other costs as well as exchange rate fluctuations.

Source: Bloomberg, Credit Suisse

Real estate investments

Attractive but no sure-fire success

Real estate investments remain very high up in investors' favor. The run on "concrete gold" can be seen in the ongoing boom of rental apartment construction, the growing share of real estate in the portfolios of institutional investors and the good to excellent performance of real estate funds and equities in the past year. We explain why real estate investments are also set to remain in demand in 2017 despite increasing risks. However, the longer the run lasts, the more it will undermine its own basis. How long will the negative interest rates continue to keep the real estate investment market in the game? And what options are there for evading the increasingly difficult conditions on the end user markets?

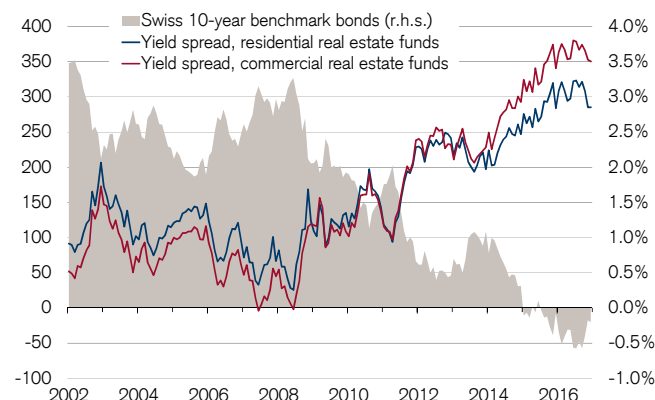
Direct real estate investments: High demand despite increasing headwind

Market continues to offer high risk premiums

For the first time in many years, all end-user markets are declining. The office and retail property market was last year also joined by the residential property market. The marketing of new rental apartments is becoming more challenging because vacancies are continuously increasing and also less profitable because rents are no longer rising (see chapter on rental apartments, p. 21 ff.). Nevertheless, the confidence of investors in real estate appears unbroken. The reason for this is the negative interest environment that is continuing to result in major yield spreads between real estate and fixed income investments (Figure 78). Despite a sharp rise in US interest rates following the election of Donald Trump as US President, long-term CHF interest rates still remain in negative territory. The distribution yields at the end of 2016 of Swiss real estate funds with a focus on residential property were on average still almost 300 basis points above the yield of a ten-year Swiss government bond. Funds with a commercial focus even achieved an excess return of 350 basis points. The yield spreads of direct investments are even higher. The market thus continued to offer investors a high risk premium. This premium appears to be attracting investors as reflected in the unbroken planning activity: Planning applications for a record number of new rental apartments were submitted over the last year. The planned volume of investments for other construction projects (largely office and retail properties) was also around 20% above its long-term average despite a striking oversupply in various places (see chapters on office property, p. 34 ff. and retail property, p. 54 ff.).

Figure 78: Yield spread by segment

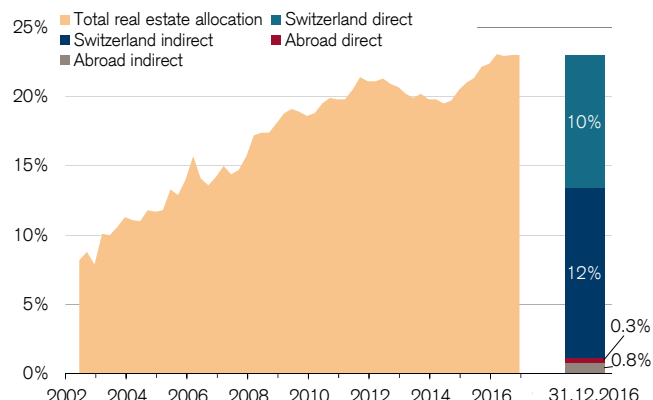
Yield spread of real estate funds in bp: distribution yield less benchmark bond yield



Source: Credit Suisse, Datastream, Baublatt

Figure 79: Real estate allocation of pension funds

Performance of real estate allocation in the balance sheet of pension funds, composition of real estate allocation as of Q4 2016



Source: Credit Suisse

No turnaround on the investment market to be expected

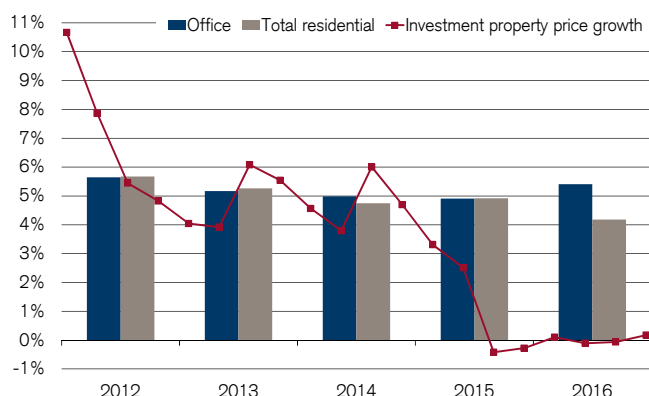
The slightly higher inflation expectations in Switzerland together with a more conscious awareness of the sales problems on the tenants' markets should cause the high demand for direct real estate investments gradually to slow down. As the normalization of monetary policy will take somewhat longer in Europe than in the USA, we do not expect a correction of the market. Institutional investors in particular such as insurance companies and pension funds have further increased their real estate investment commitments and will continue to do so for lack of any alternatives. According to the Credit Suisse Swiss Pension Fund Index (Figure 79) the real estate allocation of pension funds rose to 23% in 2016. The expansion of indirect investment commitments (+2.1 percentage points) has been greater in the past two years than that of direct investments (+0.4 percentage points since the end of 2014). However, this will largely be due to price gains. Altogether 31% of the overall investment performance of pension funds over the last year was accounted for by real estate. The commitment to foreign real estate markets remains astonishingly low at 1.2%. This 'home bias' can partially be explained by regulatory requirements, foreign currency risks and a lack of market knowledge. In view of the very advanced property cycle in all segments, venturing abroad should really be considered a necessity, if nothing else for reasons of risk diversification. The priority of smaller and medium-sized institutions is likely to be placed more on indirect investments such as funds and real estate investment trusts (REITs).

Three ways of increasing the real estate allocation

Besides pension funds, insurers are also in search of yields. They have therefore massively increased their real estate commitment. For example, the value of the real estate investments of the ten leading Swiss insurance companies whose annual reports we have assessed increased by 35% between 2010 and 2015. In an initial phase that reached its climax around 2012, institutional investors invested primarily in existing properties as evidenced by the high growth of the transaction prices of investment properties over this period (Figure 80). In the following years investors increasingly moved over in view of the high prices and dried-up market to developing their own real estate projects or acquiring those from development partners when ready for construction (see planning applications, Figure 32). A third option enabling the real estate allocation to be expanded most quickly has been increasingly observed more recently, namely the purchase of entire real estate portfolios, be this at home or abroad. Notable examples of this include the offer of AXA to buy the shares of Zürcher Freilager AG still available on the market and the acquisition by Baloise of the majority of shares in the real estate company Pax Anlage AG. In view of the ongoing investment crisis, real estate allocations can this way be increased in a targeted manner and expensive bidding processes with dozens of interested parties avoided. More such acquisitions are to be expected to take place.

Figure 80: Gross initial yields and price growth

Transaction-based yields (weighted and quality-adjusted) of institutional investors; price growth of residential and mixed-use investment properties (YoY)



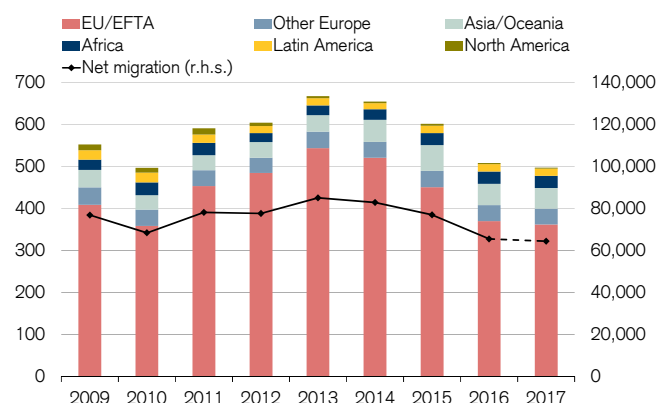
Source: Real Estate Investment Data Association (REIDA), IAZI, Credit Suisse

Initial yields: Office properties past their low?

According to the transaction database of the Real Estate Investment Data Association (REIDA), the gross initial yields on residential investment property transactions by institutional investors fell to a low of 4.2% in 2016 (Figure 80). As rents largely moved sideways during the past year, this suggests a further rise in transaction prices. Although there are hardly any deals at these low top yields. Another data source, the SWX IAZI Investment Real Estate Price Index, has therefore

Figure 81: Immigration-driven rental income

Estimated rental income from net migration (net, in CHF million/year); r.h.s.: net migration of usual foreign resident population, 2017: forecast



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

since the end of 2015 been pointing toward stagnating transaction prices. We expect the initial yields of residential investment properties gradually to stabilize. However, for the current year we are forecasting a further fall in yields and consequently higher prices. At the same time, less and less positive momentum is coming from rents, which could even fall slightly in the current year. The price upturn is thus increasingly being driven by investment pressure and less by the fundamental data. For the office properties that are further advanced in the cycle the REIDA data suggest the start of a turnaround. Gross initial yields rose from 4.9% to 5.4% between 2015 and 2016. However, transaction prices are not yet set to come under any broad-based pressure. Instead, properties outside the core segment are likely to be mostly affected. Prices at core locations that are even more within the focus of demand owing to the more challenging market conditions could stagnate or even increase slightly.

Fall in immigration lowers rental income by CHF 170 million

Since the introduction of the full free movement of persons with the European Union (EU) back in 2007, the demand for rental accommodation has been strongly supported by immigration. Over 85% of foreign new migrants live in a rental apartment within the first two years. Based on data from the structural survey carried out by the Swiss Federal Statistical Office, we have calculated the average net rents of new residents by nationality group.¹² Together with data on household sizes, the rate of home ownership, the development and country of origin of migrants¹ and the rent price development, these calculations enable us to estimate the rental income gained through immigration (Figure 81). According to this estimate, back in 2013 when immigration temporarily peaked, 85,000 net migrants generated an additional annual rental income of CHF 670 million, 81% of which was attributable to migrants from EU and EFTA countries. This amount fell by 2016 to CHF 510 million (–24%), with only 73% remaining attributable to immigration by EU and EFTA citizens. It is set to fall by almost CHF 10 million more in 2017.

Inexpensive rental apartments increasingly becoming the most attractive segment

The decline in rental income is not only attributable to the quantitative reduction of immigration but also to a change in the structure of immigrants: The increase in immigration from Asia and Africa has been unable to offset the fall in the demand for housing from EU citizens either quantitatively or qualitatively. At an estimated CHF 5,300 (Africa) and CHF 6,700 (Asia), the average rental income per immigrant is well below that per EU or EFTA citizen (CHF 8,800). While back in 2013 the average rental income per immigrant came to CHF 7,850, in 2016 it was just CHF 7,760 (–1%). This decline, which is set to continue in the current year, is not insignificant. Contractual rents over the same period rose by 2.8%. For investors this entails the need to adjust not only to a quantitative but also to a qualitative change. The segment comprising inexpensive rental apartments within commuting distance of the major centers therefore offers investors the best sales prospects. This is among other things also evidenced by the comparatively stable trend in advertised rents in this segment (see chapter on rental apartments, p. 28).

Conversion of rental apartments to condominiums as alternative worth considering

The market environment is becoming increasingly challenging. Owners of residential investment properties off the most sought-after locations are intensifying their marketing efforts, working with incentives or ultimately see themselves compelled to adjust rents downwards. But what is to be done if many apartments remain empty despite these measures? One option that owners can consider is the sale of individual apartments, entire floors or even multi-family dwellings to condominium ownership. Whether this strategy promises success depends first of all on the regional market. Regions featuring the following are likely to have the greatest potential for the successful conversion of rental apartments to condominiums: low vacancies of residential property, a sustainable price trend and construction activity that does not exceed the absorption potential of the regional residential property market. Various regions fulfill these criteria at least partially and also have high vacancies among residential apartment stock. The greatest potential is set to lie in some regions of Northwestern Switzerland, in the north of Aargau, in the Zurich Weinland and in various Alpine regions above all in the case of housing governed by previous law that can also be used as second homes.

¹² Credit Suisse (2016): Swiss Real Estate Market 2016: Banished from paradise

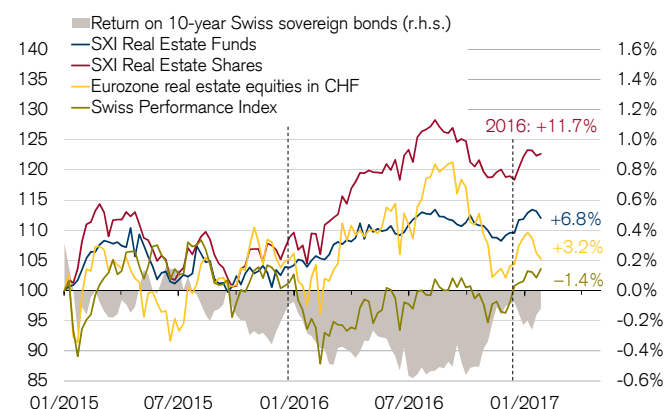
Indirect real estate investments: Investment pressure is decisive

Successful 2016 despite downturn on the end user markets

Despite more cloudy prospects on the end user markets and considerable interest rate fluctuations, investors in indirect Swiss real estate investments can look back on a successful year. At +11.7%, real estate equities in particular achieved an excellent result in 2016 (Figure 82). The basis for the good performance was formed by interest rate cuts in the first half of 2016 and an astonishingly robust response of real estate shares to the interest rate correction in the fourth quarter. Swiss real estate funds that closed 2016 with a likewise impressive overall performance of +6.8% were even less put off by the rise in long-term interest rates toward the end of the year: Their prices in January 2017 at times lay again around the peaks of August 2016. Both equities and funds therefore paid off better in 2016 than real estate equities of the Eurozone (+3.2%) and also beat the Swiss Performance Index (SPI, -1.4%). This shows that the market still does not yet believe in a sustained interest rate turnaround in Switzerland even if the low may have been passed. We share this view and do not expect any hike in the base rate by the Swiss National Bank over the next year. The return on ten-year Swiss sovereign bonds should therefore remain negative in 2017.

Figure 82: Performance of indirect real estate investments

Overall performance, index: 01.01.2015 = 100, return on ten-year Swiss sovereign bonds



Past performance is no guarantee of future results. Performance can be impaired by commissions, fees and other costs as well as exchange rate fluctuations.

Source: Datastream, Credit Suisse

Investors so far little put off by the rise in long-term interest rates

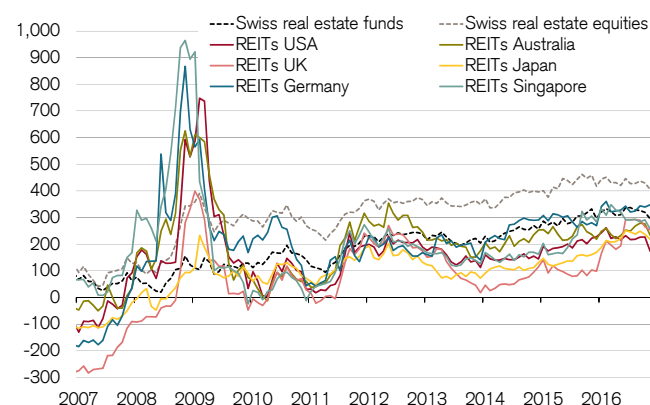
The strong performance of indirect Swiss real estate investments comes as a surprise in view of the rise in long-term interest rates. The situation on the end user markets that are all declining also speaks more against the success of real estate funds and companies. However, more decisive than the condition of the real estate market segments at least in the short and medium term are supply and demand on the investment market. Here real estate investments compete with fixed income investments such as bonds, with the relative returns and yield spreads in particular guiding investment decisions. Figure 83 illustrates the continued high attractiveness of indirect Swiss real estate investments. Not only are their yield spreads versus ten-year sovereign bonds close to their historic peaks but they also compare well internationally. This yield spread has exceeded 400 basis points for Swiss real estate equities since 2015 while Swiss real estate funds came to 290 basis points at the end of 2016 and was only beaten internationally by German real estate equities.

Premiums of real estate equities recently driven strongly by interest rates

As indirect real estate investments mostly comprise listed investment vehicles, their performance is also influenced by equity market sentiment. This applies in particular to real estate equities. Since 2003 the correlation coefficient between the SPI and the average premium of real estate equities on net asset value (NAV) has been +0.53. The phase of sharply rising premiums of real estate equities between 2003 and 2007 coincided with a prolonged boom period on the equity markets during which the SPI went up by well over 100%. However, what is also striking is how strongly the correlation with the equity market has begun to fluctuate since 2011. The negative correlation of premiums with the returns on ten-year sovereign bonds has consequently stabilized

Figure 83: Yield spreads compared internationally

Yield spread between distribution yield of real estate investment vehicle and ten-year sovereign bond of applicable market



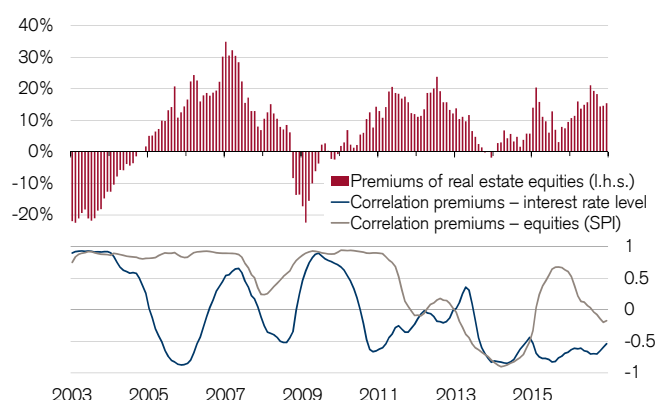
Past performance is no guarantee of future results. Performance can be impaired by commissions, fees and other costs as well as exchange rate fluctuations.

Source: Credit Suisse, Bloomberg, Datastream

at a level below the average since 2003 of -0.23 (Figure 84). This hybrid correlation character of real estate equities can also be observed on other markets. What we are basically seeing is that real estate equities with an advanced property cycle are starting to respond more sensitively to interest rate changes, that is, the negative correlation with the interest rate trend is increasing. The negative interest rates have therefore replaced equity market sentiment in the last two years as the key driver of premiums. We do not expect any significant price corrections as long as negative interest rates prevail as the latter do not pose any alternative for institutional investors. For this reason the rise in interest rates toward the end of 2016 has only had a comparatively small impact on premiums.

Figure 84: Premiums of real estate companies

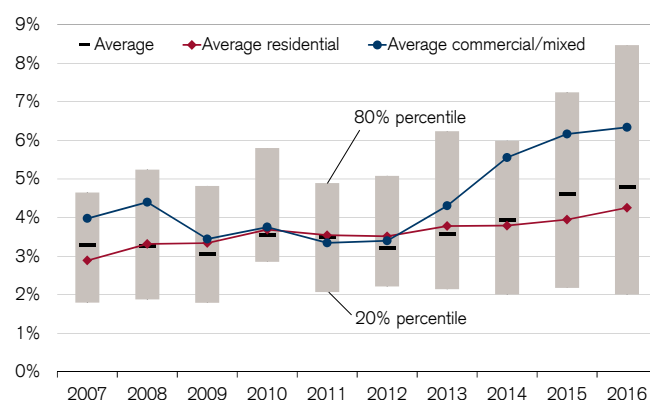
Average premiums of listed real estate equities; correlation (rolling over 24 months) with interest rate level (return on ten-year Swiss government bonds) and the equity market (SPI)



Source: Credit Suisse, Datastream, annual and semi-annual reports of the funds

Figure 85: Vacancies of real estate funds

Vacancies (rental income loss rate) of listed Swiss real estate funds; averages: weighted by net asset value as of 31 December 2016; 2016: provisional



Source: Credit Suisse, Datastream, annual and semi-annual reports of the funds

Increase in vacancies in the portfolios of real estate funds ...

The trend toward higher vacancies is also affecting the portfolios of real estate funds and companies (Figure 85). We have carried out a closer analysis of the former. Between 2007 and 2012, the average rental income loss rate fluctuated between 2.9% and 3.5% for funds focusing on residential usage and between 3.3% and 4.4% for funds with a commercial focus. The turnaround then came in 2013: First there was a sharp rise in particular in the vacancies of commercial funds which in 2016 achieved an average of 6.3%. While the increase among funds investing primarily in residential properties was less pronounced, it has nevertheless accelerated in the past two years (2016: 4.3%). Also striking are the sharply rising differences in the rental income loss rate between the individual funds since 2012. For a fifth of funds (20% percentile) the latter amounted to less than 2.0% in 2016 – similarly to in preceding years. However, vacancies have risen markedly in the majority of funds; they exceeded 8.5% in a fifth of funds in 2016.

... should primarily affect residentially focused vehicles in 2017

The vacancies of real estate companies are even higher than those of real estate funds, with average rental income loss of 9.3% recorded as of June 2016. The main reason is the greater focus of real estate companies on commercial properties. The trend toward rising vacancies is set to continue in the current year and increasingly also affect funds and real estate companies with a larger residential allocation. Vacancies exert a negative impact on distribution yields, which can ultimately also trigger value adjustments. The actual yield reductions are likely to exceed rental income loss as increased marketing efforts and higher refurbishment expenditure also generate additional costs on the expense side.

Non-listed, NAV-based global real estate investments

Increasingly difficult conditions on the end user markets in Switzerland in combination with diversification considerations would suggest that now is a good time for shifting the focus more to real estate investments abroad. While real estate investments outside Switzerland have until now primarily taken the form of listed investments, largely in real estate investment trusts (REITs), NAV-based forms of investment have been gaining popularity in the recent past.

Main benefit of international real estate investments: low correlations and attractive returns

Real estate investments in Switzerland and across the world offer the advantage of relatively low correlations with traditional investments such as equities and bonds. This low dependence on global market cycles is a result of the fact that real estate is always tied to a location. Property values are to a large extent determined by factors such as local demand, the local supply of property or the local financing conditions. As a result, the correlations between individual real estate markets, such as between the USA and Switzerland, are also very low. Real estate investments at good locations and with a good tenant structure, often referred to as “core” real estate, furthermore generate a stable long-term cash flow that also offers an attractive risk-adjusted premium (yield spread) compared with other asset classes in times of low interest rates. Global real estate investments have yielded an average annual return of 6.5% in the past ten years. With hedging in Swiss francs the annual return is only marginally lower at 5.9%. This return becomes even more attractive when we consider that the worst financial crisis since the 1930s occurred during this period and the volatility of such investments nevertheless came to just 7.3% (7.0% for returns hedged in CHF).

Real estate equities have so far dominated international real estate investments

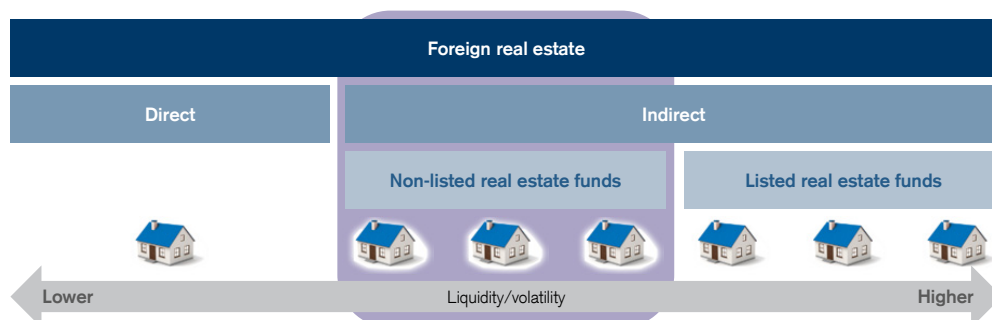
Although real estate forms the world's largest asset class, Swiss investors have until now only had limited opportunities to invest in international real estate. Most investment products focus on listed real estate investments. Although real estate equities, usually equities of listed REITs, offer the advantage of high liquidity, they are exposed to often high stock market fluctuations. The latter lead to a high volatility of share prices and in doing so reduce two of the main advantages of real estate investments, namely the high cash flow stability and low correlations with other asset classes. There are also occasional non-listed fund solutions, where over-the-counter trading is provided by the custodian bank. Agios and disagios are paid therefore as well.

Non-listed real estate funds as an attractive alternative

For this reason, the focus has shifted increasingly to non-listed, NAV-based real estate investments in recent years (Figure 86). Such investments directly reflect the actual performance of real estate. Investors accordingly benefit from low correlations, lower value fluctuations (volatility) and attractive risk-adjusted returns. Furthermore, there is never any need to pay a premium or agio on purchase. However, these positive features of non-listed real estate funds come at the price of comparatively lower liquidity. As these funds are not traded on the stock exchange but invest directly in real estate, investors need to take account of longer return periods. Depending on the size, country of domicile and type of investment, typical return periods range from three to 12 months.

Figure 86: Investment universe of global real estate investments

Liquidity and value fluctuations (volatility)



Source: Credit Suisse

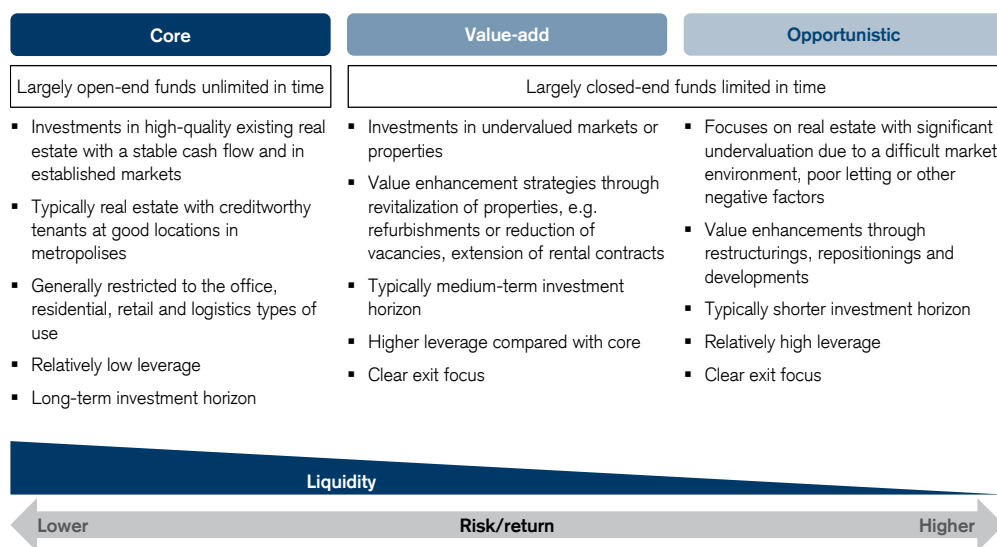
Investment universe of non-listed international real estate funds

There are now several hundred non-listed international real estate funds open to investors. However, many of these are reserved for qualified investors owing to their limited tradability. As well as funds investing in “core” real estate that are normally unlimited in time, there are also real estate funds with risk/return profiles described as “value-add” and “opportunistic”. These typically have a limited term of seven to ten years (Figure 87). While “core” funds focus on the current return from rental income (the so-called net cash flow return), the purpose of “value-add” and “opportunistic” real estate funds is to achieve the highest possible overall return – consisting of net cash flow return and valuation return – over the term of the fund. In contrast to “core” funds that are largely managed according to the “buy and hold” principle, “value-add” and “opportunistic” funds are managed with a focus on capital appreciation.

tic" funds pursue strategies along the lines of private equity according to the basic principle "buy, fix and sell".

Figure 87: Investment universe of non-listed global real estate investments

By investment strategy



Source: Credit Suisse

Which funds are suitable for which investors?

Real estate funds with a "core" strategy are most suitable for investors without specialist knowledge of the international real estate markets or with relatively high risk aversion. Such funds primarily hold existing high-quality real estate with low vacancies and are diversified across tenants, buildings, locations and contract terms. Owing to the restricted liquidity and relatively long cycles in the real estate market compared with equities and bonds, a long-term investment horizon is advisable. Investors with greater risk tolerance can consider real estate funds with "value-add" and "opportunistic" strategies. It is only possible to invest in these funds for one to two years after launch. After this the funds remain closed until their liquidation. The units can at best be sold to other investors by way of so-called secondary market transactions. "Value-add" and "opportunistic" real estate funds have the drawback in comparison with existing "core" funds of having first to build up their portfolios so that investors are to a certain extent investing in a 'blind pool'. The right choice of manager is therefore important.

Selection process and criteria

The transparency of global real estate investments has risen significantly in the past 15 years due to the growing professionalization of this asset class. Nevertheless, a broad international network with real estate fund managers, brokers, intermediaries and other market players is an important prerequisite for the success of such investments. In addition, rigorous due diligence is essential before investing in non-listed real estate funds. The track record of the manager, quality and evaluation of the real estate portfolio as well as assessment of the applicable real estate market should be placed in the foreground here. Alongside the aforementioned aspects, it is also necessary before every fund subscription to clarify in full all legal, fiscal and regulatory aspects. Specialist knowledge of the applicable legal and tax systems is not only helpful for this but absolutely imperative.

Direct invested individual funds or multi-manager funds

Investors may invest either in non-listed, NAV-based real estate foundations that hold real estate directly or as alternative multi-manager products. These offer at attractive conditions the advantage of very broad diversification across different real estate fund managers and regions. At the same time, investors in such products do not have to analyze individual funds and their real estate portfolios but can concentrate on selecting the multi-manager product provider.

Is now a good time to invest?

The international real estate markets have recovered very well since the global financial crisis. It is therefore not only in Switzerland that many market observers are questioning whether the real estate valuations currently still justify an investment. We think that although most real estate markets are highly valued when compared historically, these valuations are in many cases fundamentally justified. Three reasons are crucial for our assessment: 1) New construction activity since the global financial crisis has been at historic lows in many real estate markets, which

means that in many places there is currently a lack of high-quality real estate. Or to put it another way: There are currently only very few real estate markets struggling with an oversupply. 2) Despite the good availability of low-cost mortgage loans, the use of debt capital in the non-listed real estate funds examined by us is low to very low. "Core" funds on average have a moderate leverage of 21%.¹³ 3) The almost entirely positive although moderate economic growth across the world in combination with a scarce supply of property means that positive rental growth is expected for many international real estate markets in the years to come. Various independent research institutes are anticipating rental growth rates in the next few years in some cases to reach double figures, which should be positively reflected in the future real estate valuations of the funds.

Outlook for real estate investments in 2017

Direct real estate investments: Still in demand but increasingly challenging

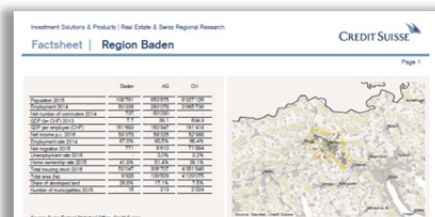
Real estate as an investment object is set also to remain very popular among investors in 2017. Although the yield spreads to alternative investments have passed their peaks, demand for "concrete gold" should remain robust for as long as the negative interest rates prevail – particularly among institutional investors. There is simply a lack of alternatives to solve investors' yield problem without excessive risk. However, it is likely to become increasingly difficult in Switzerland to maintain the good performance of the previous years. While the price growth of residential investment properties and office properties of the "core" segment does not yet appear to be completely exhausted, the capital growth returns are likely to fall. At the same time, the decline in immigration and change in the structure of immigrants are impairing the income potential and therefore the net cash flow return. Altogether, investments in direct real estate investments are accordingly becoming more challenging. Investments in residential investment properties in the major centers outside the top rental price segment remain low-risk but with initial yields below average.

Indirect real estate investments: Support from negative interest rates continuing

If we consider how long the US Fed waited before commencing any normalization of interest rates, we can conclude that the normalization of interest rates in Europe will still take years to come. In this situation the Swiss National Bank barely has any other option than to retain negative interest rates. According to the arbitrage theory, further capital will therefore be fed into the comparatively high-yielding real estate market where it is consistently putting yields under pressure. It is only possible to evade this yield pressure through a switch to niche segments, a considered selection of investment properties or by investing in international real estate markets. An allocation to the up-and-coming "foreign real estate" asset class can make sense for diversification and return reasons. However, as this asset class poses certain obstacles particularly for smaller investors, careful attention should be paid during implementation to the risk, return, correlation and liquidity properties of the different investment forms and products. A good alternative to this is offered by either multi-manager products or direct invested real estate funds and investment foundation with an international focus.

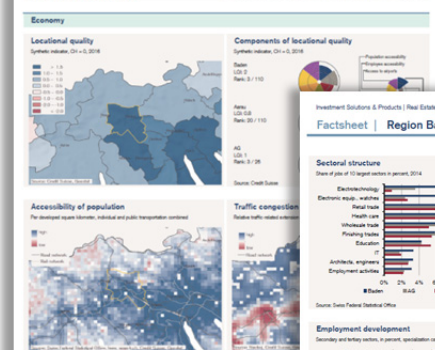
¹³ INREV, Global Real Estate Fund Index as of 30 June 2016

Factsheets: Regional real estate markets at a glance



Periodically updated key indicators for the 110 economic regions

What are the locational qualities of the Baden 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.



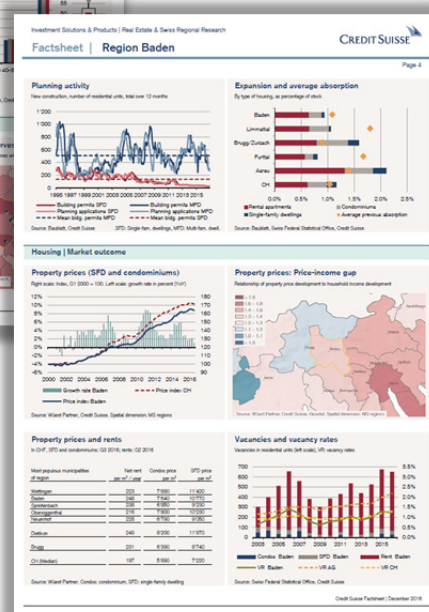
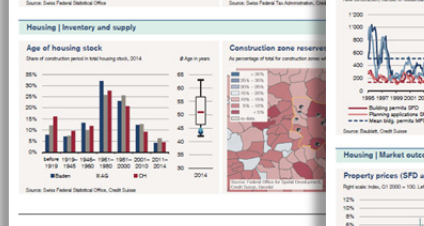
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Regional housing markets

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House prices and rents

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How to order individual Credit Suisse Factsheets:

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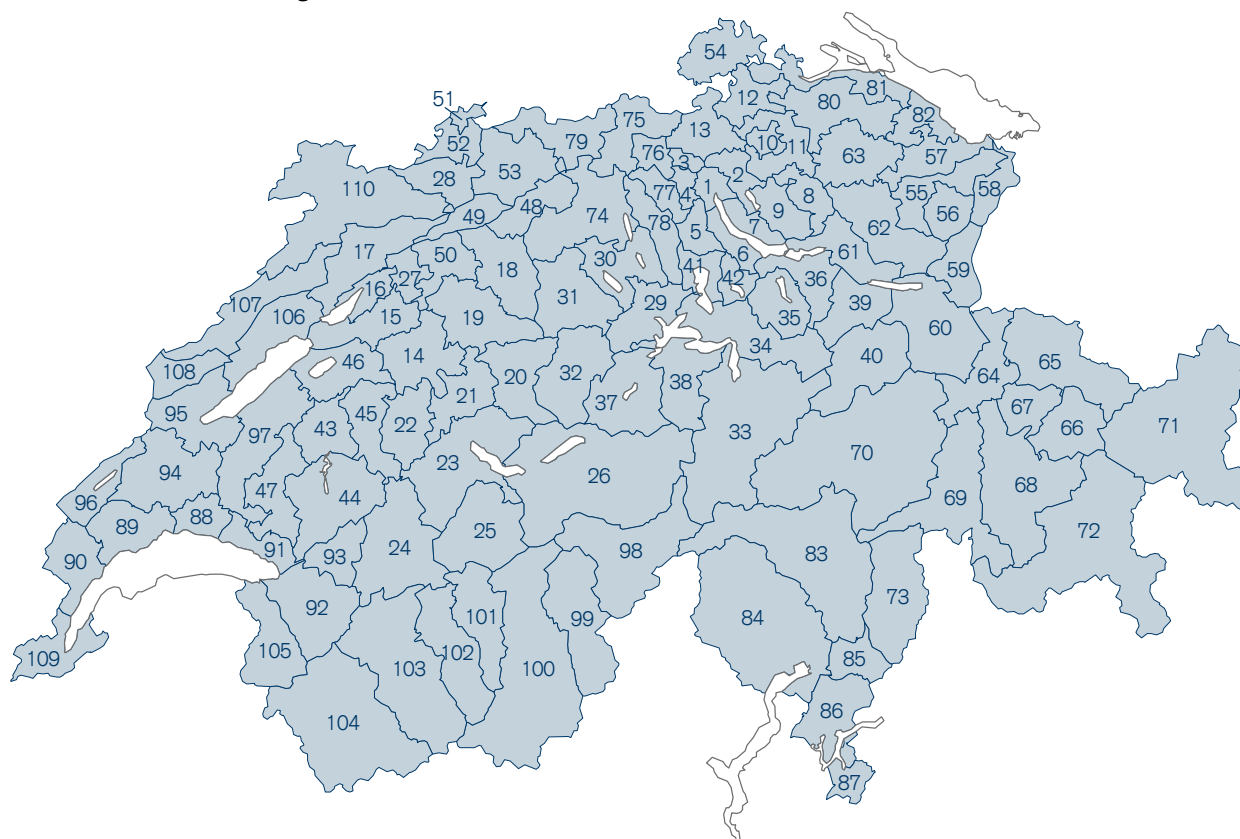
www.credit-suisse.com/immobilienstudie

You will find a list of Switzerland's 110 economic regions on the next page.

Appendix: Switzerland's economic regions

Credit Suisse Economic Research 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 Glatttal	24 Saanen/Obersimmental	46 Murten	68 Mittellanden	90 Nyon
3 Furtal	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 Knonauamt	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/Zürzach	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 Sameraatal	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

Risk warning

Every investment involves risk, especially with regard to fluctuations in value and return. If an investment is denominated in a currency other than your base currency, changes in the rate of exchange may have an adverse effect on value, price or income.

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Some investments discussed in this report have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realized. Those losses may equal your original investment. Indeed, in the case of some investments the potential losses may exceed the amount of initial investment, in such circumstances you may be required to pay more money to support those losses. Income yields from investments may fluctuate and, in consequence, initial capital paid to make the investment may be used as part of that income yield. Some investments may not be readily realizable and it may be difficult to sell or realize those investments, similarly it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed. Please contact your Relationship Manager if you have any questions.

Past performance is not an indicator of future performance. Performance can be affected by commissions, fees or other charges as well as exchange rate fluctuations.

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Sensitivity analysis is understood as the change in the market value (e.g. price) of a financial instrument for a given change in a risk factor and/or model assumption. Specifically, the market value of any financial instrument may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility, and the credit quality of any issuer or reference issuer.

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Investments may have no public market or only a restricted secondary market. Where a secondary market exists, it is not possible to predict the price at which investments will trade in the market or whether such market will be liquid or illiquid.

Emerging markets

Where this report relates to emerging markets, you should be aware that there are uncertainties and risks associated with investments and transactions in various types of investments of, or related or linked to, issuers and obligors incorporated, based or principally engaged in business in emerging markets countries. Investments related to emerging markets countries may be considered speculative, and their prices will be much more volatile than those in the more developed countries of the world. Investments in emerging markets investments should be made only by sophisticated investors or experienced professionals who have independent knowledge of the relevant markets, are able to consider and weigh the various risks presented by such investments, and have the financial resources necessary to bear the substantial risk of loss of investment in such investments. It is your responsibility to manage the risks which arise as a result of investing in emerging markets investments and the allocation of assets in your portfolio. You should seek advice from your own advisers with regard to the various risks and factors to be considered when investing in an emerging markets investment.

Alternative investments

Hedge funds are not subject to the numerous investor protection regulations that apply to regulated authorized investments and hedge fund managers are largely unregulated. Hedge funds are not limited to any particular investment discipline or trading strategy, and seek to profit in all kinds of markets by using leverage, derivatives, and complex speculative investment strategies that may increase the risk of investment loss.

Commodity transactions carry a high degree of risk and may not be suitable for many private investors. The extent of loss due to market movements can be substantial or even result in a total loss.

Investors in real estate are exposed to liquidity, foreign currency and other risks, including cyclical risk, rental and local market risk as well as environmental risk, and changes to the legal situation.

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