Roland Berger Construction Radar – Impacts on DACH region

October 2022

Gas shortages and interest rates are top concerns for construction in German-speaking region
Industry faces risk to revenue of up to -4.8% and to profit of -10 ppts over the next year

Germany's construction industry, despite enjoying resilience and growth over an extended period, is now cooling down. In this new report, Roland Berger examines the disruptions driving the uncertainty, looks at the resulting impacts and sets out recommended courses of action for companies in Germany, Switzerland and Austria.

After continued growth over the past decade, even through the pandemic, Russia's invasion of Ukraine has triggered the next economic challenge, now an energy crisis that is particularly acute in Central Europe. In short, the curtailing of energy supplies from Russia, along with ongoing supply chain disruptions, have led to soaring inflation, rocketing interest rates and tempered demand.

In light of this new crisis, the German-speaking part of Europe's construction industry have so far proven resilient. But a new Roland Berger study shows that companies need to take immediate action to protect profitability and secure a favorable position for when the market normalizes beyond 2024 and secure opportunities in the short term.

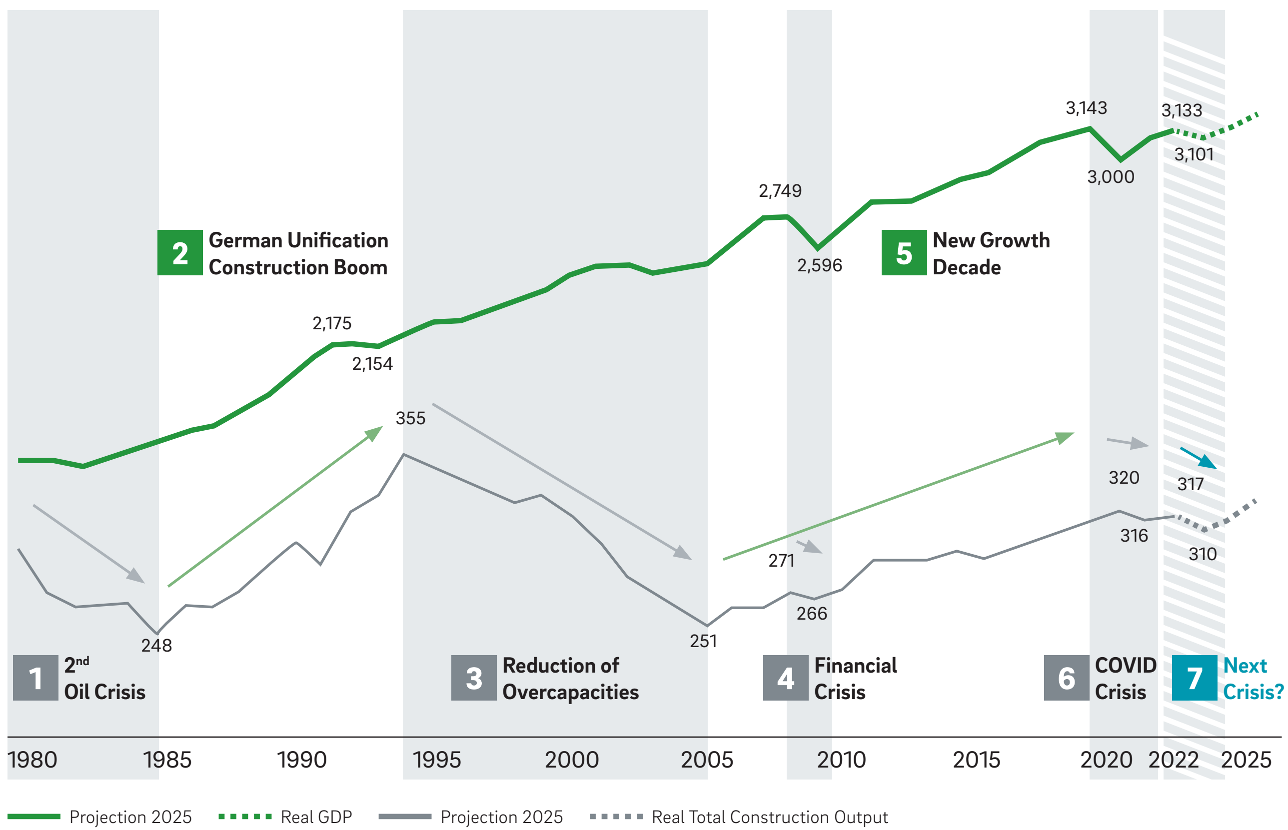
After over a decade of growth, Germany's construction industry is now cooling down
Despite its past resilience, the geopolitical crisis poses a threat to DACH construction industry

Over the last 40 years, the German construction industry has seen alternating, decade-long phases of growth and decline. Since 2005 – for nearly 17 years – the nation's construction industry has been on a long growth trajectory, even through the global pandemic and the global financial crisis before it — both of which had only a short-lived negative impact on the industry.

The European gas crisis brought about by the high dependency on Russian exports and geopolitical supply constraints is another matter entirely. Only time will tell how severe the crisis turns out to be and how long it lasts. But the disruptions are leading to serious concerns over rising inflation and interest rates, which have a direct effect on the construction industry.

DECADE-LONG GROWTH PHASE OF GERMAN CONSTRUCTION INDUSTRY IS COOLING DOWN DUE TO COVID AND THE CURRENT GEOPOLITICAL CRISIS

Real GDP[1] and real construction output in Germany, 1980–2022 [EUR bn in 2018 prices]



[1] Data in real terms based on 2018 prices and real developments for the years 2018–2022 based on Euroconstruct 06/22 data for a) Total German Construction Output and b) German GDP. Projections 2025 based on Roland Berger Base Case

Source: IHS Markt; Euroconstruct; ifo Geschäftsklimaindex; IMF; Roland Berger

The Roland Berger Construction Radar tracks relevant industry drivers and disruptions

Energy prices and shortages, soaring inflation and interest rates are main industry concerns

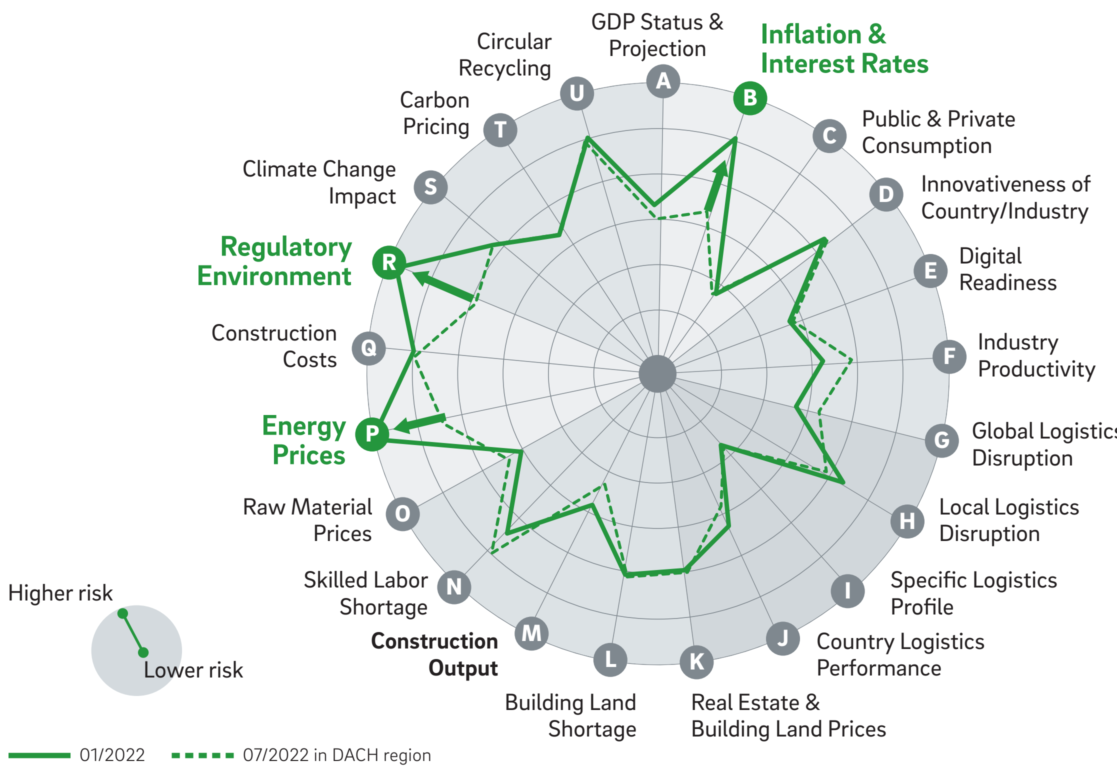
In its current state, the DACH construction industry is fundamentally strong. Order income, order backlog, and overall sales are all positive. But there are several weakening indicators that are a cause for concern.

For example, the gas shortage has already led to a 60% increase in prices. Industrial rationing over the next year is a very real threat. And inflation is already at 7–8%, leading to rising interest rates and construction uncertainty.

According to the latest release (07/22) of the Roland Berger Construction Radar, the cost of goods sold (COGS) in the region could increase by as much as 15–25% over the next year, posing a serious threat to profits of up to -10 ppts.

NUMEROUS FACTORS ARE INFLUENCING GLOBAL CONSTRUCTION – THE ROLAND BERGER CONSTRUCTION RADAR TRACKS AND IDENTIFIES THE MOST RELEVANT ONES

Introduction to the Roland Berger Construction Radar



Note: The Roland Berger Construction Radar allows us to determine to what degree various economic factors affect different companies in the construction industry based on their specific profile and geographical footprint.
The following factors are measured as relative difference between various countries or regions and the factor change between two points in time: A, C, D, E, F, I, J, M, U

Source: Roland Berger

Slowing real permit numbers are the leading cause for concern
Current order backlog of almost 2 years can help compensate for slowing new order income

Although permit value is still growing, there are signs of decline. For example, since 2018 real permit numbers have grown at a CAGR of +4.3% annually, while the value of these permits has grown at the stronger rate of +7.1%. The positive deviation of nearly +3 ppts is the result of higher prices and mix effects of construction types and sizes.

But in the first half of 2022, year-over-year absolute permits declined by -10.1% – a sizable drop – driven by lower demand for residential homes. For the same period, permit value grew by only +8.6%. At this stage, higher prices or mix effects are no longer compensating for real volume loss and are thus leading to lower overall construction output.

Before COVID, the gap between value and quantity growth was +6.8%. During COVID, the gap closed to +0.8%. Post-COVID, the gap widened to +19.7%, driven primarily by price increases and inflation.

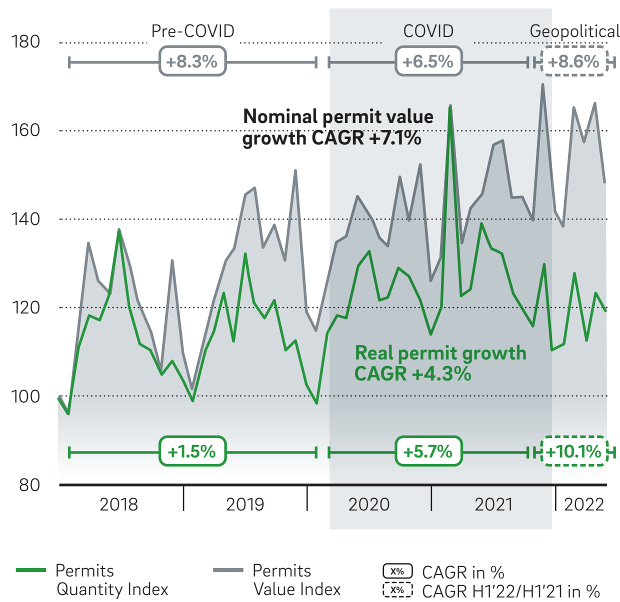
In short, slowing permit growth is a concern. One bright spot is that the current order backlog of almost 2 years will provide sufficient work in the coming months despite current order delays or cancellations, according to the Roland Berger Construction Radar.

GROWING VALUE/QUANTITY GAP – WHILE PERMIT NUMBERS TURNED NEGATIVE YOY IN H1 '22 AT -10.1%, VALUE GREW BY ONLY +8.6%

Building Permit Index (volume and value) in Germany

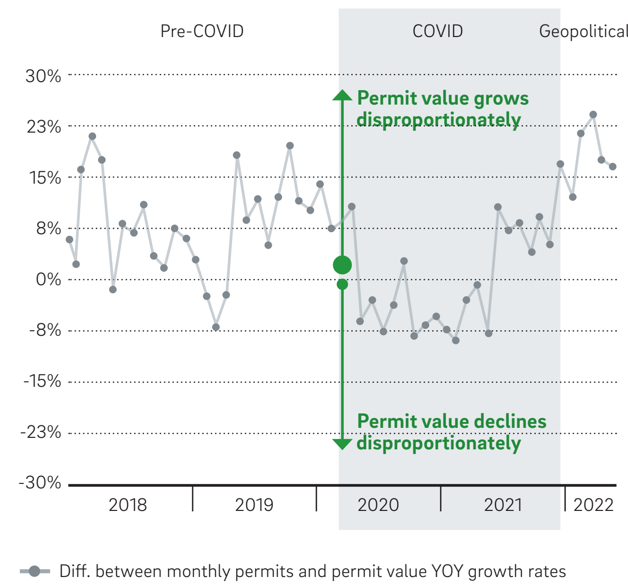
Permissions[1] value and quantity development

[Index 100 = 2018]



Difference YOY growth rates for permissions[1] value and quantity

[in ppts]



[1] Index 2018 of actual building permits for new construction and renovation of residential and non-residential buildings in quantity/permits and permit value

Source: DESTATIS; Roland Berger

Soaring inflation and interest rates, gas prices and availability are worsening the outlook

The industry is still in good shape but has a negative investment outlook

All things considered, we can observe a growing degree of uncertainty surrounding the construction industry. While business remains stable, the outlook and investment appetite are turning negative amid soaring inflation, rising interest rates, and overall limited affordability.

What's more, higher construction costs will undoubtedly lead to project reviews, delays, and expected cancellations. On top of that, the gas crisis will negatively impact purchasing power and industry output. These factors present serious challenges to future profitability.

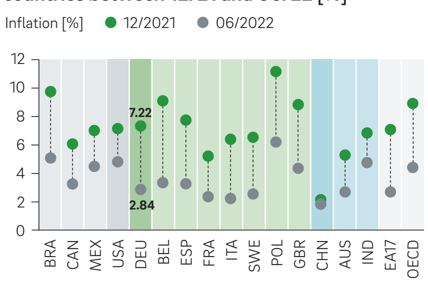
SUPPLY CHAIN DISRUPTIONS AND MATERIAL PRICE INCREASES FROM COVID ARE FOLLOWED BY AN ENERGY SHOCK WITH GAS SHORTAGES, SOARING INFLATION AND ROCKETING INTEREST RATES

Overview of key fundamentals of the European/DACH construction industry

Inflation

- COVID led to significant material price rises
- Followed by massive increases in energy costs and consumables due to geopolitical crises
- Triggering strong inflation of +3.1% in '21, up to c. +10% in '22 and c. +4-6% in '23
- Normalization can only be expected by 2025/26

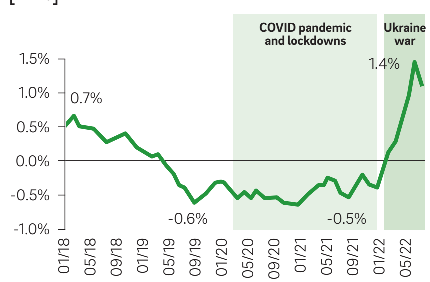
Development of inflation by regions/ countries between 12/21 and 06/22 [%]



Interest rates

- Prices and massive government spending have led central banks to raise interest rates
- Germany's long-term rate has increased by +200% from -0.5% in 2019 to +1.45%
- A level of 3–4% could be reached by 2024/25
- The ECB recently reacted to the inflation with a +0,75% on-time increase

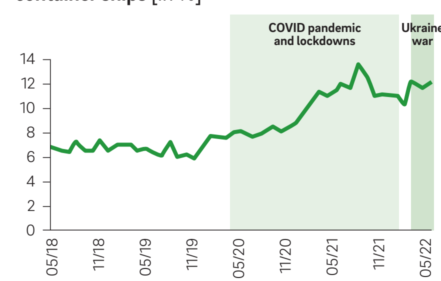
Development of long-term interest rate [in %]



Supply chain[1, 2]

- COVID lockdowns disrupted global supply chains, creating, among other things, container shortages incl. merchandise
- Leading to raw material price and logistics cost spikes
- Air freight rates EU-US up +434% and US-EU +118%
- Ocean spot rates Asia–EU up by +362%

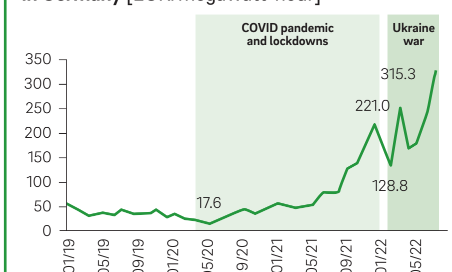
Supply chain disruption – Goods waiting in container ships [in %]



Natural gas[3]

- The geopolitical conflict has led to short supplies of energy and natural gas
- Costs are soaring for both households and industry, affecting production costs
- Fear of shortages leading to governmental restrictions on heavy industrial users
- Energy up by +325%, natural gas by +400%

Development of wholesale energy prices in Germany [EUR/megawatt-hour]



[1] Selected indexes: Air freight rates on average up by +72% since Q1/2020. Spot ocean freight rates Far East-EU up by +362% (from EUR 2,150 to EUR 14,000), while East-bound rates have fallen by -32% Q4/20 vs. Q2/22
[2] Disruption of supply chain showing in > 14% of waiting goods in containers compare to Pre-COVID average of 6%
[3] Energy/electricity wholesale price up YOY in July by +325% and natural gas up by +411%. Natural gas peaked in August 2022 at +711% vs. July 2021
[4] Based on ifo-Geschäftsklimaindex 08/22: Business expectations are negative at -17.3%, 80.3 vs. 97.6 YOY. Evaluation of business remains neutral at -3.9%, 97.5 vs. 101.4 YOY

Source: Statista; DESTATIS; OECD; Xenata; Roland Berger

Roland Berger has modeled potential impacts in 3 scenarios
Depending on the scenario and severity, full recovery can take 2–4 years

To understand the impact of the described factors and changes on the DACH construction industry in the mid term, Roland Berger has modeled three scenarios (base, worst and best case). The model takes into account the impact on a) the various construction segments, e.g., new build, renovation, and b) on the various players along the construction value chain, i.e., from developers to various manufacturers to the construction companies.

Based on three Roland Berger scenarios, the DACH construction industry will either face strong headwinds, a bump in the road or, in an optimistic scenario, perhaps a quick recovery. In all instances, however, the market in 2023 will be negatively affected. Depending on the scenario, this impact could be intense and long-lasting, or minimal and short-lived.

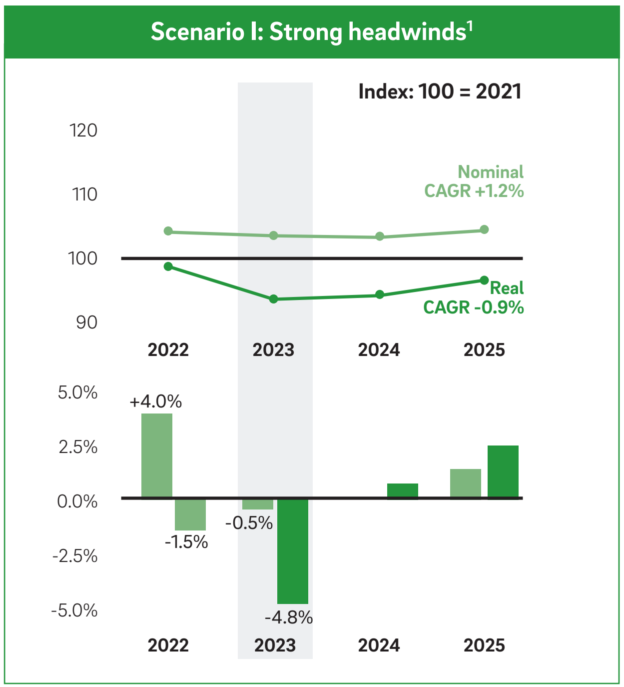
Through 2023, we expect energy prices and supply to have the largest and most immediate effect on construction output. Supply disruptions and material prices are considered to be short-term problems on the path to normalization. The soaring energy prices, high inflation, and long-term interest rate uncertainty will likely be at least a mid-term challenge. Depending on the scenario and severity, we do not expect normalization until 2024 at the earliest, and potentially as late as 2026. Either way, both supply and demand will be hit by a significant shock.

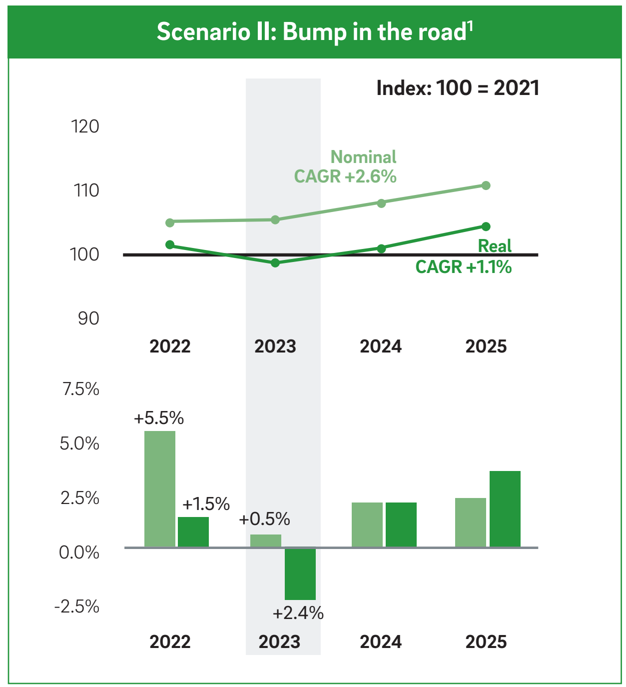
With strong headwinds (scenario I), the industry in 2023 may face an overall revenue contraction of up to -4.8% in real terms compared to a nominal -0.5%. And even with an optimistic outlook (scenario III), the industry may face low +1.4% growth in real terms.

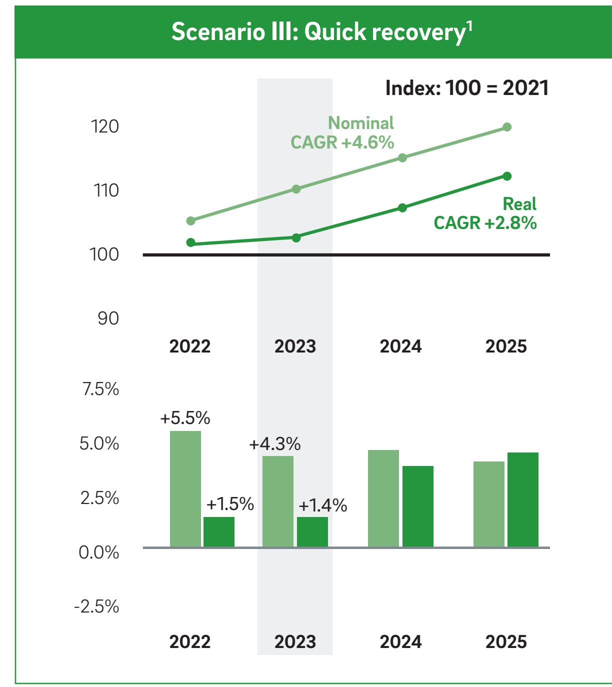
All Roland Berger scenarios entail a negative impact and challenges for 1 to 4 years
Depending on the scenario and severity, full recovery can take 2–4 years

BASED ON ROLAND BERGER SCENARIOS, THE DACH CONSTRUCTION INDUSTRY IN 2023 MAY EXHIBIT A NOMINAL DEVELOPMENT OF -0.5% TO +4.3%, WHILE IN REAL TERMS FACING -4.8% TO +1.4%

Revenue in construction industry 2021–2025, Germany [index 100 = 2021; %, CAGR %]







Impacts/outlook:

- Despite stable demand for civil and residential multi-family projects, the DACH construction industry is struck by 3 adverse factors affecting it more strongly than the average economy and other industries: **1) material price increases** of above +50% since 2020, 2) labor costs increases 2022–24 of +10% and **3) European energy** (price) **shock** of >100% YOY triggered by the geopolitical conflict, lately worsened by expected potential **gas shortages** in winter 2022/23
- Most of these factors take **effect in the short term in 2022/23**, are already partially stabilizing and will affect DACH construction industry predominantly in 2023 – however, most are expected to be resolved between 2024 and 2026
- In the short term, the negative economic factors have brought the industry to a stable but fragile state during which **demand is slower** due to more careful spending, project delays, financial/cash management challenges. Whereas high prices will drive **nominal growth in 2023**, **real growth** could **decline** by as much as **-4.8% to +1.5%**

[1] Subject to thorough simulation of assumptions

Source: Roland Berger

All construction segments will suffer negative impacts in 2023 across all scenarios
Residential and new build segments will suffer the most

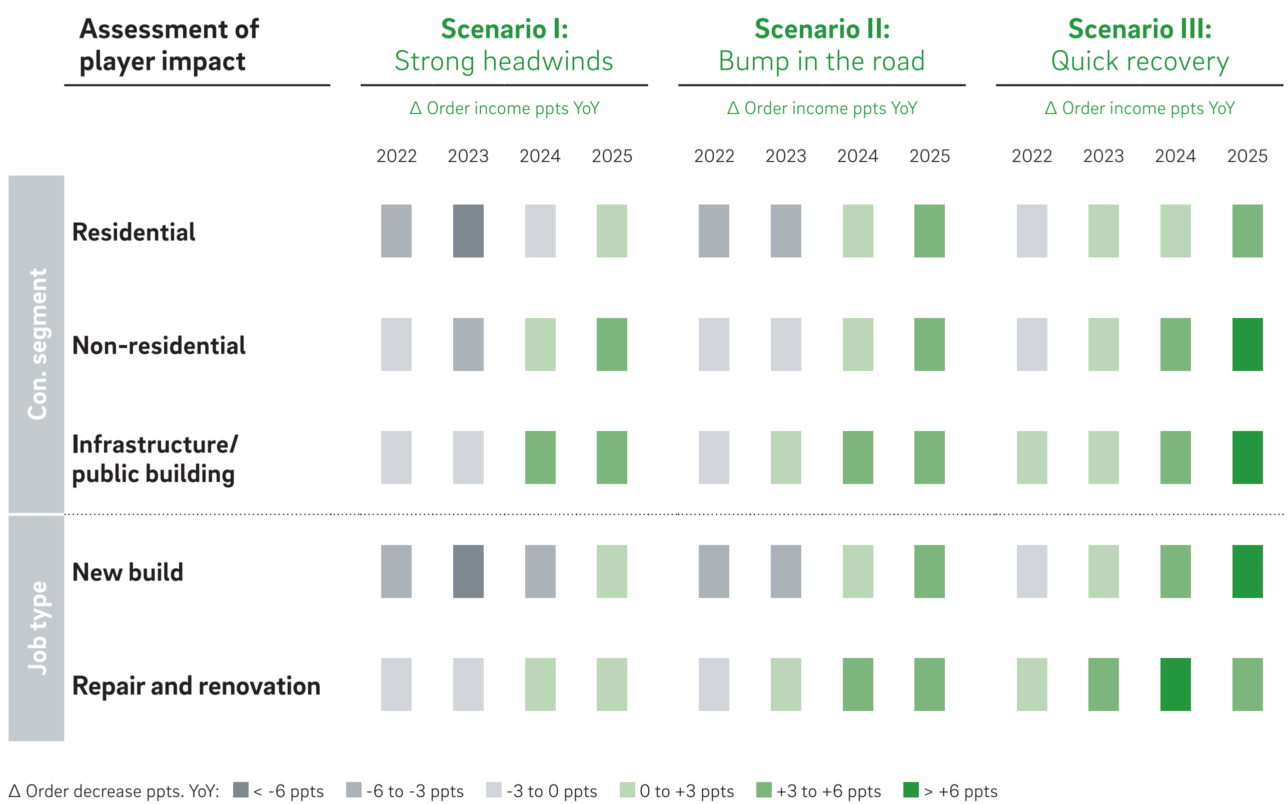
Related to the uncertainty around soaring long-term interest rates, the affordability of new single-family homes and refinancing are both at risk. In a worst case scenario, this segment is likely to see negative growth in orders of below -6% in 2023 and -3 to -6% in 2024.

In the same scenario, high construction costs for non-residential projects may see delays or postponing and thus a negative impact of -3 to -6% in 2023. With a normalization of cost levels, however, a return to growth can be expected in 2024. As infrastructure and civil projects tend to have longer lead times, this segment may experience only a minor negative impact of up to -3%, resulting from costs or supply disruptions.

Either way, residential construction will be affected the most, due to consumer uncertainty, fear of unemployment, and reduced housing affordability. Demand in the non-residential and public infrastructure segments will decrease only slightly, although credit access could stop or slow projects. That said, stabilization efforts from governments could have a stimulating impact on demand but on the other hand could worsen inflation. As expected, repair and renovation projects – especially those leading to reduced energy consumption, i.e., windows, insulation of building envelope – will likely continue (if not increase) during the energy crisis.

RESIDENTIAL AND NEW BUILD CONSTRUCTION SECTORS ARE AFFECTED THE MOST DUE TO HIGH UNCERTAINTY

Impact on DACH construction industry segments[1]



[1] Based on the Roland Berger Construction Radar, we derived the three outlined scenarios for the DACH region. Their impact on the industry's order income has been modeled accordingly for all construction segments

Source: Roland Berger

Government gas restrictions vary by scenario and material manufacturer
Heavy gas users, e.g., glass manufacturers, may face largest negative impact in 2023/24

In the worst-case scenario I with very limited or no gas supply from Russia, most raw material producers will likely have to significantly reduce their production in Q4/22 and Q1/23, which will have a negative effect on volumes next year. This, in turn, will lead to construction delays from Q2 2023 onwards if materials cannot be brought in from plants or suppliers outside of DACH countries.

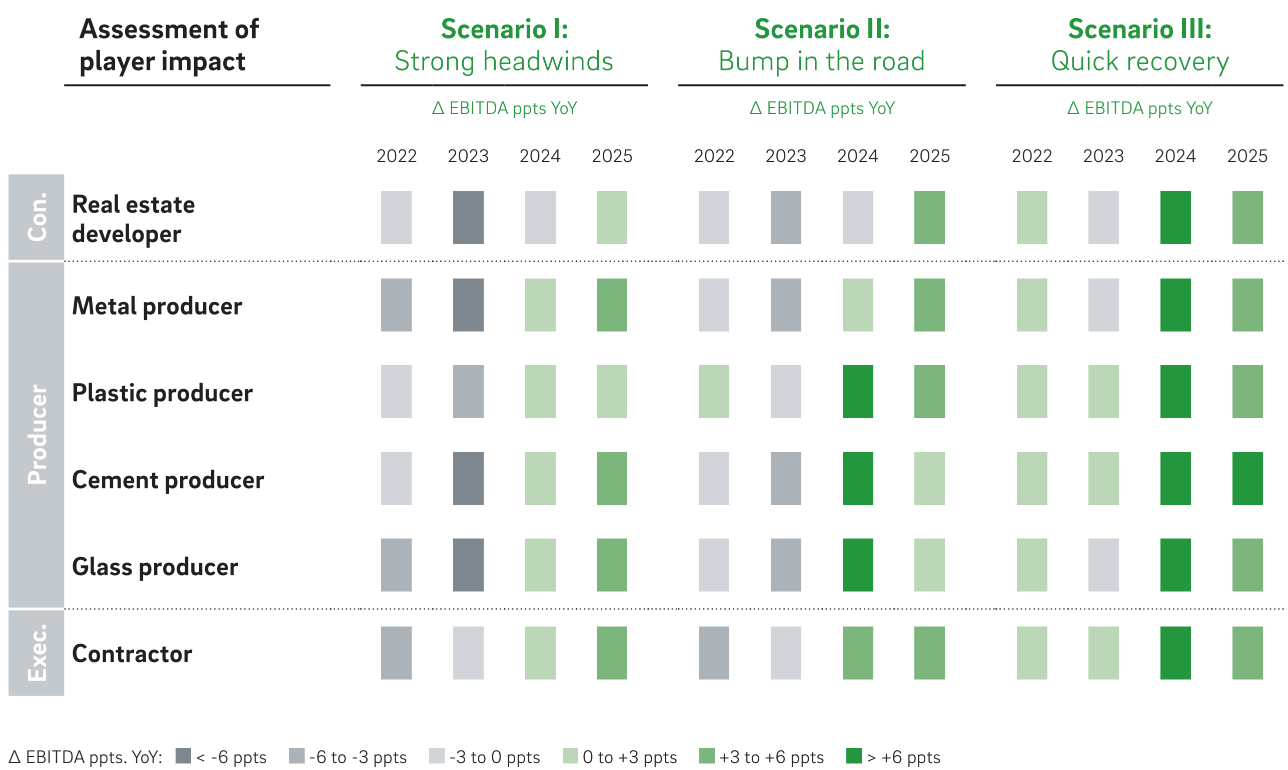
In the best-case scenario, moderate gas supply from Russia would lead to only short-term production disruptions, from which the construction industry would quickly recover.

Due to lost volumes, we expect a decline in revenues of up to -23% for certain manufacturers. Partially driven by energy prices and inflation, costs (COGS) will rise disproportionately by +15–25%. For certain manufacturing segments, i.e., metal or glass, this may lead to a loss of up to -10 ppts in EBITDA margin and even a negative bottom line.

In the worst-case scenario, developers may face cash flow issues from difficulties in selling their stock due to higher prices/costs, and on the other side there may be increased financing costs for the customer.

While most industry players in a negative scenario can expect slight growth of 0–3% as soon as 2024, developers may take until 2025 to fully overcome the challenges.

MATERIAL PRODUCERS ARE AFFECTED BY GAS PRICES WHILE CONTRACTORS AND DEVELOPERS SUFFER FROM HIGH COSTS AND DELAYS
Impact on DACH construction value chain[1]



[1] Based on the Roland Berger Construction Radar and the three outlined scenarios for the DACH region, Roland Berger thoroughly modeled the industry's P&L impact for various segments of the value chain considering the impact of revenue decrease on the industry/segment-typical P&L items, i.e., material, personnel, energy and others

Source: Roland Berger

The industry must act now to prepare for the strongest possible recovery
Timely actions add resilience and future proof companies and organizations

The ongoing gas crisis will negatively affect the DACH construction industry. Depending on the scenario, the industry will either face strong headwinds or a quick recovery. Either way, affected companies must act now to achieve the strongest possible recovery.

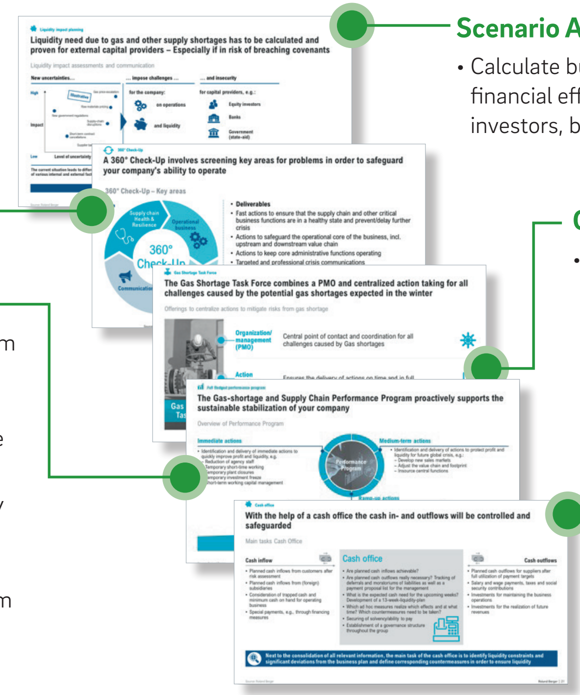
According to past and current Roland Berger projects, we believe the industry can meet today's challenges and accelerate afterwards by doing the following:

1. Set up a gas & supply task force
2. Prepare relevant mid-term scenarios and apply agile management (including increased hiring, fast ramp-up, UA geographical recovery, and geographical capacity shifts)
3. Launch performance improvement programs
4. Launch sales excellence/effectiveness programs incl. price management and expand market share via competitors' weaknesses
5. Review and accelerate inorganic growth opportunities
6. Focus on operational excellence and asset management improvement

THE INDUSTRY MUST ACT NOW TO SMOOTHEN CRISIS IMPACTS AND PREPARE FOR STRONGEST POSSIBLE RECOVERY

360° Check-up
- Identify key operational, commercial and financial risks
- Strengthening and resilience building in critical functions

Performance Program
- Develop a short- and medium-term program to stabilize the company
- Address key challenges on how to lower or keep costs low during the crisis
- Identify and seize opportunities by leveraging an international setup
- Prepare for business ramp-up and potential adjustments to long-term business model



Scenario Analysis
- Calculate business options and corresponding financial effects to prove liquidity need for investors, banks

Gas & Supply Task Force
- Establish a task force to monitor further developments and take effective actions

Cash Office
- Establish a cash office to plan and control liquidity development
- Implement internal and external measures to secure financing

+ Future-proof organizational development program:
Developing a long-term crisis-resilient organization beyond the short-mid term

Source: Roland Berger

Contact – Our experts are here to help you

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"Depending on the scenario, the industry will either face strong headwinds, a bump in the road or a fast recovery. Either way, affected companies must act now to prepare for the strongest possible recovery."

Kai-Stefan Schober, Senior Partner, Roland Berger

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