

## **Home Sweet Home**

Swiss Real Estate Market 2021 | March 2021



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#### **Cover picture**

Building: Im Guss, Bülach. Living should feel good. Attractive residential property and commercial premises on Zurich's doorstep. Building owner: A real estate fund of Credit Suisse Asset Management

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**Owner-occupied** 

housing

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# Home sweet home

COVID-19 may have triggered a great deal of uncertainty, but it has also brought certainty in one respect: Increases in interest rates are still a long way off. This consideration, combined with rapid and targeted government support measures, has ensured that real estate values have held up well in the crisis. Residential property in particular has proven to be a crisis-resistant investment, further cementing its status as a rock-solid investment. But beyond this, the coronavirus pandemic has provided clarity with respect to something else too: Digitalization is a strategic necessity for those who do not want to be left behind. We illustrate the added value that digital technologies can bring to the real estate industry using three examples.

#### The elusive dream of home ownership

Lockdowns and enforced home working have increased the significance of an attractive and comfortable home, as well as stimulating the ownership drive. This desire has been further strengthened by the extension of the low-interest phase. But the longing for residential property does not fit with the picture on the supply side, which is characterized by a decline in the construction of owner-occupied housing dating back years. The indications of scarcity are now clear for all to see. Within the last 12 months, prices have surged again – from what were already very high levels. As a result, an increasingly small number of households can now fulfill the high financing requirements imposed by the regulator. This in turn means that a greater amount of equity is essential, which is why households seek recourse to their pension assets. But as is evident simply from the declining number of advance withdrawals to finance property acquisition, the dream of owning one's own four walls is becoming increasingly elusive for many households. Many prospective homebuyers are focusing their search on peripheral regions where residential property is more affordable - particularly as the greater opportunity for working at home in the future makes longer commuting times bearable. However, the strong price growth is also likely to increase market risks further. Property owners can counteract this risk effectively if they consistently use the savings they are making as a result of low interest rates to repay the loan capital.

#### Digital real estate Data analytics – digitalization as decoder of demand

Lots of information has long been available on housing supply, but demand has remained largely in the shadows. For decades, demand preferences were mostly only measurable indirectly, such as via vacancy data. However, the digitalization of all walks of life is opening up opportunities, and allowing key information to be more easily compiled and evaluated. The best example of this are the search registrations on property websites, where prospective buyers have to enter their preferences. Realmatch360 was the first company to identify the value of this information for the real estate market. However, smart algorithms are required if missing, duplicate, and misleading information is to be stripped out of this data. The COVID-19 pandemic has shown how important it is to access data as rapidly as possible when evaluating a situation. Thanks to the valuable assessment of search profiles, data-based statements can be promptly made as to whether (and how) the coronavirus crisis has changed demand for housing. For example, there has been an increase in searches for condominiums and houses to buy, and fewer for rental apartments. Moreover, demand is increasingly focused on medium-sized and large homes, as well as on homes with outside space.

#### Rental apartments

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#### ents Demand remarkably robust thanks to "safe haven" effect

The much-feared slump in immigration as a result of the coronavirus crisis never came to pass. Indeed, net immigration in 2020 was actually much higher than the previous year, as the rate of emigration slumped more strongly than immigration. Faced with less attractive labor market situations in their native countries, many foreigners elected to remain in the safe haven of Switzerland. We are expecting net immigration to prove robust this year too, albeit not at the level of last year. In addition to this effect, the ever-higher hurdles that have to be overcome to purchase residential property should support demand for rental accommodation, which is why we are expecting only a modest decline in demand, despite the pandemic. Any weakening can be expected to make itself felt in the large urban centers as well, particularly as the pandemic is weakening not only immigration but also the pull of city centers. The flexibilization of working time and location brings less central, cheaper locations into consideration as residential alternatives. Although this will not reverse the urbanization trend, it should weaken it somewhat. On the supply side, rental apartment construction has now clearly passed its peak, and construction activity is losing momentum. That said, the rate of construction is still too high, which means vacancies are likely to continue to rise, with the corresponding downward pressure on rents.

#### Digital real estate

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Office property

**Digital real estate** 

**Retail property** 

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#### Data analytics – rethinking micro-location

Location is a criterion of the utmost importance in the real estate industry. Accordingly, the importance of evaluating this aspect objectively can hardly be overstated, as it has a key impact on real estate valuations, portfolio strategies, and the success of real estate projects. However, assessing the quality of a location is anything but child's play. Although user-specific locational ratings are theoretically useful, they often fall down in practice due to the lack of available data or analysis instruments. New technologies, which among other things focus on information on the morphology of buildings, are trying to plug this gap. Morphological criteria such as building form, exposure, size, and interconnectedness, as well as new analysis techniques such as machine learning and artificial intelligence, make it possible to capture the multifaceted nature of user preferences, thereby significantly improving the evaluation of locational quality for a variety of uses.

#### Demand being recalibrated

Demand for office space remains very weak, as companies are holding back from renting new premises and reviewing the extent to which they can make long-term savings on office space through home working. In the medium term, the importance of the office as a place of work is likely to rise again, however, as the high levels of productivity initially observed in home working are likely to fall back in time due to a lack of social control and insufficient communication. In addition, productivity is also likely to be impaired by lower innovation output on the part of a homebased workforce, which should focus attention once again on the value of centralized working. Even before the second wave of infection, there was evidence of a slow but steady stream of workers returning to the office. The remaining demand is focused heavily on central locations, which fare better not just from the perspective of accessibility, but also as a complement to home working. Since supply rates have remained at high levels in recent years despite a strong economy, we are anticipating a continuation of the latent oversupply, particularly at more peripheral locations. As a result, vacancies should rise and rents should fall outside of inner-city locations. As such, the already striking divide in respect of supply, vacancies, and rental prices between the centers and the peripheries of Switzerland's office property markets is likely to widen further over the next few years.

#### Internet of Things changes office use

Changed forms of working as well as more flexible workplaces and working times pose new challenges to the world of office property. New technologies based on the Internet of Things (IoT) are facilitating innovative solutions for the management of office buildings. The IoT essentially enables almost any physical or virtual object to be connected to, and communicate with, another object via a network. The IoT therefore goes a long way to meeting the new requirements made of office property in the form of a more efficient usage of space, better air quality, and superior services. In a similar way, IoT technologies facilitate the development of so-called "smart cities". Building an IoT solution is a complex undertaking, however. A whole array of different sensors, e.g. for measuring occupancy, need to be connected with one another using various linking technologies so that all sensor data can be managed at a central location – such as a public or private cloud – on an ongoing basis, before then being enriched with additional information and ultimately analyzed. In this way, meeting rooms and collaborative working areas can be used efficiently and conveniently thanks to real-time information on occupancy and quality, for example.

#### A bad start to the year for retail

The stationary retail trade has endured a very bad start to the year. The renewed closure of nonessential stores is likely to entail a serious slump in sales for the non-food trade. In what was a topsy-turvy year, bricks-and-mortar retailers emerged from 2020 fairly well with a modest sales increase, but this overall result conceals a number of significant differences. Rarely, if ever, can the results of different retailers have diverged as dramatically as they did last year. COVID-19 is driving this disparity, creating clear winners and losers in this sector too. The biggest beneficiary has been food retailing, which had no competition from restaurants or canteens for a significant period due to lockdown. The winners also include omni-channel providers, whose losses in the stationary trade can be at least partly offset by disproportionate growth in the online business. The retail trade benefited from shifts in consumer spending last year due to restrictions on leisure activities and cross-border shopping. But this is a deceptive advantage: Any benefit gained is likely

to evaporate again once the pandemic has been mastered. What's more, a significant proportion of the sales that migrated to the online channel is likely to be lost to the stationary trade forever. Last but not least, our model calculations flag up a lasting decline in pedestrian frequencies (15% to 20%) as a result of the greater proportion of employees working from home in the future which will affect stores that benefit from spontaneous purchases in particular. Logistics real estate Real estate segment of the hour In a world where everything can be ordered at the click of a mouse, logistics services have become a key factor for manufacturers and retailers. COVID-19 has accelerated this development, and the need for logistics space has grown as a result. Switzerland has a shortage of modern warehousing as well as distribution and transportation centers, as many existing buildings have become outdated. In addition, new development projects are encountering resistance almost everywhere, and proceeding only slowly. With suitable sites being in short supply, prices have risen accordingly. Only rental prices - unlike in other countries - have yet to rise in Switzerland. The combination of scarcity of supply and a healthy long-term demand picture nonetheless makes logistics real estate an interesting diversification option for investors looking to benefit from low correlations with other real estate segments, as well as high yield premiums. Direct real estate Low interest rates make real estate a coveted asset Bearing in mind the dislocations triggered by the coronavirus pandemic, the rental income losses in the portfolios of Swiss real estate funds and real estate investment companies have been tolerable, and limited to low single-digit percentages. But the consequences of COVID-19 will prove challenging for the real estate market for guite some time, as they are triggering structural changes in demand. The pandemic has accelerated developments that were previously only patchy. Specifically, the office and retail property markets are experiencing a trend of increasing oversupply as companies look to reduce their space requirements. The general pessimism over the traditional real estate segments of office and retail is something we share, at least where the latter is concerned. In the world of office property, however, we see reason for a more optimistic assessment once an end to the pandemic is within reach. Here investors are likely to attach all the more importance to locational quality. Furthermore, some niche strategies are likely to be suc-

#### Indirect real estate investments

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investments

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#### Sustainable real estate Page 53

#### Residential investment property: false sense of security?

The long-term demand for residential property has been comparatively little affected by the coronavirus crisis. The rental market, by contrast, has been on a downward trajectory for years, as evidenced by rising oversupply tendencies and downward pressure on rents. Vacancy-related rental income losses are therefore on the rise generally. Striking discrepancies in premiums and rental income losses point to major differences between the various market funds in respect of portfolio quality, diversification, and vacancy management. We see virtually no potential for further increases in value in residential real estate funds at the moment. As economic recovery gains momentum as the year progresses, demand is likely to increasingly shift to cyclical sectors, which means real estate shares and commercial real estate funds could benefit.

cessful, as smaller sectors such as logistics real estate and student accommodation are supported

#### No sustainability without transparency

by powerful trends.

For wide swathes of the population, the COVID-19 pandemic has pushed climate concerns into the background only temporarily. The need for a more proactive response to climate crisis is now firmly lodged in the minds of broad swathes of the population, and this shift in attitude is increasingly reflected in the behavior of investors. Where sustainable real estate investments are concerned, investors expect greater transparency, as only this can engender trust. One of the greatest problems for sustainability is that sustainable goods or services are typically not identifiable as such from the outside. In the world of real estate, the initial focus therefore lay on building labels, which resulted in a rising transparency to at least a certain degree. Benchmarking comparisons at an international level have strengthened this trend. Ultimately however, there can be no alternative to systematic measurements at individual property level, particularly where the consumption of energy and emission of greenhouse gases is concerned. This is the only way of obtaining the information needed to continue bringing down consumption figures in a lasting way. Nor is it just regulatory pressure that can be expected to remain high over the coming years - competitive pressure will also remain intense, particularly as an increasing number of market participants are becoming aware of the advantages of a sustainable approach.

# The elusive ownership dream

	Those wanting to purchase their own home in Switzerland are finding "imputed affordability" an increasingly formidable hurdle. However, higher equity – such as through advance withdrawals of pension assets – can reduce the affordability problem.
Imputed affordability as major hurdle	The strong price rises of the last two decades are putting property ownership out of reach for an increasing number of Swiss households. The big challenge is "imputed affordability" as dictated by regulatory requirements, under which the financing of residential property must be calculated with a conservative long-term interest rate rather than the very low mortgage interest rates currently available. By contrast, actual affordability continues to pose no problem at all (Fig. 6, page 9).
Two out of every three properties no longer affordable	For an average-income household, only 34% of the properties advertised across Switzerland with four or more rooms are affordable based on an imputed interest rate of 5% and 80% debt financ- ing (Fig. 1). At 42%, condominiums (CDM) fare better than single-family homes (SFH) at 26%. By way of comparison, at the end of 2008, 65% of advertised condominiums and 43% of single-family homes were affordable for an average-income household.
Newbuilds now particularly unaffordable	The development illustrated in Figure 1 shows the recent intensification of the problem only partly, however. The sideways movement in the proportion of affordable properties in recent years cannot be attributed to an unchanging price level. It is more likely to be a case of increasingly older and thus cheaper (as well as less well-located) properties being advertised. It should be borne in mind that newbuilds are not included in the calculation. Newbuilds, which are typically more expensive, are usually not advertised or only in summary form (development cluster advertisements), which is why no evaluation is possible here. In other words, the magnitude of the affordability problem is even being underestimated.
Central locations too pricey	In the cantons of Zurich and Zug, in the Lake Geneva region, and in the areas around Basel and Lucerne, almost no properties are affordable for average-income households requiring an 80% mortgage. The proportion of affordable properties in the Glattal region close to Zurich stands at 7.8%, for example. The situation is similarly bleak for prospective buyers in the Nyon region on Lake Geneva (3.7%), and in the lower Basel region (13.7%). By contrast, more options open up in the Mittelland region: For example, 40.3% of all advertised properties are affordable for an average-income household in the Aarau region, a figure that rises to as high as 62.2% in the Olten region.

#### Fig. 1: Only a third of residential property still affordable Proportion of affordable advertised properties with four or more rooms for an average-income household



Fig. 2: Residential property close to urban centers barely affordable Proportion of affordable advertised properties (CDM and SFH) with four or more



Smaller proportion of debt capital helps	The problem can be defused if households provide more equity. Figure 3 shows how strongly imputed affordability improves for a specific income when the equity proportion rises. On an income of CHF 120,000 and an 80% mortgage, 30% of properties are affordable. But if the mortgage proportion can be reduced to 60%, for example, 56% of all advertised properties become affordable.
Insufficient equity the problem for buyers	In other words, the key for many households looking to live in their own four walls is to provide greater equity. This is easier said than done, however, as prospective buyers first need to save the amount in question. While this can obviously be achieved more quickly with a higher income, even high-earning households are now taking longer to save the equity sum they need. Without family support (inheritance, interest-free loan), younger households in particular lack the capital they need to realize the home ownership dream.
Pension assets can help	For that reason, many households are viewing their pension assets as an increasingly important source of equity. Tied pension assets (Pillar 3a) have been eligible as a source of equity since 1990, and occupational pension savings (Pillar 2) since 1995. However, it should be borne in mind that buyers must provide at least 10% of "hard" equity, for which occupational pension savings – in contrast to Pillar 3a funds – are not eligible. Pension assets may also be drawn upon for renovations and any other value-enhancing property investments.
Declining number of advance withdrawals reflects growing affordability problem	In 2018, 18,400 people withdrew funds from occupational pension savings under the home own- ership promotion scheme. The average amount was just under CHF 78,900 per person (Fig. 4). In addition, 33,000 people withdrew funds from Pillar 3a. The average amount here was CHF 36,300. 4,850 people drew on assets from both Pillar 2 and Pillar 3a savings, with the average combined amount coming in at CHF 101,800. It is important to bear in mind that the above fig- ures are displayed per person. In the case of couples/families, it is often likely that both partners draw on pension savings to acquire residential property. Before the financial crisis, when residen- tial property was more affordable, more than 30,000 people per year withdrew funds from Pillar 2. The number of people making such advance withdrawals experienced a further slight decline be- tween 2015 and 2018. This reflects the extent to which the dream of owning one's own home has become removed from reality for many households – despite mortgage interest rates lan- guishing at record lows.
Majority of withdrawals by over- 35s, amounts increase with age	As people get older, the size of pension withdrawals under the homeownership promotion scheme rises (Fig. 4), as the longer a person works, the greater their occupational pension assets. However, the number of people making such withdrawals declines. Very few people draw on their pension assets below the age of 30. The 35–39 age category is the one in which most withdrawals are made.
The pitfalls of advance withdrawals	Pension fund assets are a door opener for the acquisition of property. That said, resorting to these assets is a step that should be considered carefully. Pension fund withdrawals reduce the benefits paid in retirement (and in some cases also in the event of death/disability, depending on the pension fund) unless the assets can be paid back. However, questions also arise in respect of the actual withdrawal (withdrawal or pledge?), and tax considerations also have to be taken into account – particularly if a person has bought into a pension fund in the three years prior to withdrawal.

#### Fig. 3: Greater equity improves affordability

Affordability of property (CDM/SFH, ≥4 rooms)\* by loan-to-value ratio and income



\* Advertised properties 2018–202 Source: Credit Suisse, Meta-Sys

Last data point: Q4/2020





\*Occupational pension fund: 60–61 (F), 60–62 (M), Pillar 3a: 60–64 (F), 60–65 (M) Source: Swiss Federal Statistical Office Last data point: 2018

# Home working boosts demand on urban periphery

	Demand for residential property ownership has remained strong, despite COVID-19. One reason is likely to be the rise in status of the home in the wake of the pandemic. In addition, a greater acceptance of flexible working is increasing the relative appeal of property on the urban periphery.
Demand un- impressed by pandemic	COVID-19 has not slowed demand for residential property. Quite the reverse – over the course of the last year, the desire of the Swiss to own their own four walls has risen to new levels. The demand indices produced by Realmatch360, which evaluate online search registrations for residential property, rose sharply in the aftermath of the first lockdown, suggesting record-high interest in condominiums and single-family homes in the second half of 2020 (Fig. 5).
COVID-19 slowed demand only briefly	COVID-19 had only a very brief negative impact on the search activity of would-be homeowners in the spring of last year (Fig. 5). Once the initial shock had been overcome, interest returned with a vengeance. Such a spike was hardly to be expected, as deep recessions and rising unemployment typically throttle demand for residential property.
Pandemic increases standing of the home	This time, however, a different reaction was triggered by the rapid measures taken by the political establishment and knowledge of the finite nature of the pandemic. In addition, the crisis greatly increased the significance of the home and its qualities. Housing is therefore being accorded as high a priority as ever. This has prompted many people to continue to pursue – or even accelerate – their goal of home ownership.
Low interest rates remain key driver of demand	However, the home ownership drive would be nothing like as strong as it is right now without mortgage interest rates still languishing at ultra-low levels. Mortgage interest costs for existing homeowners declined once again this year by CHF 238, and now stand at a new low of CHF 4,684 (Fig. 6). Annual mortgage interest costs are now some CHF 5,279 lower than in 2008, a fall of 53%.
Actual affordability remains very much intact	Low mortgage interest rates translate into very low actual affordability costs for new homebuyers. These currently stand at 15.1% of average household income for a new condominium and 21.8% for a new single-family home (Fig. 6; assuming an 80% mortgage). These figures also include maintenance and mortgage amortization costs. Accordingly, the acquisition of residential property remains attractive from a financial perspective.

#### Fig. 5: Surge in demand since the first lockdown

Residential property demand indices, February 2014 = 100



#### Fig. 6: Actual affordability remains no problem

Affordability for average household as % of income (assumptions: newbuild, 1% maintenance, 80% loan-to-value, amortization on 2/3 within 15 years)



Source: Credit Suisse, BWO, SNB

Demand to remain robust in 2021	The COVID-19 crisis has further prolonged the negative interest phase. We are not expecting the Swiss National Bank to raise key interest rates until the end of 2022 at the earliest. The actual costs of financing property ownership will therefore remain low. As an additional factor, the economic situation can be expected to improve this year. Demand for residential property will therefore remain strong in 2021. However, it will be held back by rising capital requirements and the high regulatory affordability hurdles.
	Home working increases appeal of residential property on urban periphery
Home working trend changes structure of demand	Due to the high levels of real estate prices in or close to urban centers, home buyers on average have to accept longer commutes than tenants. But the trend toward home working is having the effect of extending the commuting times buyers are prepared to accept, because the less frequently a worker has to commute, the greater the distance they see as tolerable. This in turn widens the search radius of households thinking of acquiring residential property.
Longer but less frequent commuting	We have illustrated this for Zurich, assuming that a property owner employed in Zurich has a com- mute of 48 minutes at each end of the working day. If he or she spends one day a week working from home, the commute could therefore increase to 60 minutes without changing the total weekly commuting time (Fig. 7). And if the employee in question manages to work from home two days a week, the total weekly travel time could be kept unchanged with an 80-minute daily com- mute.
Search radius expanding around urban centers	Of course, many workers do not want to "invest" the total time savings gained from home working in a longer commute. But even if they are prepared to forgo half of the time saved, the commute described above could be extended to 54 or 64 minutes respectively (Fig. 7). Figure 8 shows the extent to which the geographical scope of possible residential areas increases as a result. Here we assume that 15 minutes of the commute is within the city of Zurich itself. With a greater search radius, the number of residential properties advertised on a quarterly basis likewise increases – by as much as 43% in the case of a 6-minute extension to the commute.
Greater demand for property on urban periphery	Thanks to the rising trend of home working, more peripheral locations with lower real estate prices are increasingly falling within the search radius of possible residential locations. As long as centrally-located residential property remains expensive and in short supply, this will have the effect of shifting some demand for residential property away from the centers to these peripheral, still comparatively affordable regions. Indeed, it is only through this expansion of the potential residential perimeter that the dream of home ownership can become achievable again for some renting households.
Interest in vacation homes rises too	It is not only on the urban periphery that the demand for home ownership has increased. Many tourist regions in the mountains have also been attracting greater interest. This phenomenon is the result of a resurgence in demand for vacation homes. Flexible working increases the amount of time a vacation home can be used. And cross-border travel restrictions of the kind that were repeatedly imposed in 2020 have strengthened the preference for vacation homes in Switzerland.

### Fig. 7: Home working should mean less frequent but longer commutes

Commuting time per journey based on number of days working at home



Source: Credit Suisse

Last data point: 2020

### Fig. 8: Expansion of residential location scope in "50% saving" scenario

Residential location scope for Zurich commuters by proportion of home working if 50% of commuting time saved is invested (in brackets: driving time at 07:00)



# Existing stock dominates supply due to low newbuild activity

Newbuild activity in the owner-occupied housing segment continues to decline, and there is no end to this trend in sight. Supply is therefore increasingly dominated by existing stock. A contributory factor here is demographics – a growing number of older buildings are coming back onto the market, particularly as a growing number of baby boomers are selling up.

Production of residential property declines once more	Newbuild activity in the owner-occupied housing segment declined once again in 2020. According to our estimates, the net addition over the last year amounted to just 12,500 condominiums and 6,200 single-family homes. This represents a year-on-year decline of 10.8% and 10.6% respectively. When measured against existing stock, the increase in the number of condominiums amounts to a still healthy 1.1%. By contrast, the increase in single-family homes stood at just 0.6%.
No trend reversal in sight	There is no indication that this trend is set to change in the coming year. The volume of building permits and planning applications would appear to confirm this: The former have recorded a further decline of 2.9% over the last year for condominiums, and a decline of 0.8% for single-family homes (Fig. 9). Where planning applications are concerned, the declines come in at 10.0% for condominiums and 3.2% for single-family homes.
More hybrid projects involving both owner- occupied and rental accommodation	The reason for the persistent decline in production remains unchanged: The negative interest envi- ronment continues to favor the construction of rental apartments. Although projected activity in the rental apartment segment is currently in decline, this has not sparked any rise in owner-occupied housing production. The only striking aspect is that – for reasons of diversification – investors are increasingly planning hybrid projects involving both owner-occupied and rental accommodation. These account for around a quarter of all approved apartments in multi-family dwelling projects, which are for the most part large-scale undertakings.
Condominiums being built near urban centers once again	Construction activity remains concentrated in peripheral locations. In 2020, 54.9% of all condo- minium approvals involved projects outside the large and mid-sized centers and their wider urban agglomerations. However, this is also the lowest figure since 2010 and well below the prior-year level, when 63.8% of all planning related to peripheral sites. This shift in condominium production toward urban centers is likely to be the result of hybrid projects. At 73.9%, by contrast, building permit issuance for single-family homes remains clearly focused on peripheral locations.

#### Fig. 9: Fewer owner-occupied newbuilds in 2021 too

Planning applications and building permits in number of residential units, moving 12month total



Last data point: 11/2020

Fig. 10: 31 regions exhibit rise in construction activity Planned expansion of residential property 2021, as % of housing stock



Construction activity weak in mountain regions	We are expecting construction activity to expand relatively sharply in numerous parts of central Switzerland, as well as in the cantons of Aargau, St. Gallen, and Geneva (Fig. 10). In addition, a relatively high number of projects are set to come onto the market in the cantons of Vaud, Fribourg, and Ticino. By contrast, as a result of the restrictions on the building of second homes, construction activity is very weak across Switzerland's mountain regions generally.
Supply dominated by existing stock	One consequence of the decline in construction activity is the increasing lack of newbuilds available to buyers. Last year, just 30.2% of all transactions related to new condominiums. Back in 2008, this proportion was as high as 46.1% (Fig. 11). In the case of single-family homes, just 6.9% of transactions last year involved newbuilds, while the equivalent figure for 2008 was 16.1%, and for 2000 as much as 35.2%. A newbuild is the term given to any property completed no more than 12 months prior to the transaction year.
Market dominated by older single-family dwellings	Depending on the segment, the owner-occupied housing transaction market is dominated by very different properties. The dominant properties are modern condominiums and older single-family dwellings. 59.1% of all condominiums that exchanged hands in 2020 were built no earlier than 2000 (Fig. 12). By contrast, the market for single-family homes looks very different: Here just 25.8% were built in or after the year 2000, with the most frequently traded properties being houses dating back to the periods 1981-1990 (14.6%) and 1971-1980 (13.6%).
More and more baby- boomers selling up	It is thanks to the existing stock of housing that prospective buyers have a greater selection of residential properties to choose from than might be assumed at first glance, despite years of de- clining newbuild activity. Moreover, the supply of existing stock is being fed not just by properties of existing owners looking for a different property, but also increasingly by residential property be- ing relinquished for age-related reasons. As a consequence of age demographics, transactions of this kind have become more frequent in recent years. Based on an analysis of ownership structure by age in the years 2013 and 2017 (no later data available), it can be seen that an average of 13,100 single-family homes and just under 2,900 condominiums were relinquished each year by the over-70 age group during this period. Based on demographic developments, this source of available property can be expected to increase even further over the coming years.
Older buildings com- pensate for declining newbuild activity	Thanks to the growing number of older buildings on the market prior to COVID-19, the conse- quences of the ongoing decline in newbuild activity have been mitigated somewhat. As a result, would-be buyers have a less restrictive spectrum of available property to buy. In the single-family home segment, older buildings are almost the only option for buyers. At the same time, declining construction activity will make it easier to sell the properties that are set to come onto the market in larger numbers over the next few years. Very low vacancy rates confirm that the market has had no problems absorbing the existing stock on offer up to now (page 13). The specter of a surplus of derelict single-family homes, which has often been raised in the past, looks a rather less likely scenario from today's perspective.

### Fig. 11: Existing stock increasingly dominates supply Newbuilds as proportion of total transactions



Source: Swiss Real Estate Datapool, Credit Suisse

12

Last data point: Q4/2020

**Fig. 12: More older single-family dwellings on the market** Transactions in 2020 by period of construction, proportion in %



Source: Swiss Real Estate Datapool, Credit Suisse

Last data point: Q4/2020

# Prices keep rising

	The supply of owner-occupied housing has not kept up with demand. As a result, vacancies are likely to decline further in 2021, despite already being at low levels, while prices keep rising.
Demand overhang has become more substantial	As a result of the COVID-19 pandemic and mortgage interest rates remaining at very low levels, the desire of the Swiss to own their own home has increased further recently. The crisis has made many households even more aware of the desirability of having a home in which they feel comfort- able and which meets their own (changed) requirements, which has in turn prompted many house- holds to rethink their living situation – frequently including the issue of ownership. This is in stark contrast to the supply side, which is characterized by declining newbuild activity. The consequence has been the emergence of a substantial demand overhang for owner-occupied housing.
More than twice as many home-seekers as available properties	A comparison of property search engine registrations online with the supply situation clearly high- lights this demand overhang. For each property advertised in Switzerland there are 2.1 search en- gine registrations by people looking to acquire property. The imbalance is greater for single-family homes than condominiums. In order to facilitate a better regional comparison and ensure that cer- tain nuances in the use of online platforms and advertisements do not distort the results, we have looked at the relationship of search engine registrations to advertisements separately and in a standardized way for the three different main language areas of Switzerland. The highest number of property-seekers relative to supply is to be found in the wider Zurich area, the Lake Geneva re- gion, and central regions such as Basel, Zug, Bern, and Fribourg (Fig. 13). By contrast, the num- ber of interested parties relative to supply is lower in the Valais, Ticino, and rural and Alpine re- gions.
More rapid marketing	The persistent demand overhang is also reflected in the change in advertised residential property supply. Over the last 12 months, the supply of available condominiums and single-family homes has fallen by 4.3% and 8.3% respectively. The same picture also emerges when we look at the required marketing costs: Over the last 12 months, the time-on-market of the median condominium has declined from 110 to 74 days, and in the case of single-family homes from 98 to 77.
Low vacancies an almost ubiquitous phenomenon	The smooth sale of residential property is keeping vacancies in this segment at very low levels, quite at odds with the situation in the rental apartment market. In June 2020, the respective segment vacancy rates stood at 0.55% for condominiums and 0.61% for single-family homes. Vacancies are low in the great majority of Swiss regions (Fig. 14). Only nine of the 110 regions exhibit a vacancy rate of more than 1%, and just one region more than 1.4%.

Fig. 13: Pronounced demand overhangs close to urban centers Ratio of property search engine registrations to advertisements, standardized by language region



Source: Realmatch360, Meta-Sys, Credit Suisse

Fig. 14: Very low vacancies in the majority of regions Regional vacancy rates for owner-occupied housing (condominiums and single-family homes), as % of housing stock



Source: Swiss Federal Statistical Office, Credit Suisse

Last data point: Q3/2020

Lower vacancies expected for 2021	If the Swiss economy recovers from the pandemic as expected, vacancies should even decline this year. However, the downside potential is limited by virtue of the fact that vacancy rates are al- ready so low. Regional differences are likely to become apparent. In particular, the surge in inter- est in second homes could have the effect of bringing down vacancies in mountain regions, which are relatively high compared to the Mittelland region north of the Alps.
Unexpectedly strong price dynamism in 2020	The combination of strong demand and declining supply drove up the prices of residential property last year to an unexpectedly high degree. In just one year, prices in the mid-range segment rose by 5.1% for condominiums and 5.5% for single-family homes (Fig. 15). Surprisingly, rises were strongest in the upmarket segment. Given the decline in household incomes, a stronger rise in the lower and mid-range segments might have been expected. Where condominiums are concerned, by contrast, growth has accelerated most strongly in the lower price segment over the last few quarters.
Price growth likely to flatten in 2021	Given the ongoing demand overhang, it is only reasonable to expect prices to continue to rise this year. Upside price potential is limited by Switzerland's strict regulatory financing requirements, however. We are therefore expecting price momentum to flatten off. Just like last year, price growth can be expected to be less strong for condominiums (3%) than for single-family homes (4%).
Growing imbalances	Because the prices of residential property are being fueled not just by low mortgage interest rates, but now also by a scarcity of supply, regional imbalances between price and income development have increased further. But this also gives rise to the possibility of greater price corrections. At the same time, stringent regulatory measures are limiting the ability to purchase a home to relatively affluent, high-income swathes of the population, which generally speaking ought to be in a better position to handle price fluctuations.
Savings on interest costs allow house- holds to reduce risks tangibly	The imposed regulatory measures are helping to reduce the risks faced by individual homeowners. Thanks to the shortened repayment requirement for two-thirds of the loan-to-value ratio intro- duced a few years ago, households with high ratios are reducing these more quickly. In addition, the wide gap between the actual mortgage interest paid by a household and the imputed interest rate is significantly increasing homeowners' financial freedom of maneuver. Figure 16 shows how rapidly a first-time buyer could reduce their risk. Here we are looking at a household that only just passes the imputed affordability test. If this household then saves the difference between the actual and the imputed rate of interest, it could reduce its overall debt level substantially by the end of the term. In the case of a 10-year fixed mortgage, for example, the loan-to-value ratio can be reduced from 80% to 43.3% and the income burden of imputed affordability from 33.3% to 17.9%. In practice, of course, only very few owners will save the entire interest difference. The above example nonetheless shows how important it is to set aside at least a proportion of the saved interest costs. This way, the individual financial risks associated with home ownership can be reduced significantly.

#### Fig. 15: Higher price growth in all segments



#### Fig. 16: Striking reduction in risk after just a few years

Assumptions: Difference between imputed and actual interest rate is wholly used for the partial repayment of the mortgage at end of term



Source: Wüest Partner

14

Last data point: Q4/2020



Last data point: 12/2020

# Scarcity of property for sale



2021: Price growth expected to remain strong

coming

## Digitalization as decoder of demand

The digitalization of all walks of life opens up opportunities, allowing key information to be more easily compiled and evaluated. For example, the consequences of COVID-19 for the housing market can be better evaluated. Demand data has Lots of information has long been available on housing supply, but demand has remained largely been a long time in the shadows. For decades, demand preferences were mostly only indirectly measurable (e.g. via vacancy data). While statistics such as the structural survey of the Swiss Federal Statistical Office provide indications on household living space, they suffer from the problem that households do not necessarily have the amount of living space that they would like. In addition, the time lag between survey and publication of the corresponding data is often significant. Surveys on demand behavior – such as the NZZ's Real Estate Barometer – are helpful up to a point, but are based on small sample sizes and thus make regional conclusions difficult to draw. From the analysis of The precursors of digitalization in the real estate market were property websites. As these made huge inroads into the residential property advertising market around the turn of the millennium,

clicks ... new data analysis opportunities started opening up, particularly as home seekers left a trail in these digital channels. Analysis initially focused on what online searchers were clicking on. This allowed conclusions to be drawn as to what was eliciting interest. The information remained incomplete, however, as in the absence of the desired offer, there was nothing to click on. Moreover, this approach did not yield information on a searcher's price ceiling.

... to the evaluation The growing number of residential property advertisements then gave rise to registrations for of online property online property searches, as these give users rapid and customized information on properties of search registrations interest. Users have to enter their true preferences to obtain meaningful information. The Swiss proptech company Realmatch360 was the first company to perceive the value of this information: Since February 2014, it has been (anonymously) analyzing the search registrations of the largest Swiss property websites and promptly making this data available to clients. More than a million active search profiles are now investigated every day, facilitating detailed regional analyses. The specific focus here is the data available on the rental and owner-occupied housing markets.

Data cleansing a But in order for meaningful results to be arrived at, a number of challenges needed to be cracked. challenge To identify and "cleanse" (i.e. correct) missing, duplicate, and misleading information, smart algorithms are required. The dreamer searching for a large, modern, single-family home in the city of Zurich for less than CHF 700,000 tells us nothing about actual demand or real price ceilings. In addition, real estate marketers and brokers who themselves maintain property search registrations in order to observe the market need to be removed from the dataset. Ultimately, only around 200,000 search profiles are really used every day.

Data extremely up Modern data processing methods allow property demand data to be made available promptly. For to date example, Realmatch360 updates its products on a weekly basis, and for good reason: Around 10,000 adjustments to property search registrations are made across Switzerland every day (new registrations or adjustment/deletion of existing registrations). On average, these run for between two and three months for rental property and at least twice that long for property to buy.

Case study 1: The COVID-19 pandemic showed how important it is to access data as rapidly as possible when Demand shifts due to evaluating a situation. Thanks to the valuable assessment of search profiles, statements backed COVID-19 by real data can now be made on whether and how COVID-19 has changed demand for housing. For example, there has been an increase in searches for apartments and houses to buy, and fewer for rentals (Fig. 17).

"Home sweet home" reigns supreme	Moreover, a shift in preferences is also evident within individual segments. Demand is increasingly focused on medium-sized and large homes (rental/condominium: $\geq$ 3 rooms, single-family home: $\geq$ 5 rooms) (Fig. 17). In other words, aspirations have risen, meaning less frequent searches for cheaper properties compared to those in the middle and upper price segments. Furthermore, the desire for rental apartments to have outside space (balcony/terrace) spiked briefly following the lockdown. Explicit demand for parking spaces with property to buy or rent has also become more common. All of this suggests that as people have spent more time at home since the onset of COVID-19, there has been a marked increase in the desirability of properties that meet specific user needs, are compatible with changed user behavior (more time spent at home, home working), and deliver that feel-good factor.
COVID-19 has also produced spatial shifts	Since the outbreak of the pandemic, residential property hunters have shown greater interest in municipalities outside of the large centers and surrounding urban areas (Fig. 18). However, as 50.4% of all searches remain focused on rental apartments in a large center or surrounding area, with the decline in demand amounting to just 1.9 percentage points here, it can hardly be said that people are looking to move out of the city. Where buyers are concerned, by contrast, the move toward the periphery is more pronounced. As we explain in the "Owner-occupied housing" section (page 9 f.), this trend could even become more accentuated due to high real estate prices in central locations and the paradigm shift toward home working.
Demand tracking essential	The COVID-19 pandemic has changed demand preferences, at least temporarily. The sustainabil- ity of such trends will not become clear for several quarters or even years, however. It will there- fore remain crucial to observe demand continuously, rather than drawing false conclusions based on snapshot pictures.
Rapid delivery of findings – thanks to simple tools	Detailed analysis of search profiles can also throw up fascinating results regarding local demand. However, developers and brokers frequently do not have the time to conduct their own analyses. Simple (web) apps such as the one we describe below can provide these market participants with the information they desire with just a few clicks of the mouse.
Case study 2: Identifying price ceilings	As mentioned earlier, search registrations provide local information on what residential property hunters can afford to pay. As just a few francs more or less per square meter can make the difference between how easy or difficult it is to rent out a property, precise information is gold dust for owners, property developers, marketers, and brokers. And thanks to modern web apps, this need can be met. We demonstrate this below using the example of Realmatch360's "Pricesetter", an application that gives information on searcher's willingness to pay.
Identifying "price cliffs"	Figure 19 shows local affordability (as per Pricesetter) of a rental apartment with four rooms in Zurich Oerlikon, Uster, und Wetzikon. This shows that a targeted gross rent of CHF 2,500 will reach 68.7% of all online searchers in Zurich Oerlikon. The proportion sinks to 37.7% in Uster, and to just 17.6% in Wetzikon. What matters here are so-called "price cliffs", where the proportion of searchers suddenly drops dramatically with just a slight rise in price. In Zurich Oerlikon, price cliffs of this kind can be observed above CHF 3,000 and CHF 3,500 (Fig. 19). In other words, significantly fewer home-seekers will get to see a property advertisement that is only slightly more expensive.

#### Fig. 17: Large apartments in greater demand since COVID-19

Change in demand indices: 02/2020 - 12/2020



### Fig. 18: Large centers (incl. wider urban areas) less in demand since COVID-19

Distribution of rental property search registrations by municipality type



Source: Realmatch360

Source: Realmatch360

Ascertaining the optimum rent	If additional information on the marketed property is provided – such as age, condition, area, location, and fitout/features – the optimum rent can be ascertained. This involves use of a hedonic price model that takes into account a property's qualitative features. Figure 20 illustrates this using an example of a four-room rental apartment in the town of Bienne. For a newbuild offering 110 m <sup>2</sup> of living space in an average micro-location with standard features, a gross monthly rent of CHF 1,850 is recommended. By contrast, the optimum newbuild rent in a very good micro-location with upscale features is CHF 2,090.
Property-seekers typically enter a higher price ceiling than they can afford	Statistical models such as those used in Pricesetter have their limits, however. For example, they are ill-suited to evaluating luxury or "must-have" properties. When it comes to what searchers' will-ingness to pay, it should also always be borne in mind that people typically enter a ceiling that is somewhat above what they can or want to afford. On average, the maximum price entered in property searches is 6.7% above what is feasible. Why? Because people do not want to miss out on their dream home just because it was slightly beyond their budget.
Only integration untaps full potential	While an app can provide valuable services for individual inquiries, using such tools manually is time-intensive for high data volumes, and often inexpedient. What's more, with the inexorable rise of digitalization, an ever-increasing number of tools may offer companies interesting services, but they frequently remain stand-alone applications. In other words, such tools cannot communicate with one another, and the results can often only be integrated into proprietary data holdings manually.
API solutions increase value of data	For this reason, large companies in particular expect such products to be made available via a so- called application programming interface – API. This facilitates the automated execution of inquir- ies and the transfer of results to proprietary systems, thereby avoiding system discontinuities. Realmatch360 already offers precisely such APIs. For example, a bank can use the Pricesetter application automatically for the risk monitoring of mortgage loans. If the price ceiling in a particu- lar municipality falls below a defined threshold, this automatically triggers an alarm for properties in this location, and the bank can then seek out the underlying reasons.
Conclusion: Digitalization closes knowledge gaps	Digital analysis of demand behavior can act as a "third eye" – alongside supply and market data – to eliminate knowledge gaps in project planning and marketing. However, local property market expertise remains irreplaceable and other indicators should also be taken into account. Thanks to the increasing spread of APIs, the linking of different data sources is becoming easier, thus increasing the value of data analyses significantly and opening up new linking possibilities. Specifically, there is plenty of research left to be done in the area of demand behavior. For example, integration of the "Sinus-Milieus" (social/target group typology developed by the Sinus Institute) will help to deliver more precise analysis of the target audience. Furthermore, thanks to modern techniques such as machine learning and the incorporation of additional sources of data, it should be possible to generate new findings from search behavior – including for other segments. This is very much to be welcomed, particularly as – given the growing challenges facing the office and retail property markets – it is becoming increasingly important to learn more about demand behavior in these areas too.

#### Fig. 19: Identification of price cliffs

Price ceiling (gross rent in CHF/month) for four-room apartments



#### Fig. 20: Determining the optimum rent

Price ceiling (gross rent in CHF/month) for four-room apartments in Bienne



Source: Realmatch360, Credit Suisse

Last data point: 12/2020

Source: Realmatch360

# Demand extremely robust



### Fig. 21: Due to the pandemic, many fewer people leaving Switzerland

Net migration of permanent resident population (excluding registry corrections); 2020: extrapolation; 2021: forecast



Source: State Secretariat for Migration, Swiss Federal Statistical Office, OECD, Credit Suisse Last data point: 12/2020 Fig. 22: Net migration lowering in most regions since start of pandemic

Net migration (including short-term residents) Mar. – Oct. 2020, year-on-year change



Source: State Secretariat for Migration , Credit Suisse, Geostat Last data point: 10/2020

2021: Immigration to weaken slightly	The development of immigration going forward is likely depend on how quickly the economies of Switzerland and the main native countries of the foreign residential population recover from the slump triggered by the pandemic. Immigration should remain constrained as a result of modest employment growth (2021 forecast: 0.2%). However, the labor markets of a number of countries in Europe are suffering from the consequences of the pandemic even more than Switzerland. For 2021, the OECD is expecting a strong rise in unemployment in France (2021 forecast: 10.5%), Italy (11.0%), and Portugal (9.5%). As a consequence, the number of Swiss and foreigners leaving Switzerland should remain low in 2021 too. At the same time, due to the decline in the number of short-term residents, there should be fewer changes of status from the non-permanent to the permanent residential population. All in all, we are expecting net migration to decline this year to some 55,000 persons (Fig. 21).
Moderate decline in demand for rental accommodation	Domestic demand has also recovered following a temporary slump at the start of the pandemic. However, the extent of the economic impact of the current crisis differs significantly from house- hold to household. Employees and company owners in sectors hard-hit by the coronavirus measures can be expected to suffer declines in income, despite the rapid support provided by the state, or are at least exposed to heightened uncertainty. This stands in contrast to the great ma- jority of households, which have actually saved more due to their inability/reluctance to holiday abroad, lower commuting costs, and restrictions on leisure activities. In addition, the significant ob- stacles to the acquisition of residential property ownership remain a source of support for rental apartment demand (Fig. 23). We are therefore anticipating a moderate decline in rental apartment demand of around 1,000 to 1,500 residential units for both 2020 and 2021.
Slight weakening of demand in large centers	Although the decline in demand is likely to be temporary, the question nonetheless arises as to how the coronavirus crisis is influencing the structure of demand. Due to lower net immigration from abroad (see above) among other things, Switzerland's large centers – with the exception of Basel – saw population growth slow in 2020 (Fig. 24). Furthermore, the growth of the Swiss residential population has exhibited a strongly declining trend in Zurich and Geneva. Analyses of property search registrations for rental apartments on real estate platforms also appear to show a slight shift in rental apartment demand from smaller apartments in the large centers and their surrounding urban areas to larger apartments in the mid-sized centers and rural regions (p. 16 f.).
Permanent shift in structure of demand?	Many of the attractions that characterize the large urban centers, such as the wide spectrum of cultural, leisure, and gastronomic options, have been unavailable over the last few months. During lockdown, the focus has switched to other characteristics of accommodation – such as a balcony or terrace, the suitability of an apartment for home working, and proximity to greenery and local recreation areas. However, the coronavirus restrictions will be of a temporary nature. The question therefore arises as to whether the pandemic will also have longer-term repercussions for the structure of demand. This could above all be the case in the event of the shift toward home working proving an enduring phenomenon. The potential repercussions of such a scenario are discussed on page 23.

#### Fig. 23: Decline in demand likely to prove moderate

Absorption of rental apartments and employment growth (full-time equivalents), 2019 - 2021: estimate/forecast



Source: Swiss Federal Statistical Office, Credit Suisse

20

Fig. 24: Declining population growth in large centers Growth in residential population of large centers, annualized



Source: Official statistical sources, Credit Suisse

Last data point: Q4/2020

# **Construction peak passed**

#### The boom in rental apartment construction of the last few years has passed its peak. From a geographical perspective too, a convergence of supply and demand can be tentatively discerned.

**Strong decline in planning applications** Much like in 2019, building permits were issued for 26,000 rental apartments in Switzerland over the course of 2020 (Fig. 25). This is significantly less than in the years 2016 to 2018, but it is probably still too many to bring down vacancy levels any time soon. On the other hand, a sharp decline in the volume of newly submitted planning applications suggests that the gradual slowdown in construction activity is actually a trend that could persist for at least two to three years. In 2020, newbuild applications were submitted for 27,000 rental apartments – the lowest figure since 2014.

**Stronger focus on major urban areas ...** The oversupply situation that has become established over the years in the rental apartment market has been caused not just by high construction volumes, but above all by the geographical distribution of this activity, which has been out of kilter with demand. With this in mind, the recent building permit issuance figures raise hopes of an improvement, as the number of approved apartments in the large centers (+41.8%) and their surrounding urban municipalities (+14.3%) has increased significantly in 2020 (Fig. 25). However, this should be qualified by the observation that there is virtually no more building land available in the major centers, and many of the most attractive brownfield sites have already been converted into residential developments. In other words, an increasing number of projects are replacement newbuilds, which means that the net addition of residential units will be lower than construction figures would suggest.

... and central Switzerland It is not just in the major urban areas that numerous construction cranes can be seen. In central Switzerland Switzerland too, a significant amount of new living space is being created (Fig. 26). By contrast, fewer apartments are set to be built in a majority of 63 of the 110 economic regions than the average construction figure for the last five years. Based on expected expansion, past absorption rates, and active search registrations, we have tried to identify the 15 regions with the highest current absorption risk. In these regions, which are geographically widespread, we are anticipating rising vacancy rates. They largely comprise regions that already exhibit high vacancy rates (Mendrisio, Bellinzona, Surselva, Laufental, Solothurn, and La Vallée), but also those in which there is little or only modest oversupply at the moment (Furttal, Mittelbünden, Uri). By contrast, a number of regions characterized by strong rises in vacancies in recent years now appear to be undergoing a degree of normalization (e.g. Lower Valais, western areas of Aargau).

#### Fig. 25: Construction activity more focused on major centers Building permits for rental apartments (newbuild) by municipality type



Source: Baublatt, Credit Suisse

Last data point: 12/2020

#### **Fig.26: Rental apartment construction slows in majority of regions** Expected expansion of rental apartments stock in 2021 compared to 5-year average; triangles: regions with highest absorption risk (horizon of 1–2 years)



Source: Baublatt, Realmatch360, Federal Statistical Office, Credit Suisse, Geostat Last data point: 11/2020

# Calming in the centers

So far, the coronavirus crisis has hardly exacerbated the oversupply problem in the Swiss rental apartment market. It is nonetheless likely to leave a lasting mark, as well as cooling the market to a certain extent in the major centers.

**COVID-19 changes structure of demand more strongly than volume of demand volume vol** 

Marketing still easiest in the large centers, ...

... but supply has recently shrunk elsewhere

Alongside vacancy rates, another proven indicator of the market situation and the relationship between supply and demand is the duration of advertising ("time on market") of a vacant apartment. In 2020 the relative scarcity of rental accommodation in the large centers was reflected in a short average time on market of just 26 days (Fig. 27). The lowest figure of all – 21 days – was recorded by the city of Zurich. In other words, the market has hardly cooled in the major centers. Compared to the long-term average of 24 days, the 2020 figure is just two days higher. Properties in the outer and periurban municipalities of the major urban centers likewise exhibit a relatively short time on market, namely 32 days and 39 days respectively. Outside of the major urban areas, marketing periods work out at an average of between 45 and 50 days. A rule of thumb that applies in all municipality types is that the more rooms an apartment has, the longer the time on market.

ters (p. 16 f.). Below we analyze these structural changes and their repercussions for the market.

During the first lockdown in March/April 2020, the number of apartments advertised for rental declined (Fig. 28). As apartment viewings and moves were at times almost impossible, the marketing of apartments was in many cases deferred or interrupted. Following a recovery in the summer, supply remained relatively stable in the larger centers in the fourth quarter too, whereas there was a significant decline in the number of apartments being offered outside of the main centers. This would suggest that fewer apartments are being vacated and coming back onto the market outside of the main centers. In other words, less central areas appear to have gained in appeal.





Last data point: Q4/2020

Fig. 28: Supply declines outside of the large centers

Weekly development of the number of advertised rental apartments from January 2020, index: week of January  $6-12,\,2020=100$ 



Source: Meta-Sys, Credit Suisse

Last data point: 13.12.2020

Source: Meta-Sys, Credit Suisse

Pandemic prompts re-evaluation of living situation	The reasons for the slight market shift toward larger apartments outside of the main centers can- not be directly derived from the data itself. However, it may be assumed that the restrictions im- posed on economic and private life in connection with COVID-19 have played a role. During lock- down, the appeal of a spacious apartment with dedicated office area, large balcony, and proximity to greenery over a small older apartment in the inner city became evident for all to see. True, the coronavirus restrictions will only be temporary in nature, but there is broad consensus in both the private sector and the world of academic research that home working will be a more commonplace phenomenon once the pandemic is behind us.
"Home office" widens catchment area	The more a person works from home, the more likely they are to accept longer commutes, and the more a separate office room in the apartment becomes a necessity. Employees who now enjoy greater freedom of choice when it comes to their place of work must re-evaluate their current living situation. Put simply, they have two options: To live centrally and work in the office, or to live further away and do a proportion of their workload remotely – in a larger apartment more suited to this scenario. Which option they choose will depend on their personal preferences – with the attractions offered by the city being rather different to those that come with rural living. Against these respective benefits must be set the costs of the two options. Primarily these come down to living costs, travel costs, taxes, and other levies. The greater the time spent working from home, the lower the travel costs (including time costs) for commuting the same distance between work and home.
Model calculation: moving out of the city to a larger apartment	We have tried to illustrate the optimum choice of place of residence based on a simple model cal- culation for the Zurich area. Our starting scenario is a double-earning couple who live and work in the city of Zurich. Let us assume that both spouses now have the option of spending a significant part of their week working from home, which in turn influences their ideal apartment setup. In the initial scenario, this household has an income of CHF 125,000 a year, which is broadly equivalent to a Swiss median income for a total working week of 180% for a couple. Our couple currently live in a 2.5-room rental apartment of the medium price segment, and are looking at moving to a larger rental apartment (one extra room) outside of the city.

#### Fig. 29: Larger apartment an option with move out of town

Model calculation: Cost difference in CHF/year (income tax and net rent) for a move out of the city of Zurich to a rental apartment with an extra room; assumption: double-earning couple without children, income CHF 125,000/year (gross), move from medium 2.5-room apartment to medium 3.5-room apartment



Source: Meta-Sys, Federal Tax Administration, Credit Suisse, Geostat Last data point: Q4/2020

#### Fig. 30: Move out of Zurich becomes more attractive for high incomes

Model calculation: cost difference in CHF/year (income tax and net rent) for a move out of the city of Zurich to a rental apartment with an extra room; assumption: double-earning couple without children, income CHF 250,000/year (gross), move from upmarket 3.5-room apartment to upmarket 4.5-room apartment



Source: Meta-Sys, Federal Tax Administration, Credit Suisse, Geostat Last data point:  ${\rm O4}/{\rm 2020}$ 

#### Moving makes most sense with wider search radius

Fig. 29 illustrates the consequences of such a move for living costs and taxes. Despite a larger apartment, this household would actually make savings in the majority of municipalities in the catchment area due to the high rents and (in a regional comparison) high tax rates that apply in the city of Zurich. The only exceptions are a number of lakeside municipalities where the lower taxes do not make up for the higher rental costs. However, the financial upside in most of the nearby catchment area of the city of Zurich (travel time of no more than 20 minutes) amounts to less than CHF 5,000 annually. And if this saving is then set against the higher travel costs that apply, the move is unlikely to be worthwhile financially in the majority of cases. In certain communities such as Kloten, Urdorf, and Volketswil, however, the savings would be more than CHF 5,000, meaning that a move could be worthwhile, particularly given a higher proportion of time

spent working from home, depending on opportunity costs and the couple's preferences. In order to achieve savings of at least CHF 10,000, the search radius needs to be expanded to around 40 minutes' commuting time. This then brings municipalities such as Birr (Aargau), Menzingen (Zug), and Schlatt (Thurgau) into play. The higher the In a second scenario (Fig. 30) we consider the situation of a household with a higher income of income, the more CHF 250,000 occupying a 3.5-room apartment with upmarket features in Zurich, in this case attractive the move wanting to move to a similar-guality 4.5-room apartment in another municipality. In this scenario, a saving of more than CHF 10,000 is achieved simply by moving to a majority of municipalities within a 20-minute radius. Due to its higher income, however, this household is also likely to incur greater opportunity costs for its commute. The lower-tax municipalities of central Switzerland become much more appealing in this scenario. Municipalities such as Wangen (Schwyz) and Hünenberg (Zug) lie within a commuting radius of less than 40 minutes, and the household in question would save CHF 20,000 or more a year through a move. Strong rent divide Based on the above calculations, we conclude that savings can be made in living costs and taxes opens up as distance for even average incomes with a move out of Zurich to a rental apartment with an extra room. The to urban center main reason for this is a steep and continuously increasing difference in rents between city and increases countryside (Fig. 31). Nonetheless, a switch of residential location within the inner urban ring is seldom likely to prove worthwhile due to commuting costs. Moreover, due to the advantages enjoyed by long-term renters under Swiss rental law, the rents paid are below the level of the advertised rates used in our analysis. It is actually possible that significant savings would be made for a move to a municipality within a 40-minute perimeter and a high proportion of the working week spent at home. In that case, however, many households would be likely to consider buying their own home. In addition, as incomes rise a move to a low-tax municipality makes increasing sense. Conclusion: In a world where many people spend a greater proportion of their time working from home, expen-No reversal of sive city centers could lose some of their appeal. That said, we are in no way anticipating an exourbanization trend dus from the city or a reversal of the urbanization trend. A number of important factors that were not taken into consideration in the (cost-side) model calculations set out above favor urban living in the future. Cities have been the drivers of economic growth since time immemorial. Trends such as digitalization and sustainability can be expected to provide further support to urbanization. The large centers have gained hugely in appeal in recent years, and many households will be prepared to pay a premium for the attractions and infrastructures that a city offers in the future too. 2021: Downturn in While first signs of the structural effects unleashed by the pandemic can now be observed in the rental apartment rental apartment market, the economic impact has been modest so far. The downturn in this marmarket to continue ket will continue for now, without being significantly accelerated by the pandemic. Factors that support this argument include the remarkable stability of demand and construction activity levels having passed their peak. For 2021, we are anticipating a further increase in the rental apartment vacancy rate to around 2.85%. However, some of this increase will take place in the main urban centers, where it will provide a welcome (albeit only slight) cooling of the market - mainly in the

#### Fig. 31: Gulf between rents in centers and elsewhere

Advertised median net rent for a four-room apartment, in CHF per m<sup>2</sup> and year, 2019/2020; arrow: trend since 2009/2010



Source: Meta-Sys, Credit Suisse, Geostat

Fig. 32: Steady pressure on advertised rents

medium to high price segments. Across Switzerland as a whole, the pressure on advertised rents

is expected to continue. Here we are anticipating an average decline of 1.5% (Fig. 32).

Year-on-year change in rental apartment vacancy rate (VR) and rents, 2021: forecasts



Source: BFS. Wüest Partner. Credit Suisse

# Consequences of COVID manageable



These forecasts are not reliable indicators of future performance.

# **Rethinking micro-location**

	"Today's way of evaluating micro-location is a historic relic", reckons the CEO of Ur- banDataLab, a spin-off of ETH Zurich. Specifically, new approaches make it possible to develop locational criteria in a much more data-supported and user-specific way. This facilitates the creation of more individual portfolio strategies that are also scalable inter- nationally.
Measurement of locational quality deserves greater attention	In the world of real estate, location is viewed as absolutely critical, defining the value, risk, and even the potential of a property site. Accordingly, the importance of evaluating locational quality objectively can hardly be overstated. It has a key impact on real estate valuations, portfolio strate- gies, and the market success of real estate projects. However, measuring locational quality is any- thing but child's play, and the evaluation process typically comprises numerous dimensions. Con- ventional locational ratings are based on a selection of locational attributes that are weighted and aggregated to create an index. However, if the methodology is not transparent, key influential fac- tors are missing, or there is a lack of consistency in their measurement, standardization can lead to misunderstandings.
Segmentation of location by users makes sense	For example, if user preferences are explained solely by price differences or are insufficiently fac- tored into the locational rating, this can prove problematic. Locational potential differs not just by principal use (e.g. residential, office, retail), but also by individual user segment (e.g. students, seniors, or families on the residential side, and fast food restaurants and luxury restaurants on the catering front). Segmentation of user preferences therefore makes sense, but often fails in prac- tice due to the lack of available data or analytical instruments.
Urban morphology as new explanatory dimension	Studies carried out at ETH Zurich have shown that a distinction can be made between five dimen- sions of descriptive micro-data when modeling the reasons for property switching: <sup>1</sup> social econ- omy (e.g. household structure, tax burden), points of interest (e.g. schools, public transport con- nections), accessibility, topography (e.g. sunlight, views), and urban morphology. The latter de- scribes the spatial composition of buildings and transport networks, e.g. building form, building depth, street width, and street interconnectivity. The use of urban morphology requires special geo-processing, and has yet to become very widespread due to its great complexity. The starting point is geographical data – i.e. maps of buildings and street networks. Morphological information is then extracted and processed through various process steps. A start-up that is mastering this technology is UrbanDataLab. This proptech company has proved in scientific studies and publica- tions that its technology is well-suited to explaining differences in price levels, as well as mobility and relocation behavior, and can therefore also quantify the underutilized potential of development premises – rather than just their actual use.
From morphology to locational quality	Figure 33 shows how the morphology of buildings is used to automatically identify building typolo- gies along Zurich's Langstrasse. Buildings that are similar in respect of their morphological criteria – such as building form, exposure, size, and interconnectedness – are displayed here in the same color. The various different building types identified in this way are designed to appeal to different user types, and among other things also have different development potential. A simple locational index can be calculated purely through the exploitation and processing of morphological infor- mation, for example in respect of a location's suitability for retail premises. Here, centrality meas- urements are used in combination with building information and then calibrated in UrbanDataLab's proprietary Machine Learning Framework, using reference data such as actual locations of nearby retail premises. The result is a locational index that makes few demands of data availability and can be automatically calculated in any location where the corresponding map data is available – which to all intents and purposes means anywhere in the world. This locational index can be used for the pre-selection of potentially suitable locational areas. In further steps, additional data – where available – such as spatial economic and demographic information as well as points of in- terest can be included to refine the results of the automated evaluation of locational suitability.

<sup>1</sup> Schirmer, Patrick M., Michael AB van Eggermond, and Kay W. Axhausen. "The role of location in residential location choice models: a review of literature". Journal of Transport and Land Use 7.2 (2014): 3–21.

Use-specific location evaluation – thanks to big data	In the past, evaluation of locational qualities has come up against its limits, primarily due to the re- stricted availability of data and the difficulty of processing whatever data does exist. By contrast, in view of the steadily growing number of datasets, the question that increasingly arises nowadays is how these datasets can be utilized and integrated into a company's own processes. However, new technology such as machine learning and artificial intelligence make it possible to capture the multifaceted nature of user preferences, and thereby significantly improve the evaluation of loca- tional quality for a variety of uses. Crucial to this is access to basic data for the description of loca- tions and behavioral analysis. The ongoing rise in the number of available datasets at micro-level is boosting data-based decision-making and risk appraisal. However, the processing of geo-data – i.e. its use in machine learning models – requires specific knowledge and a level of IT infrastruc- ture that many companies simply do not have. For this reason, all sorts of potential often goes un- exploited, such as the possibility of deriving strategic recommendations from proprietary data, e.g. through the evaluation of vacancies and rental prices.
Tools for an individual real estate strategy	The proptech provider UrbanDataLab assists companies with precisely such applications. Interac- tive tools make it easier to access data and use research-based analysis methods. Clients are thus empowered to undertake in-depth assessment of their own datasets. The overriding priority is to facilitate individual assessment and strategy, and then integrate these into tools for day-to-day work. If needed, the user can also obtain specialist support in the modeling of their data, in keep- ing with the motto: "book your data scientist". Figure 34 shows one of the application modules created by UrbanDataLab. The Scout module assists with locational search and acquisition by in- teractively defining micro-location profiles and calling up locational information. To this end, the user filters locations by a variety of characteristics (accessibility, noise levels, proximity to public transport, points of interest, etc.). This then allows them to evaluate how well a selected strategy fits the company's own portfolio, and how that portfolio could ideally be expanded. Another mod- ule is the Manager, which allows a portfolio to be digitally captured and enriched with information. The applications are modular and the content dynamic, i.e. they adapt to the user's purpose.
Application areas of micro-location	In the real estate industry, there are basically three areas of application in which micro-location plays a key role: (1) When looking for a location, developers and investors try to identify ideally situated sites or sites that exhibit a high probability of conversion of use or acquisition. (2) In the due diligence phase, a specific property and its location are analyzed in respect of target group definition and expected return. (3) Successful portfolio management seeks to optimize investments, on the one hand through diversification and the minimization of risks, and on the other through the maximization of return.
Integration of appli- cations creates added value	These areas of application are frequently tackled by separate departments of a company, with the effect that valuable potential can be left unexploited. Integrated approaches such as the modular applications of UrbanDataLab focus on merging these data silos and generating value through internal feedback loops. The observations of day-to-day management can thus also support the strategic positioning of portfolios or the acquisition process.

#### Fig. 33: Morphological segmentation

Among other things, the form of buildings makes it possible to differentiate between building types



Fig. 34: Interactive definition of micro-location ratings Drawing up micro-location profiles independently and using these for acquisition



#### Case study 1: The best locations for business apartments

**Special properties** Newly emerging niche markets permit portfolio diversification not just by geographical location, but require use-specific also by usage. However, special properties require their own separate appraisal of micro-location, location evaluations as can be illustrated in the case of business apartments, for example. Apartments of this kind in Switzerland are managed by a range of providers such as Vision Apartments, Swiss Star, and Glandon Apartments, and promise the property owner a guaranteed return over a fixed timeframe. Apartments can also be marketed via platforms such as Airbnb. However, locational requirements, demand, and the target return have to be evaluated differently for business apartments than for rental apartments. Determining a A distinction can be made between three types of locational evaluation: (1) location-based, (2) delocational rating mand-based, and (3) model-based. A location-based appraisal (1) allows the user to define a lofor business cational rating interactively. In the case of business apartments, the decisive factors include a cenapartments ... tral location, local amenities in the leisure, gastronomy and retail spheres, proximity to public transport and the freeway, and in some cases also the development of the number of jobs in the vicinity. By filtering according to specific characteristics and defining ranges of values, locations can be classified interactively and particularly suitable geographical scopes identified. A demandbased evaluation (2) investigates the catchment areas of a location and determines demand arithmetically. In the case of business apartments, the anticipated need for apartments is defined in advance, taking into account the corresponding sector and company size. It is then investigated in detail how many companies are potential clients in the catchment area, and how many employees such an offering can be expected to appeal to. Finally, the model-based location rating (3) uses reference objects to arrive at values such as the price level through use of a statistical model. In one UrbanDataLab project commissioned by Immobilien Basel-Stadt, publicly placed advertise-... facilitates forecasting of ments were used to model the maximum potential rental price of business apartments across rental income Switzerland. This map extract shows the Oerlikon - Glattbrugg - Wallisellen region. The darker red the location, the more suitable it is from the perspective of the expert-determined criteria (Fig. 35). In the Zurich-North area, for example, locations in close proximity to Oerlikon and Wallisellen stations were identified as being particularly suitable, but so too were locations close to the airport. The grey markers designate the locations of various providers of business apartments, and were used as reference objects for the calibration of the model.

#### Fig. 35: Locational ratings for business apartments in Zurich Interactively produced, user-based locational qualities for business apartments



Source: UrbanDataLab, Credit Suisse

Last data point: 2021

Fig. 36: Price forecasts for the city of Medan Modeled level of purchase prices for a 3-room apartment in Medan (Indonesia)



Source: UrbanDataLab

Last data point: 2020

#### Case study 2: International comparability

#### "Home bias" leaves return opportunities unexplored ...

A well-diversified institutional real estate portfolio not only encompasses properties from various usage segments, but also takes into account the need for geographical spread. International diversification is now the norm for equity and bond portfolios. Even securities from emerging markets offering higher potential returns but with the corresponding risk typically have a fixed place in the asset allocation of major investors. Where real estate portfolios are concerned, by contrast, a strong "home bias" continues to be evident. To give an example: The foreign holdings of the real

estate portfolios of Swiss pension funds – which also takes into account indirect investments – amount to just 12% according to the Credit Suisse Pension Funds Index (equities: 58%). Moreover, the investments of large international real estate companies and real estate investment trusts (REITs) typically focus on a few global metropolises, which are accordingly well covered on the data side.

... and is frequently a consequence of a lack of locational information Due to this strong home bias, investors fail to limit exposure to their own domestic market, particularly in late phases of the economic cycle. And due to the systematic neglect of less established but nonetheless strongly growing locations, additional return opportunities are missed. This home bias and the failure to consider less established locations are ultimately a consequence of the dearth of reliable locational information across national borders.

Locational ratings can be compared across borders with the morphological approach In a pilot project with an Asian developer, UrbanDataLab demonstrated for the Medan metropolis (Indonesia) that a price model for apartments can be set up and integrated into applications in just three weeks. As part of implementation, 100 attributes of urban morphology were used and integrated into a price model, which facilitated efficient analysis within a very short space of time thanks to machine learning. In this specific case, the model was calibrated using around 12,000 property sale advertisements and then made available as an interface and a map in the application (Fig. 36). In the future, approaches of this kind could significantly improve international portfolio management and location evaluation, thereby giving portfolio managers and companies an edge in the hunt for locations and properties.

#### Conclusion and outlook

Technological and social trends are molding the use of space ...

... and call for active data-based real estate management

Urban spaces as well as social norms and behavioral patterns are changing ever more rapidly, eluding standard administrative regulations. It therefore follows that planning regulations can no longer fully define the use of urban space, while new reference planes are increasingly gaining in influence. The reasons for this are multifaceted, and extend from digital interconnectivity (the home as new place of work), to new modes of transport (the final miles by e-scooter or autonomous vehicle), and to the demographic and economic transformation of society itself.

As objects tied by definition to a specific location, real estate will have to lend itself to ever more flexible use as a result, which in turn necessitates a change in mindset on the part of portfolio and property managers: Only active management – such as through repositioning or interim use concepts – can respond to changes in demand, and even long-term return forecasts can change rapidly. This much was becoming clear even in the years prior to COVID-19: Platforms such as Airbnb are now exerting a direct influence on property prices, and sharing economy concepts – think co-working or co-living – are likewise impacting on demand for space. A further catalyst of urban space usage has now manifested itself in the form of the coronavirus pandemic, which is changing the structure of demand. A number of the resulting changes can be expected to endure even after the pandemic has been mastered. Even now, it is becoming apparent that micro-location will become an even more important factor going forward. The navigation of all these trends requires dynamic tools that can continuously adapt, as well as efficient usage of the available data – in short, integrated real-estate management.

# Demand being recalibrated

	Demand for office space remains very weak, as companies hold back from renting premises and review the extent to which they can make long-term savings on office costs through home working.
Short-time working cushions labor market slump	Following the difficult economic situation last year caused by COVID-19, hopes are heavily pinned on the success of coronavirus vaccines as 2021 gets under way. However, we do not expect the recovery to prove strong enough to restore Swiss gross domestic product (GDP) to its pre-crisis levels before the end of the year. Thanks to a combination of COVID-19 bridging loans and com- pensation for short-time working, the economic slump has not yet fed through into the labor mar- ket to the same extent. Employment was down just 0.06% year-on-year at the end of the third quarter of 2020. That said, the impact of the pandemic on individual sectors of the economy has differed considerably (Fig. 37). Due to coronavirus restrictions, the most significant decline in em- ployment has been suffered by the hotels and catering industry (-9.3%). By contrast, the IT sector (+4.3%) has benefited greatly from the boost to digitalization.
Demand for office space currently very low	The COVID-19 pandemic is nonetheless greatly suppressing demand for office space. For 2020 and 2021, we are expecting demand to decline by around 700,000 m <sup>2</sup> (Fig. 38). To a lesser extent, this decline is attributable to the fact that the number of (office) employees has come down as a result of the crisis, and hence less office space is required. But the principal cause of the decline is that companies have been focusing on cost savings rather than growth since the crisis broke. Large service providers in particular are looking to see how higher levels of home working will change their requirement for office space.
Return to office working in medium term	In the medium term, the importance of the office as a place of work is likely to rise again, as the high levels of productivity initially observed in home working are likely to fall back in time due to a lack of "social control" and restricted communication. In addition, productivity is likely to be impaired by lower innovation output with a home-based workforce, which should refocus attention on the importance of a centralized office. Even before the second wave of infection, there was evidence of a slight but steady return to office working – albeit not at the explicit behest of employers.
Demand for space to stagnate in long term	As centralized office working and home working both have their own undisputed advantages, we believe hybrid forms of working will increasingly emerge. As a result, we estimate demand for office space will decline by 15% over the next ten years. However, this fall in demand will be offset by other developments such as economic growth, digitalization, and the tertiarization of industry; hence we believe overall demand for office space will only stagnate in the long term.

#### Fig. 37: Sectors affected by COVID-19 to differing degrees

Employment growth (annual growth as per end Q3) of selected service providers on a full-time basis



Source: Swiss Federal Statistical Office, Credit Suisse Last data point: Q3/2020

Fig. 38: Lower demand for office space

Estimated additional demand compared to prior-year quarter in 1,000  $\mbox{m}^2;$  forecasts for Q4 2020 and for 2021



Source: Credit Suisse, Swiss Federal Statistical Office

Last data point: 03/2020

# Central premises in demand

	When companies choose their office premises, in addition to ease of accessibility, the quality of the immediate environment – ideally with a wide range of local amenities – should not be underestimated as a criterion. Office properties in locations with a high density of so-called "points of interest" (POI) are more sought after and achieve higher rents.
COVID-19 increases significance of office location	In the post-COVID-19 world, companies will be confronted with the challenge of coaxing their employees back to the office after a prolonged spell of working at home. In this context, an attractive office location will play a role that should not be underestimated. Even in the years prior to the pandemic, centrally located premises were enjoying a powerful surge in demand. Part of the reason for the focus on central locations is the growing importance of environmental quality. Wider social trends – such as the desire to achieve a better balance of work and leisure time, along with a higher proportion of the population in work – have increased the appeal of offices close to local amenities.
POI boost quality of environment	Opinions differ when it comes to defining the reason for the inherent appeal of central locations. But there is agreement that a greater density of so-called points of interest (POI) is generally more attractive. Accordingly, the number and diversity of nearby points of interest serve as an indicator of the environmental quality of office locations. However, precisely what a spectrum of amenities needs to offer to make a key contribution to locational quality and indeed quality of life remains an open question, which would probably be answered differently by individual respondents, depending on their preferences. But a wide variety of POI is evidently important.
Offices in locations with numerous POI more coveted	Our analyses reveal that office properties in locations with few POI are advertised disproportion- ately more often, as they are less in demand. The disproportionately high supply of office space at locations with a low POI density therefore means greater supply rates at these locations. In Lau- sanne, for example, this is reflected in supply rates at per-hectare level (Fig. 39). With a few ex- ceptions, high supply rates are restricted to those hectares that exhibit a weak POI offering within a radius of 400 meters. By contrast, hectares that boast a large POI offering very rarely exhibit high supply rates. A similar situation exists in Zurich.
and achieve higher rents	Office properties in locations with high POI densities not only attract greater demand and are let more quickly, they also generate higher rents. The positive correlation between the number of POI within 400 meters and the level of advertised office rents also emerges clearly from a scatterplot (Fig. 40, cf. also our "Swiss office property market 2021" study published in December 2020).

#### Fig. 39: High supply rates correlate with fewer POI

At hectare level in Lausanne, only hectares with at least one advertisement in 2019, number of POI within 400 m of hectare mid-point



Source: HERE, BFS, Meta-Sys, Credit Suisse

Source: HERE, Meta-Sys, Credit Suisse

Last data point: 2019

### Fig. 40: Breadth of local POI offering goes hand in hand with rising rents



Average gross rents at hectare level in Zurich, number of POI within 400 m of midpoint of each hectare

32

# Supply of space remains high

	Despite good absorption of space in recent years, the office property supply rate re- mained close to the prior-year level in 2020. Whereas supply has fallen in the (inner) cit- ies, the outer business districts have plenty of surplus space as they confront the con- sequences of the coronavirus crisis.
Center-periphery divide	Weak demand for office space will lead to a rise in supply over the coming quarters, dashing hopes of a substantial reduction of available space following the higher demand of the last three years. When the space primarily marketed by brokers or individual websites is also taken into account (some of which has sat on the market for quite some time), the total office space advertised across Switzerland in the summer of 2020 was 3,043,000 m <sup>2</sup> – a similar level to that of 2019 (Fig. 41). The supply rate, which reflects the availability of space as a proportion of the total office property market, therefore amounted to 5.5%. Thanks to good absorption of office premises in urban centers, supply differences have widened. In the five major centers in particular, there is a striking gap between inner city and peripheral office markets. The stronger demand for centrally situated premises in attractive locations is reflected in the lower supply rates of central and some middle business districts (particularly Zurich, Geneva, and Lausanne), whereas the outer business districts of all large centers are struggling with oversupply (Fig. 42). This divide is likely to widen further going forward.
Geneva exhibits by far the highest supply rate	There are also significant differences between individual large and mid-sized centers. Geneva stands out in particular with its very high supply rate of 11.5% (Fig. 44). Demand here is simply not dynamic enough to rectify the oversupply problem. That said, the situation has improved slightly since 2019, when the supply rate stood at 11.9%. The second-highest supply rate of the major centers is to be found in Lausanne (7.9%) – primarily due to the scale of new office property development in the locality. A substantial amount of office space is currently being freed up in Basel (7.7%), which is driving up the supply rate here. By contrast, space is in short supply in Zurich (7.0%) and Bern (5.7%), especially in the city centers, whereas there is plenty of space awaiting tenants on the periphery of these cities.
Supply rates predominantly low in mid-sized centers	In Switzerland's mid-sized centers, supply rates are typically lower than in the large centers (Fig. 44). Office property construction projects are rarely launched in the former without high pre- letting rates or an anchor tenant in place, as the demand for space in these markets is less dy- namic. The only mid-sized centers with a supply rate higher than the Swiss average of 5.5% are Schaffhausen (5.6%), Lugano (5.9%), and Zug (7.8%). The consequences of the ready availabil-



as the Quadrolith in Baar.

#### Fig. 42: Oversupply in outer business districts

ity of capital are thus reflected even in Zug. Despite a reasonable level of demand, the market equilibrium is skewed toward the supply side and dominated by various large-scale projects such



Source: Credit Suisse, Meta-Sys

Last data point: 02/2020

# Too much space in the pipeline

### Starting from relatively low levels building permit issuance rose again in 2020, and given the gloomier prospects for demand this makes an end to high supply rates unlikely.

Building permit issuance currently in line with long-term average	Construction approvals for office property paused for breath in 2019 and declined to their lowest level since 2000, but then increased in 2020 despite COVID-19. In December 2020, the 12-month total stood at CHF 2,145 mn, which is above the long-term average (Fig. 43). The reason for this relatively high level of projected activity, in spite of a comparatively high supply rate, is primarily the ongoing low-interest environment, which means low financing costs and limited investment alternatives, thereby providing a strong incentive for investors to buy into newbuild projects. For that reason, building permit issuance only rarely dipped much below its long-term average in the years prior to 2019 too.
Planning activity likely to decline further due to COVID-19	Ever since the onset of the coronavirus crisis and the resulting boost to home working, investors and developers have increasingly been fretting over the future commercial viability of new office properties. Office property planning activity is thus set to slacken in the future. Moreover, it is pos- sible that a number of planned office developments will not go ahead. That said, the current 12- month total of building permit issuance includes a number of major projects for large companies (e.g. Swiss Re and Helvetia) and for the federal administration in Bern, with a view to amalgamat- ing currently dispersed workforces in single building complexes. These projects will be completed, as owner occupancy eliminates vacancy risk.
No excessive expansion of space expected in major centers	The individual office markets of Switzerland's mid-sized and large urban centers are illustrated in Figure 44. The vertical axis illustrates the anticipated future expansion of space, whereby the values indicate the percentage by which construction approvals over the last two years lie either above or below the long-term average. It is apparent that the expected expansion of space in all five major centers is below average, which is above all explained by the low volume of building permits issued in 2019. Further information on the situation in the office markets of the individual large centers can be found in our study "Swiss office property market 2021" published in December 2020.
Construction activity subdued in majority of mid-sized centers too	In most mid-sized centers, planning activity has also long been languishing at low levels. The exceptions are Neuchâtel and Olten, where the anticipated expansion is comparatively high, just like last year. Furthermore, planning activity compared to 2019 has risen above all in the office markets of Winterthur and Zug. In Zug, for example, the two office buildings Suurstoffi 43 and 45 in Rotkreuz and the office building on Grabenstrasse (in Baar) were approved. In Winterthur, the Rieter campus (future headquarters of the eponymous textile machine manufacturer) received the go-ahead.

#### **Fig. 43: Office construction activity set to fall back once again** Building permits and planning applications, moving 12-month total, in CHF mn



#### Fig. 44: Anticipated expansion for the most part below average

Circle circumference: total office space; expansion (y-axis): building permits 2019/2020 compared to long-term average; supply rate as % of total space 2020 Expected expansion



# Center-periphery divide widens

	The negative effects of the COVID-19 pandemic have yet to really feed through into the official office vacancy statistics. Overall, vacancies are at the same level as 2019, but should rise over the next few quarters.
Vacancies overall at 2019 level	The repercussions of the COVID-19 pandemic for Switzerland's office property markets are for the most part not yet visible in vacancy rates. Although the reference date (June 1, 2020) came after the first lockdown, the effects of such crises typically only feed through into the office property market with a certain time lag. Office vacancy rates are therefore at similar levels to those of 2019 (Fig. 45). However, major differences are apparent in the regions and cities included in the statistics, with Canton Geneva having published no vacancy data at all last year due to the difficult COVID-19 situation.
Significant decline in vacancies in Zurich, Lausanne, and Basel- Landschaft	There was a decline in vacancies in 2020 above all in the city of Zurich (-23%) and in Canton Vaud (-19%), where the market recovery in place prior to the onset of COVID-19 is quite evident. Indeed, Zurich reported its sixth decline in succession since 2014 (total decline of 61%). In central locations, vacancies typically declined even more sharply last year. In Zurich's central business district (CBD) they declined by 40%, and in the district of Lausanne by 27%. At the moment, Canton Basel-Landschaft (-19%) is faring better than Basel-Stadt (+24%). Significant rises in office vacancies are also apparent in Canton Neuchâtel (+74%) and the city of Bern (+78%). However, while vacancies have surged in these cities they have done so from relatively low levels, with both areas having benefited from an impressive decline in vacancies between 2018 and 2019.
An end to rent rises	In the office markets under review, rents have developed broadly in step in recent years. Following a period of sideways movement, rents rose strongly in the second half of 2019 in particular (Fig. 46), following the recovery in office property demand in previous years. Between the second and fourth quarters of 2019, the city of Geneva recorded the strongest rise in rents (+6.3%) and the city of Lausanne the weakest (+4.1%). In 2020, however, these upward movements were abruptly halted by the COVID-19 outbreak.
COVID-19 likely to lead to higher vacancies and lower rents	This year, the decline in demand for office property is increasingly likely to feed through into rising vacancy rates and declining rents, as construction activity broadly in line with the long-term average when demand is weak leads to overcapacity. At less central locations, the difficult current situation is only likely to deteriorate, particularly in the outer business districts of the urban centers. In central locations we expect the repercussions to be much less severe. As such, the already striking divide in respect of supply, vacancies, and rental prices between the centers and the peripheries of Switzerland's office property markets is likely to widen further over the next few years.

### Fig. 45: Office vacancy levels unchanged from 2019 Vacant office space as per June 1, in thousand $m^2$



\* Canton Geneva published no vacancy data in 2020 due to COVID-19. Source: Various statistical sources, Credit Suisse Last data point: 06/2020



Source: Wüest Partner, Credit Suisse

Last data point: Q4/2020

### Demand applies the brakes

### Demand

#### Additional demand for office space (in 1,000 m<sup>2</sup>)



- · Demand collapses due to wait-and-see approach of many companies
- Demand brake not likely to be released until H2 2021

#### 2021: Demand for premises weak



- Supply rate rises slightly to 5.5%
- Stronger development in inner cities compared to office markets based on the periphery of large centers

#### Price and vacancy gap between center and periphery grows

### Vacancies

- COVID-19 crisis not yet reflected in 2020 vacancy levels
- Decline in Zurich, Lausanne, and Basel-Landschaft in 2020, above all in central locations



#### Building permits for office space (in CHF mn, 12 months)



- Temporary reduction in space increase, as building permit issuance has been below long-term average until recently
- Planning activity at current level too high for sluggish demand

#### 2021: Below-average construction activity

#### Supply rates 2020 By degree of centrality French-speaking German-speaking Switzerland Switzerland (Geneva, Lausanne) (Zurich, Bern, Basel) 6% central business districts central business districts

7% 5% middle business districts middle business districts 11% 15% outer business districts outer business districts

- Inner cities exhibit low supply rates
- The large centers of French-speaking Switzerland, particularly Geneva, are struggling with higher supply rates than those of German-speaking Switzerland

#### Gap between inner and outer office markets to widen further



- Rises in rents come to an end in 2020 in all five large centers
- Rents expected to decline in 2021, above all on the periphery of office markets (inner cities: sideways movement)

#### 2021: Growing pressure on rents



3%

2021: Increase in vacancies

# IoT changes office use

	New technologies based on the Internet of Things (IoT) are facilitating innovative solutions for the management of office buildings. The benefits include the more efficient use of premises, improved air quality, and better services. In a similar way, IoT technologies are also being used in the development of "smart cities".
Requirements of office properties are changing	Over the last few years, the digitalization trend has established itself in almost all walks of life. The outbreak of the coronavirus pandemic and the subsequent surge in demand for digital solutions have accelerated this trend dramatically. Office buildings have also been affected, particularly as changing work habits are allowing greater flexibility in terms of work location and working hours. Start-ups such as the Zurich-based proptech company Akenza are developing innovative platforms based on the Internet of Things (IoT) for the management of office premises, thereby helping office property owners and managers meet the new requirements being made of office space.
Internet of Things (IoT) offers innovative solutions	The IoT essentially enables almost any physical or virtual object to be connected to and communi- cate with another object via a network. IoT users have already proved that the use of connected devices opens up new horizons for business processes and models, as well as for smart products and services. The interconnectedness and integration of things facilitate the development of inno- vative solutions for any number of key challenges of the modern world.
IoT platform as key to integration of "things"	Building an IoT solution is a complex undertaking, however. Akenza has therefore built an IoT plat- form that allows companies and indeed entire cities to easily develop their own smart solutions. The platform acts as a bridge between the physical world and the cloud. It makes it possible to connect very different types of sensors (e.g. for monitoring air quality, human presence, and tem- perature) via different technologies (e.g. LoRaWAN, NB-IoT, LTE-M, 5G) and manage the result- ing data in a single location such as a public or private cloud (Fig. 47). The corresponding data can then be visualized directly on the platform itself or in an app. This in turn enables users from all kinds of different areas (such as transportation, retail, healthcare) to develop their own intelli- gent solutions with minimal IT knowledge.
Optimization of office buildings	An area where IoT can deliver numerous efficiency gains is facility management. The management of office premises is becoming increasingly complex for facility managers, particularly as tenants have been seeking greater working flexibility since the outbreak of COVID-19. The installation of occupancy sensors, for example, can help with the management of office premises and provide employees with a better working environment. For example, infrared sensors can be fitted to desks or in meeting rooms. The sophisticated business intelligence module designed by Akenza can read the data from thousands of sensors, and then display this in user-defined office maps to provide a real-time snapshot of both desk and room occupancy, as well as the corresponding KPIs on their usage (Fig. 48). Employees and departmental heads can therefore see where desks are

#### Fig. 47: Akenza's IoT technology

Principal components



### Fig. 48: "Desk occupancy" digital signage



Source: Akenza

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Source: Akenza

free on the corresponding electronic screens. Tools of this kind are popular with companies as they help employees with the changeover to flexible desk-sharing models. Such models could become more widely accepted and promoted as a result. The monitoring of office premises facilitates the identification of unexploited space potential, which Saving on office space can in turn reduce the total amount of space required. Through the tracking of desk and meeting room occupancy, statistics can be produced that can help evaluate optimization potential (Fig. 49). Based on these evaluations, empty or underused meeting rooms or collaborative working areas can be eliminated, and new space usage concepts validated. For example, one client of Akenza had an ongoing problem of insufficient meeting rooms. With the help of occupancy monitoring, it was identified that the company's meeting rooms were not actually being used in 20% of bookings. This gave the client a crucial insight into the need to optimize internal processes. Another example of the use of Akenza's IoT technology was the new global headquarters of Zurich Insurance Group. As part of an overall renovation, building monitoring and other facility management functionalities were implemented to increase the convenience and wellbeing of employees and visitors alike. Air quality important The importance of a healthier office environment for the wellbeing of a workforce has become to employee particularly apparent since the outbreak of COVID-19. Recent studies<sup>2</sup> have shown that the level wellbeing of carbon dioxide (CO<sub>2</sub>) indoors can impair a person's wellbeing and ability to perform. Poor air quality due to high concentrations of CO<sub>2</sub> has been linked to detrimental cognitive effects such as poor decision-making, a lack of focus, and drowsiness. Humans typically start exhibiting physical effects at concentrations of 900 parts per million (ppm) - by way of comparison, outdoor air typically has a CO<sub>2</sub> concentration of around 400 ppm. Indeed, there have been frequent recordings of indoor office concentrations in excess of 1,000 ppm, with peaks of over 2,000 ppm. In order to tackle this problem, companies need to be able to measure air quality on their own premises. Dedicated climate monitoring sensors can be used to track CO<sub>2</sub> levels, temperature, and humidity in indoor areas (Fig. 50). An IoT platform monitors air quality continuously and reacts automatically when a set of predefined rules has been met. The corresponding alert can be transmitted via text, email, or visual notification (e.g. change in the color of a connected source of light). In an ideal scenario, the IoT system will be connected to the facility management system that operates the window blinds and ventilation system. **IoT** delivers services As home working and flexible working hours have become more widespread, facility managers more rapidly, also need to adapt to greater fluctuation in the usage of washrooms and common areas. IoT soluexpediently, and tions can help here. For example, magnetic sensors can count the number of times a door opens efficiently and therefore track toilet usage. This makes it easier to manage cleaning cycles and optimize personnel deployment. In addition, "service-on-demand" solutions are an efficient tool for increasing service quality and efficiency. Service-on-demand is based on a very simple piece of hardware: a connected button (Fig. 51): By touching the button, clients and employees can notify personnel and trigger a predefined process. The potential areas of application are almost limitless, extending from cleaning to reporting a faulty printer or triggering an alarm. By integrating buttons of this kind into workflow reporting, processes can be automated, reactions to a delicate situation accelerated, and satisfaction levels of employees improved. To bring this technology speedily to a wide variety of clients, Akenza has teamed up on a long-term basis with ISS, one of the world's largest facility

#### Fig. 49: "Desk occupancy" dashboard

#### Data on the use of desks

ta on the use of desks		Data on the climate situation in rooms		
Desk Occupancy 1/6 desk is occupied		Max Temperature	Min CO2	Max CO2
Threshold warning: > 80% occupied Threshold alert: > 90% occupied	0% 100%	↑ <b>25.2</b> °C	<u> </u>	т <b>2478рр</b> т
Average desk occupancy last 30 days Ø <b>15%</b> -2%	Average desk occupancy Ø <b>12% occupied</b>	Max Humidity ↑ <b>57.5%</b>	<sup>Min Pressure</sup> 业 <b>929.4 hPa</b>	<sup>Max Pressure</sup>

Source: Akenza

Source: Akenza

management companies, to make plug&play IoT applications available to ISS clients.

Fig. 50: "Indoor climate" dashboard

<sup>2</sup> Kristopher B. Karnauskas, 2019: Fossil fuel combustion is driving indoor CO<sub>2</sub> toward levels harmful to human cognition, GeoHealth, Research Article (https://doi.org/10.1029/2019GH000237)

loT also deployed in fight against COVID-19	In Switzerland, the Federal Council responded to the growing number of COVID-19 infections by imposing strict measures to contain the pandemic. Companies had to take measures to increase the physical distance between employees, particularly in communal areas such as work canteens and other places where queues form. People-counting is an effective prevention tool for tracking human traffic flows and avoiding overcrowding. This is made possible by counting sensors – such as those developed by the high-tech company Xovis based in Bern, which has grown its business by installing such sensors in airports around the world. This type of sensor counts human traffic and transfers the latest figures to the cloud. The solution does not capture personal data and is compliant with the EU's General Data Protection Regulation. Employees and visitors to office buildings are informed about human traffic flows in real time via dedicated signage screens, a web app, or directly on their mobile phones (Fig. 52). While transmission of the virus obviously cannot be wholly avoided through this mechanism, people are sensitized to crowd flows and can adapt visiting times accordingly.
loT as basis for smart cities	The Internet of Things is being used not just for the digitalization of office buildings, but also for the digital transformation of entire cities. All across Europe, municipalities and utility companies are launching "smart city" initiatives to improve quality of life, manage resources more efficiently, optimize processes, and deliver innovative services. The digitalization of our cities will open up an array of opportunities with numerous areas of application, such as intelligent parking systems, smart energy metering (electricity, heat, water), and outdoor monitoring of air quality and water levels. Another area of application open not just to private companies but also municipalities is asset tracking in connection with mobile infrastructures. For example, the police and other emergency services can pinpoint their vehicles and equipment at all times, and therefore deploy them in an expedient way.
Zurich evolving into smart city	In Zurich, the city-owned utility provider (ewz) has implemented an energy-efficient communication network (Low Range, Wide Area Network or LoRaWAN) as part of its digital "smart city" strategy, the aim being to deploy sensors across the city – particularly in areas where there is no electricity supply or fiber-optic data connection infrastructure. This enables data to be transferred between the numerous sensors installed in public areas (including buildings) and the corresponding computing centers. The application for managing the sensors is produced by Akenza and made available through Microsoft's local Azure cloud. Users and operators can manage their sensors and analyze data on this scalable platform. On this basis, the city of Zurich has been testing the implementation of a smart parking system for an e-car station that displays the current availability of outside parking spaces (including charging stations). Given such innovative developments, it is not surprising that the IMD Business School ranked Zurich in an outstanding third place in its 2020 Smart City index.

#### **Fig. 51: Service button of facility manager ISS** Pushing the button triggers a cleaning request



Source: ISS





Source: Akenza

# A bad start to the year for retail

Changes in mobility behavior that will translate into less footfall even after COVID-19 are likely to accelerate the structural change in bricks-and-mortar retailing. This phenomenon is also being driven by the pandemic-instigated shift in sales to the online channel.

**Second lockdown hits non-food retailers** The stationary retail trade has endured a very bad start to the year. High infection rates and fears of mutant versions of coronavirus have led to a second lockdown for non-essential goods retailers. Mobility in Switzerland has not slumped as dramatically as it did during the first lockdown (Fig. 56), since schools are to be kept open as long as possible, certain service businesses have remained open (e.g. hair salons), and people have learned how to cope with the virus in their day-to-day lives (masks, physical distancing). But although the months of January and February are typically low in revenues, the potentially prolonged lockdown phase could have a serious impact on the non-food sector, whereas the food segment is benefiting from the closure of restaurants and empty canteens.

Abnormal sales growth in the topsyturvy year of 2020 In other words, 2021 has kicked off in the topsy-turvy manner that characterized the whole of 2020. A look back at last year helps to give a better idea of the consequences of the latest lockdown. After the first lockdown, in which shops remain closed for almost two months and suffered appalling slumps in sales, the retail trade recorded a surprisingly strong recovery (Fig. 53). Overall, nominal sales last year rose by 7.2% in the year-on-year comparison – a growth rate not seen for decades.

Lockdown eliminates Following a relatively stable start to 2020 (Phase 1, Fig. 54), sales in the food segment then competition of food picked up strongly toward the end of February. A dramatic spike in COVID-19 infections and the retailers first cases in Switzerland then prompted consumers to start hoarding products. The closure of borders, all bars and restaurants, and large parts of the non-food retail trade by the Federal Council from March 17, 2020 ushered in a second phase that could hardly have affected the various segments more differently. For food retailers, the competition from bars, restaurants, and crossborder shopping was suddenly removed from the equation. Between March and May, the sales of the food and near-food segment recorded a rise of some 20%. Although food sales then drifted down slightly once restaurants and bars were able to open from May 11 and country borders were reopened on June 15, they remained above pre-crisis levels (Phase 3). And as a second wave of infection began to build in the fall, food sales then resumed their upward trajectory (Phase 4). The closure of restaurants as well as cultural, sporting and leisure facilities from December 22 is likely to have boosted food sales to a similar extent as during the first wave.



Fig. 53: Surprising sales growth in retailing in 2020 Fig. 54: Yo-yo trajectory of retail sales by area





Source: GfK, Credit Suisse

Last data point: 12/2020

Source: GfK, Credit Suisse

Last data point: 12/2020

Lockdowns have drastic consequences for non-food	In the non-food area, by contrast, the shutdown of the stationary sales channel from mid-March to mid-May led to a historic year-on-year collapse in sales in March (-21%) and April (-40%, Fig. 54). In May, the fine weather and a catch-up effect following the reopening of stores triggered a sales boom, above all in the DIY/garden/auto accessories (full-year: +10.3%) and leisure (+8.3%) segments, which manifested itself in record-high sales increases of almost 58% and 45% respectively. For the year as a whole, there were also strong rises in the personal care and health (+7.7%) and home electronics (+10.2%) segments. Overall, this helped the non-food segment to record a sales rise of 23% in May. During the third and fourth phases too, the above-mentioned areas developed well, with the result that the non-food segment ultimately recorded an annual sales rise of 2.7%.
Strong polarization	But this aggregated picture of retail segments conceals a number of very different developments. According to a survey of retailers and manufacturers carried out by Fuhrer & Hotz, more than a third performed above their budgeted level, whereas 46% fell short. Polarization of this kind has not been seen at any other point in the last decade. The contrast is particularly apparent in the clothing/shoes area, which suffered a full-year slump in sales of 15.4%. Also among the losers were jewelry, watch, and cosmetics stores, which missed out not only on the steady stream of office workers, but most crucially on foreign tourists. The difference in profitability figures is less pronounced, which can be explained by government support measures (e.g. compensation for short-time working), among other things.
Rapid recovery not just a Swiss phenomenon	The rapid recovery of the retail trade is not a purely Swiss phenomenon – neighboring countries recorded similar developments. In Germany, the retail trade recorded a nominal sales increase of 5.3% over the same period. Unlike in its neighboring countries, however, retail trade sentiment had risen well above pre-crisis levels by the end of 2020, buoyed by the higher sales figures.
Drivers of the strong sales growth in 2020	Over the last year, consumers have concentrated their spending above all in Switzerland. A combi- nation of the slump in foreign holidays and the effective ban on cross-border shopping in the wake of border closures had the effect of rerouting a huge proportion of purchases that would normally be made abroad back to Switzerland. In the case of cross-border shopping ("retail tourism"), the value of Swiss purchases abroad slumped by 25%. But there was also evidence of a rerouting of consumer spending within Switzerland itself: As households spent much less on concerts, sporting events, restaurant meals, etc., they had more income at their disposal to spend on traditional re- tail. Shopping – be it in-store or online – was one of the few leisure activities that was possible and relatively safe for the great majority of the year.
Changed purchasing behavior	The pandemic nonetheless changed consumer purchasing behavior. Consumers are now purchas- ing less often, but in greater volumes when they do. Particularly in demand are products for living and working at home, whereas there is barely any demand for office clothing or clothes to go out in. Fewer spontaneous/opportunistic purchases are being made – above all because mobility pat- terns have changed. As mobility behavior plays a key role in the world of shopping, we have sub- jected the pandemic's influence on mobility to special analysis.



Fig. 55: Slump in worker/student commuting activity

Source: intervista

40

Last data point: 31.01.2021

Fig. 56: Disproportionate decline in use of public transport



7-day average relative to the starting value (0%) for the period 10.01. - 29.02.2020

Source: intervista

<sup>01/2020 03/2020 05/2020 07/2020 09/2020 11/2020 01/2021</sup> 

#### Repercussions of lockdown for mobility behavior

Mobility behavior changes	During the first lockdown, a significant proportion of the population either did not work, or worked from home. As a result, the proportion of commuters almost halved (Fig. 55). In the second, par- tial lockdown from January 18, 2021, non-essential stores have remained closed. Restaurants as well as cultural, sporting, and leisure facilities were forced to close just before Christmas. By con- trast, educational institutions (with the exception of universities) have remained open, as have cer- tain providers of personal services such as hair salons (true as of start of February 2020).
Applying Senozon's simulation technology	In order to model the repercussions of the various scenarios for frequencies, we have been given access to the simulation technology of Senozon AG, an engineering company with offices in Zurich and Berlin that specializes in the model-based calculation of frequencies. For the illustration of frequencies during the initial lockdown, when non-food businesses as well as educational establishments were closed, we have assumed for the purposes of the model calculations that only 50% of workers and no pupils/students at all were commuting.
Hard lockdown saw pedestrian frequencies more than halve	Based on these assumptions, per-hectare pedestrian frequencies work out some 30–70% lower than usual (Fig. 57). In a few areas, a decline as high as 80% can be discerned. The decline is more pronounced in urban areas than in rural regions, where the decline per hectare works out at 35–50%. This makes sense insofar as universities, universities of applied science, and secondary schools are typically located in towns or cities. Switzerland's inner cities, home to numerous office buildings and providers of personal services, were also much less visited during the first lockdown. By contrast, the decline in per-hectare pedestrian frequencies in residential districts and in rural regions was much less stark, as these are primarily the areas in which people live.
Partial lockdown cut frequencies by around a third	The difference between town and country is no longer so clearly visible once the return of stu- dents to their educational establishments and a 50% decline in the number of workers based at home is fed into the model. The slump in per-hectare pedestrian frequencies in this scenario of a partial lockdown – which broadly corresponds to the situation of the second lockdown from Janu- ary 18, 2021 onward – in most cases still amounts to between 20% and 50%. The partial lock- down leads to a more even reduction in mobility in towns and cities, which means the differences between inner-city and residential districts are no longer so clearly apparent (Fig. 57). Only at purely commercial sites is a slump of more than 50% still evident.
Lockdown also reduces car passenger frequencies	In addition to pedestrian frequencies, car passenger frequencies also decline. According to the model, the partial lockdown leads to a decline of between 25% and 45% in per-hectare car passenger frequencies. Furthermore, vehicle traffic appears to be clustered along the main axes, i.e. the decline is more tangible on the roads of residential districts than on major roads. While a direct town-country comparison once again works out in favor of the former, there are still differences evident within urban centers themselves. Inner-city areas record a greater slump in per-hectare car passenger frequencies than areas on the periphery. In the former, the modeled lockdown leads to a decline in per-hectare car passenger frequencies of up to 70%. Once again, the model implies that residential districts are less severely affected. By contrast, given the epidemiological situation, the use of public transport (PT) was significantly down during the second lockdown (Fig. 56).
Post-coronavirus: Frequencies will not recover fully	In a post-coronavirus scenario, in which the proportion of home working is determined individually by the sector in question and the income level of employees, the decline in per-hectare pedestrian frequencies amounts to between 5% and 30%. Here we see how urban areas such as St. Gallen, for example, are more greatly affected than rural regions. Within the cities themselves, the decline in footfall is less pronounced in residential areas than it is in districts with a particularly high proportion of office buildings, or in mixed areas. In St. Gallen, the inner city experiences a slump in per-hectare pedestrian frequencies of between 20% and 30%. The same is true for the area around the university. In other words, it is likely that – even when the pandemic is over – pedestrian footfall and spontaneous purchases will tend to increase in residential districts but decline slightly in city centers, above all in districts that are home to numerous office complexes. The decline in rural communities is likely to be some 5% to 10% lower across the board.

**Post-coronavirus:** In the case of per-hectare car passenger frequencies, the post-coronavirus scenario envisages a decline of between 5% and 25%. Here too, there is a significant difference between town and Average frequency declines of 15% to country. Whereas the decline on rural roads amounts to around 5% to 10%, it is much more ap-20% expected parent on key urban transport axes, namely 15% to 25%. Inner-city areas are particularly hard-hit. The analysis of per-hectare car passenger frequencies provides important findings for retailers with businesses on key transport axes or major streets, and whose consumers travel by car. According to the model, sites on major or connecting roads are likely to suffer the least from reduced mobility. In urban areas, the negative repercussions are likely to be less keenly felt on the periphery and in outer suburbs than in the city center. **Consequences for** From this modeling process it can be inferred that frequencies in the post-COVID-19 era will not stationary retail return to pre-crisis levels. Higher levels of home working will reduce pedestrian frequencies by between 5% and 30%, and the frequencies of drivers by between 5% and 25%. The reduced number of employees in the office will above all weigh on spontaneous and opportunistic purchases, which are likely to be less numerous in the inner cities in particular. But as people spend less money in the inner city, the outer urban areas and rural regions are set to benefit. By contrast, regular purchases at the local supermarket or shopping mall are unlikely to be threatened. Shopping malls, whose catchment areas rely much more heavily on local residents than on local workers, can be expected to benefit most of all. The greater their relative appeal compared to other shopping centers, the greater this benefit will be. In other words, the reduction in mobility will favor shopping locations that can function as a one-stop shop. Due to their strong pulling power, the key high streets are likewise likely to suffer less than other inner-city shopping areas. Local shops will also be among the winners of the reduction in mobility entailed by greater home working, whereas stationary retailers typically frequented by consumers on their way home from work will be at a disadvantage. A similar effect will arise due to the efforts of consumers to increasingly do their shopping on foot or by bike, with a view to doing their bit for climate protection. **Online retailing** If COVID-19 had occurred just a few years ago, consumers would simply have had to do without surges ahead many of their desired goods, whereas during the 2020 lockdown they were able to switch seamlessly to the online channel. The consequence was an unprecedented flood of parcels, with logistics operators working close to the point of system collapse. Over 2020 as a whole, online traders are likely to have booked a year-on-year sales increase of 35% across all ranges (Fig. 58). Of this figure, around 10% is likely to have been structural growth (as in previous years), with 25% attributable to COVID-19. As a result of the online boom, Swiss Post delivered 23% more parcels last year. The repeated lockdown of bricks-and-mortar retailers therefore drove a large number of new customers into the arms of online traders. This is likely to have lasting consequences. Some brick-and-mortar retailers have kept their stores open during the partial lockdown in early 2021 despite losses, in order to remind clients of their presence. But the risk of customers who have headed elsewhere due to COVID-19 never coming back is very real. Even in the summer of 2020, following the reopening after the first lockdown, online purchases continued to record a

#### **Fig. 57: Mobility to be reduced even in a post-COVID-19 world** Frequencies in % of pre-coronavirus level by scenario

year-on-year rise of 30%.







Source: GfK, Association of Swiss Commerce, Credit Suisse Last data point: 2020

Consequences for the retail property market	The additional boost to online trading notwithstanding, the stationary retail segment has generally recovered well. After seven years of successive declines in revenues, it recorded an increase of 3.6% in 2020. But this is a deceptive statistic: Bridging loans, forbearance measures, and compensation for short-time working may have put the brakes on structural change in the short term, but this phenomenon is likely to bounce back even more strongly after COVID-19. In addition, the healthy sales figures of the retail sector overall conceal a number of significant differences between individual retailers. International retailers, who generally fared less well, are reducing their footprint all around the world, which can also be expected to have consequences for Switzerland. The financial situation of many companies has now deteriorated again following a brief improvement in the late summer. Retailers have responded to the situation by slashing inventories to the minimum and letting staff go. In the major centers in particular, which are traditionally magnets for shoppers, stores have had to reduce headcount due to lower footfall.
Supply rates rise again	Cutbacks are also being made on the premises front. Expiring rental agreements are in some cases not being extended, or are only being re-signed in exchange for rent concessions. This reticence has driven the volume of vacant retail premises to record highs (Fig. 59). For a while, a combination of use conversion and the letting of premises to less financially robust tenants led to a reduction. But with the advent of the coronavirus crisis, the volume of advertised space has now risen once again – and in almost all size categories. Most striking has been the increase in advertised premises offering 2000 m <sup>2</sup> or more (Fig. 60). This is a reflection of the trend towards smaller shop premises against a backdrop of surging online sales.
Outlook for 2021: Phenomenon of space reduction to continue	The impressive sales figures of 2020 have set the bar very high in many segments. As wide- spread normalization is unlikely to occur until the second half of 2021, shifts in consumer spend- ing can be expected to influence sales figures positively in the current year too. This is first and foremost true of the food/near-food segment. However, rising unemployment and an expected decline in purchasing power are likely to hinder any dramatic catch-up effect after the pandemic. The decisive factor for the development of sales is likely to be what the Swiss choose to do with their vacations in the summer and fall. If summer vacations are once again predominantly taken in Switzerland, the figures recorded in 2020 will be within reach. But if not, a decline is likely. The 2020 sales boom triggered by COVID-19 is then likely to be remembered as just one – albeit unique – bright spot in a long succession of disappointing sales developments. When it comes to the individual segments, developments are likely to be turned on their head once the pandemic has been mastered, i.e. retail areas that have enjoyed strong growth due to the exceptional cir- cumstances are likely to lose ground compared to the previous year, and vice versa.
Structural change to last for years	In addition to the pure online traders, omni-channel providers are also likely to number among the winners this year. These retailers, who have both a stationary and an online presence, recorded disproportionate growth in online sales during lockdown, thereby at least partly offsetting their instore losses. COVID-19 has contributed to the increasing fusion of these two formats, to the point where they cannot even be separated in many companies. Quite where the sweet spot will ultimately come to lie between physical presence and online visibility remains to be seen. But if the experiences of other countries are anything to go by, the share of online sales in Switzerland is only likely to rise further over the coming years. And as long as this remains the case, retail property will remain under pressure.

#### Fig. 59: Supply of available retail space reaches new high Advertised supply of space per quarter in m<sup>2</sup>



#### Fig. 60: Larger stores increasingly being relinquished

Advertised supply of space (wider definition) per quarter by premises size in m<sup>2</sup>



Last data point: 04/2020 Source: Meta-Sys, Credit Suisse

Last data point: Q4/2020

# Real estate segment of the hour

The COVID-19 pandemic has strengthened investor interest in logistics real estate all around the world. In Switzerland too, this segment is increasingly forcing its way into the spotlight. But vibrant demand is matched by only limited supply.

- Logistics real estate a winner ... The coronavirus crisis has triggered a worldwide decline in demand for commercial property, and transaction volumes have been developing weakly in many locations as a result. Moreover, investments geared around retail space, hotels, or office property have taken a pummeling on stock exchanges. But logistics real estate is another story: Contrary to the general trend, listed investments in global logistics and industrial properties have surged by 15.4% over the last year (see also "Real estate investments" section, Fig. 68).
- ... of the pandemicdriven boost to online trading The confidence of investors in the future of logistics properties is based on the remarkable boost that COVID-19 has given to online trading. Due to lockdowns imposed around the world, the relentless growth of this distribution channel has accelerated sharply once again. In Switzerland, plenty of upward potential remains in the shift of retail sales to the online channel. Over the past year, the proportion of sales generated online is likely to have increased by more than a third (cf. "Retail property" section, page 42). In order to avoid having to do without certain goods, a number of households are likely to have made their first online purchases ever, or at least increased the proportion of such purchases significantly. It is only reasonable to assume that a significant part of this shift will remain in place even when the pandemic is over.
- Logistics as USP The growth of online trading presents a major challenge on the logistical front. The key to this business is to provide an ever-increasing volume of small packages to end clients as rapidly as possible. In Switzerland, the trend is highlighted by the exponential growth in the volume of parcels handled by Swiss Post since 2014 (Fig. 61). In 2020, this rose by a stratospheric 23.3%. But the competition between the various online retailers has long been about more than just price logistics has become a key part of strategy. Next-day delivery is now standard, while same-day delivery is on the rise. Furthermore, customers now expect a growing spectrum of additional services including being able to return goods free of charge.



### Fig. 61: Exponential growth in parcel volumes

Source: Swiss Post, Credit Suisse

Source: Realmatch360, Credit Suisse, Geostat

Fig. 62: Demand clustered in major urban areas

gion: excluding registrations for premises < 200 m<sup>2</sup>

- Main transport axes

> 100 50 - 100

30 - 50

□ 10 - 30
■ < 10</p>

Number of search registrations for warehousing space on online portals, per MS re-

### Growing need for space ...

Not only has the logistics behind online trading become much more complex, it now also requires more space. Prologis, a global leading developer and operator of logistics properties, estimates that online traders need at least three times the space of traditional bricks-and-mortar retailers.<sup>3</sup> The reasons for this include the enormous breadth and depth of product ranges, the absence of

<sup>3</sup> Prologis Research (2020): "Accelerated retail evolution could bolster demand for well-located logistics space".

Last data point: 2020

Last data point: 05.12.2020

plementary services. But it is not just online traders who are likely to be expanding their logistics space over the coming years - many manufacturing companies were caught on the wrong foot by the coronavirus crisis, as the pandemic led to bottlenecks and disruption of supply chains. ... above all in An indication of the geographical distribution of demand for warehousing space in Switzerland can proximity to urban be obtained from analysis of online property search registrations (Fig. 62). These show that space centers is most in demand in the major conurbations - particularly the wider Zurich region. In the urban centers themselves, it is above all smaller premises that are likely to be in demand, such as for the fine distribution of goods ("the final mile") and to cover short-term storage needs. As well as the centers, demand is strong along the main transportation axes. These are typically home to distribution and transport centers, which require significant space. Swiss logistics real estate market has significant investment need Much of existing In view of the increasing significance of business-to-client (B2C) supply chains, the automation of building stock intralogistics, and the growing sustainability trend, the demands made of logistics properties are outdated on the rise. Much of the existing building stock in Switzerland can no longer meet these needs. Analysis of a portfolio of properties valued by Wüest Partner reveals that 47% of existing properties are more than 40 years old (Fig. 63). As a consequence, logistics companies, traders, and producers all began to ramp up their investment in logistics space around 15 years ago. A peak was reached in 2015 with a construction investment volume of around CHF 1 billion. Construction investment then declined again up until 2018 (Fig. 64). Significant hurdles But the development of major distribution and cross-docking facilities in Switzerland is becoming for larger challenging. The ideal scenario of a large site with expansion potential together with freeway and rail connections is rarely achievable any longer. Available sites with these characteristics are often newbuilds jealously guarded by municipalities - in the hope of major residential developments springing up in the future in connection with the creation of a high number of jobs. Accordingly, companies are increasingly settling on a compromise for their logistics projects, and resorting to multi-story prop-

erties or decentralized warehousing, for example.

store shelving, as well as the space required for order picking, returns processing, and other sup-





Fig. 64: Construction investment has declined again in recent years Construction investment in warehousing and depots, in CHF mn



#### Swiss rental market remains relatively small

Given the high demand for space, construction activity can be expected to pick up again over the next few years. Analysis of planning applications reveals that some CHF 2.2 billion of major warehousing and logistics projects were initiated across Switzerland between 2016 and 2020. The focus of this planning lies on the major conurbations and the main transportation axes along the A1 and A2 freeways (Fig. 65). A striking aspect of Swiss logistics development is that companies themselves are the developers in the majority of projects. Only a minority of properties are being built by construction and real estate companies (10.9%), or by banks, insurers and pension funds (2.6%), with a view to later rental.

### Traders facing logistical bottlenecks

Almost a half of the investment planned over the period 2016–2020 was driven by trading or by logistics/transport companies. Some of the largest developers are the major Swiss retailers. For example, Migros is currently investing several hundred million francs in capacity expansion at its distribution centers in Mosseedorf (Canton Bern) and Neuendorf (Canton Solothurn). Moreover, the fast-growing Swiss online retailers have announced a slew of logistics projects for which planning applications have not even been submitted yet in some cases. The largest Swiss online retailer, Migros subsidiary Digitec Galaxus, is planning a new distribution service center in Utzenstorf, Canton Bern, with a Swiss Post parcel sorting center to be built right next door. This project is scheduled to complete in 2023. The company Competec, which operates the second-largest Swiss online shop (brack.ch), is also currently expanding its logistics capacities in Willisau (Canton Lucerne): Last summer, it announced that its dramatically growing need for space was forcing it to abandon the planned phasing of the project in favor of rapid completion.

#### Fig. 65: Focus on urban agglomerations and freeway interchanges

Planned construction investment (planning applications) with warehousing/logistics as principal form of use, by developer category, 2016 – 2020 (projects with investment volume of CHF 10 mn or more)



#### Logistics real estate delivers yield and increases diversification

**Yields under pressure** The combination of high demand and limited supply has led to rising prices and downward pressure on yields in the market for logistics rental properties too. According to an evaluation of 200 logistics investment properties valued by Wüest Partner, the median gross yield declined from 8.0% to 5.9% between 2011 and 2020 (Fig. 66). Furthermore, market observers believe the transaction market has pretty much dried up. For the few attractive properties that are still changing hands – such as parcel distribution centers at top locations – gross initial yields of 3.5% or less are no longer a rarity. Accordingly, buyers are showing a preference for industrial properties that can subsequently be repurposed as logistics properties.

High demand creates The general trend of declining yields is not just the result of rising prices. Although there is a scarrental income city of available supply at attractive locations, particularly when it comes to large-scale premises, potential market rents for warehouse facilities in Switzerland - running counter to international developments - exhibited a downward trend until 2018. In recent years, the median target rent for warehousing premises has settled at around CHF 75/m<sup>2</sup> (Fig. 66); if properties with integrated office premises are included, the cost lies at around CHF 90–100/m<sup>2</sup>. However, the rents of modern, spacious premises in good locations or close to urban centers are far higher. One of the reasons why rental income has not managed to keep up with price growth - in addition to the widespread problem of outdated properties - was because many logistics and transport companies operate with low margins. However, advertised rents for warehouse space have risen recently. Particularly in the case of modern and larger warehouse space in good locations, effective rental income can also be expected to increase again in the future and thus put a brake on the yield compression somewhat.

### Direct market access requires expertise

While logistics real estate has long been on the radar of real estate investors in the Anglo-Saxon world, as well as in Germany, it has only been discovered gradually by Swiss investors in the last few years. The first Swiss investment products have now been created that target this asset class segment. Thanks to these products, investors who do not possess profound knowledge of the logistics market – which is essential for successful investing in this niche – can gain exposure to the market nonetheless. In order to be suitable as an investment property, a logistics property must fulfill specific criteria. The key factor here is third-party usage. Large premises are typically rented by just a few companies, making dependency on individual tenants high in many cases, which makes the question of re-letting when a contract term approaches its end a serious concern. In order to minimize the long-term risk of rent income losses and improve the chances of a property retaining its value, investment properties should offer space that appeals to the greatest possible number of potential tenants. This presupposes a macro-location and micro-location that are advantageous from a logistics perspective, and a design that facilitates the flexible use of space. Accordingly, the more specific the requirements of the tenant, the longer the agreed contract term should be.

#### Conclusion: Appeal from both a yield and a diversification standpoint

There are a number of reasons why investors with large real estate portfolios in particular should think of adding logistics property to their portfolios. For one thing, logistics properties can continue to make a positive contribution to the overall return of a portfolio, even if the yield premium compared to other commercial property types is disappearing. According to the MSCI Swiss Real Estate Index, the yield premium (based on net cash flow yield) of logistics/industrial properties over office and retail properties amounted to more than 150 basis points in 2019. Second, logistics properties make a significant contribution to the diversification of a real estate portfolio, as the yields here are driven by different factors to those of residential or office properties. Total returns on logistic premises exhibit a negative correlation with the former, and have virtually no correlation at all with the latter. Once upon a time, logistics yields had a positive correlation with retail property yields. But with the rise of online trading, which favors logistics property at the expense of retail property, this has simply disappeared (Fig. 67). Third, a combination of scarcity of supply and the healthy long-term demand outlook makes logistics real estate attractive. Unlike in the case of office property and multi-family dwellings, no oversupply has built up here in recent years, and there are no structural reasons pointing to any decline in demand in the future.

#### Fig. 66: Persistent pressure on rental income and gross yield

Target rent and gross return of logistics properties by year of valuation (median); sample size: 200



Historical performance data and financial market scenarios are no reliable indicator of future results

Source: Wüest Partner

Last data point: 2020

#### Fig. 67: Decoupling of logistics and retail property yields Total return as per Swiss Real Estate Index (MSCI)



Historical performance data and financial market scenarios are no reliable indicator of future results

Source: MSCI

Last data point: 2019

# Limited COVID losses

	The COVID-19 pandemic has led to dislocations in real estate investments all around the world – particularly for commercial property. For the time being, Swiss investors are likely to remain faithful to this asset class given the lack of more appealing alternatives.
Massive upheaval in global markets for real estate investments	At the start of 2020, the first reports started circulating in the media about a "mysterious lung dis- ease" in the Chinese city of Wuhan. Within just a few weeks, what looked like a local issue had evolved into the certainty that an unstoppable pandemic was spreading around the world. The dis- locations in financial markets triggered by this development were accordingly extreme. Uncertainty quickly spread to the world of real estate, and the prices of listed real estate investments suffered a dramatic slump. On the one hand investors feared a long deep recession that would drag down the real estate market too; on the other, global lockdowns were imposed that temporarily made it impossible for tenants to generate sufficient sales on their rented premises.
Uncertainty over long- term repercussions	Thanks to comprehensive fiscal support measures, however, the concerns of investors soon switched to the long-term repercussions of the pandemic. Thanks to the rapid production of vaccines, the direct effects of the pandemic should subside in a few months, thereby lifting restrictions on the use of real estate and triggering an increase in income from rental premises. What now remains is the uncertainty over the longer-term consequences of the pandemic, which are likely to affect the various segments of the market to differing degrees. The expectations of market participants in this respect can be most directly gleaned from the global performance of listed real estate investments (Fig. 68). In the second half of March 2020, these had already started to recover from their initial reverses. That said, a number of sector indices were still well below their prior-year levels at the start of 2021. Most notable here was the performance of retail and office premises (-23.7%). By contrast, investors consider the "winners" of this crisis to be the segment of logistics real estate (+15.4%).
Ongoing skepticism over commercial property	In Switzerland too, investors turned their backs on commercial property at the start of the pan- demic, as can be seen from the negative performance of real estate shares (-13.1%) and com- mercial real estate funds (-8.0%) over the last twelve months. By contrast, direct investments in residential and mixed investment properties recorded a positive performance (+3.2%), as did resi- dential property funds (+6.0%). Moreover, the owners of commercial premises affected by the lockdown, primarily from the areas of retailing, hotels & catering, and leisure/sport, found them- selves confronted with demands for rent waivers. The wrangling over state-decreed concessions

#### Fig. 68: COVID-related exodus from commercial property

12 month total returns of global REIT indices (MSCI) by sector compared to Swiss real estate investment, \*residential and mixed investment properties



Historical performance data and financial market scenarios are no reliable indicator of future results

Source: Datastream, IAZI, Credit Suisse Last data point: 01.02.2021

Fig. 69: Damage due to rent waivers is kept within limits

COVID-19-related rent waivers at Swiss real estate funds and investment companies, as % of rental income, according to semi-annual/annual reports.



Source: Annual reports of real estate funds and investment companies, Credit Suisse Last data point: 03/2020

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	from landlords gave rise to heightened legal uncertainty until the corresponding bill was rejected by the Council of States at the start of December 2020. But even before this point, numerous land-lords had come to amicable agreements for rental relief with affected tenants.
Rent waivers tolerable	The total extent of these waivers is not known. An indication can be gleaned from the business reports of real estate companies, however. According to the annual (and semi-annual) reports of listed real estate funds and real estate investment companies published up to mid-January 2021, these companies have forgone rental income amounting to some CHF 36 mn, which equates to 1.7% of rental income (or 2.8% if only the rental income from commercial premises is taken into account). In the case of commercial real estate funds, the median rent waiver amounted to 3%, but in the case of some funds it was substantially more (Fig. 69). The actual lost income is likely to be even higher, as in many cases only figures for the first half of 2020 were available, and a number of planned (but not yet granted) waivers have not yet been taken into consideration. Quite a few landlords are likely to have been waiting for parliament's decision on the commercial rents bill before negotiating individual solutions with hard-hit tenants. Accordingly, rent waivers are likely to reduce income of certain commercial property landlords in the current year too. However, these temporary disruptions to rental streams are unlikely to feed through into the market values of the properties themselves. What matters are the long-term prospects and thus in particular the question of how the accelerated rise of online shopping, a persistent boom in home working, and a slump in business tourism will impact on rental income streams in the long term.
Impact on the trans- action market limited so far	The first repercussions of this changed income outlook are also evident in the transaction market. In 2020, for example, the gross initial yields on office property rose for the first time since 2015 (from 2.9% to 3.0%, Fig. 70). By contrast, the initial yields on multi-family dwellings in the major centers (2.7%) as well as outside of the centers (3.7%) fell to new lows. Also falling to a new low in 2020 were the net cash flow returns on investment properties, which according to IAZI declined to 3.2%. Here the ongoing negative interest rate environment continues to offer scope for higher market values, which allows for positive valuation returns going forward. Away from the major urban areas, however, these value increases lose momentum – this being particularly true to date in eastern Switzerland and Ticino, where a number of regions actually recorded a decline in values in 2019 (Fig. 71).
Multi-family dwellings remain the focus of investors	The pandemic has led to uncertainty regarding the future demand for commercial property. Out- side of the top locations, longer-term declines in demand remain a threat whose magnitude can hardly be predicted from today's standpoint. Given this backdrop, residential investment properties are being even more strongly targeted by investors, despite vacancies rising further. However, in view of the resurgence in oversupply risks in the rental apartment market and the difficult eco- nomic situation, future value increases are likely to work out lower than in recent years, for which 3% or more has been the norm. We are therefore anticipating a total return of 4.0% to 4.5% in 2021.



Fig. 70: Initial yields of multi-family dwellings fall again

Transaction-based gross initial yields (median) of institutional investors; urban: large centers including Lucerne, Lugano, St. Gallen, Bellinzona, and Chiasso

Historical performance data and financial market scenarios are no reliable indicator of future results  $% \left( \frac{\partial f_{\mathrm{sc}}}{\partial t} \right) = \left( \frac{\partial$ 

Source: REIDA, Meta-Sys, Credit Suisse

Last data point: 12/2020

### Fig. 71: Residential segment: waning price growth to the east and south

Growth in market values of multi-family dwellings by MS region, 2019; arrows: trend compared to long-term average since 2010



Historical performance data and financial market scenarios are no reliable indicator of future results  $\label{eq:constraint}$ 

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

Last data point: 12/2019

# Residential property: false sense of security?

Listed Swiss real estate securities have once again proved to be a safe haven during the coronavirus crisis. In particular, residential real estate funds are more popular than ever and correspondingly expensive.

Swiss real estate funds the star pupils	Viewed at a global level, listed real estate investments are among the losers of the COVID-19 pandemic, particularly as they have recovered more slowly than other asset classes from the market crash at the start of the crisis. For example, the MSCI World Real Estate Index closed 5.9% down at the end of 2020 (Fig. 72). Similar falls were recorded by Swiss real estate shares (-6.7%), although these were very highly valued just before the correction and contain a high proportion of commercial property, unlike real estate funds. But the picture for listed Swiss real estate funds is very different: After an impressive year-end rally these ended up 10.8% in positive territory at the close of 2020, having already recorded a rise of 20.7% the year before. With this performance, they have left other "COVID-resistant" markets such as Germany (+3.9%) and the US (+4.6%) well behind.
and residential real estate funds were the best of the best	The darlings of investors in 2020 were Swiss residential real estate funds (+12.5%), although the shares of real estate companies with a high residential component in their portfolios also proved very popular. By contrast, securities with a high proportion of office or retail property, as well as properties from the hotel & catering sector, were relatively scorned – a pattern that was repeated globally due to the gloomy long-term income outlook for these segments (Fig. 68).
and this despite a difficult letting situation	The latest upward trajectory of Swiss real estate funds cannot be explained by any improvement in their income outlook. Although COVID-19 is not likely to have any detrimental long-term impact on overall demand for residential property – unlike demand for retail or office property – the rental market has been on a downward trajectory for years, as evidenced by rising oversupply tendencies and downward pressure on rental income. In actual fact, the risk of lost income has increased even further over the last year (Fig. 73). At 6.2%, the rent default rate of listed Swiss real estate funds reached a new high. The rise was particularly strong in the case of commercial real estate funds, where a total of 9.5% of target income fell victim to vacancies or rent waivers. But in the case of residential real estate funds too, the rent default rate has risen noticeably to 5.5%.



Historical performance data and financial market scenarios are no reliable indicator of future results

Source: Datastream, Credit Suisse Last data point: 01.02.2021

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Source: Annual and semi-annual reports of real estate funds, Datastream, Credit Suisse Last data point: 30.09.2020

Vacancies even high in an international comparison	Where the increasing vacancy rate of the Swiss rental apartment market is concerned, many observers like to point out that vacancy levels are still modest in an international comparison. Unfortunately, this assertion can only be reviewed to a limited degree due to the lack of comparable international surveys of rental apartment vacancies. But it can be clearly dismissed as incorrect in the case of listed real estate investments. This much is apparent from a comparison of the rent default rates of Swiss residential real estate funds with the vacancy figures in the portfolios of international real estate investment trusts (REITs) and real estate companies (Fig. 74). The companies used for the purposes of this comparison are contained in the global real estate indices of MSCI and EPRA, and focus mainly on residential property. From this comparison it emerges that the average rent default rate of Swiss funds amounts to 5.4%, which is far higher than the vacancy levels apparent in the portfolios of German and US companies, or those in other countries. That said, the difference is likely to be somewhat exaggerated as the rent default rates published by funds typically include rent waivers and payment default, as well as vacancies. But even the few Swiss real estate investment companies with a residential focus are recording vacancy rates of 3% to 4%, which is rather high in a European comparison. This is – at least in part – likely to be attributable to structural factors, however. Particularly in countries such as the UK or the US, owner-occupied housing is traditionally dominant, and rental apartment blocks are often clustered in major cities where demand for housing is high. Moreover, a greater role is played in these markets by special types of rental apartments, such as student and serviced apartments.
High premiums indicate high valuations	The year-end rally of Swiss real estate funds has pushed the corresponding premiums to net asset values to heady levels. In the case of residential real estate funds, this premium stood at 43.4% at the end of 2020, its highest level for twelve years. At the end of January 2021, it was still at 37.8% (Fig. 75). But even commercial funds are relatively highly valued with a premium of 23.8%, particularly given the clouds on the future income horizon due to COVID-19. However, there are huge differences between the individual funds themselves, with the spectrum of premiums ranging from almost -5% to +70%. These significant valuation differences reflect not just the quality of individual portfolios but above all their composition (e.g. Zurich region versus Ticino; focus on logistics or sustainability versus retail property and hotels & catering).
Conclusion: not much upside for funds	Another aspect was the year-end rally of real estate funds, played out against a backdrop of con- siderable activity in the capital market. Overall, capital increases and launches in the fourth quarter of 2020 encompassed a volume of CHF 1,235 billion, of which CHF 768 million related to listed funds. Capital increases of this kind typically dilute returns. Furthermore, the rally took place with- out any noteworthy increase in trading volumes – an indicator of a buyer surplus. Given the dearth of investment alternatives in the entrenched low-interest environment, many market players have clearly refrained from taking profits, with some even increasing their positions. As such, this looks to us like an overly expensive market entry point for Swiss residential real estate funds. On the other hand, we see opportunities in real estate investment companies and commercial property funds, which are more modestly valued, particularly if the focus of the portfolio is on office prop- erty in central locations, sustainable real estate, or logistics properties.



Source: Annual reports of real estate companies, Credit Suisse Last data point: 30.09.2020

Fig. 75: Swiss residential real estate funds look expensive Premiums of real estate funds and real estate shares, as % of net asset value; commercial real estate funds including special properties, excluding mixed funds 60%



Historical performance data and financial market scenarios are no reliable indicator of future results

Source: Datastream, Credit Suisse

Last data point: 31.01.2021

## Low interest rates make real estate a coveted asset

#### Real estate is directly affected by the COVID-19 pandemic, as containment measures and lockdowns have led to temporary closures of restaurants, hotels, leisure facilities, and other busiconsequences to weigh on real estate nesses all around the world. This has led to income losses for the corresponding owners - in the market for some time form of forfeited revenue shares and lost rental income, including through rental waivers. If vaccine programs proceed at the planned tempo, things should gradually return to normal over the course of the second semester of 2021. In the meantime, the longer-term repercussions of the pandemic - which are increasingly preoccupying investors - will be much weightier. Focus switches to It is only reasonable to assume that the structural shifts apparent in the market may well persist structural effects long after the coronavirus crisis has been mastered. Home working will continue to be supported by a much greater number of companies, and demand for office property can be expected to focus on the most attractive premises in easily accessible locations boasting plentiful local amenities. A substantial proportion of the retail sales that have shifted to the online channel will probably have been lost to bricks-and-mortar retailers for good. This will mean a lasting decline in demand for retail premises, particularly away from the key "high streets", whereas demand for logistics premises will receive a further boost. It will probably be several years before business tourism volumes get back to pre-crisis levels, as the pandemic has made it starkly clear that remote collaboration using digital tools functions well. That said, the magnitude of these effects remains shrouded in uncertainty. Meanwhile, overall demand for residential property has barely been impacted by the pandemic, and will fully recover. But here too, structural shifts in demand could emerge, for example if employees continue to spend a significant proportion of their working week at home, and respond to the new parameters by optimizing their living situation. **Direct investments:** Net cash flow yields are likely to record another slight fall, and in the case of residential investtime for a review of ment properties approach the 3% threshold in the course of this year. Nonetheless, in the event investment strategy of negative interest rates remaining in place – as is currently expected by the great majority of investors - real estate investments still offer very attractive returns compared to the available alternatives. In the longer term, the combination of ultra-expansionary fiscal policy and the ongoing flood of liquidity from central banks is likely to increase inflationary risks. Interest rate rises therefore remain the greatest risk from the investor's perspective, as at current price levels these could trigger sharp corrections. For now, however, we see slight increases in value as the most likely scenario, such as for commercial properties in top locations and logistics real estate, as well as

Indirect investments: low interest rates to outweigh consequences of pandemic

COVID-19

At a global level, indirect real estate investments could not escape the downward trend that set in at the start of the COVID-19 pandemic. Quite the opposite: In a comparison of asset classes, they remain among the overall losers, as although the massive correction in the first guarter of 2020 was followed by a recovery, it was nothing like as strong as that of equity markets. In Switzerland too, real estate shares geared around cyclical sectors suffered reverses. The prices of real estate funds however, particularly those with a residential focus, reached giddy heights despite a further rise in vacancy risks. Having said this, the enormous discrepancies in premiums and rental income losses point to major differences between the various funds in respect of portfolio quality, diversification, and vacancy management. We see only limited potential for further increases in value in Swiss real estate funds at the moment. As the economic recovery gains momentum as the year progresses, demand is increasingly likely to shift to cyclical sectors. As such, real estate shares, commercial real estate funds and international real estate investments could benefit at the cost of residential real estate funds.

residential property. For the latter, we are anticipating a total return in 2021 of 4.0% to 4.5%. Over the next few years, careful monitoring of demand trends and the corresponding adjustment

of individual investment strategies will be crucial to the success of real estate investors.

# No sustainability without transparency

Investors expect greater transparency in the area of sustainable real estate investments, as this is crucial to trust. Recognized building labels and international benchmarking results were just the start in this respect. Investors are increasingly looking for specific energy ratios at portfolio level and a commitment to ambitious targets for the reduction of environmentally-damaging emissions.

COVID-19 may be the most pressing problem, ... For wide swathes of the population, the COVID-19 pandemic has pushed climate concerns into the background. But while coronavirus has slowed the momentum of the environmental movement, the latter issue can be expected to be back on the front pages very soon. The trend toward sustainability is becoming increasingly established among the Swiss population. This has been demonstrated not just by the 2019 elections to the National Council, but also by the Credit Suisse Worry Barometer, which has been identifying the most pressing concerns of the Swiss electorate for many years now. On average, the topic of the environment has been cited as one of the most important concerns by 17.3% of survey respondents annually since 2001 (Fig. 76). In most years, this has not been enough for it to make the top ten worry rankings. The issue enjoyed a public spike of awareness briefly in 2007 due to the publication of a gloomy UN Climate Report. But in 2018 the environment then rocketed back into the top five biggest worries of the Swiss with a score of 23%. The hot and very dry summer of that year sparked off discussions over climate change, and is therefore likely to have sensitized the population to this issue all the more.

... but the climate is the most important In 2019, 29% of voters viewed climate change and environmental protection as one of the five most pressing problems. This was a rise of six percentage points, the second-largest of any Swiss worry. While the coronavirus threat far outstripped all other problems in 2020, the issue of the environment nonetheless remained in fourth place with 29% of citations once again. But if voters had been asked to identify only the most urgent problem, rather than the five most urgent problems, environmental protection/climate change would have ranked second behind the coronavirus, the same position as in 2019. The accumulation of natural catastrophes and extreme weather phenomena, together with global climate demonstrations, have led to an appreciation of this issue by wider swathes of society. Under the slogan "climate strike", young people and children have started to take their anger over climate change to the streets all around the world, forcing society to sit up and take notice. The environmental issue has therefore been prominent in the media, political debate, and discussion forums.

#### Fig. 76: Growing relevance of the environment as a theme

Credit Suisse Worry Barometer: Proportion of Swiss voters who cite the environment as one of the five most pressing concerns



Fig. 77: Global increase in regulatory requirements



Source: UN Principles for Responsible Investment (PRI) Last data point: 2019

Sustainability as megatrend	The Worry Barometer makes it clear that the issue of sustainability has finally come to the atten- tion of the wider masses. Many Swiss have already started to adapt their behavior. This can be seen in the surge in the number of people traveling by bike – and not just since the onset of the COVID-19 pandemic – and in the high growth rates being recorded by organic products, even though these are more expensive. This wider social development is increasingly being reflected in the behavior of investors too. The popularity of sustainable investments is rising strongly, and the corresponding market is recording very high double-digit growth rates.
Transparency emerges as competitive factor	One of the greatest problems for sustainability is that sustainable goods or services are typically not identifiable as such from the outside. As a result, consumers do not know if they are acting sustainably by purchasing this or that product. This prompted a number of providers to start designating their products with quality labels some years ago. They recognized the competitive advantage that greater transparency would give their products. Things have been no different in the world of real estate: Building "labels" now document compliance with certain sustainable parameters. These labels have subsequently risen to prominence, particularly as they have improved transparency – at least to a certain extent. But their success also gave rise to an extreme proliferation of labels and ratings, which has delivered more confusion than enlightenment in recent years. In the real estate area, such labels are often based on twenty or more factors, greatly complicating the process of comparing different labels. For that reason, calls for more far-reaching transparency soon became widespread. Because ultimately, transparency must be comprehensible if it is to engender trust.
Investors demand sustainable real estate investments	The change in consumer and user behavior is ultimately also reflected in changed investor behav- ior. The move towards sustainability has grown above all in connection with property investments, particularly as real estate and the corresponding investments are responsible for a large proportion of global energy, CO <sub>2</sub> , and resource consumption, making them an inevitable focus of attention. The key drivers of greater sustainability are first and foremost institutional and private investors, who have been calling for greater transparency in connection with real estate investments.
Growing regulatory pressure	Another driver is the more engaged stance of regulators, other public institutions, governments, and supervisory authorities, who are promoting sustainable investment in the financial sector in a targeted way in the wake of the global climate movement, while insisting on greater transparency in the form of sustainability criteria, along with disclosure of the corresponding integration. At the same time, governments and supervisory authorities are actively involving the financial sector in the financing of measures to combat climate change. Figure 77 shows how dramatically the number of political interventions relating to sustainable investment is rising worldwide. Switzerland is no exception here. In many cases, this is to introduce additional transparency and disclosure obligations, which on the one hand lead to a better and uniform understanding of sustainable real estate investments, while on the other actively promoting and improving investor protection. A further objective is to attract greater institutional and private capital to sustainable financial investments generally, and to sustainable real estate in particular
Portfolio managers discover competitive advantage of ESG	The third driver is the change in portfolio managers themselves, who are recognizing the growing demand and need for innovative, sustainable real estate. Providers of real estate investments increasingly apply environmental, social, and governance (ESG) criteria and integrate comprehensive sustainability aspects into their investment options. In other words, not only are they reacting to increasing competition in the supply of convincing investment solutions, they are also pushing for the holistic integration of ESG criteria along the entire real estate value creation chain. In this way, sustainability targets can be effectively displayed in addition to return ratios and used to establish a competitive advantage.
From qualitative features to measurable indicators	Greater transparency in all sustainability matters is going hand in hand with a clear professionaliza- tion of the real estate industry when it comes to ESG and sustainability. A look at developments over the last few years shows how far the industry has come. To start with, sustainability aspects were only sporadically mentioned in conventional annual reports, and often restricted to purely qualitative statements and declarations of intent with respect to sustainable use of resources. But investors now expect a great deal more – namely the transparency, measurability, and compatibil- ity of key indicators. Sustainability reporting is a good indicator of the professionalization of the real estate industry, which is increasingly applying uniform sustainability standards such as the Global Reporting Initiative (GRI) or Sustainability Best Practice (cf. INREV, EPRA). This increasing trans- parency is evident from the fact that a growing number of market participants do not just report on qualitative criteria, but systematically track measurable and therefore comparable indicators such as energy efficiency, $CO_2$ emissions, water and waste consumption, and the proportion of renew- able energies, before then setting this information out in detail in separate sustainability reports

	(Fig. 78). Comprehensive disclosure of this kind in turn puts pressure on competitors who are not so far advanced to publish the same information. All this has dealt a severe blow to so-called "greenwashing", as pure marketing exercises are now easily identifiable as such.
Credit Suisse an early mover in sustainability	The real estate investments of Credit Suisse are market leaders in terms of sustainability. Real Es- tate Management adopted a comprehensive sustainability approach at an early stage, initially fo- cusing on sustainability labels not just for existing property portfolios, but also real estate projects. Credit Suisse has also developed a proprietary sustainability standard – "greenproperty", in which properties are subject to an independent and certified sustainability quality audit process involving more than 50 ESG criteria. Investors and tenants can therefore immediately recognize the quality differences compared to traditional real estate. In addition to the greenproperty seal of quality, la- bels that feature commonly in the market such as SNBS, Minergie, LEED, and BREEAM are also used. This required the build-up of a comprehensive measuring system for recording consumption figures. Thanks to this process, valuable findings have been accumulated over many years that highlight what really matters for sustainable real estate investments.
No managing without measuring	Sustainability indicators were consistently measured and recorded in the context of all building op- timization measures with a view to further increasing the measurability and compatibility of sustain- ability criteria. After all, something that cannot be measured also cannot be managed. For exam- ple, it was only thanks to the transparency gained with regard to the real estate portfolio that the basis was laid for optimizing energy efficiency and systematically reducing environmentally-damag- ing CO <sub>2</sub> emissions. Many of these indicators are now available to investors in annual business re- ports. In addition, sustainability indicators are increasingly being presented in standardized form in integrated or independent sustainability reports. In the future, there is likely to be a link established between these measurable sustainability indicators and balance sheet reporting. As a conse- quence, a company's assets and liabilities will have a stronger connection with sustainability fac- tors in the future, as well as being incorporated into company profitability evaluations.
Sustainability bench- marks facilitate competitive comparisons	A successful sustainability strategy is characterized by the integration of ESG criteria across the entire real estate value creation chain, as well as the entire real estate life cycle. ESG benchmarks have been established in the real estate sector in order to ensure standardization of track records. The aim here is to provide investors and portfolio managers with a transparent picture of sustainability performance through structured and comparable evaluations, and to provide a comparative rating through use of a benchmark. At an international level, the Global Real Estate Sustainability Benchmark (GRESB) has emerged as by far the largest – and in our view therefore the most professional – benchmark initiative in the industry. The GRESB has recorded strong growth in recent years in connection with the benchmarking of investment real estate portfolios.







Source: Credit Suisse

Last data point: 2019

Source: GRESB, Credit Suisse

Last data point: 2020

International GRESB benchmark	More than 1,200 real estate portfolios with a combined value of USD 4.8 trillion from more than 64 countries currently participate in the annual GRESB survey in order to have their sustainability performance measured. For investors, obtaining detailed insights into the sustainability performance of real estate investments and comparing investment products with the relevant peer groups provides important decision-making criteria when it comes to selecting sustainable real estate funds (Fig. 79). GRESB offers portfolio managers a transparent basis for deciding which areas of a portfolio still have a need for development in terms of sustainability, and which areas are already competitive. This transparency and the disclosed competitive comparisons are increasingly becoming a success factor for active portfolio management in the Swiss real estate market.
Swiss REIDA benchmark	Further comparison options are emerging in Switzerland thanks to the energy and $CO_2$ benchmarking initiative being set up by the industry association REIDA (Real Estate Investment Data Association). The first key figures were unveiled in August 2020. In the future, the energy consumption and $CO_2$ emissions of real estate portfolios will be directly comparable with the REIDA universe. This will show portfolio managers how well their properties match up against others, whether their own annual improvements are similar to those of other portfolios, and which properties exhibit the greatest deviations from target values. Portfolio managers will therefore receive an informative analysis of the status quo, as well as specific information that can be used to make the measures they take as effective as possible.
No conflict of objectives between return and sustainability	The much-discussed conflict of objectives between return metrics and sustainability indicators has never been proven. Quite the opposite: Those who take into account sustainability criteria and report transparently achieve certain advantages. Here too, measurability – and the corresponding track record in the area of sustainability – is a prerequisite for achieving higher letting and transaction prices. The rapid growth in the popularity of sustainable investments among private and institutional investors can also be explained by the fact that capital invested according to environmental and social principles is often exposed to fewer risks and can frequently generate a higher return. Numerous studies have provided evidence of just that. <sup>4</sup>
Sustainability making inroads into risk management	If real estate and property portfolios are to be managed in accordance with sustainability criteria, the integration of CSG factors into risk management will ultimately be essential. Here too, transparency is key. Two perspectives in particular have evolved in the area of ESG risk management for real estate investments: The first is the "inside-out" perspective, where all relevant sustainability criteria that result from the operation or use of a property and have an impact on its environment are measured and evaluated. This includes the usual key figures such as energy efficiency, CO <sub>2</sub> emissions, water and waste consumption, and the proportion of renewable energies. The second is the "outside-in" view, in which all sustainability criteria that impact on the property from outside – and can therefore influence valuation and value stability – are determined. For example, this would include all the physical risks that result from the effects of climate change, such as the risk of flooding and frequently recurring extreme weather events. Last but not least, regulatory risks play an increasingly important role in the holistic view of ESG risks. Although the transparent tracking and quantification of ESG risk factors remains a huge challenge for the real estate industry, ongoing professionalization of the sector through greater transparency and disclosure can be expected in the area of ESG risk management too.
Conclusion: Transparency the only way forward	If the goal of sustainable real estate is to be attained, there is no alternative to greater transpar- ency – properties must be systematically measured and compared, and the right conclusions drawn. This will also help to absorb the growing pressure coming not just from investors and regu- lators, but also increasingly from competitors who have grasped the benefits of a sustainable ap- proach. In the medium term, there is likely to be particular pressure to reduce $CO_2$ emissions fur- ther. At an international level, portfolio managers of numerous real estate investments are already trying to outdo one another with their plans to reduce real estate portfolio emissions. Binding com- munication of "downward trajectories" of this kind can soon be expected to become the norm in Switzerland too.

<sup>4</sup> See for example G. Clark, A. Feiner, M. Viehs (2015): "From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance"; University of Oxford and Arabesque Partners



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