

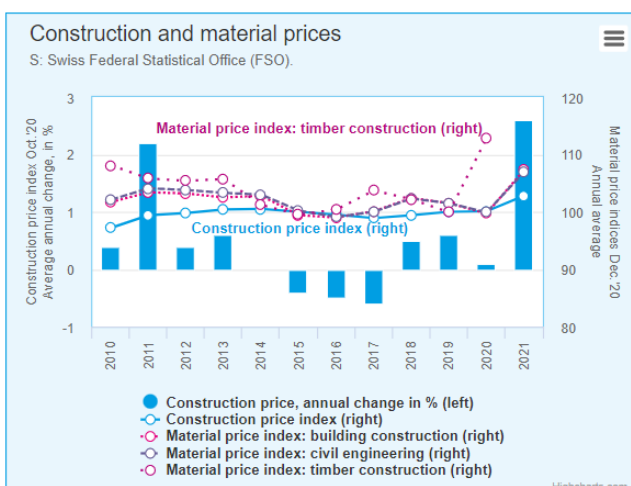
Scenario forecasts for the Swiss construction sector

Considering potential implications of the war in Ukraine for the European economy, the spring edition of the quarterly KOF forecasts entails two scenarios for the trajectory of construction investments in Switzerland. In the fully negative scenario, aggregate construction investments in Switzerland are expected to slump considerably in 2023. The favourable scenario should be regarded as the baseline forecast, although the probabilities of occurrence are not determined.

Retrospection: Supply constraints and Swiss construction prices in 2021

Over the course of last year, global price increases for energy, commodities, and transportation drove up producer prices in the manufacturing and construction industries. The accelerating global demand, accompanied by supply chain disruptions in production as well as in shipping, have shaken industries and markets around the globe.

Switzerland's construction sector was challenged by above-average price increases last year. With the ensuing global scarcity of commodities such as wood, steel, and plastic, material prices for Swiss construction firms started to elevate at the beginning of 2021. The increase in prices was subdued by international comparison though, partly owed to the strong Swiss franc acting as a buffer against imported inflation. With higher costs for material, the average construction price index in 2021 rose by 2.6% above the average index in 2020. Prior to last year's inflation, the pressure on construction prices in Switzerland was high for many years, leaving little room for progressions in margins (see figure "Construction and material prices").



Quantifying losses from an oil price shock

Russia's violent invasion in Ukraine leads to additional supply shocks for commodities and intermediate products this year. Further price surges are to be expected with the intensifying scarcity of oil, natural gas, and coal, but also of industrial metals such as aluminium, copper, nickel, palladium, and titanium – essential materials for the automobile industry. Hence, particularly manufacturing-intensive economies in Europe could experience substantial losses this year.

To grasp the economic implications of oil price surges in connection with the war in Ukraine, a study from 2015 offers a starting point to quantify short- and medium-term effects of a global oil price shock on the Swiss manufacturing and construction sector¹. In a representative survey experiment among 1000 Swiss firms, the study finds that after a sudden and persistent oil price increase of 30% real sales in the manufacturing sector declined by 0.45% within 6 months and by 0.82% within 18 months. In the construction sector, the full impact unfolds within the first 6 months already. Among construction firms, real turnover declines by 0.93% within 6 months and by 0.95% within 18 months. For oil-intensive manufacturers as well as for the construction sector, the loss in real turnover is mainly owed to higher costs for oil driving up firms' sales prices and thereby curbing the demand for their products (the cost-push channel).

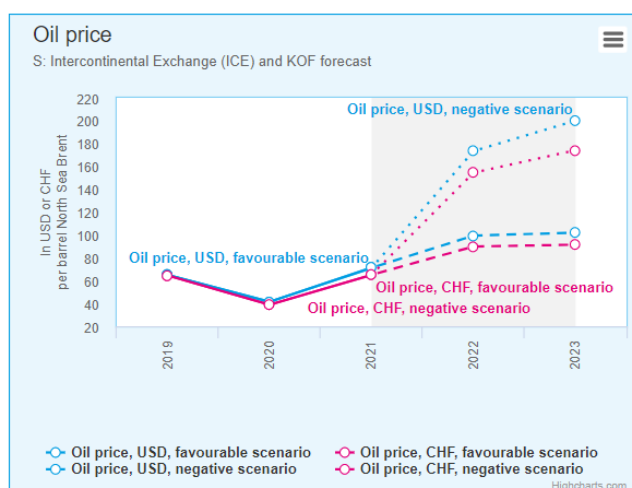
Outlook: Two scenarios for the Swiss construction sector 2022-2023

In the favourable scenario – the war in Ukraine has no drastic impact on the Swiss manufacturing and construction sector – KOF forecasts that real construction investments increase by 0.3% in 2022 and by 0.4% in 2023. The slight expansion in the forecast period is mainly driven by growth in industrial construction² and supported by investments in transport infrastructure. Investments in residential construction, the biggest subsector of the Swiss construction industry, are expected to uphold their activity observed last year. A prolonged war escalation in Ukraine holds the potential to stifle the Swiss construction sector as well. In the fully negative scenario of the KOF forecast, a drastic increase in the oil price and fast tightening long-term interest rates slow down both residential and industrial construction investments in the forecast period. In this scenario, KOF expects zero growth in real construction investments this year and a decline of 2.4% in 2023 (see figure "Construction investments: Scenario forecasts")

¹ See Bannert, Drechsel, Mikosch, Sarferaz (2015) for the comprehensive set of results.

² In the KOF forecast, industrial construction entails new buildings and renovations as well as the following Euroconstruct subsectors: industrial buildings, storage buildings, office buildings, commercial buildings.

In its negative scenario, KOF projects the barrel oil price to drastically increase from 71 US \$ in 2021 to 173 US \$ this year and to 200 US Dollar in 2023 (annual averages of price). The strong Swiss franc and further currency appreciation this year dampen the oil price increase in Switzerland to some extent (see figure "Oil price"). In contrast to the favourable trajectory of long-term interest rates, they tighten at a faster pace in the negative scenario. In this scenario, the 10-year Swiss government bond yield would lie 0.6 percentage points above the annual average yield from the favourable scenario this year and 0.7 percentage points next year. Accordingly, long-term fixed interest rates for mortgages in the negative scenario are expected to tighten even faster.

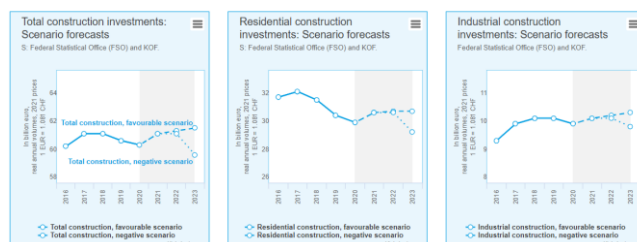


Assuming the global supply bottlenecks for commodities and construction material remain tense at least during the first half of this year, construction prices are expected to rise further even under the favourable scenario (2022: 2.4%, 2023: 0.2%). Considering the oil price trajectory of the negative scenario, KOF alternatively projects construction prices to increase by 4.0% this year and by 1.3% in 2023 in the negative case.

In its favourable scenario, KOF forecasts real residential construction investments to stabilise at the level observed last year (2022: 0.2%, 2023: -0.1%). The current demand impulse for housing, which is associated with new living circumstances under the Covid pandemic situation, halted the ensuing downturn in the Swiss residential construction market leading up to 2020. Accordingly, we estimate that real investments increased again considerably last year (2021: 2.4%) and expect that the demand impulse upholds residential construction at this level in the forecast period. In the negative scenario, elevated construction prices and considerably higher mortgage costs would curb contractors' investment intentions for future

housing projects. In this case, real investments in residential construction are expected to decrease slightly this year (-0.1%) and to slump in 2023 (-4.5%).

Output and investment intentions in the Swiss economy developed positively as part of last year's recovery after the pandemic trough in 2020. Accordingly, industrial construction investments are expected to expand in the forecast horizon (2022: 1.0%, 2023: 0.7%) in the favourable scenario. A prolonged war escalation in Ukraine may curb industrial investments through multiple channels. For one, an oil price shock, intensifying supply constraints for commodities and intermediate goods, and dampening demand in the European economy, decelerate production and turnover in the manufacturing sector and curb investment intentions. Furthermore, elevated construction prices throttle the projection of construction investments additionally. In this negative scenario, KOF expects a subdued expansion in industrial construction investments this year (2022: 0.4%) followed by a substantial downturn next year (2023: -3.2%).



Sources

Bannert, M., Drechsel, D., Mikosch, H., & Sarferaz S. (2015). Macro and micro level impulse responses: A survey experimental identification procedure. *KOF Working papers*, 15-386. <https://doi.org/10.3929/ethz-a-010479956>.
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