

# Locational quality: Basel-City temporarily takes over top spot

Locational quality 2019 | October 2019



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Tomasz Limberger

# Basel-City edges ahead of Zug

**For the first time in the history of the Locational Quality Indicator, the Canton of Zug does not top the rankings. The top spot in the cantonal rankings is now occupied by Basel-City, which has dramatically cut its corporate tax rates with retroactive effect from the start of 2019. The Canton of Vaud has also recently cut its taxes for legal entities, which has propelled it nine positions up the rankings to 8th place. Switzerland's corporate tax reform can be expected to result in further changes in the rankings over the next few years.**

## The Locational Quality Indicator by Credit Suisse

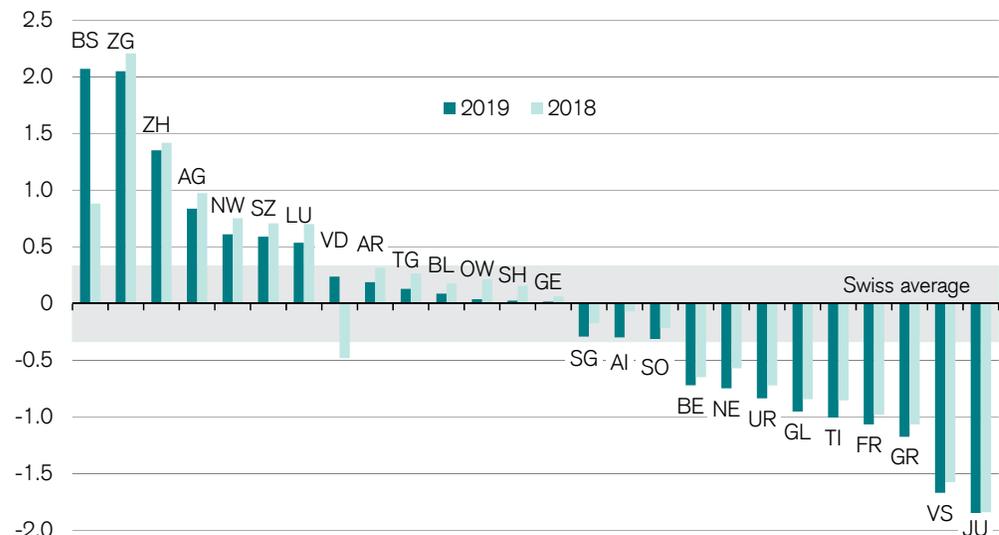
The long-term economic potential of the Swiss cantons is largely determined by the overall conditions for businesses. Firms tend to invest primarily in attractive locations, thus creating jobs and bringing added value and prosperity. Intense competition between different locations is forcing the Swiss cantons and regions to take steps to optimize their appeal to the greatest extent possible. The annual Credit Suisse Locational Quality Indicator (LQI) measures the attractiveness of the Swiss cantons and regions to companies compared to the Swiss average (see appendix for detailed results). Figures between -0.3 and +0.3 can be considered mid-pack territory, with higher figures signifying above-average appeal and lower figures signifying less appeal. The indicator is based on the following seven quantitative sub-indicators (cf. box on page 6): tax burden on legal entities and private individuals, availability of specialized labor and highly qualified personnel, population accessibility, employee accessibility, and access to airports. In this way, the LQI serves on the one hand as a guide to companies that are in the process of evaluating potential locations, and on the other as a benchmarking tool for the optimization of cantonal or regional location policy.

## Basel-City now ahead of Zug and Zurich, Vaud climbs nine places

The Canton of Zug has been the undisputed leader of the cantonal rankings ever since the analysis of locational quality began back in 1997. This year, however, it is the Canton of Basel-City that has claimed top ranking (cf. Fig.). Thanks to a significant cut in its rate of profit tax to 13.04% (with retroactive effect from the start of the year), Basel-City has surged up the rankings from last year's fourth place, and now boasts the most favorable combination of appeal factors, closely followed by Zug and Zurich.

### Locational quality of Swiss cantons

Locational Quality Indicator (LQI), synthetic index, CH = 0



Source: Credit Suisse

The results for the Cantons Aargau, Nidwalden, Schwyz, and Lucerne are also well above the average. The Canton of Vaud has surged up the rankings from 17th place to 8th place thanks to a significant reduction in corporate taxes (profit tax rate now 13.79%). The rise puts this canton in the forefront of the mid-pack, which also includes various cantons with urban agglomerations and the city canton of Geneva. With their challenging topography, the peripheral cantons of Jura and Valais exhibit the lowest locational quality. Compared to last year, there have been a number of minor changes in the rankings. Among others, Cantons Obwalden and Appenzell Innerrhoden each fall back two places, while Canton Bern rises one place.

### The reform of corporate taxation has begun

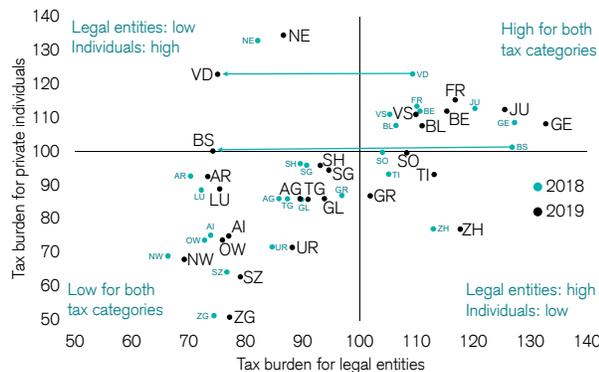
The most significant changes in the rankings are primarily attributable to changes in the taxation of companies. Tax policy is a key component of location development, and one of the easiest LQI sub-indicators to influence. In 2018, the lowest rates of corporation tax were levied in Nidwalden, Appenzell Ausserrhoden, and Lucerne, closely followed by Obwalden, Appenzell Innerrhoden, Zug, and Schwyz. As a result of the significant tax cuts already implemented, Basel-City and Vaud now occupy third and fourth positions in 2019 in the tax index for legal entities (cf. Fig.). However, the majority of cantons are planning to reduce their corporate tax rates in order to remain attractive in the tax competition. We can therefore expect to see further changes in the locational quality ranking over the next few years (cf. next section).

### Accessibility and education can only be changed slowly

Unlike the local tax burden, the remaining LQI sub-indicators can only be influenced to a limited extent. The aspect of transport accessibility can only be improved with prolonged and costly investments in road and rail networks. Even a multi-billion-franc project such as the New Railway Link through the Alps (NRLA) only increases the accessibility of the Gotthard region slightly, as travel times to Switzerland's main urban centers remain significant, despite the gains achieved. The development of the two indicators that measure the availability of skilled labor is likewise fairly slow. Although the level of education in Switzerland generally has risen consistently in recent years, regional differences remain significant. With 55% of its working-age population classified as highly qualified, the city of Zurich leads among Switzerland's 110 economic regions (cf. Fig.). The regions containing the other key urban centers (Geneva, Lausanne, Bern, Basel, Zug) and the nearby conurbations along Lake Zurich and Lake Geneva can also draw on a relatively large pool of workers who have been through tertiary education. A key role here is played by local sector clusters, which in the major centers are heavily geared around knowledge-based activities. Universities and other higher education institutions have an additional impact.

### Basel-City and Vaud slash corporate taxes with effect from start of 2019

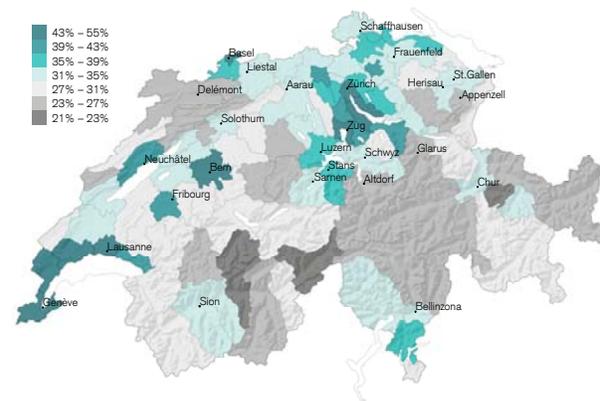
Development of tax burden 2018 – 2019, tax burden on private individuals (income and wealth taxes) and legal entities (profits and capital taxes), synthetic indices, CH = 100



Source: TaxWare, Credit Suisse

### Highly-qualified personnel clustered in regions with major urban centers

Percentage of working-age population with tertiary education, 2013 – 2017



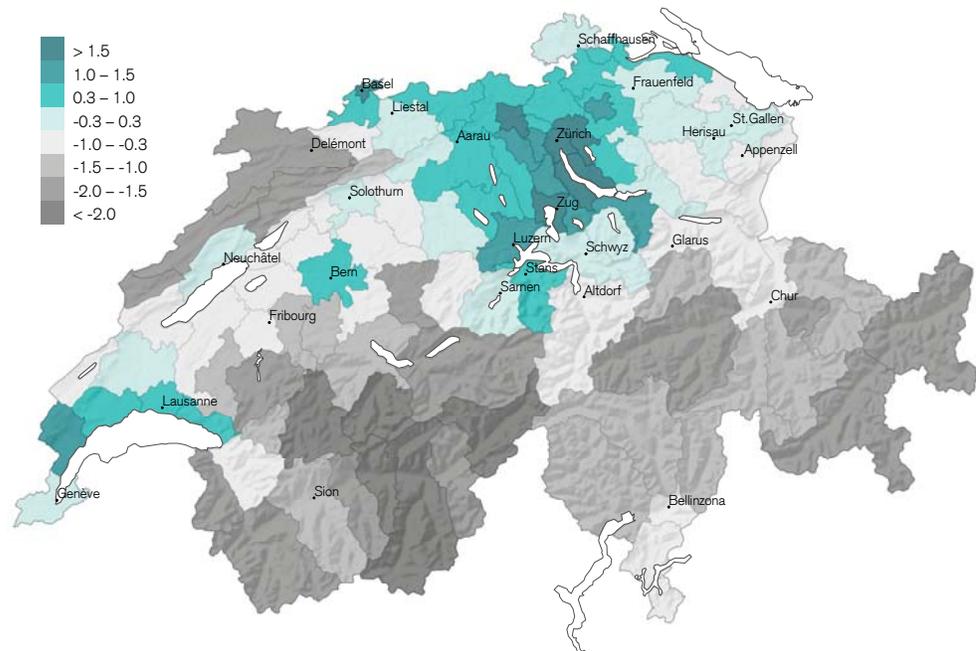
Source: Swiss Federal Statistical Office, Credit Suisse, Geostat

**Regional view:  
significant  
differences within  
the cantons**

For the larger, heterogeneous cantons – such as Bern, Vaud, Ticino or Graubünden – an analysis solely at cantonal level is too superficial. We therefore also analyze locational quality at the level of Switzerland's 110 economic regions. The highest degree of attractiveness is exhibited by the centers of Zurich, Zug, Basel, Baden, Lucerne, and Bern, as well as their wider agglomerations, thanks not least to their transport accessibility. Basel-City now occupies third place, an improvement of 13 places. With ranking gains of between 12 and 30 places, the regions of the Canton of Vaud have performed even more impressively: Nyon (13th place), Lausanne (20th place), and Morges/Rolle (24th place) have all now moved into the top quartile, thereby setting themselves apart from the other regions of French-speaking Switzerland. Over in Ticino, the Lugano region and in particular the Mendrisio region exhibit a higher locational quality than their neighbor regions. The regions of the Alpine and Jura arcs are clearly less attractive from the perspective of companies, which can be explained by their topography and the often significant travel time involved to reach the main centers. These different regional characteristics make it difficult for the cantons in question to gear their locational policy optimally around their individual strengths and weaknesses. For example, an above-average tax burden in an urban center is less disadvantageous from a corporate perspective than an equivalent burden in a peripheral region. Why? Because state services and infrastructures are for the most part widely available in urban centers, which outweighs the higher tax burden from a cost/benefit perspective. An overview of the locational quality of Switzerland's 110 economic regions and the individual location factors can be found in the Appendix starting on page 11.

**Locational quality of Swiss economic regions 2019**

Locational Quality Indicator (LQI), synthetic index, CH = 0



Source: Credit Suisse, Geostat

## The Credit Suisse Locational Quality Indicator (LQI)

Quantitative analysis of the locational quality of Switzerland's cantons and regions has been part of the Credit Suisse research offering since 1997. The LQI is calculated on the basis of current data. Compared with the revision in 2013, however, the methodology remains largely unchanged.

The tax burden on private individuals is calculated on the basis of taxes on income and wealth at federal, cantonal, and municipal level, as well as taking account of the normal deductions. The tax burden on legal entities examines taxes on profit and capital. The calculations are based on the statutory tax rates and municipal tax rates for 2019, where available. Special tax systems such as lump-sum taxation or tax privileges for special status companies cannot be taken into account, as these privileges are not published in a suitable statistical form.

The availability of specialist labor and highly qualified personnel is based on the level of education of the residents, inbound commuters, and cross-border commuters of a region. Specialist labor refers to persons with vocational or higher training, while highly qualified personnel have completed tertiary education at a higher technical college, university of applied sciences or university. The database is the 2013–2017 structural survey conducted by the Swiss census. The level of education of cross-border commuters is estimated on the basis of the wage structure survey of the Swiss Federal Statistical Office.

Population accessibility, employee accessibility, and access to airports is based on data for 2016. The indicators are calculated for each populated square kilometer and are based on the entire road network and all public transportation connections. The opening of the Gotthard base tunnel is likely to have slightly improved the accessibility of the Gotthard region. According to our analysis, the opening of the New Railway Link through the Alps (NRLA) will add 0.04 LQI index points to Ticino's score, due particularly to the Monte Ceneri tunnel (opening in 2020), while Canton Uri will gain an additional 0.01 points.

Further information: "Locational quality: Basel-City set to overtake Canton Zurich", Credit Suisse, September 2016.

Regional locational quality: Clients of Credit Suisse can order fact sheets on individual economic regions from their client advisor.

# Zug likely to reclaim top spot from Basel-City

The fundamental restructuring of corporate taxation in Switzerland has begun. The first cantons have now reduced their corporate tax rates significantly. The privileged tax regimes that apply to status companies will be abolished in 2020. In addition, the accessibility of Ticino in particular will improve next year with the opening of the Ceneri base tunnel. The latest outlook for locational quality in 2025 sees Zug reclaiming the top spot, followed by Basel-City and Zurich. Canton Geneva climbs ten positions to 4th place.

## Abolition of tax privileges for status companies

On May 19, 2019, the Swiss electorate formally accepted the Federal Act on Tax Reform and AHV Financing (TRAF). The reform of corporate taxation is designed to restore international acceptance of Swiss tax regimes and preserve locational appeal, among other things. The majority of measures will enter into force at the start of 2020. The privileged taxation of status companies (holding companies, management companies, domiciliary companies, and mixed companies) is being abolished. In the future, the same tax rules will apply to all companies.

## Support for research and development

In order to preserve Switzerland's appeal as a business location, new and internationally accepted measures will be introduced at cantonal level to support innovative activities. The following table provides an overview of the current intentions of the Swiss cantons when it comes to the design of tax instruments. For example, all cantons must introduce privileged tax treatment for profits from

### Zurich fully exploits potential of new tax instruments

Overview of cantonal design of key new tax instruments, as at 05.09.2019

	Relief restriction	Patent box	Additional R&D deduction	Dividend taxation exemption	Interest deduction on equity capital
ZH*	70%	90%	50%	50%	☑
OW	70%	90%	50%	50%	☒
AG	70%	90%	50%	50%	☒
SZ*	70%	90%	50%	50%	☒
ZG	70%	90%	50%	50%	☒
BE	70%	90%	50%	50%	☒
TI	70%	90%	50%	30%	☒
JU	70%	90%	50%	30%	☒
SO	70%	90%	50%	30%	☒
SH	70%	90%	25%	40%	☒
NW	70%	90%	0%	50%	☒
GR	70%	70%	0%	30%	☒
TG	70%	40%	not yet known	30%	☒
LU	70%	10%	0%	40%	☒
VS	50%	90%	50%	40%	☒
BL	50%	90%	20%	40%	☒
AR	50%	50%	50%	40%	☒
UR	50%	30%	0%	50%	☒
AI	50%	10%	0%	50%	☒
BS*	40%	90%	0%	20%	☒
SG*	40%	50%	40%	30%	☒
NE*	40%	20%	50%	40%	☒
FR*	20%	90%	50%	30%	☒
GL*	10%	10%	0%	30%	☒
GE*	9%	10%	50%	30%	☒
VD		Implementation not yet known		30%	☒
Maximum permissible	70%	90%	50%	50%	

Source: BDO, Credit Suisse

\* Implementation confirmed as per 01.01.2020

patents (“patent box”) – although the amount of tax relief may not exceed 90% of the profit in question. Cantons will also have the option of introducing additional deductions for expenditures incurred in R&D. Finally, a canton can grant an interest deduction for self-financing, as long as the effective profit tax burden in the cantonal capital amounts to at least 18.03%. Overall, however, the tax relief obtained through these three tax instruments may not exceed the threshold of 70% (relief restriction), i.e. every company must be taxed on at least 30% of its taxable profit prior to the application of the special rules.

**Increase in dividend taxation and the cantons’ share**

Among the measures being introduced to counterfinance this reform, a higher rate of income tax will be levied on revenue from participations: Such income will in the future be taxed at 70% at federal level (currently 60% for private assets and 50% for commercial assets), and at a rate of at least 50% at cantonal level (currently lower in four Swiss cantons). Furthermore, the cantons’ share of direct federal tax revenue will in the future amount to 21.2% (currently 17%), not least with a view to giving the cantons greater fiscal policy leeway to reduce their ordinary tax rates.<sup>1</sup>

**Major cantonal differences in the design of new tax instruments**

Within these statutory parameters, the cantons can put together their preferred overall package of ordinary corporate tax rates and customized fiscal policy measures. A canton’s fiscal policy strategy will depend on the significance of status companies in that canton, the relevance of corporate taxation for the canton’s appeal as a business location, the intensity of intercantonal and international tax competition, and the financial freedom of maneuver available to each canton.

**Trend toward competition via lower ordinary tax rates persists**

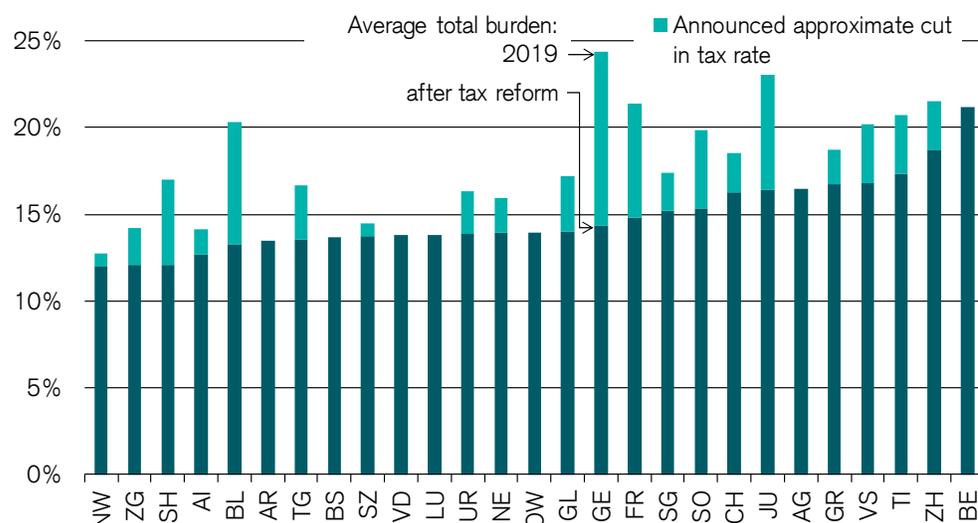
Despite the newly introduced tax privileges, the options available to companies for reducing their tax assessment basis will be more restricted when viewed in overall terms. Furthermore, many companies are unlikely to be able to benefit from the planned new tax instruments. In order to remain attractive in the tax competition, the majority of cantons are therefore planning to reduce their ordinary corporate tax rates (cf. Fig.). A few cantons such as Vaud and Basel-City have already significantly reduced their tax rates with effect from the start of 2019. In other cantons, the tax strategies elaborated still have to be approved by the cantonal electorates.

**Significant repercussions for locational quality**

Subject to acceptance by the Swiss people, the corporate tax reform and the cantonal adjustments will have the effect of “reshuffling the cards” in the cantonal competition for companies. In other words, one of the seven components of Credit Suisse’s Locational Quality Indicator is likely to change significantly. Based on the intended corporate taxation adjustments of the cantonal

**Nidwalden, Zug, and Schaffhausen planning the lowest corporate taxes**

Overall burden\* (in % of net profit) through profit and capital taxes 2019, taking into account corporate taxation adjustments already communicated by the cantonal governments (as at September 5, 2019)



\* Average effective burden for a joint-stock company with capital of CHF 2 mn and net profit of between CHF 80,000 and CHF 1,040,000

Source: TaxWare, BDO, Credit Suisse

<sup>1</sup> In addition to the measures cited above, the reform includes a number of other tax measures for both companies (adjustments to capital tax, rules on the disclosure of hidden reserves, etc.) and shareholders (restrictions in respect of the capital contribution principle). Moreover, the process of fiscal equalization between the cantons will be adjusted. More detailed information available at: [www.efd.admin.ch/efd/en/home/dokumentation/gesetzgebung/abstimmungen/staf.html](http://www.efd.admin.ch/efd/en/home/dokumentation/gesetzgebung/abstimmungen/staf.html).

governments, which in many cases will be implemented in stages between now and 2025 or so, we looked into the future in November 2018 and in April 2019 to predict locational quality in 2025.<sup>2</sup> This has involved us recalculating the locational quality sub-indicator “tax attractiveness for legal entities.” This measures the tax burden on ordinary profit and capital taxes, but not the planned design of the new tax instruments. It also involved taking into account changes in the “accessibility” indicators as a result of the completion of the New Rail Link through the Alps (NRLA) in 2020. As cantons have made further changes to their planned tax strategies in the meantime, we have updated our hypothetical ranking.

**Locational quality in 2025: Zug back at the top, followed by Basel-City, Zurich, and up-and-coming Geneva**

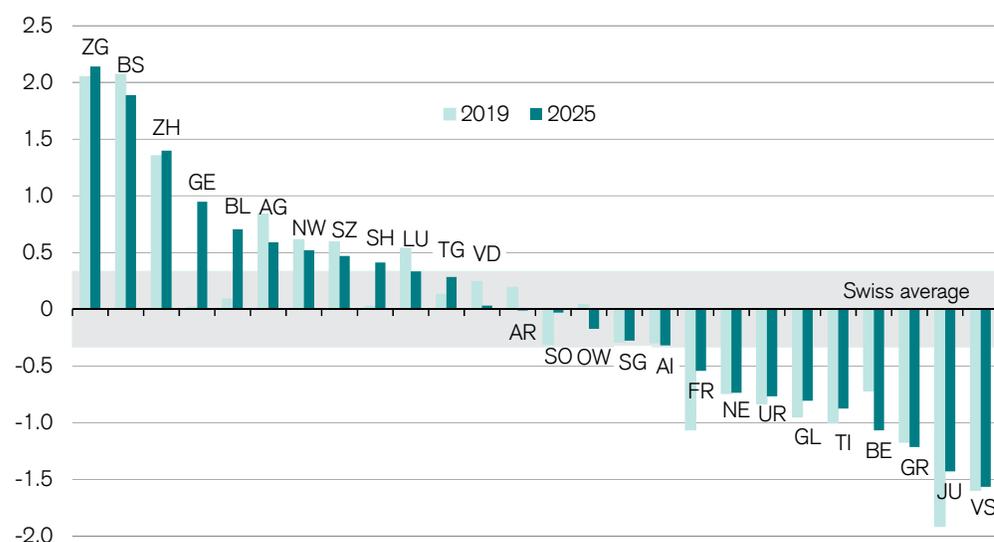
In this hypothetical Locational Quality Indicator (LQI) for 2025, Canton Zug finds itself back at the top of the rankings (cf. Fig). With its planned profit tax reduction to around 12%, it could relegate Canton Basel-City back to 2nd place. With the local electorate having already approved a profit tax reduction to 18.19%, Canton Zurich remains in third place. On the basis of the latest information, Cantons Geneva and Basel-Country are set to occupy positions 4 and 5 (planned profit tax burdens of 13.99% and 13.45%) – which represents a significant leap of ten and six places respectively compared to 2019. Canton Aargau, which ranked as high as 3rd as recently as 2018, is expected to fall back to 6th place due to its decision not to reduce its ordinary profit tax rate.

**Relative advantage of low corporate taxes diminished**

Reductions in corporate tax rates will increase locational quality. Due to the relative view of locational quality, however, cantons can still slip down the Locational Quality Indicator rankings despite introducing tax relief measures. The current leaders in the sphere of corporate taxation will lose at least some of their relative advantage, as the differences will narrow overall, while a number of cantons are seeking to position themselves even more attractively from a tax standpoint. With the exception of Zug and Uri, the indicator figure declines for all central Swiss cantons, as well as the two Appenzell cantons. Here, the most significant ranking decline – a full four places – is suffered by Cantons Appenzell Ausserrhoden and Obwalden. With the local electorate having rejected the cantonal tax legislation revision in November 2018, Canton Bern looks set to fall the furthest down the locational quality rankings, namely five places to 23rd place. After years of stability, there are now set to be other changes at the bottom end of the rankings too: With a profit tax rate of 15%, Canton Jura is set to replace Canton Valais at the bottom of the rankings.

**Locational quality in 2025: Zug back on top, Basel-Country and Geneva set to enjoy strong rises**

Locational Quality Indicator (LQI), synthetic index, CH = 0, 2019 and recalculation of sub-indicators of accessibility and tax burden for legal entities



Source: Credit Suisse

<sup>2</sup> Cf. “Locational quality in 2025: outlook after the tax reform,” Credit Suisse, November 2018, and “TRAF: cantonal strategies in the competition to attract businesses,” Credit Suisse, April 2019.

# LQI 2019 results in detail

## Factors of locational quality at cantonal level

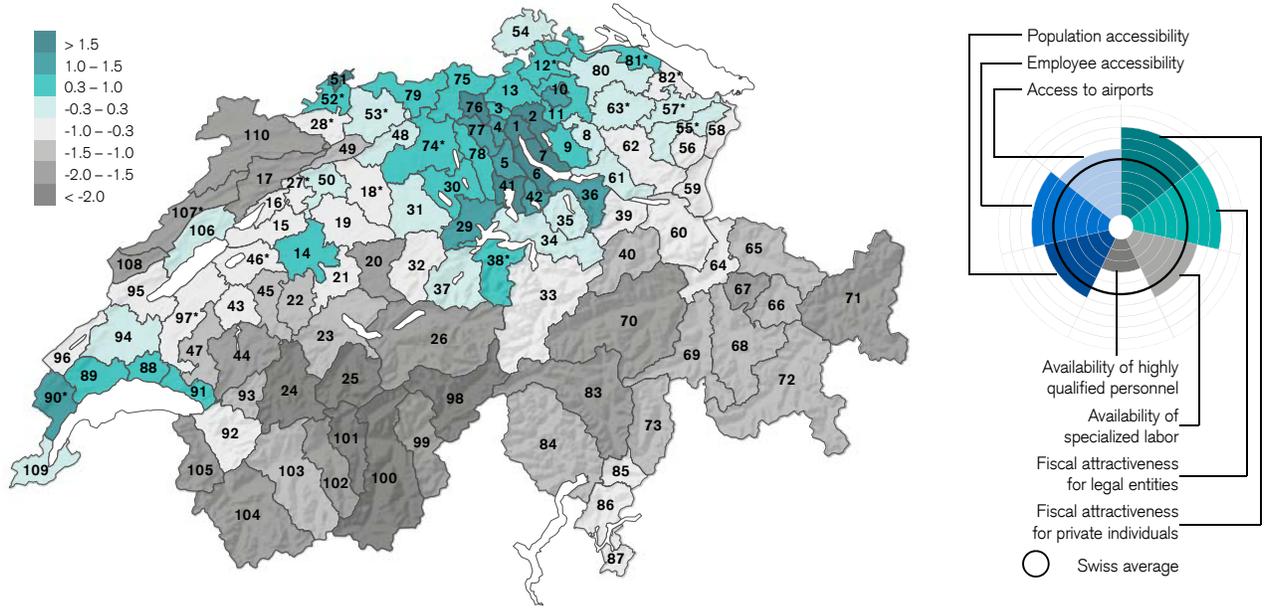
Ordered by rank, + / ++ more attractive than the Swiss average; - / -- less attractive than the Swiss average; = CH average

Canton	Fiscal attractiveness		Availability		Accessibility			Locational quality 2019		
	Private individuals	Legal entities	Specialized labor	Highly qualified personnel	Population	Employees	Airports	LQI 2019		Rank 2019 (vs. 2018).
BS	=	++	=	+	++	++	+	2.07	++	1 (+3)
ZG	++	++	++	++	+	+	+	2.05	++	2 (-1)
ZH	++	--	+	+	++	++	++	1.35	++	3 (-1)
AG	+	+	+	-	+	++	+	0.84	+	4 (-1)
NW	++	++	+	-	-	=	-	0.61	+	5 (=)
SZ	++	++	=	-	=	=	=	0.59	+	6 (=)
LU	+	++	+	-	=	=	=	0.54	+	7 (=)
VD	--	++	-	+	=	-	=	0.24	=	8 (+9)
AR	+	++	+	-	-	=	-	0.19	=	9 (-1)
TG	+	+	=	-	=	+	=	0.13	=	10 (-1)
BL	-	-	+	-	+	++	=	0.09	=	11 (=)
OW	++	++	=	-	-	-	-	0.04	=	12 (-2)
SH	=	+	+	-	=	=	=	0.03	=	13 (-1)
GE	-	--	--	++	+	=	++	0.02	=	14 (-1)
SG	+	+	=	-	=	=	=	-0.29	=	15 (=)
AI	++	++	=	--	-	-	-	-0.30	=	16 (-2)
SO	=	-	=	-	+	+	=	-0.31	-	17 (-1)
BE	-	-	+	-	=	=	-	-0.72	-	18 (+1)
NE	--	+	--	-	-	-	-	-0.74	-	19 (-1)
UR	++	+	-	--	-	-	-	-0.83	-	20 (=)
GL	+	+	-	--	-	-	-	-0.95	-	21 (=)
TI	+	-	--	-	-	-	-	-1.00	--	22 (=)
FR	-	--	--	-	=	=	-	-1.06	--	23 (=)
GR	+	=	=	--	--	--	-	-1.17	--	24 (=)
VS	-	-	--	--	-	--	-	-1.67	--	25 (=)
JU	-	--	--	--	-	-	-	-1.92	--	26 (=)

Source: Credit Suisse

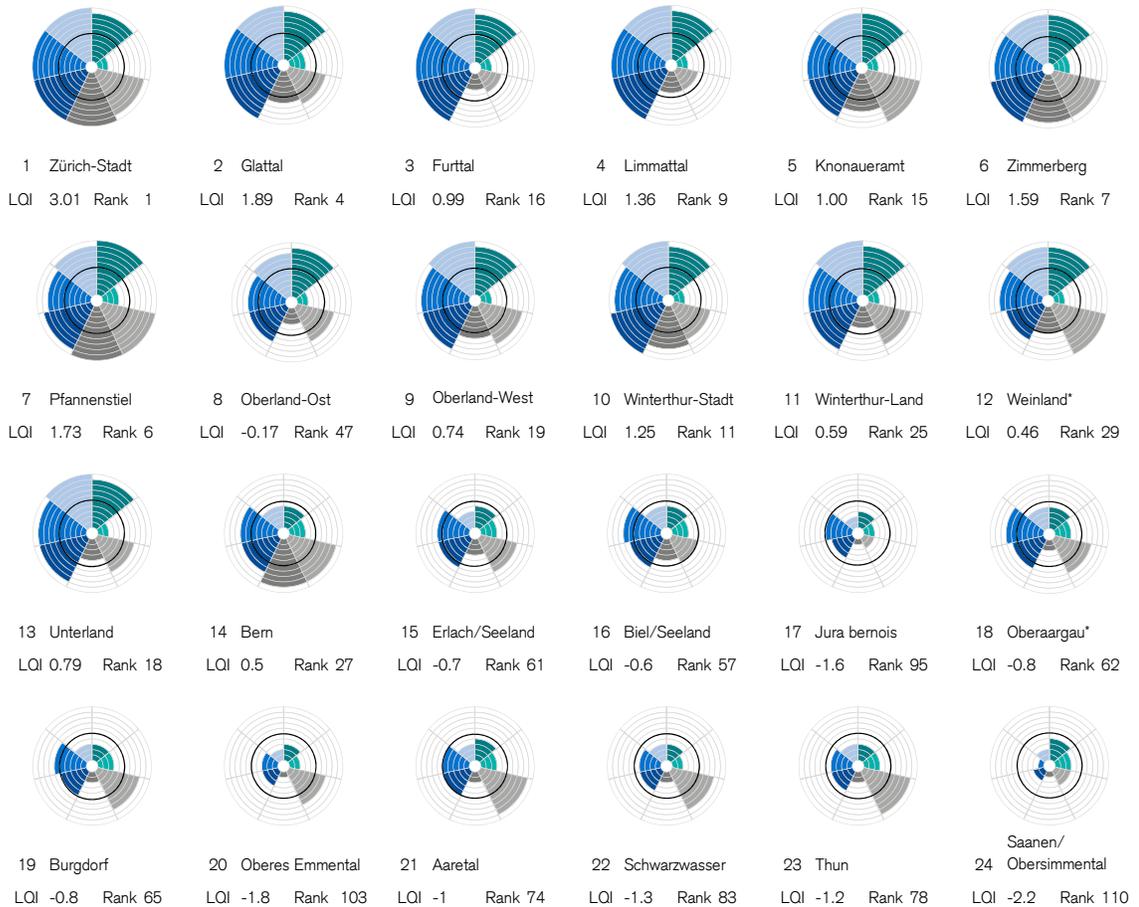
# Locational quality of Swiss economic regions\*, 2019

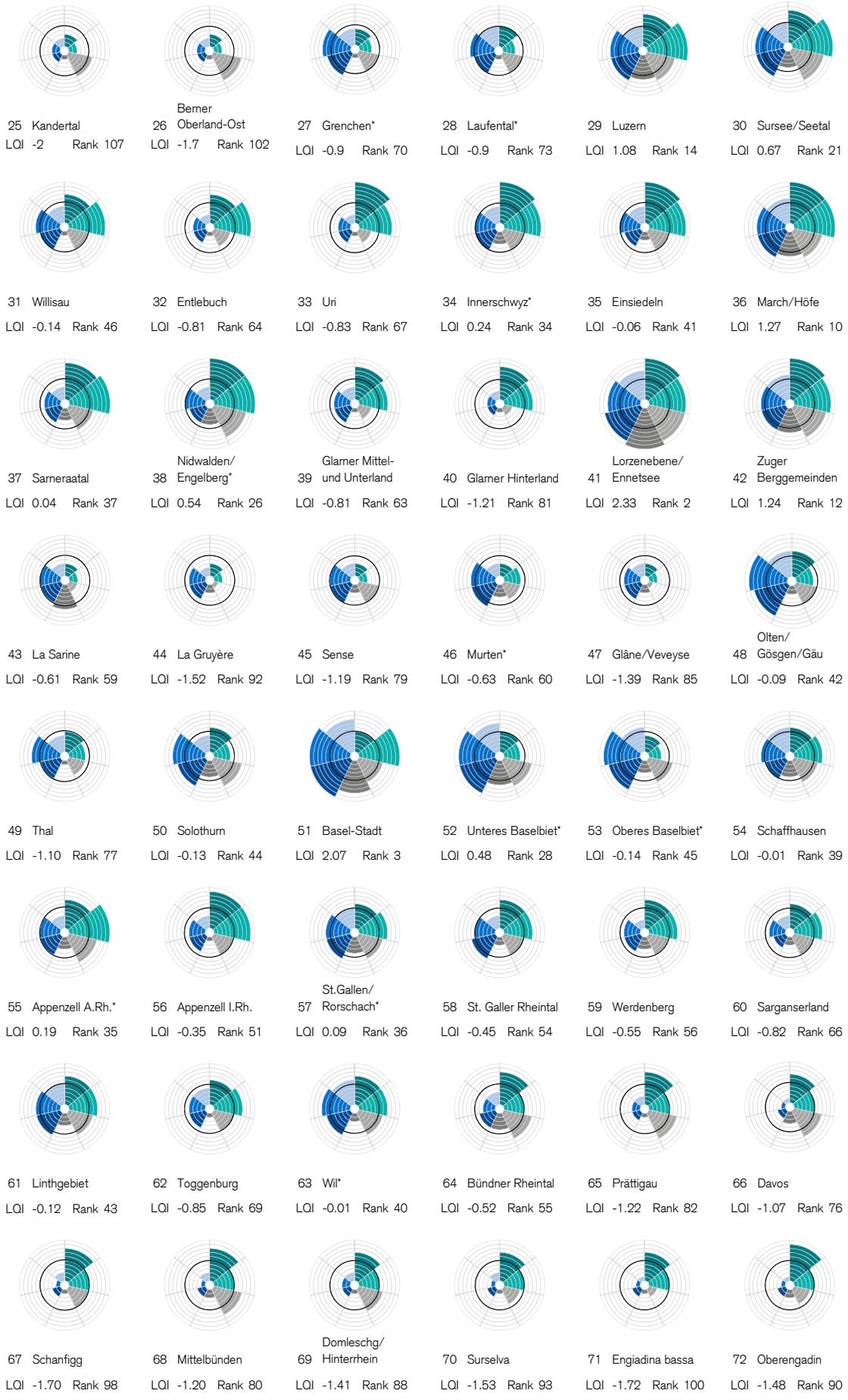
Locational Quality Indicator (LQI), synthetic index, CH = 0, use the identification number to view the detailed profile (see chart at right) of each economic region below



Source: Credit Suisse, Geostat

\* The 110 Swiss economic regions reflect the economic conditions in the best possible way and do not always follow political borders. The economic regions that comprise more than one canton are marked with an asterisk.







73 Mesolcina  
LQI -1.43 Rank 89



74 Aarau\*  
LQI 0.63 Rank 23



75 Brugg/Zuzach  
LQI 0.83 Rank 17



76 Baden  
LQI 1.82 Rank 5



77 Mutschellen  
LQI 1.45 Rank 8



78 Freiamt  
LQI 0.39 Rank 31



79 Fricktal  
LQI 0.63 Rank 22



80 Thurtal  
LQI 0.29 Rank 33



81 Untersee/Rhein\*  
LQI 0.31 Rank 32



82 Oberthurgau\*  
LQI -0.37 Rank 52



83 Tre Valli  
LQI -1.83 Rank 104



84 Locarno  
LQI -1.41 Rank 87



85 Bellinzona  
LQI -0.99 Rank 75



86 Lugano  
LQI -0.57 Rank 58



87 Mendrisio  
LQI -0.43 Rank 53



88 Lausanne  
LQI 0.68 Rank 20



89 Morges/Rolle  
LQI 0.62 Rank 24



90 Nyon\*  
LQI 1.22 Rank 13



91 Vevey/Lavaux  
LQI 0.41 Rank 30



92 Aigle  
LQI -0.92 Rank 72



93 Pays d'Enhaut  
LQI -1.31 Rank 84



94 Gros-de-Vaud  
LQI -0.21 Rank 48



95 Yverdon  
LQI -0.34 Rank 50



96 La Vallée  
LQI -0.85 Rank 68



97 La Broye\*  
LQI -0.92 Rank 71



98 Goms  
LQI -2.14 Rank 109



99 Brig  
LQI -1.71 Rank 99



100 Visp  
LQI -2.01 Rank 106



101 Leuk  
LQI -2.07 Rank 108



102 Sierre  
LQI -1.57 Rank 94



103 Sion  
LQI -1.41 Rank 86



104 Martigny  
LQI -1.72 Rank 101



105 Monthey/  
St-Maurice  
LQI -1.63 Rank 97



106 Neuchâtel  
LQI -0.26 Rank 49



107 La-Chaux-de-  
Fonds\*  
LQI -1.52 Rank 91



108 Val-de-Travers  
LQI -1.63 Rank 96



109 Genève  
LQI 0.02 Rank 38



110 Jura  
LQI -1.92 Rank 105

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

### Emerging markets

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

### Alternative investments

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

Commodity transactions carry a high degree of risk, including the loss of the entire investment, and may not be suitable for many private investors. The performance of such investments depends on unpredictable factors such as natural catastrophes, climate influences, hauling capacities, political unrest, seasonal fluctuations and strong influences of rolling-forward, particularly in futures and indices.

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

### Private Equity

Private Equity (hereafter "PE") means private equity capital investment in companies that are not traded publicly (i.e. are not listed on a stock exchange), they are complex, usually illiquid and long-lasting. Investments in a PE fund generally involve a significant degree of financial and/or business risks. Investments in private equity funds are not principal-protected nor guaranteed. Investors will be required to meet capital calls of investments over an extended period of time. Failure to do so may traditionally result in the forfeiture of a portion or the entirety of the capital account, forego any future income or gains on investments made prior to such default and among other things, lose any rights to participate in future investments or forced to sell their investments at a very low price, much lower than secondary market valuations. Companies or funds may be highly leveraged and therefore may be more sensitive to adverse business and/or financial developments or economic factors. Such investments may face intense competition, changing business or economic conditions or other developments that may adversely affect their performance.

### Interest rate and credit risks

The retention of value of a bond is dependent on the creditworthiness of the Issuer and/or Guarantor (as applicable), which may change over the term of the bond. In the event of default by the Issuer and/or Guarantor of the bond, the bond or any income derived from it is not guaranteed and you may get back none of, or less than, what was originally invested.

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