Swiss Economics

CREDIT SUISSE

How hard will rising energy prices hit Switzerland?

Monitor Switzerland | Q1 2022

Editorial

Dear readers

Two years after the outbreak of the pandemic, the coronavirus has lost much of its potential to do economic damage. In contrast to the two previous years, economic output did not decline this winter, and thanks to the general lifting of containment measures, the outlook – on this front at least – looks extremely positive until the end of the summer, if not beyond. Despite this positive situation, we are leaving our growth forecast for Switzerland this year unchanged at 2.5% (cf. page 6).

This is due to the jaw-dropping and unimaginable events of the last few weeks, namely the return of war in Europe. As a bank, we stand in solidarity with the international community in support of those suffering from the grievous consequences of the invasion of Ukraine. This crisis has triggered massive movements in the financial markets, strong upward pressure on the Swiss franc, and sharp rises in energy prices. Switzerland's direct sensitivity to higher gas and oil prices may be lower than that of its neighboring countries, but any supply shortages would likewise have dramatic consequences. Moreover, lower demand from Europe has a direct impact on the Swiss export economy.

You can read more about energy prices and international interdependencies in our Focus article starting on page 12. Here we analyze the impact of so-called "greenflation" – or the inflationary effect of climate protection measures – on Swiss households. Given the urgency to slow down climate change, the prices of CO_2 emissions can be expected to rise further all around the world. Our analyses show that some three-quarters of CO_2 emissions of Swiss households arise "indirectly" through the production of the goods they purchase. By contrast, direct emissions, such as those produced by heating buildings or driving, play a lesser role. Furthermore, two-thirds of these indirect emissions originate abroad – on the one hand because the majority of consumer goods are imported, and on the other because production in Switzerland is less emission-heavy than production abroad due to the high proportion of renewable energy used in the generation of Swiss electricity.

There are two conclusions that can be drawn from these findings: First, the less Switzerland participates in a global CO_2 tax, the more emission revenues will initially move abroad. Second, if Switzerland were to play a more pioneering role in this area, it would not only keep emission revenues in Switzerland, but also prepare the Swiss economy for any global increase in the price of CO_2 at a later stage. After all, for all the uncertainty in this area, one thing appears certain: The energy transition process will be pushed forward, be it for climate protection reasons or to reduce our dependency on oil, gas, and coal – particularly from Russia.

We wish you an interesting read.

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CEO Credit Suisse (Switzerland) Ltd

Claude Maurer
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Ukraine crisis weighs on economy, but post-pandemic recovery prevails

The effects of the COVID-19 pandemic on the economy are increasingly receding. At the same time, however, Russia's invasion of Ukraine clouds the outlook, particularly due to an inflationary effect. For 2022, we are still expecting Swiss gross domestic product to grow by 2.5%.

Economic output has increased, despite the latest COVID-19 wave, ...

Real gross domestic product (GDP) in Switzerland recorded a quarter-on-quarter rise of 0.3% in the fourth quarter of 2021. As expected, the domestic economy was slowed by the Omicron wave and the associated restrictions. However, the adverse economic effect was significantly weaker than in previous waves of the infection, when value creation took a significant hit in the winter months. Only in the hotels and catering sector did value creation decline in the fourth quarter of last year (–2.9%). Meanwhile, value creation in manufacturing rose dynamically despite problems in supply chains, with the chemicals and pharmaceutical sector leading the way (+4.9%). For 2021 as a whole, GDP growth amounted to 3.7%, hence Swiss economic output is now 2% higher than prior to the onset of the crisis (Fig. 1).

... and the lifting of restrictions is fueling growth

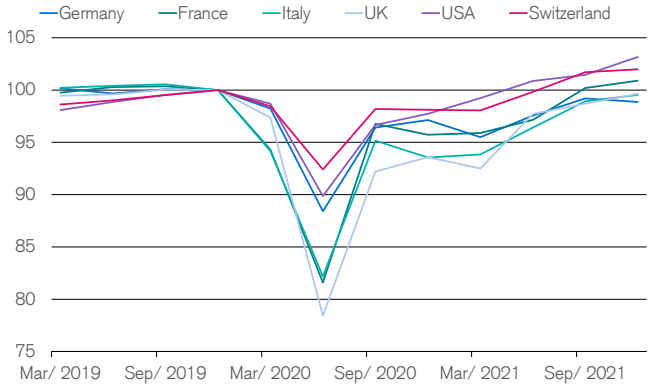
In other words, the economic situation at the start of 2022 was more dynamic than we predicted. In addition, we were previously anticipating harsher and longer-lasting restrictions to contain coronavirus than actually proved the case. With restrictions being rolled back in February, the Purchasing Managers Index (PMI) for the services sector surged to its highest level since the start of the pandemic, with numerous new orders pointing to strong development over the next few months too (Fig. 2). At the same time, the labor market situation is improving further in both services and manufacturing (cf. box on labor market on page 8), which should also have a positive impact on consumer sentiment.

War in Ukraine clouds economic outlook

Given this backdrop, our current forecast for GDP growth of 2.5% for 2022 would probably be about 0.5 percentage points too low. However, Russia's invasion of Ukraine has cast a shadow over the economic situation in Europe, and will indirectly affect Switzerland too. In addition, Switzerland also faces numerous economic risks, which we explore in more detail below. We are therefore sticking with our existing GDP growth forecast of 2.5% for the current year.

Fig. 1: Swiss economic output well above pre-crisis level

Real gross domestic product, seasonally adjusted, Q4 2019 = 100



Source: Datastream, Credit Suisse. Last data point: Q4 2021

Fig. 2: PMI for services sector records sharp rise

Growth threshold = 50

Source: procure.ch, Credit Suisse. Last data point: February 2022

Russia's share of Swiss exports minimal

We estimate the direct repercussions of the Russia-Ukraine conflict for Switzerland to be fairly low, as the regions' trade links to Switzerland are weak. According to the Federal Customs Administration (FCA), just 1.2% of Swiss export volumes are earmarked for Russia, with the corresponding figure for Ukraine being just 0.2%. On the import side, the importance of these two countries is minimal too, at just 0.1% each. Even in the area of tourism, Russian and Ukrainian guests account for just 1% of overnight stays, with Geneva being the biggest draw (1.5%).

A quarter of Swiss energy needs are met by gas – and a half of that comes from Russia

In contrast to the situation with foreign trade, Russia's role as a key commodity exporter is more crucial with regard to the repercussions of this conflict. Its greatest significance lies in the area of natural gas, as the substitution options for this commodity are the most limited in the short term. Although oil and gas are relatively insignificant for Swiss electricity generation, gas is an important source of heating. All in all, we estimate that at peak times, up to a quarter of all Swiss energy needs are met by gas, with around a half of this coming from Russia. However, an analysis on the basis of world input-output tables shows that Russian gas is not a key input factor for the sectors that are most relevant to Swiss value creation (Fig. 3).

Inflation rises to more than 2% due to energy prices, ...

The huge increase of global natural gas and oil prices over the last few months has also had a direct influence on inflation in Switzerland. Indeed, recent inflation figures have been at odds with what were previously rather benign price developments from a purchasing power standpoint. In February, inflation as measured through the Swiss Consumer Price Index rose to 2.2%, its highest level since October 2008. According to our forecasts, the inflation rate will remain above 2.0% for a few months before then slowly coming back down (cf. box on inflation, page 8).

... but SNB will not hike rates until mid-2023

However, the fact that inflation has risen above the target bandwidth of 0–2% set by the Swiss National Bank (SNB) is unlikely to trigger any immediate change in monetary policy. For the time being, the SNB will focus on the exchange rate and intervene in the currency markets as needed, particularly as the conflict in Ukraine has resulted in upward pressure on the franc. In the event of the situation stabilizing, the likelihood of such interventions would decline. The SNB can be expected to increase its key interest rate for the first time in mid-2023 – probably to be followed by a second rise in December of that year.

Inflation to weigh on economy only slightly

Meanwhile, our analyses of the price elasticities of consumer demand show that the negative impact of inflation on consumer spending should be manageable. On average since 1982, an increase in the rate of inflation by 1 percentage point has had the effect of reducing consumer spending by between 0.11% and 0.13% (depending on the estimation method). The positive momentum resulting from the general removal of measures to contain coronavirus should therefore remain the key driver of economic development over the coming months, hence economic growth should once again prove above-average this year (+2.5%). These special effects should increasingly wane, however, and we therefore expect growth momentum to slow to 1.6% in 2023.

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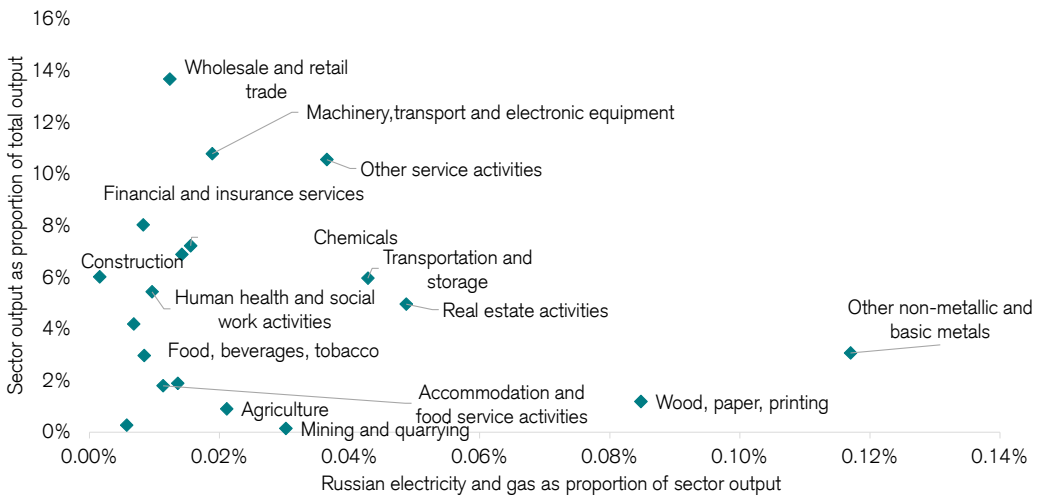
Fig. 3: Russian gas not a major input factor for key Swiss industries

Proportion of Russian electricity gas in output relative to significance of sector for gross value creation, excluding energy sector.



Source: World Input-Output Database (WIOD), Credit Suisse

Inflation

The latest price in oil prices is having a greater impact on inflation in Switzerland than previously assumed. While in our previous forecast we estimated that crude oil products contributed less than 0.1 percentage points to consumer price inflation, the current level of oil prices is likely to increas inflation by 0.3 percentage points in 2022. In both cases, however, the contribution made by oil prices to inflation is likely to peak soon. We therefore continue to anticipate a gradual fall in inflation over the course of the year. For 2022 we expect average inflation of 1.8%.

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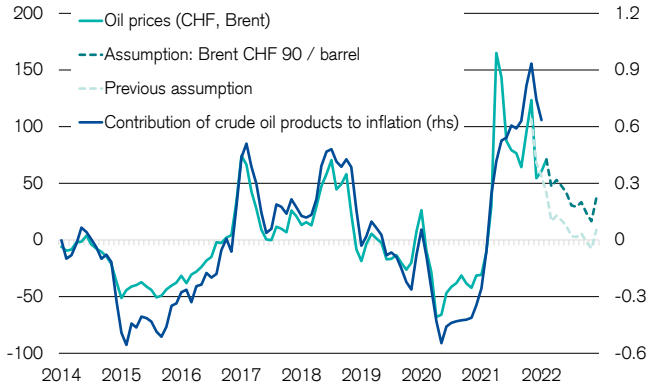
Contribution of oil prices to inflation likely to decline

Change in year-on-year comparison, in %, and contribution in percentage points



Source: Refinitiv Datastream, Credit Suisse. Last data point: January 2022.

Labor market

The labor market is currently experiencing a shortage of specialist personnel on a broad front. The number of vacant positions advertised at the end of 2021 was higher than any time since the turn of the millennium, and unemployment has now come back down to its pre-crisis level. Particularly in manufacturing and healthcare, but also in IT and hotels & catering, an above-average number of companies were reporting difficulties in finding qualified personnel at the year-end. As annual averages in 2022, we are expecting employment growth (expressed in full-time equivalents) of 1.4% and an unemployment rate of 2.3%, as compared to +0.6% and 3.0% respectively the previous year.

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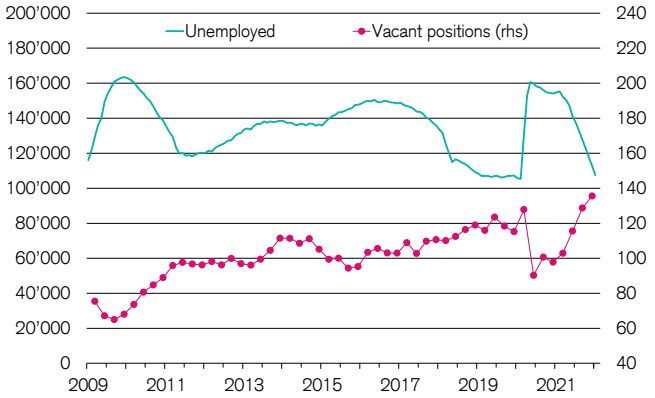
Unemployment back at pre-crisis level, vacant positions at record high

Registered unemployed; vacant positions according to Adecco Group Swiss Job Market Index, Q1 2008 = 100; seasonally adjusted figures



Source: State Secretariat for Economic Affairs (SECO), Adecco/University of Zurich, Credit Suisse
Last data point: February 2022 (unemployed); Q4 2021 (vacant positions)

Immigration

In 2021, net immigration is expected to amount to some 62,000 persons, and we are expecting a similar figure for 2022. The economic recovery in Switzerland is continuing, and the need for personnel is increasing accordingly. Despite the clouding due to the Ukraine crisis we also expect a positive economic development for the Eurozone this year, reducing the incentive to emigrate to Switzerland. All in all, these effects should broadly cancel each other out, leaving net migration for 2022 positive to the tune of 60,000 persons.

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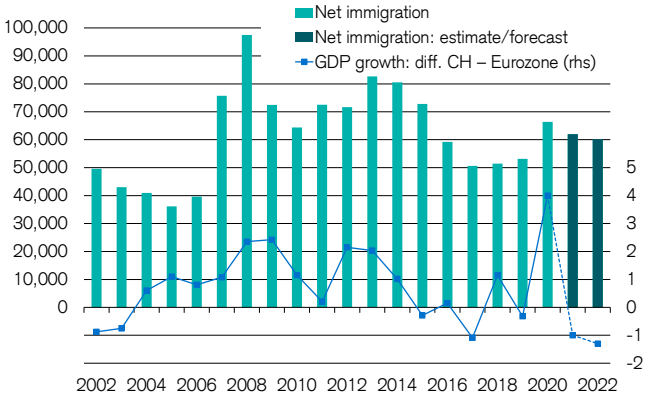
Net immigration likely to remain above pre-crisis level

Net migration of permanent residential population (excl. registry corrections, incl. Swiss citizens); GDP growth: difference in percentage points



Source: State Secretariat for Migration, Federal Statistical Office, SECO, Organisation for Economic Co-operation and Development (OECD), Credit Suisse

Pharmaceutical industry

In keeping with Swiss goods exports as a whole, pharma exports reached a new high in the fourth quarter of 2021. This occurred despite the appreciation of the Swiss franc against the currencies of key export destinations over the same period. Pharma exports exhibit a low price elasticity, which is why their value typically does not decrease against the backdrop of a strengthening franc. Irrespective of exchange rate effects, pharma exports can be expected to remain at a high level over the coming months.

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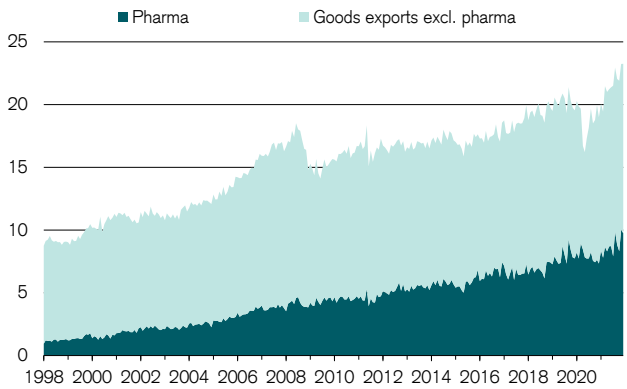
Pharma exports clamber to new high in Q4 2021
Goods exports excl. pharma and pharma exports, in CHF bn, seasonally adjusted



Source: Federal Customs Administration, Credit Suisse

Engineering, electrical and metal industry (MEM)

Compared to the previous quarter, MEM exports did record a slight decline in the fourth quarter of 2021 but remained at a high level. A broad-based recovery has taken place since the first wave of COVID-19 in the spring of 2020. Compared to the end of 2019, exports to all key destination countries have increased. The latest wave of COVID-19 had a negative impact only on exports to France. We are expecting the influence of the pandemic to weaken further, which should benefit MEM exports. However, a possible deterioration in supply shortages could weigh on export growth or even lead to declines.

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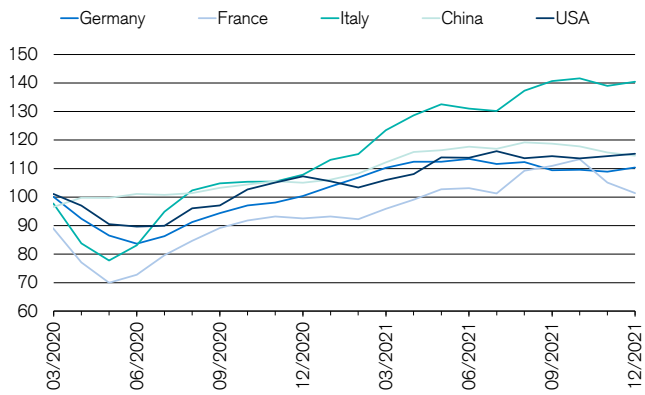
Key export destinations push above pre-crisis level
MEM exports, seasonally adjusted, indexed (Dec. 2019 = 100), three-month average



Source: Swiss Federal Customs Administration, Credit Suisse

Watchmaking industry

Watch exports finally got back to their pre-crisis level in the fourth quarter of 2021. Indeed, at CHF 5.6 billion they recorded the second-highest figure since record-keeping began (the highest quarterly figure was registered in 2014). Compared to pre-crisis levels, growth was strongest in the US (+36%), China (+22%), the United Kingdom (+14%), and the Netherlands (+10%). However, high rates of inflation in both Europe and the US could drag down consumer sentiment and act as a counterweight against further growth of watch exports over the coming months.

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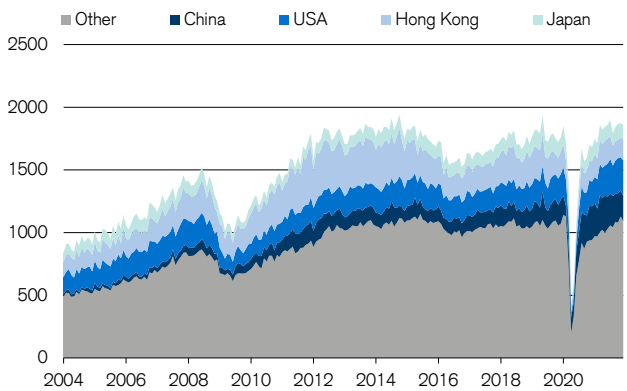
Full recovery of watch exports
Watch exports in CHF mn, by country, seasonally adjusted



Source: Swiss Federal Customs Administration, Credit Suisse

Retail

The Swiss retail trade closed out 2021 with a year-on-year sales increase of 1.3%. This was attributable to the positive development in the non-food segment, where sales increased by +2.7%. By contrast, the food area recorded a slight year-on-year decline (–0.5%). As there were no further far-reaching lockdowns, the influence of the COVID-19 pandemic on retail sales development has weakened in recent months. We are expecting a similar pattern for the current year, with the underlying effects of the pandemic likely to be less pronounced. We are therefore expecting sales declines of 5.5% in the food area and 2.8% in the non-food area.

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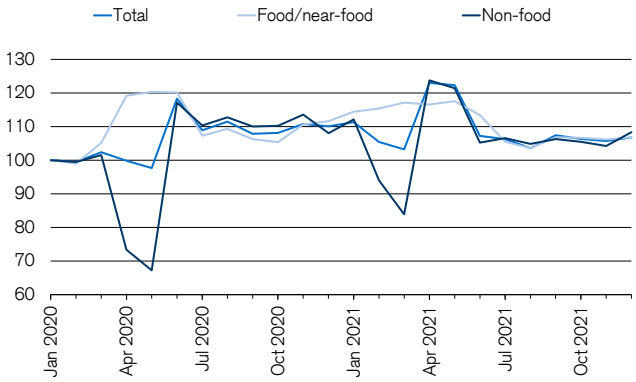
Retail sales even out

Development of seasonally-adjusted nominal retail sales, indexed, average 2019 = 100



Source: GfK, Credit Suisse

Tourism

In the autumn months, overnight stays in Switzerland's tourist municipalities were at least as high as in the years prior to the outbreak of coronavirus. A recovery took place in urban areas too, even though absolute overnight stay figures remained below pre-crisis levels. The loosening of the COVID-19 containment measures and the opening-up of borders should gradually reinvigorate city tourism. By contrast, we are expecting the recovery of business travel to be slow and probably incomplete. Accordingly, the number of overnight stays should remain below the pre-crisis level for the time being.

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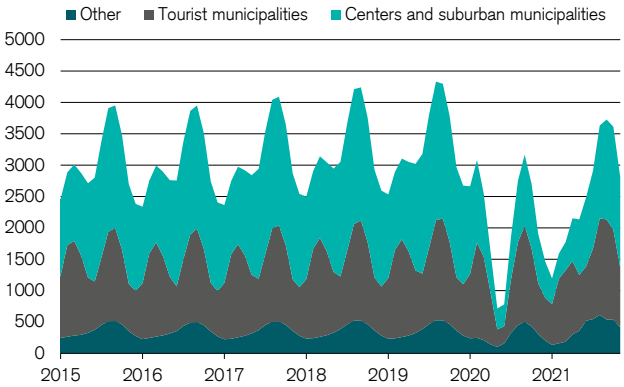
Tourism has recovered in Switzerland's tourist regions

Overnight stays in '000, three-month average, by tourist region classification



Source: Swiss Federal Statistical Office, Credit Suisse

Information technology (IT)

IT companies are currently benefiting indirectly from strong production in the manufacturing sector, and from the ongoing structural change that has been given an additional boost by the COVID-19 pandemic. Both phenomena have stimulated demand for IT services. Sentiment in the sector remained at a high level at the start of 2022 too. The balance between companies that view their business situation as positive and those that view it as negative stood at above 53% at the start of the first quarter of 2022. The factors cited above can be expected to support the IT sector over the coming months too.

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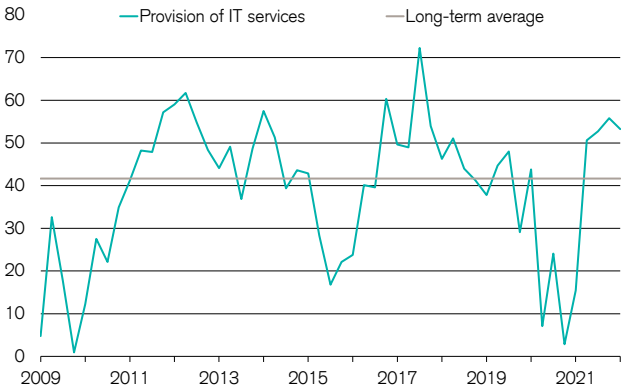
Sentiment remains positive in IT sector

Balance between companies who view their business situation as positive and those that view it as negative, in %, and long-term average



Source: Economic research unit of ETH Zurich (KOF), Credit Suisse

What "greenflation" means for Swiss households

Making CO_2 emissions more expensive to slow down climate change appears to be inevitable. The consequence would be rising prices along the entire value chain, which would affect the consumer spending of Swiss households mainly due to the indirect emissions latent in consumer demand. However, even a global CO_2 price would be unlikely to lead to uncontrollable inflation.

Greenflation likely to become an issue in the future

Rising inflation as a result of the energy transition, or "greenflation", has recently become a focus of international debate, even though the inflation of energy prices so far has been more attributable to geopolitical tensions and a lack of investment in the energy area than higher CO_2 prices[1]. In order to slow down climate change and decarbonize demand, however, higher CO_2 prices are likely to be unavoidable in future. This means that greenflation could gain importance – including in Switzerland. In the following, we analyze where CO_2 emissions originate when meeting the demand of Swiss households, and how Swiss households would be affected if CO_2 prices were to rise through taxation in the value chain.

A large proportion of emissions originate in production

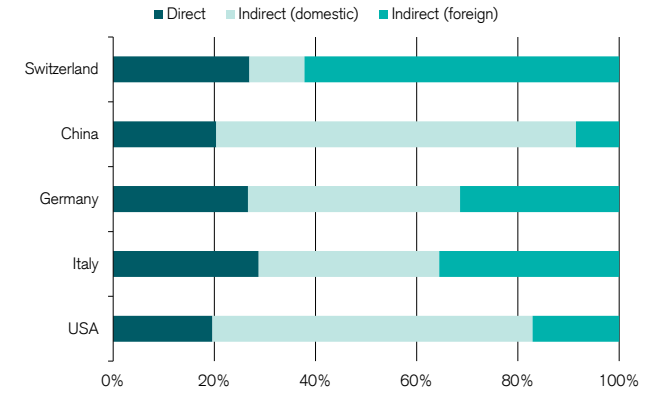
CO_2 emissions throughout the entire value chain can be quantified using global input-output tables[2]. Our analysis shows that 27% of the CO_2 emissions of Swiss households are direct emissions of households themselves, being the product of heating or driving, for example (Fig. 1). By contrast, the lion's share of Swiss household emissions (a total of 73%) originate during goods production, i.e. they are indirect emissions. Switzerland is no exception here. Developed nations' indirect emissions typically outstrip their direct emissions by far.

High proportion of indirect foreign emissions ...

Indirect emissions can originate either domestically or abroad. Switzerland is a special international case in this respect. As Figure 1 shows, around 62% of the CO_2 latent in the demand of Swiss households stems from abroad. Just 11% is emitted during production processes in Switzerland. On the one hand, this may be attributable to Switzerland's high dependency on imports. On the other, domestic value creation is less emission-heavy due to the high proportion of renewable energies in Swiss electricity production.

Fig. 1: Swiss consumer demand contains comparatively few domestic indirect emissions

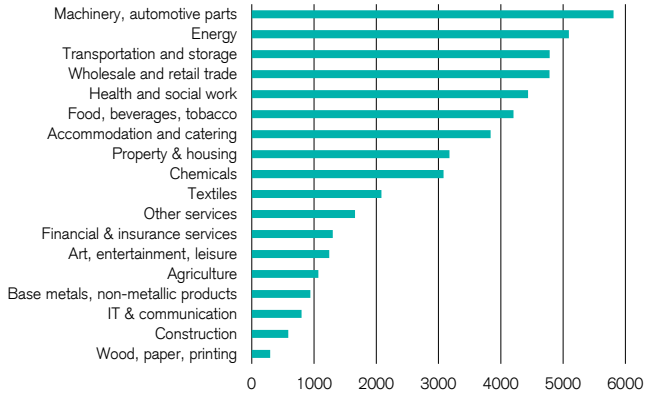
Percentage proportions of direct domestic emissions and indirect domestic and foreign emissions that are latent in household demand



Source: World Input-Output Database (WIOD), EU environmental accounts, Credit Suisse

Fig. 2: Indirect CO_2 emissions of the individual sectors originating in production for Swiss consumers

CO_2 emissions in kilotons (kt)



Source: World Input-Output Database (WIOD), EU environmental accounts, Credit Suisse

[1] "Greenflation: The Price for Net Zero?" in 2022 Economic Outlook: "The Great Transition"
[2] World Input-Output Database 2016 (WIOD); European Commission (2019): WIOD Environmental Accounts

… above all from Russia, China, and Germany

The three most important foreign countries of origin for the CO_2 emissions latent in Swiss consumer spending are Russia, China, and Germany. Around 8% of these indirect emissions can be attributed to each of these countries, primarily to the energy sector and manufacturers of chemicals.

Indirect emissions come from various sectors

The sectoral breakdown illustrated in Figure 2 reveals that most indirect emissions originating during production for Swiss consumer goods come from the machinery sector (12%) followed by the sectors of energy (11%), transportation and storage (10%), and wholesaling and retailing (10%). Around 9% of the indirect emissions latent in consumer demand originate through food production or through healthcare and social work. But irrespective of the sector, the proportion of foreign indirect emissions is very high (cf. Fig. 3).

CO_2-intensive sectors are less important for Swiss consumers, …

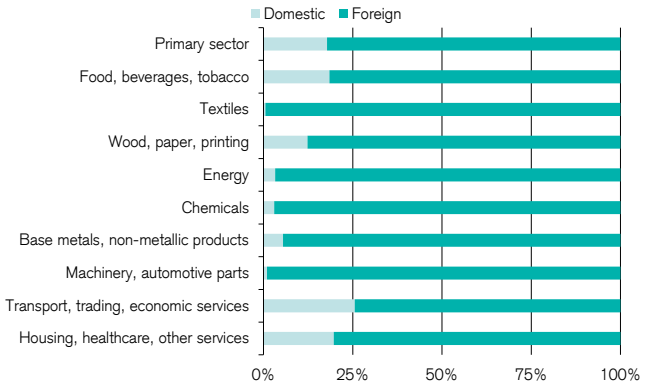
The level of indirect emissions of any given sector in final demand is determined by two factors: first, the significance of the sector for demand generally, and second, the CO_2 intensity of the sector. Around 80% of the expenditure of Swiss households relates to services, above all housing, healthcare, and wholesaling and retailing. By contrast, the industrial, energy, and primary sectors all account for lower proportions of consumer spending. When we combine the relevance of sectors for consumers with the sectors' CO_2 intensity (i.e. the volume of CO_2 emitted in the production of a single output unit), it emerges that the key sectors for consumers are not the most CO_2-intensive (Fig. 4). Unsurprisingly, the energy sector is the most CO_2-intensive, followed by the production of base metals and other non-metallic products. With regard to the relevance to household spending, however, these sectors rank only in the lower middle, and therefore have a lesser relative influence on the level of indirect emissions.

… which is why Switzerland exhibits comparatively low indirect CO_2 intensity

In an international comparison, therefore, Swiss households do not spend a great deal in CO_2-intensive sectors. The average indirect CO_2 intensity of Swiss consumer spending is correspondingly low: For each Swiss franc spent, just 0.15 kilograms (kg) of CO_2 is released. By way of comparison, in China it is 0.67 kg CO_2/CHF, in the USA 0.34 kg CO_2/CHF, in Germany 0.30 kg CO_2/CHF, and in Italy 0.22 kg CO_2/CHF. The relatively low indirect CO_2 intensity of Swiss consumer spending suggests that Swiss households would be less exposed to a global rise in CO_2 prices than consumers in other countries. After all, a CO_2 tax is typically not levied on the consumption of the individual (e.g. oil heating) but upstream in the value creation process (e.g. in the extraction, processing, and distribution of oil). As such, only the indirect emissions of households are relevant in any further analysis. However, as a majority of demand-side emissions come from abroad, a decisive factor is likely to be where higher CO_2 prices are implemented.

Fig. 3: In all sectors, indirect emissions predominantly originate abroad

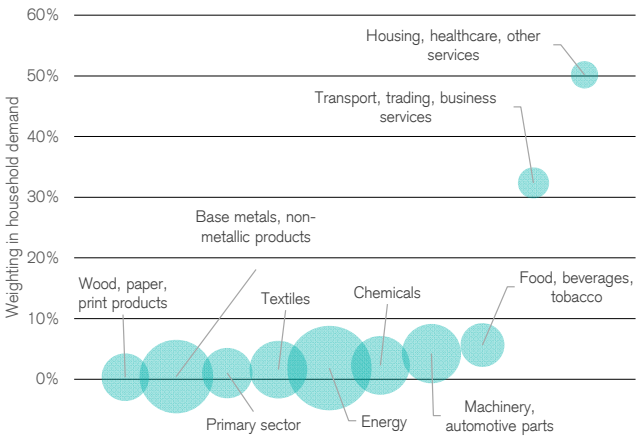
Percentage proportions of indirect emissions from Switzerland and abroad that are latent in Swiss consumer demand



Source: World Input-Output Database (WIOD), EU environmental accounts, Credit Suisse

Fig. 4: CO_2-intensive goods less relevant to the Swiss consumer

Weighting of sector in Swiss consumer spending (in %), circle size illustrates CO_2 intensity of sector in question (in kg CO_2/CHF)



Source: World Input-Output Database (WIOD), EU environmental accounts, Credit Suisse

Analysis restricted to a short time horizon with inelastic demand

Using global input-output tables, we can now simulate the introduction of a CO_2 tax on value creation in various sectors and countries of the world. A CO_2 levy essentially increases the input costs of the taxed companies in proportion to their CO_2 emissions. For purposes of our analysis, we are assuming that producers pass on higher CO_2 prices fully to consumers – an assumption that is borne out by empirical studies[3]. Moreover, we restrict our analysis to a short time horizon, i.e. the first year after the introduction of the CO_2 price. In this phase, energy intensity and the technologies used are still inelastic and cannot be adjusted to the higher CO_2 price. Companies and households will react to changes in relative prices in the medium to long term by reducing their use of CO_2-intensive goods and substituting these with lower-emission and therefore comparatively cheaper alternatives. In addition, these price rises will have repercussions for the international competitiveness of a sector or country. However, we exclude these quantity effects from our analysis for the time being and focusing solely on the supply-side repercussions in the first year.

Four stylized scenarios for CO_2 pricing: global, national, and sector-specific

We evaluate four different scenarios for a CO_2 tax. From a political standpoint, these scenarios are presumably somewhat improbable. But the aim of our analysis is rather to illustrate impacts along global value creation flows, which is why we have deliberately chosen contrasting – and in some cases extreme – scenarios.

World	By far the most wide-ranging scenario: The global community decides to put a uniform price on all emissions this year. The overarching aim is to reach the price of USD 75 per ton of CO_2 (t CO_2) in the next few years, as recommended by the International Monetary Fund (IMF) in order to comply with the Paris Climate Agreement. In the first year, which is the relevant one for our analysis, the new price initially amounts to USD 30/t CO_2. This scenario covers 100% of global emissions.
G7	Similar to the "World" scenario, a "Climate Club" of the largest industrialized nations (European Union [EU], US, United Kingdom, Canada, Japan), agrees to apply a universal CO_2 price of USD 30/t CO_2 in their economies. This is introduced on top of existing national CO_2 taxes. In this scenario, around 27% of global emissions are covered. Switzerland does not participate.
EU-ETS price rise	The third scenario is not based on an explicit political decision. Instead, the price of emissions certificates in the EU's Emission Trading System (EU-ETS) experiences a rapid market-driven rise of EUR 27 (USD 30) from EUR 80/t CO_2 at the start of 2022 to EUR 107/t CO_2. In emissions trading in Switzerland, which is affiliated to the EU-ETS, the price rises by the same amount, albeit from a lower base. Unlike other scenarios, however, this development only affects sectors that participate in emissions trading, i.e. predominantly energy-intensive activities such as oil refining, steel manufacture, the generation of power and heat, the production of metals, cement, and paper, and domestic European flight operations – but here too, only in Switzerland and the EU. Accordingly, this scenario covers just 6% of global emissions.
Switzerland goes it alone	While the world generally makes only gradual progress in the pricing of emissions, the Swiss electorate approves a revised version of the CO_2 Act, which envisages a unilateral increase and expansion of the CO_2 levy. The levy now applies to all CO_2 emissions, i.e. there are no exemptions, and the figure in question rises by CHF 28 (USD 30) to CHF 148/t CO_2. Despite the very radical measure, this scenario affects just 0.08% of global emissions, and has the least far-reaching impact in our analysis. This is logical, as a go-it-alone stance by the Swiss can only cover Swiss emissions.

[3] Lise et al. (2010): "The Impact of the EU ETS on Prices, Profits and Emissions in the Power Sector – Simulation Results with the COMPETES EU20 Model", Environ Resource Econ 47, 23 – 44;
Fabra and Reguant (2014): "Pass-Through of Emissions Costs in Electricity Markets", American Economic Review, 104 (9), 2872 – 99

Energy sector the most affected by an international CO_2 price due to oil imports

In a first step, we look at which sectors of the economy in Switzerland would be particularly hard-hit by the introduction of CO_2 prices. These are on the one hand the sectors with above-average CO_2 intensity, and on the other – depending on the scenario – those with strong trade links and therefore high indirect emissions from abroad. The greatest cost increases for the Swiss economy are entailed as expected in the "World" scenario, as this is where most emissions are priced (Fig. 5). Due to the import of fossil fuels, the energy sector is the most hard-hit, with a relative price increase of almost 6%. Energy prices in Switzerland rise accordingly. But other sectors also record relatively high price increases of around 3% in the "World" scenario, such as mining, agriculture, and base metal and paper production. In the other scenarios, inflation is less pronounced. In the G7 scenario, for example, in which oil, gas, and coal imported from third countries is not subject to any CO_2 tax, energy prices in Switzerland rise by just 0.55%.

Fig. 5: "World" scenario has the most far-reaching repercussions for Swiss value creation, above all for the CO_2-intensive energy sector.

Sectoral proportions of total output, relative price rise of products in first year, in %

	Output share	World	G7	EU-ETS price rise	Switzerland goes it alone
Agriculture	0.9%	2.43%	0.46%	0.26%	0.09%
Mining	0.1%	3.24%	0.49%	0.30%	0.07%
Manufacture of food, beverages, tobacco	3.0%	2.00%	0.38%	0.20%	0.10%
Manufacture of textiles	0.3%	2.36%	0.37%	0.19%	0.02%
Manufacture of wood, paper, print products	1.2%	2.60%	0.53%	0.32%	0.09%
Energy	4.0%	5.90%	0.55%	0.37%	0.04%
Manufacture of chemicals	7.2%	1.75%	0.43%	0.19%	0.02%
Manufacture of base metals, other non-metallic products	3.1%	3.10%	0.61%	0.34%	0.08%
Manufacture of machinery, automotive parts, and electronics	10.8%	2.18%	0.38%	0.18%	0.04%
Construction	6.0%	1.68%	0.37%	0.29%	0.10%
Wholesale and retail trade	13.7%	1.15%	0.24%	0.11%	0.05%
Transportation and storage	6.0%	2.16%	0.41%	0.21%	0.06%
Accommodation and catering	1.8%	1.80%	0.30%	0.17%	0.07%
IT and communication	4.2%	1.40%	0.23%	0.09%	0.03%
Financial and insurance services	8.0%	0.73%	0.12%	0.05%	0.02%
Property & housing	5.0%	1.18%	0.12%	0.07%	0.02%
Freelance, scientific, technical services	6.9%	1.15%	0.21%	0.11%	0.03%
Health and social work	5.4%	1.26%	0.19%	0.10%	0.02%
Art, entertainment, leisure	1.9%	2.05%	0.31%	0.18%	0.04%
Other services	10.6%	1.45%	0.22%	0.12%	0.04%
Total	**100%**	**1.75%**	**0.30%**	**0.16%**	**0.04%**

Source: World Input-Output Database (WIOD), EU environmental accounts, Credit Suisse

Swiss CO_2 price increase would above all affect domestic agriculture and manufacturing

In the EU-ETS price rise scenario, the cost increases are concentrated – as expected – primarily in the sectors that are directly subject to emissions trading. Due to interconnected value chains, however, the higher CO_2 prices also impact downstream industries such as agriculture, construction, and transportation. In the "Switzerland goes it alone" scenario, trade links do not play a role: What matters here are the indirect emissions of domestic value creation, which were seen in our previous analysis (Fig. 3) to be fairly low. As a consequence, cost rises manifest themselves first and foremost in agriculture, certain branches of industry, and construction.

Households would feel price rises in the areas of healthcare and housing most strongly

In a second step, we look at the repercussions of these scenarios for the pockets of Swiss households. After all, the fact that a sector records high price rises in its final products does not necessarily mean significant increases in living costs for households. The extent to which CO_2 prices are felt in household budgets also depends on how much money households spend on the products in question. For this reason, we weight all these price increases with the end demand of households, as we did previously with the calculation of the CO_2 intensity. A very different picture then emerges – the large price increases in energy and manufacturing immediately become much less important, whereas relatively modest inflation in housing and healthcare as well as in wholesaling/retailing suddenly takes on particular significance (Fig. 6). This is because these three sectors account for above-average proportions of household budgets, namely 18%, 16%, and 15% respectively, hence even a small price rise has a major impact. A global CO_2 tax would therefore affect Swiss households most of all via this expenditure. But food, catering, and accommodation would also become more expensive.

In no scenario is inflation expected to exhibit an uncontrollable rise

All in all, it can nonetheless be said that the price increases remain manageable in all four scenarios. Even in the extreme "World" scenario, the price of consumption for Swiss households rises by just 1.51% in the first year (Fig. 7). In the less far-reaching "G7" scenario the repercussions are accordingly lower (0.26%), just as they are with the EU-ETS price increase scenario (0.14%). The "Switzerland goes it alone" scenario increases the price of consumption by just 0.03%. These average price rises should not be considered exactly the same as annual inflation rates. After all, our weighting with final demand is sector-based rather than product-based, which is how the Swiss consumer price index (LIK – the measure of Swiss inflation) is calculated. Nonetheless, the general magnitude of our results makes it reasonable to conclude that even the introduction of a global CO_2 price of USD 30/t CO_2 would see inflation in Switzerland only rise temporarily – if at all – above the target bandwidth of the Swiss National Bank (SNB).

"World" and "Switzerland goes it alone" scenarios generate the most state revenues for redistribution

With regard to the impact on the wallets of Swiss households, it should not be forgotten that a CO_2 tax also generates income that is then available for redistribution, and can thus partly compensate for higher living costs. Here too, what matters is where the CO_2 price is introduced or increased. In a comparison of the four scenarios, the "World and "Switzerland goes it alone" scenarios are the most lucrative solutions for the Swiss public finances: They both generate CHF 660 million in the first year, in addition to the CHF 1,400 million coming from Switzerland's existing CO_2 levy. If these additional revenues were redistributed to the Swiss people on the basis of the same formula, annual healthcare premiums would decline by an additional CHF 35 for every person resident in Switzerland (Fig. 7). In the case of the "EU-ETS price rise" the equivalent figure is just CHF 10, while for the "G7" scenario it is actually zero, because the tax in question is levied abroad. Here it should be borne in mind that the cost increases for Swiss households in these scenarios are significantly higher than in the "Switzerland goes it alone" scenario. At the same time, however, the state has less financial freedom to mitigate the impact and redistribute, because a proportion of the additional expenditure imposed on consumers ends up in the coffers of foreign tax authorities.

"Switzerland goes it alone" would be a cheap way of preparing the economy for the transition to climate neutrality

From an overall standpoint, the "Switzerland goes it alone" scenario is therefore the cheapest of the four – both for domestic value creation and for the consumer spending of Swiss households and the state budget. Admittedly, this scenario would hardly make a significant contribution to combating climate change, as less than 0.08% of global emissions would be covered by the levy – the effect at a global level would be negligible. Political efforts to deliver an internationally coordinated approach therefore remain essential. However, "Switzerland goes it alone" would create effective emission reduction incentives for domestic manufacturers and consumers – and with relatively little cost to households, as our analysis shows. The Swiss economy would therefore be gently prepared for an increase in global CO_2 prices. Such an increase can be expected to come sooner or later, and would then have much greater consequences for a badly prepared economy than for an already prepared Switzerland with its go-it-alone stance.

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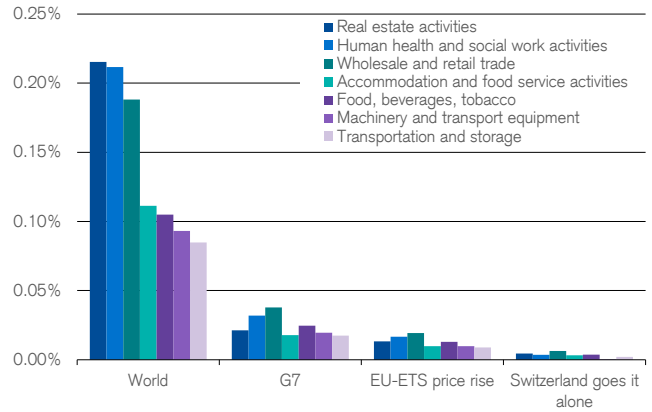
Fig. 6: Swiss households would feel a global CO_2 price most keenly in the housing and healthcare areas

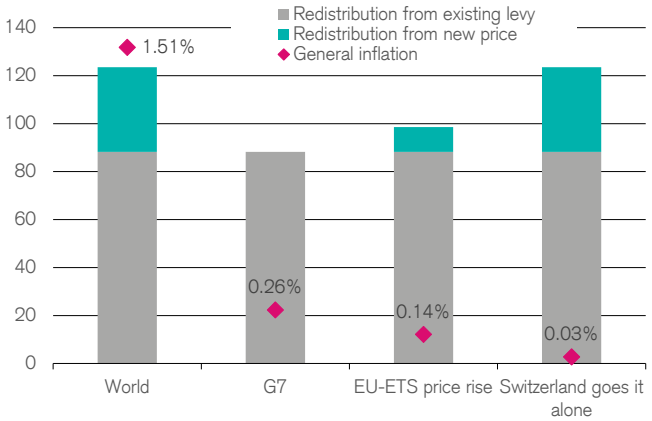
Price rises weighted with end household demand in the first year, in the seven most affected sectors, in %



Source: World Input-Output Database (WIOD), EU environmental accounts, Credit Suisse

Fig. 7: "Switzerland goes it alone" delivers the most revenues for redistribution relative to the cost increase

Redistribution in CHF per person resident in Switzerland; inflation weighted with end household demand in the first year



Source: World Input-Output Database (WIOD), EU environmental accounts, Federal Office for the Environment (FOEN), Credit Suisse

Privilege of the last mover

Central banks globally are rapidly shifting toward a tighter monetary policy stance, prompting us to revise our forecast for the Swiss National Bank (SNB). We now expect the SNB to raise its policy rate twice in 2023 by a cumulative 0.5 percentage points.

Inflation outlook does not warrant a tighter monetary policy yet…

Unlike many other advanced economies, we believe that the inflation outlook for Switzerland would not warrant a tightening of monetary policy in 2022 and 2023. But as central banks globally are rapidly shifting toward a tighter monetary policy stance, it does not seem realistic anymore for the SNB to hold on to its record-low policy rate for two more years, in our view.

…and being patient with rate hikes should reduce appreciation pressures on the Swiss franc

Still, in being patient with policy rate increases, the SNB could allow a widening of the interest rate spread with other currency areas, and in particular with the Eurozone. Following the European Central Bank's (ECB) monetary policy decision on 3 February, our European Economics team now expects the ECB to start raising its policy rate in December 2022 and by a total of 1 percentage point by the end of 2023. Therefore, the interest rate spread widening will now likely occur sooner than we expected. A wider interest rate spread should help reduce appreciation pressures on the Swiss franc, a development that the SNB would most likely welcome, given that it has regularly expressed its discomfort with the strength of the Swiss franc. Being the last mover in shifting toward a tighter monetary policy stance would therefore be an advantage for the SNB.

The SNB should start raising its policy rate only in 2023

At the same time, given the outlook for the ECB policy rate, it should not be necessary anymore for the SNB to keep its policy rate unchanged at –0.75% until the end of 2023 to reduce appreciation pressures, according to our previous forecast. In this context, we revise our forecast and now expect the SNB to start raising its policy rate in 2023. We pencil in one rate hike of 0.25 percentage point in June 2023 and another in December 2023, leading to a cumulative increase in the policy rate of 0.5 percentage point by the end of 2023. This forecast is still significantly lower than what financial markets are pricing in.

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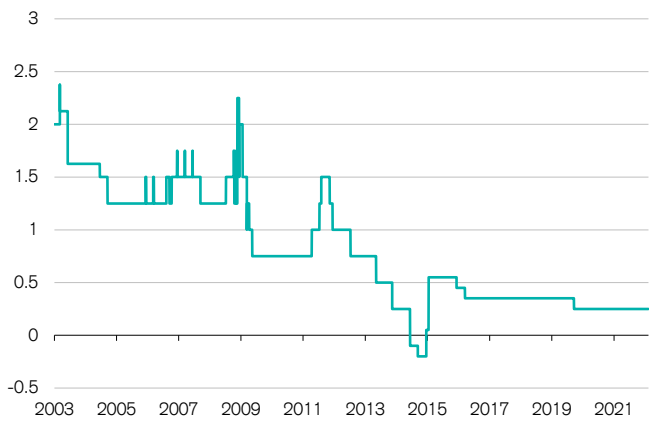
Figure 1: Interest rate difference between the ECB and the SNB is narrow in historical comparison

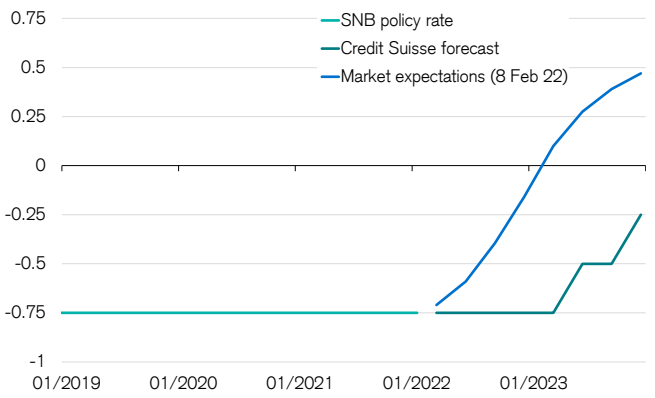
Interest rate spread between the ECB main policy rate and the SNB policy rate, in percentage point



Last data point: 08/02/2022. Source: Bloomberg, SNB, Credit Suisse

Figure 2: Financial markets expect a rapid increase in SNB's policy rate

SNB policy rate, in %



Market expectations are derived from the futures on the three-month SARON index (Swiss Average Rate Overnight). Last data point: 08/02/2022. Source: Bloomberg, SNB, Credit Suisse

Negative interest rates

Even if the SNB starts to raise its policy rate next year, as we currently forecast, most bank customers are unlikely to benefit from higher interest rate on their deposits any time soon. First, despite the two expected interest rate hikes in 2023, the SNB policy rate should remain negative at least until the end of 2023. Second, only a relatively small amount of CHF 125 bn (13% of total) of customer deposits is subject to a negative interest rate. While the interest rate on the latter may become less negative, any interest rate increase for deposits not subject to negative interest rates is highly unlikely, as long as the SNB policy rate is not positive.

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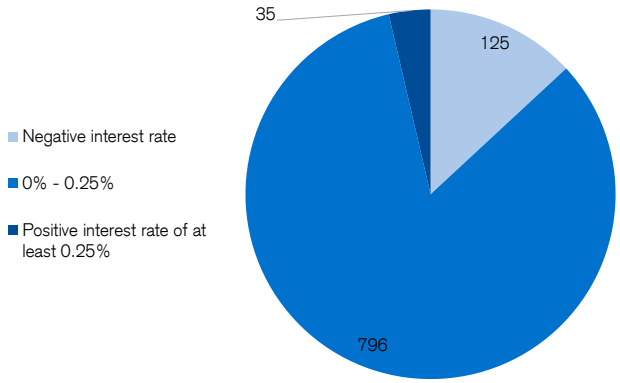
Most bank clients do not pay negative interest rates

Domestic customer deposits excluding tied pension provision, by interest rate range, in CHF bn



Last data point: Q3 2021. Source: SNB, Credit Suisse

Foreign currency purchases

As the Swiss franc appreciated in Q4 2021, the SNB stepped up its foreign currency purchases. However, we estimate that the foreign exchange interventions were much smaller than at the start of the COVID-19 crisis in 2020 or in the months that preceded the French presidential elections in 2017. The reason is that the appreciation of the Swiss franc was largely driven by economic fundamentals, including a much lower inflation rate in Switzerland than in the rest of the world. In 2022, as most central banks are shifting toward a tighter monetary policy stance, foreign currency purchases by the SNB will become scarcer, in our view.

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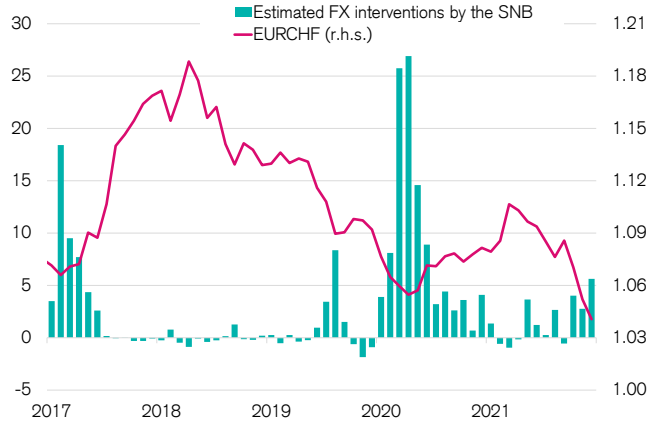
Renewed foreign currency purchases in Q4 2021

In CHF bn (l.h.s.) and EUR/CHF (r.h.s.)



Last data point: 12/2021. Source: Refinitiv Datastream, SNB, Credit Suisse

COVID-19 loans

Since the last edition of the "Monitor Switzerland" (based on data from 8 December 2021), companies have paid back an additional CHF 351 m of COVID-19 loans. With a total of CHF 4.7 bn, corporates have paid back 28% of COVID-19 loans. Defaults have also increased since our last update, from CHF 324 m to CHF 355 m. In parallel, and according to newly published data, CHF 9 m could be recovered from previously defaulted loans.

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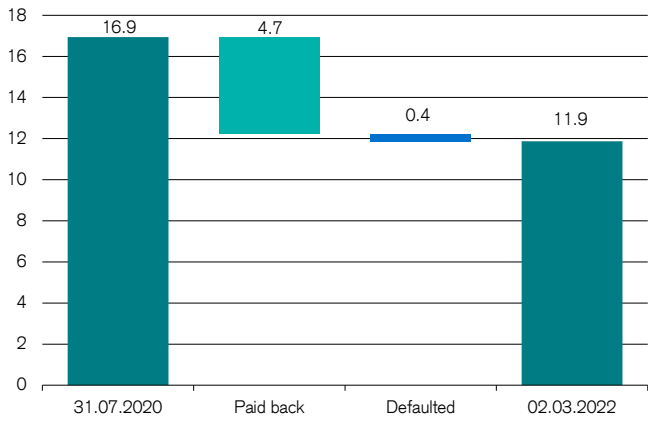
COVID-19 loans outstanding have dropped below CHF 12 bn

In CHF bn



Last data point: 03/02/2022. Source: SECO, Credit Suisse

Owner-occupied housing

The combination of scarce – and declining – supply and persistently high demand is resulting in strong price growth in owner-occupied housing. Within the space of a year, the prices of condominiums (CDM) in the medium price segment have surged by 6.7%. The price growth of single-family homes (SFH) was even more striking at 8.3%. In both segments, these rises are far above of the long-term average (CDM: 3.8%, SFH: 3.3%). The rises would probably have been even higher were it not for Switzerland's rigorous regulatory financing requirements

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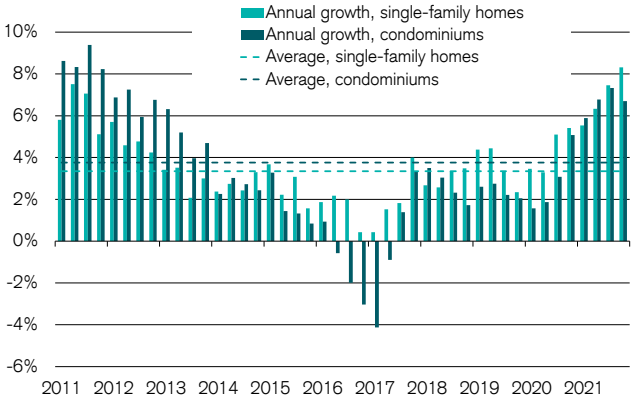
Residential property records unusually strong price growth

Price development of medium segment; dotted lines: average 2000–2021



Source: Wüest Partner. Last data point: Q4 2021

Rental apartments

In 2021, the number of rental apartments approved for construction across Switzerland stood at an estimated 23,800, or almost 2,000 residential units fewer than in 2020. The annually approved volume of newbuild construction has therefore declined by 17.7% since peaking in 2016. Indeed, actual building activity can be expected to have declined even more strongly recently. Construction site productivity has suffered declines in some places due to the hygiene and social distancing measures in connection with COVID-19, while all sorts of construction materials have been – and remain – difficult to procure. The decline in construction activity was reflected in the first decline in vacancies for 12 years.

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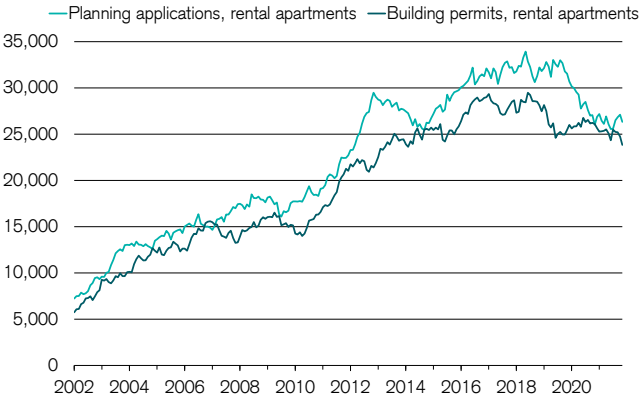
Building permit issuance at lowest level since 2013

Planning applications and building permits for rental apartments (newbuilds) in number of residential units, moving 12-month total



Source: Baublatt, Credit Suisse. Last data point: November 2021

Office property

The volume of advertised office space is increasing due to hesitant demand. This is particularly true in certain sub-markets that have seen approval of high construction investment in recent years. For example, brisk building activity in Basel and Geneva has contributed to a significant rise in supply, whereas the market in Zurich has received fewer supply stimuli due to below-average planning activity over the last few years. As long as uncertainty remains over the future need for office space, investors will remain reticent: Building permit issuance in 2021 (up to November) amounted to around CHF 1.6 billion, which is 17% below the long-term average.

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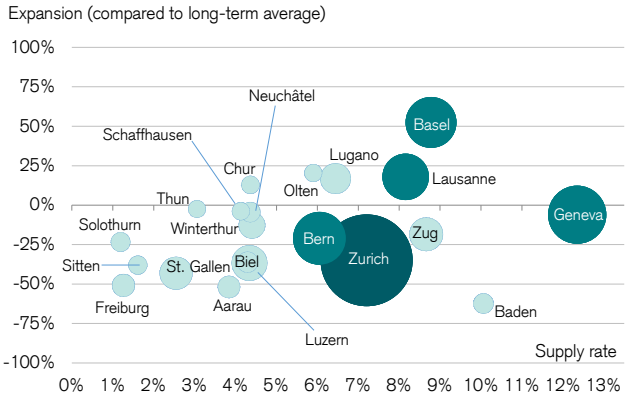
Strong increase in volume of available space increases supply rate

Circle size: existing office space; expansion: construction approvals over the last five years compared to the long-term average; supply rate as % of existing stock 2018



Source: Credit Suisse, Meta-Sys, Baublatt. Last data point: September 2021

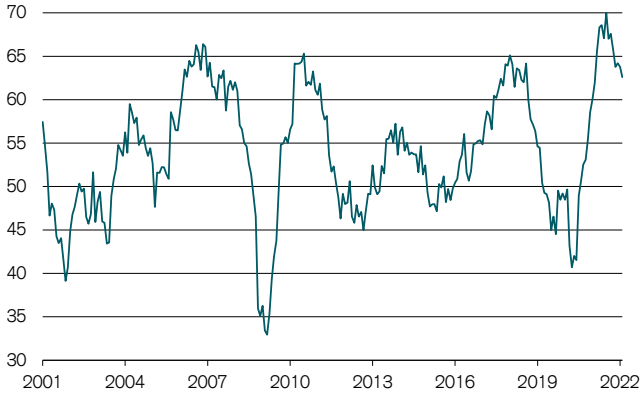
Credit Suisse Leading Indicators

Purchasing Managers' Index (PMI)

Purchasing managers stand at the beginning of the production process. The PMI uses this forward-looking feature to forecast the level of economic activity. The index is based on a monthly survey conducted by procure.ch, the industry body for purchasing and supply management. Purchasing managers respond to eight questions on output, backlog of orders, purchasing volumes, purchase price, delivery times, stocks of purchases, stocks of finished goods, and employment. They indicate whether activity levels are higher, the same, or lower than in the preceding month. The percentage share of responses stating "higher" and "no change" are used to calculate the sub-indices, though only half of the "no change" share of responses is included. The PMI lies between 0 and 100, with a figure of more than 50 indicating an expansion of activity compared with the previous month.

Industrial Activity

PMI index > 50 = growth



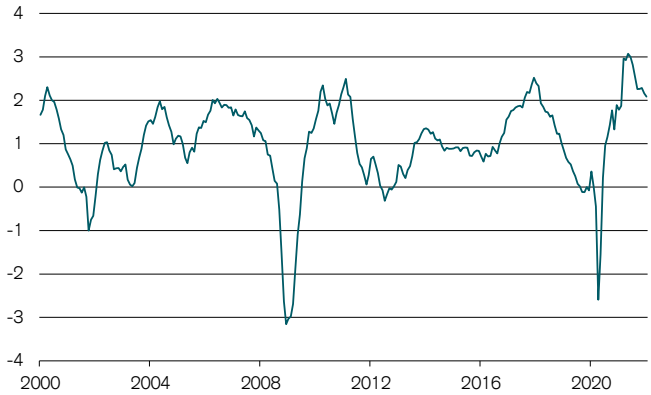
Source: procure.ch, Credit Suisse

Credit Suisse Export Barometer

The Credit Suisse Export Barometer takes as its basis the dependence of Swiss exports on foreign export markets. In constructing the export barometer, we have drawn together important leading industry indicators in Switzerland's 28 most important export markets. The values of these leading indicators are weighted on the basis of the share of exports that goes to each country. The export barometer consolidates this information to produce a single indicator. Since the values in question are standardized, the export barometer is calibrated in standard deviations. The zero line corresponds to the growth threshold. The long-term average growth of Swiss exports of approximately 5% is at 1.

Exports

In standard deviation, values > 0 = growth



Source: PMIPremium, Credit Suisse

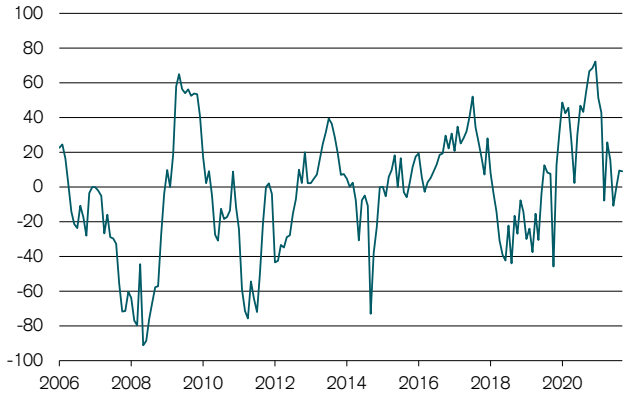
CS CFA Society Switzerland Index

Financial analysts have their finger on the pulse of the economy. Since 2017, we have been conducting a monthly survey of financial analysts jointly with CFA Society Switzerland under the heading Financial Market Test Switzerland[1]. Analysts are questioned not only about their assessment of the current and future economic situation as well as the rate of inflation but also about financial market issues such as equity market performance and interest rate forecasts. The CS CFA Society Switzerland Index represents the balance of expectations regarding the development of Swiss economic activity over the coming six months.

[1] Published as the Credit Suisse ZEW Index from 2006 until 2016

Economic Activity

Balance of expectations, values > 0 = growth



Source: CFA Society Switzerland, Credit Suisse

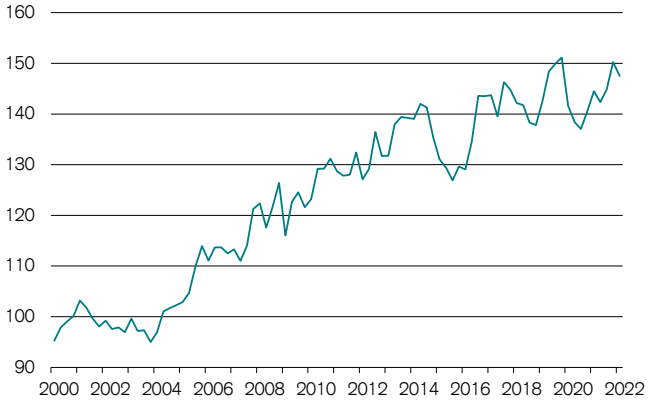
Credit Suisse Leading Indicators

Swiss Construction Index

The Swiss Construction Index is published once a quarter jointly by Credit Suisse and the Swiss Contractors' Association (SCA). It serves as a leading indicator for the state of Switzerland's construction sector by forecasting the volume of work in the core construction business in the coming quarter. The indicator is calculated by Credit Suisse and is based mainly on a quarterly survey conducted by the SCA among its members. Additional data is provided by the Swiss Federal Statistical Office and Baublatt. The Construction Index was launched in the first quarter of 1996.

Construction Industry Climate

1st quarter 1996 = 100



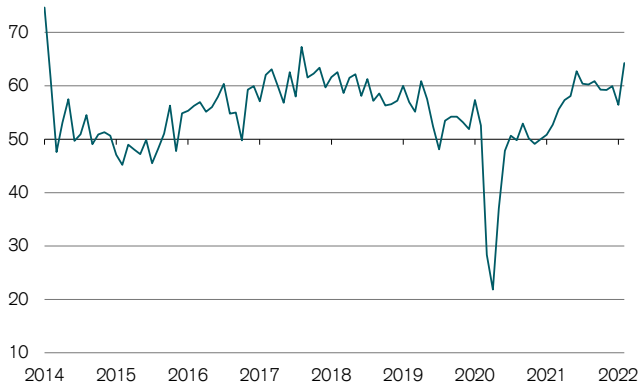
Source: Swiss Contractor's Association, Credit Suisse

PMI Services

Procure.ch, the professional association for purchasing and supply management and Credit Suisse launched a PMI for the services sector in 2014. The Services PMI is structured in exactly the same way as its industry counterpart. Values over 50.0 points mean expansion. It is based on a survey of purchasing managers from Swiss service providers. There are six subcomponents: type of business, new orders, order book, purchasing prices, sales prices and number of employees.

Activity in the services sector

PMI Services index > 50 = growth



Source: procure.ch, Credit Suisse

Forecasts and Indicators

Forecasts for the Swiss Economy

	2022P	2022P	2022P	2022P	2023P	2023P	2023P	2023P	2022P	2023P
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4		
GDP (YoY, in %)	4.4	2.8	1.4	1.4	1.5	1.6	1.5	1.7	2.5	1.6
Consumer spending	7.5	4.2	1.7	3.0	1.6	1.6	1.6	1.6	4.0	1.6
Government expenditure	3.0	0.0	2.0	0.0	1.0	1.0	1.0	1.0	1.2	1.0
Gross capital investment	2.1	0.1	1.9	2.7	1.5	1.5	1.5	1.5	1.7	1.5
Construction investment	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.3	0.5
Investment in plant and equipment	3.0	0.0	2.9	4.0	2.0	2.0	2.0	2.0	2.5	2.0
Exports (goods and services)	10.0	4.5	2.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0
Imports (goods and services)	7.0	4.0	1.5	1.6	3.0	3.0	3.0	3.0	3.5	3.0
Inflation (in %)	2.0	2.2	1.6	1.5	1.2	1.0	0.8	0.9	1.8	1.0
Unemployment (in %)	2.3	2.3	2.4	2.4	2.5	2.4	2.5	2.4	2.3	2.4
Employment growth FTEs (YoY, in %)	2.1	1.8	1.1	0.7	0.8	0.9	0.8	0.9	1.4	0.9
Net immigration									60,000	
Nominal wage growth (YoY, in %)									0.8	1.2

Source: Federal Statistics Office, State Secretariat for Economic Affairs SECO, Credit Suisse

Forecasts for the World Economy

	Forecasts				Structure		Significance for Switzerland	
Forecasts	**GDP** YoY, in %		**Inflation** YoY, in %		**Population** In million	**GDP** In USD billion	**Share of exports** In %	**Share of imports** In %
	2022	**2023**	**2022**	**2023**	**2021**	**2021**	**2021**	**2021**
World	3.6	2.9	5.8	3.1	7,762	94,935	100	100
US	3.3	2.1	6.3	2.5	331	22,940	18.1	6.0
Euro zone	2.8	2.5	6.0	2.0	343	14,518	51.5	66.8
Germany	2.2	2.3	5.6	2.3	83	4,230	17.0	27.4
France	3.3	2.3	4.5	2.2	65	2,940	5.7	7.7
Italy	3.2	2.1	6.3	1.8	60	2,120	6.0	9.3
UK	3.6	1.4	7.4	3.8	67	3,108	3.0	2.2
Japan	1.5	1.2	0.7	0.5	125	5,103	2.9	2.0
China	5.9	4.9	2.1	2.0	1,418	16,863	6.0	8.9

Source: Datastream, International Monetary Fund, Credit Suisse

Interest Rates and Monetary Policy Data

	Current	3-month	12-month		03/2022	02/2022	03/2021
SNB target range (in %)	-0.75	-0.75	-0.75	M0 money supply (CHF bn)	746.0	736.9	722.5
10-year government bond yields (in %)	0.30	0.2	0.4	M1 money supply (%, YoY)	3.7	4.5	10.0
				M2 money supply (%, YoY)	0.7	1.5	6.8
				M3 money supply (%, YoY)	0.6	1.4	7.0
				Foreign currency reserves (CHF bn)	977.0	966.2	914.0

Source: Datastream, Bloomberg, Credit Suisse

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