Roland Berger Construction Trend Radar Germany

Situation has worsened, further decline expected

Cover Roland Berger

November 2023

Roland Berger

Situation in the German-speaking region has worsened
Further decline in the construction industry expected

In our last *Construction Trend Radar*, published in October 2022, we reported that the construction industry in the DACH region (Germany, Austria, Switzerland) was cooling down after an extended period of growth. We examined the disruptions driving that uncertainty – the Covid-19 pandemic, Russia's invasion of Ukraine and the resulting energy crisis, particularly in Central Europe – and looked at their impact on the local construction industry.

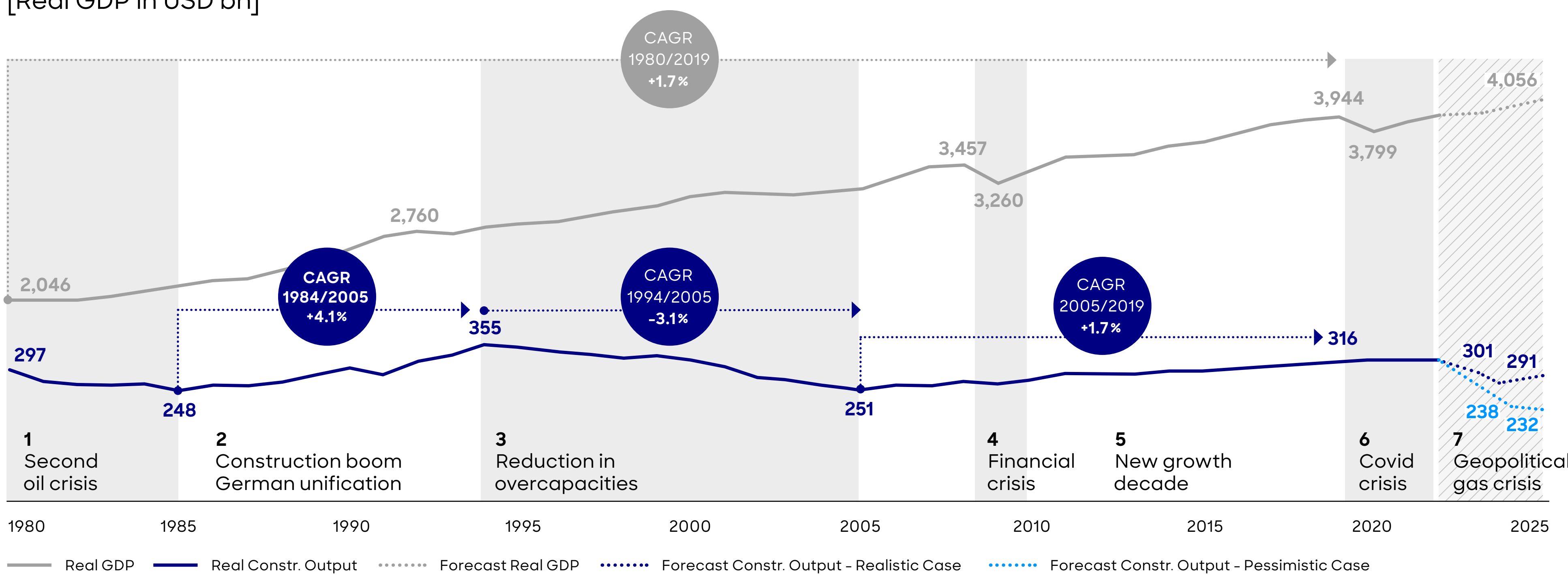
Since the last study, things have taken a noticeable turn for the worse. The geopolitical crisis, combined with soaring inflation and interest rates, have thrown the industry into a tailspin, eradicating any signs of imminent recovery. Last year, we suggested three possible scenarios: an optimistic case, a realistic case and a pessimistic case. This year, we only suggest a realistic case, which is already pretty bad in itself, and a pessimistic case, which is considerably worse than previously forecast.

In this study we narrow our focus to Germany, the largest construction market in the DACH region, and include data up to the third quarter of 2023. We investigate the ongoing downturn in the construction industry, industry fundamentals, key economic factors and their impact on industry segments and the construction value chain. Our message for construction companies remains the same as last year, but is now even more urgent: Act now to protect profitability and secure a favorable position for when the market finally gets back to normal.

Construction industry grew till 2021
But the geopolitical crisis then threw it into a tailspin

In our 2022 Construction Trend Radar we reported that the German construction industry was cooling down after nearly 17 years of growth since 2005. The global financial crisis, and more recently the Covid-19 pandemic, had a negative impact on construction. But the industry managed to recover quickly from both these setbacks. The current geopolitical crisis creates challenges of a different order. It has triggered soaring inflation and rising interest rates, both of which have a direct effect on the construction industry. Our new *Realistic* case scenario is far from inspiring, predicting that real construction production output in Germany will decrease to USD 291 billion by 2025. Our *Pessimistic* case is even more depressing, with the figure dropping to USD 232 billion by 2025.

Real GDP[1] and real construction output in Germany, 1980-2025
[Real GDP in USD bn]



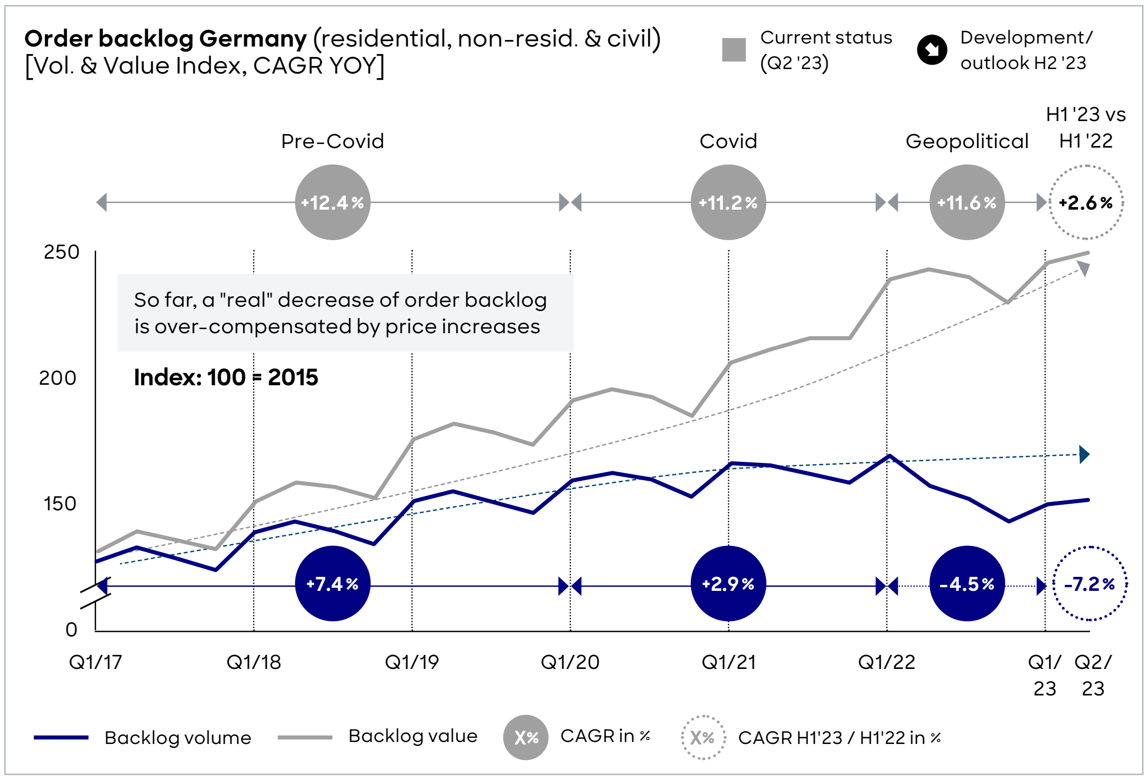
1 Real data based on 2018 prices and real developments for the years 2018-2022, derived from Euroconstruct 06/23 data for a) total German construction output and b) German GDP projections 2025 (based on RB realistic and pessimistic cases)

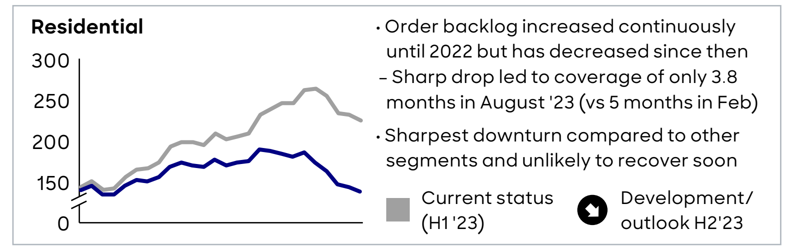
Source: IHS Markt, Euroconstruct, ifo Business Climate Index, IMF, Roland Berger

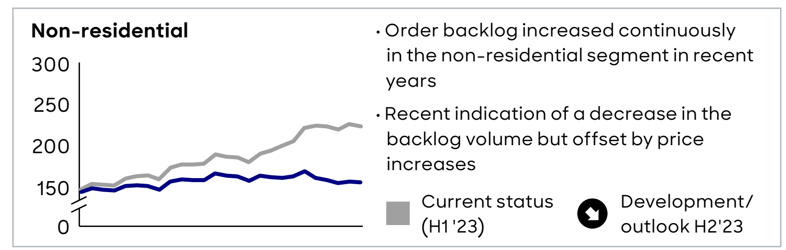
Order backlog by volume falling, unlikely to rebound until 2024
Price increases have so far more than offset volume decline

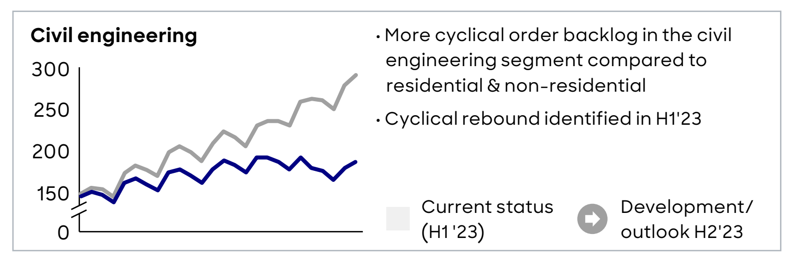
One of the key fundamentals for the construction industry is the *order backlog*. While the overall volume of orders across all three construction sectors – residential, non-residential and civil engineering – declined throughout 2023, rising prices are still more than compensating for this downturn in value terms. A cyclical rebound in the civil engineering segment became apparent in the first half of 2023. However, the residential and non-residential segments are not likely to follow suit until the period as of 2024.

Fundamentals of the German construction industry – Order backlog, 2017- H1 2023









Very positive | Positive | Medium | Negative | Very negative | Positive outlook | Neutral outlook | Negative outlook | Backlog volume | Backlog value

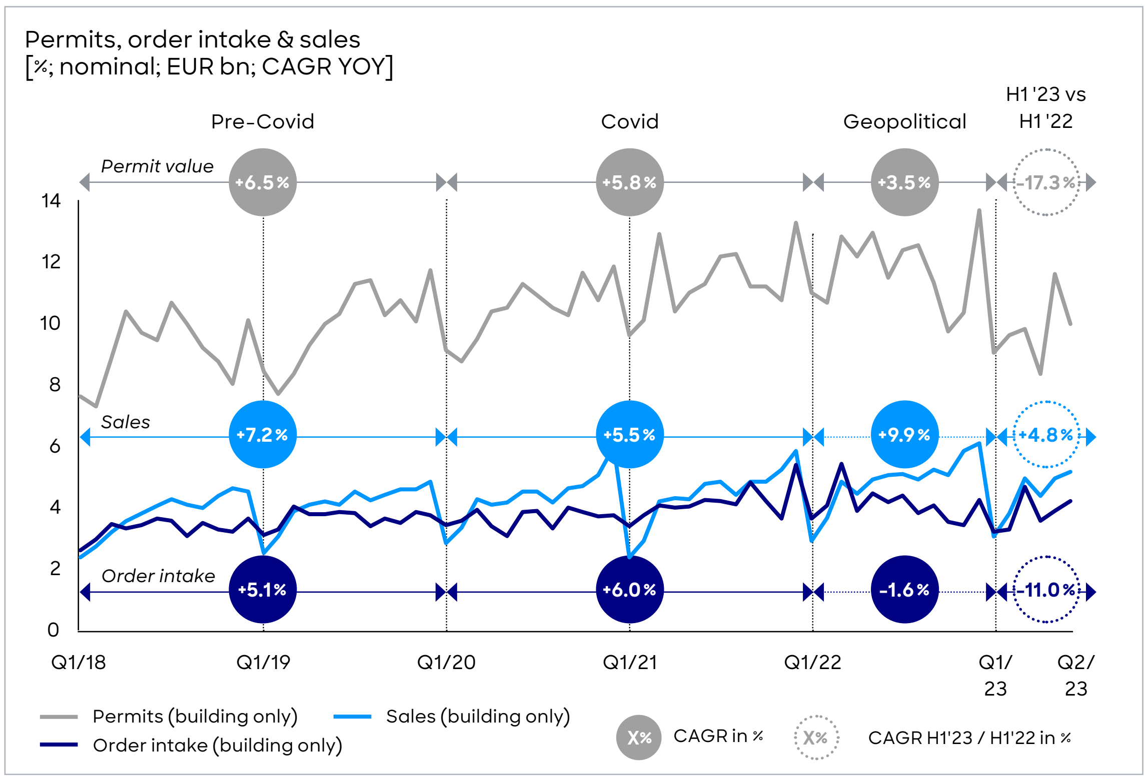
Source: DESTATIS, Roland Berger

Slower growth in the number of permits and order intake driving a downturn in 2023

Sales now declining in real terms

The drastic fall in the number of permits issued at the end of 2022 and the start of 2023 is an early indicator of a downturn in the construction industry. More evidence for this downturn can be found in the slowdown in the number of orders across the two periods. Responding after a time lag, sales have been declining in real terms throughout 2023.

Fundamentals of the German construction industry – Permits, order intake and sales, 2018-H1 2023



Sales

- Sales increased overall in H1 2023, on a par with H1 2022 but only in nominal terms
- Lower growth in permits and the order intake in the same period points to slower sales growth in 2023

Current status (H1 '23) | Development/ outlook H2'23

Order intake

- Decline in the order intake in H1 2023 vs. H1 2022
- Construction downturn expected after steady growth in recent years

Current status (H1 '23) | Development/ outlook H2'23

Permits

- Slower growth in permits in H1 2023 vs. H1 2022 compared to growth rates in past years, then drastic decrease in January 2023
- Early warning of a construction downturn

Current status (H1 '23) | Development/ outlook H2'23

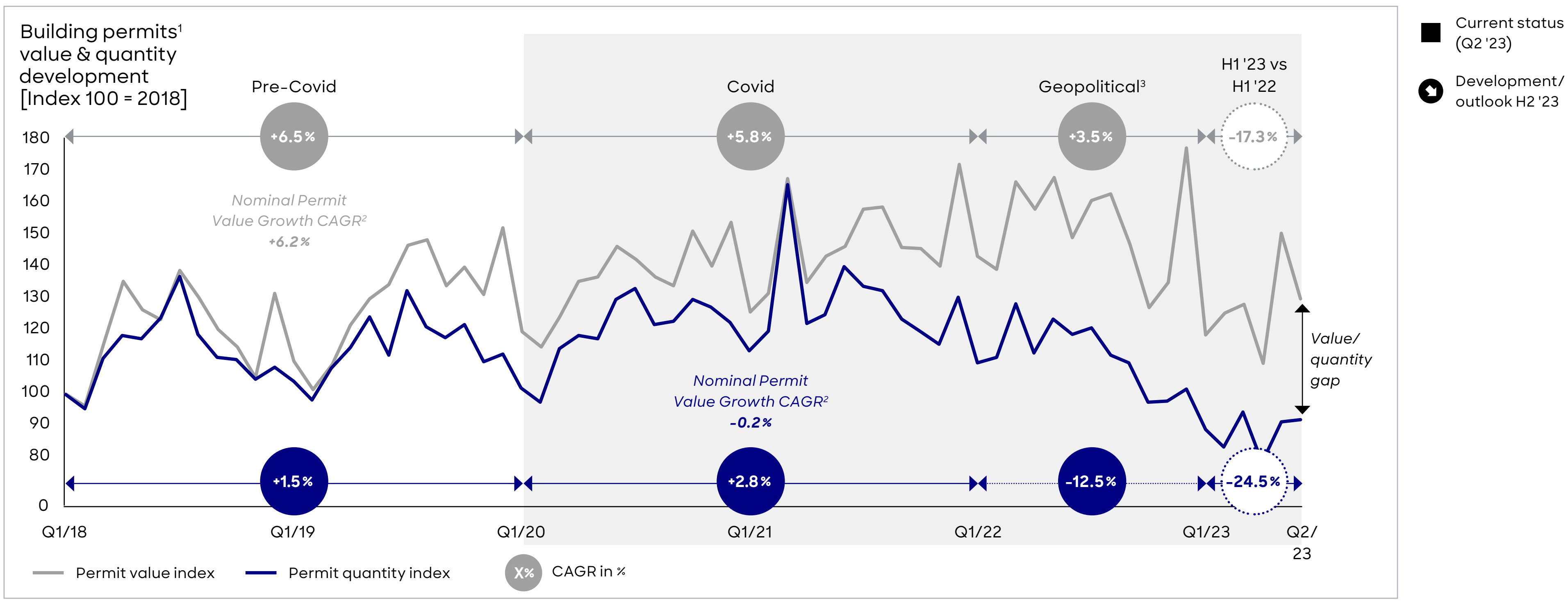
Very positive | Positive | Medium | Negative | Very negative | Positive outlook | Neutral outlook | Negative outlook

Source: DESTATIS, Roland Berger

Gap between quantity and value of permits continues to grow
Fall in number of permits almost doubled in first half of 2023

The number of permits issued fell at a CAGR of -0.2 percent between January 2018 and December 2022. Over the same period, the value of permits – a function of construction prices, building and the segment mix – grew by 6.2 percent a year. In the course of 2023 to date, the quantity of permits issued has continued to drop. While the value of permits has also declined, the gap between quantity and value is in Q2 2023 wider than at any time in recent years during the same time period.

Building Permit Index (volume & value) in Germany, 2018 – H1 2023



1 Index 2018 of actual building permits for new construction and renovation of residential & non-residential buildings in quantity/permits and permit value
2 CAGR between Jan 2018 and Dec 2022 3 CAGR 22/21 in %

Very positive | Positive | Medium | Negative | Very negative | Positive outlook | Neutral outlook | Negative outlook

Source: DESTATIS, Roland Berger

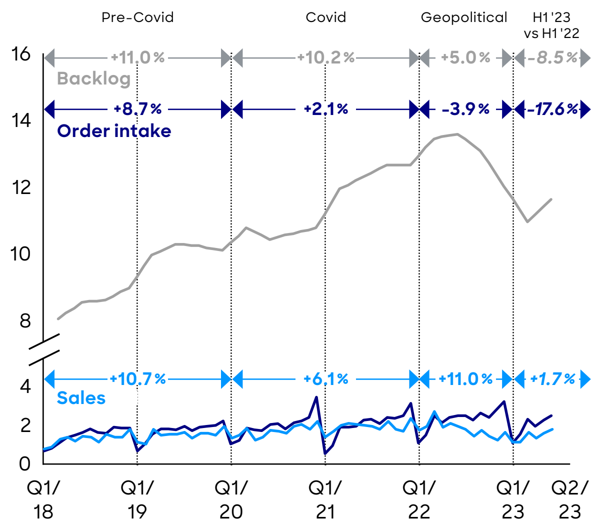
Shrinking order backlog testifies ongoing crisis in residential construction

Civil engineering still robust, non-residential faltering, residential heading south

Order backlogs are a key indicator of the health of the construction sector. While the civil engineering and infrastructure segment still boasts well-filled order books and anticipates further growth going forward, the picture for the other two key segments is rather bleaker. Non-residential construction is seeing a marked slowdown in order intakes, whose current rate will not be able to sustain the existing backlog. Worst hit is residential construction, which is already eating into its order backlog. Compared to H1 2022, new orders here are down by nearly one fifth year on year, despite a slight rebound at the start of 2023.

Fundamentals of the German construction industry[1] – By segment, 2018- H1 2023 (monthly development)

Residential [EUR bn]

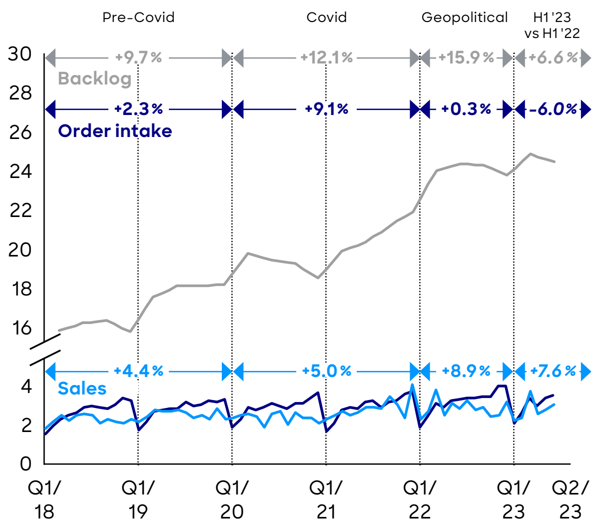


Current status (H1'23)

Development/ outlook H2'23

- Sharpest downturn in order intake compared to other segments, thus already feeding on backlog to sustain sales

Non-residential [EUR bn]

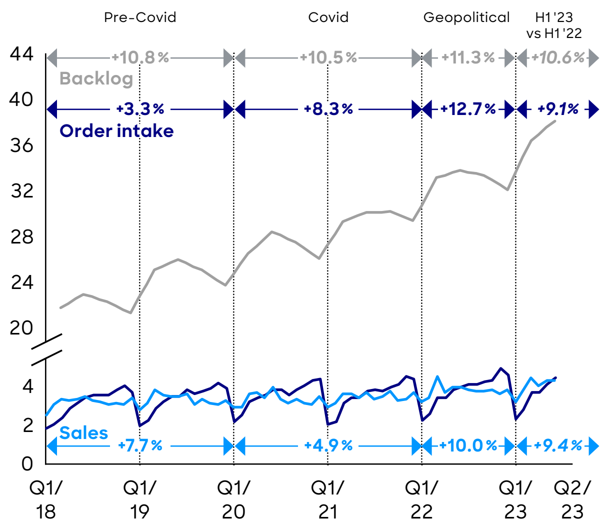


Current status (H1'23)

Development/ outlook H2'23

- Less impacted than residentials but still experiencing a noticeable slow down in order intake

Civil & infrastructure [EUR bn]



Current status (H1'23)

Development/ outlook H2'23

- Most stable growth outlook of the three segments, with continuous growth expected in the future

1 Data only covers construction companies with >20 employees x% Pre-Covid = CAGR 2018-2020 x% Covid = CAGR 2020-2022 x% Geopolitical = CAGR 2021-2022 x% = CAGR H1'23/H1'22

Very positive | Positive | Medium | Negative | Very negative | Positive outlook | Neutral outlook | Negative outlook | Backlog | Order income | Sales

Source: DESTATIS, Roland Berger

Key fundamentals of construction industry paint a worrying picture – Supply chain and gas effects have eased, but inflation and high interest rates are here to stay

The Covid-19 pandemic and the geopolitical crisis caused by Russia's war in Ukraine have led to a high level of uncertainty. Of the few bright spots in the picture, one is the decrease in disruptions to the supply chain: The composite freight rate index has fallen consistently since the beginning of 2022. Another positive is that natural gas prices are now back down almost to their level before the outbreak of war in Ukraine. However, soaring inflation continues to make new building projects unaffordable, limiting investment appetite. At the same time, repeated jumps in interest rates and increased construction costs result in more project reviews, delays and even project cancellations. On both counts, a return to more normal levels is not expected before 2025 at the earliest.

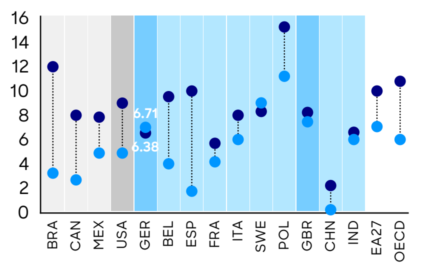
Fundamentals of the German construction industry

Inflation

- Covid led to significant material price increases
- Followed by massive increases in energy costs & consumables due to geopolitical crises
- Triggering strong inflation of +3.1% in 2021, up to c. +7.9% in 2022 and c. +4-7% in 2023
- Normalization can only be expected until 2025/26

Current status (July '23) Development/ outlook

Development of inflation by regions/ countries between 06/22 and 06/23 [%]

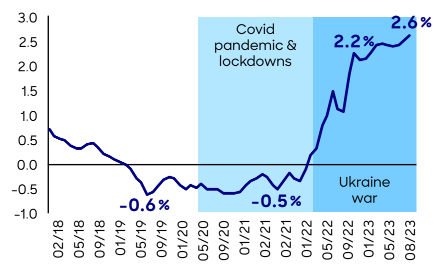


Interest rates

- Prices and massive governmental spending have led central banks to raise interest rates
- Germany's long-term rate has increased by +3.1 pp from -0.6% in '19 to +2.6% - level of c. 3-4% to be reached by '24/25
- ECB reacted with a next prime rate increase to 4.5% in Sept '23 (10th since July 2022)

Current status (August '23) Development/ outlook

Development of Long-Term Interest Rates [%]

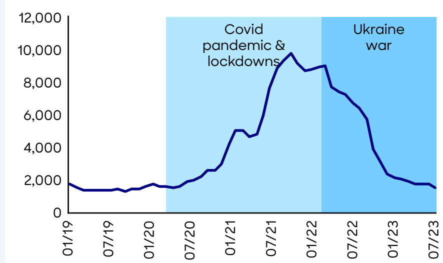


Supply chain[1,2]

- Covid lockdowns disrupted global supply chains, creating containers/goods shortages, leading to spikes in raw material price & logistic costs
- Air freight rates EU-US up +40%, ocean freight spot rates Asia-EU up +16% compared to pre-Covid levels

Current status (July '23) Development/ outlook

Supply Chain Disruption - Composite Freight Rate Index [USD]

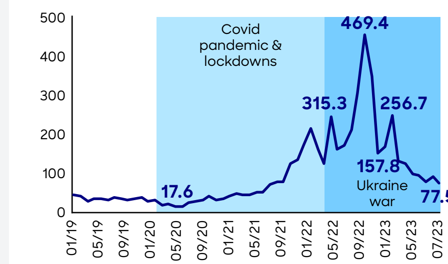


Natural gas[3]

- The geopolitical conflict has led to short supply of energy and natural gas – Costs are soaring for households a. industry affecting production costs
- In July '23, electricity price fell below 80 EUR/ mWh for the first time in 2 y.
- Electricity down by -75% YOY, natural gas down by -87% YOY

Current status (July '23) Development/ outlook

Development of wholesale electricity prices in Germany [EUR/MWh]



● 06/2022 ● 06/2023 Very positive Positive Medium Negative Very negative Positive outlook Neutral outlook Negative outlook

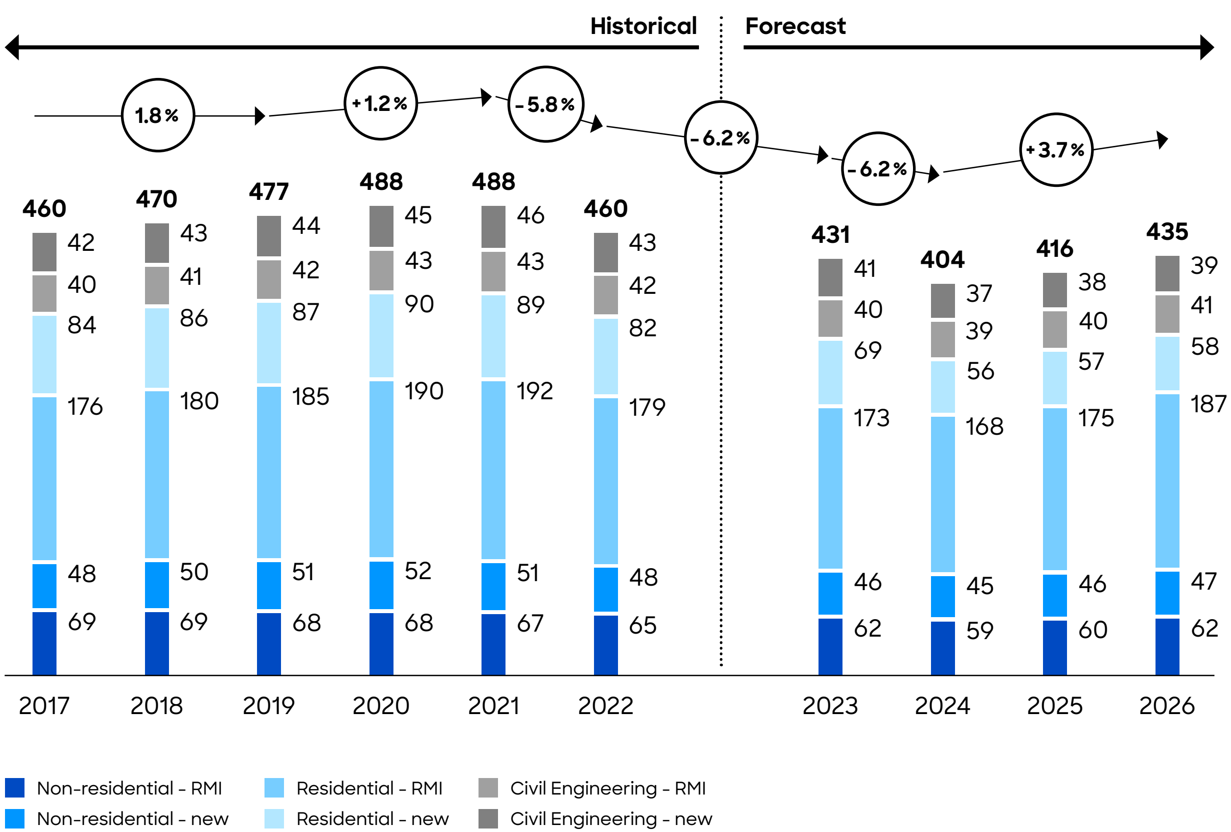
1 Selected indexes: Air freight rates on avg. up by 113% compared to pre-Covid. spot ocean freight rates. Far East-EU up by 10% (from c. USD 1350 in June 2019 to c. USD 1,500 in June 2023) 2 Supply chain disruption showing in >14% of goods waiting in containers, compared to pre-Covid average of 6% 3 Wholesale electricity price down by 75% YOY in July '23 (EUR 77.5/MWh vs EUR 315.3/MWh) and natural gas down by 53% YOY in Nov. 2022. Wholesale natural gas peaked in Aug. '22 (c. EUR 352/MWh) at +780% YOY (c. EUR 40/MWh in Aug. '21)

Source: Statista, DESTATIS, OECD, Xeneta, ifo, Roland Berger

Construction market declining further in 2023
No rebound until 2025, recovery from 2026

The construction market in Germany is likely to contract by 6.2 percent in real terms in 2023 and is expected to see again a drop of 6.2 percent between this year and next. According to Roland Berger forecasts, the market will not begin to rebound until 2025, and a more robust recovery is not likely until 2026.

Market development by overarching markets and segments [EUR bn, 2022 prices], 2017-2026



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Civil Engineering - new	42	43	44	45	46	43	41	37	38	39
Civil Engineering - RMI	40	41	42	43	43	42	40	39	40	41
Residential - new	84	86	87	90	89	82	69	56	57	58
Residential - RMI	176	180	185	190	192	179	173	168	175	187
Non-residential - new	48	50	51	52	51	48	46	45	46	47
Non-residential - RMI	69	69	68	68	67	65	62	59	60	62
Total	460	470	477	488	488	460	431	404	416	435

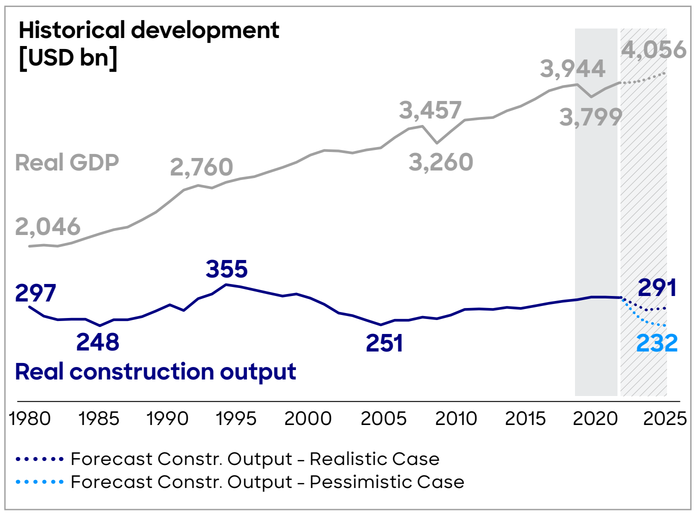
	CAGR '17-'19	CAGR '19-'22	CAGR '22-'23	CAGR '23-'24	CAGR '24-'26
Civil Engineering - new	1.8%	-0.4%	-6.2%	-7.6%	1.7%
Civil Engineering - RMI	2.0%	-0.1%	-3.9%	-2.4%	2.6%
Residential - new	1.5%	-1.8%	-15.8%	-19.9%	2.3%
Residential - RMI	2.4%	-1.0%	-3.7%	-2.9%	5.5%
Non-residential - new	2.9%	-2.0%	-4.6%	-2.3%	2.6%
Non-residential - RMI	-0.7%	-1.8%	-3.5%	-4.8%	2.5%

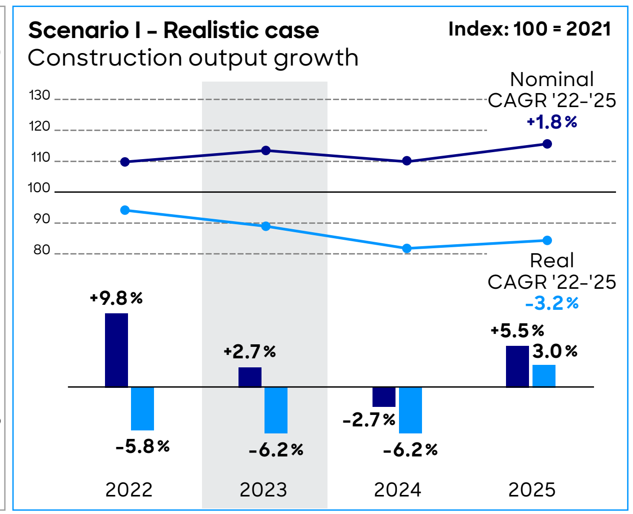
Source: Euroconstruct, Construction Trend Radar, Roland Berger

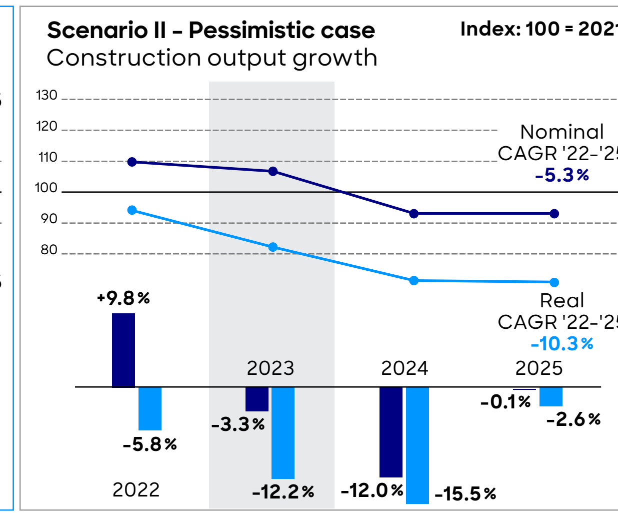
Hopes of swift recovery in 2023 now revised
Two to three-year recession expected from this year

In light of recent developments, experts have revised their mid-2022 predictions of a swift recovery and are now expecting to see a two to three-year recession starting in 2023. This recession will be driven by inflation and interest rates- factors that can only change in the medium term, thus eliminating hopes for a recovery this year. While all segments of the construction industry are affected by this recession, residential new construction is suffering the most. A decline in residential new build will generate minor benefits for renovation work, but will not fully compensate for lost volume in the sector as a whole.

Construction Scorecard – Germany







Key findings

- Compared to mid-year expert predictions and hopes of a fast recovery, there seems to be a shift toward a 2 to 3-year **recession outlook for 2023 and 2024**
- Main **drivers of the crisis** are **inflation, interest rates** (affordability of private investments) and **energy prices**
- These drivers can only be **resolved in the mid-term**, thus eliminating hopes of a fast recovery in 2023
- While **all construction segments are affected in 2022/23**, residential new construction is suffering the most
- **Residential new construction weakness** is slightly favoring renovation work but cannot fully offset the lost volume

GDP growth YOY change in %

2022	2023	2024	2025
1.8%	-0.4%	+1.1%	+1.5%

Construction cost YOY change in %

2022	2023	2024	2025
+15.6%	+12.2%	+4.8%	+2.2%

Construction output growth YOY change in %

2022	2023	2024	2025
-5.8%	-6.2%	-6.2%	+3.0%

Long-term interest rate Annual average in %

2022	2023	2024	2025
+1.1%	+2.7%	+3.0%	+3.5%

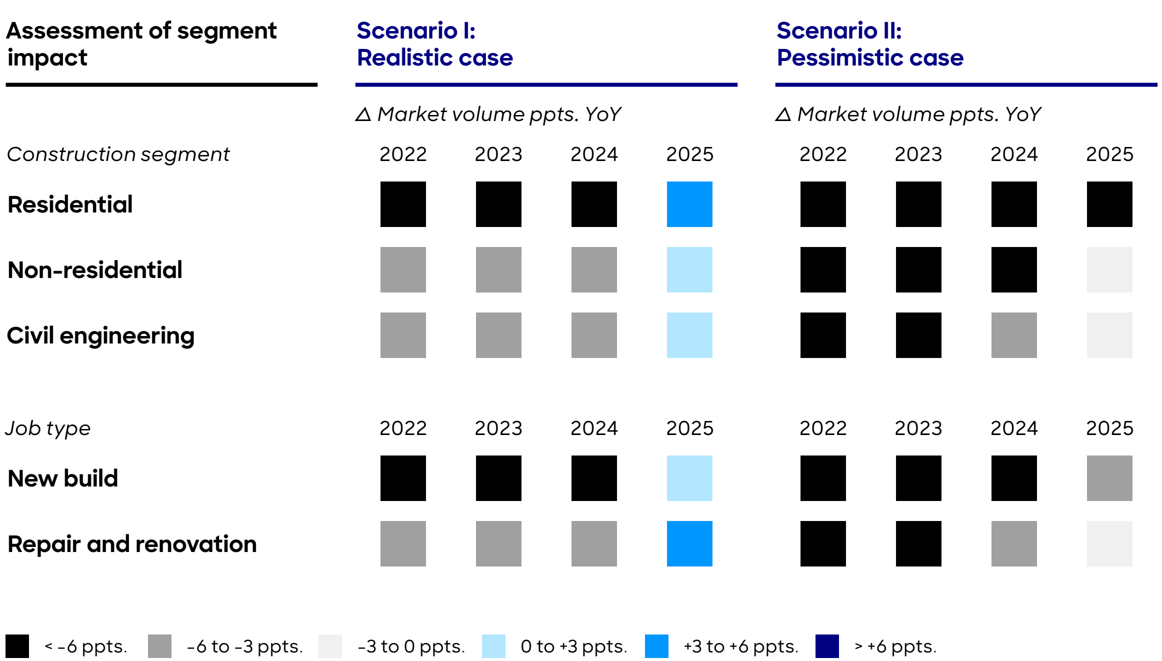
Segment	Growth 2023 in %	Share
Residential building	-7.5%	56% of Total
Commercial/ industrial	-4.0%	25% of Total
Infrastructure/public	-5.1%	19% of Total
New build	-10.3%	36% of Total
Renovation	-3.7%	64% of Total
Total construction	-6.2%	Total = 100%

Source: BMI, BKI, Destatis, IFO, Euroconstruct, European Commission, Roland Berger

Residential sector hardest hit by uncertainty
New build projects will lose share to repair and renovation

Both our new Realistic and Pessimistic scenarios predict very slow growth in real construction production output in Germany in the period to 2025. The residential sector will be the most strongly affected, with demand falling due to the prevailing uncertainty. The rising building and financing costs will dampen demand and make developers more cost-conscious than ever. Furthermore, the initation of new and implementation of existing project in the non-residential sector will be negatively affected, resulting in delayed projects or even cancelation thereof. The outlook for civil engineering is less bleak, and government measures could even boost demand. Overall, however, new construction projects are increasingly likely to be put on hold or delayed. By contrast, repair and renovation projects will continue, potentially benefiting from the fact that they are a more cost-efficient alternative to building new assets.

Impact on German construction industry segments[1]



Residential
- Demand in the residential segment will sharply decrease due to high uncertainty
- The increasing building and financing costs will make households and real estate developer more cost-conscious and decrease their demand

Non-residential
- Demand in the non-residential segment will further decrease to save or delay costs
- The growing financing costs will negatively affect the initiation of new and implementation of existing projects, resulting in delayed projects or even cancelation thereof

Civil engineering
- Demand in civil engineering building segment will also decrease due to the higher building and financing costs
- Stabilization efforts from the government could even have a positive impact on the demand side

New built/repair and renovation
- Mostly new construction projects will be delayed, put on hold or even canceled, while repair and renovation projects will mostly be continued
- Projects might even be shifted from new construction to more cost-efficient renovations and repair projects

1 Based on the RB Construction Radar, we have derived these 2 scenarios for Germany. Their impact on the industry's order intake has been modeled accordingly for all construction segments.

Source: Roland Berger

Swift and resolute action needed to weather the current crisis

But companies and investors must also prepare themselves for coming rebound

Realizing what awaits them, many players in the construction industry have already taken steps to prepare for the coming recession. Yet even while cutting costs, shoring up liquidity and moving to contain immediate geopolitical risks, it is important not to lose sight of the longer term. Companies that resize and become more flexible now can also take advantage of new opportunities even during the crisis. For investors too, this is the time to realign portfolios and back companies' attempts to improve performance. Then, when the storm abates, they can be among the first to seize fresh strategic and operational opportunities.

	Companies along the construction value chain					Investors
	1. Must-do to remain capable of acting during/after crisis	**2. Meet challenges & exploit chances during the crisis**		**3. Be ready to accelerate after the storm**		**For investors (PE, company)**
Operational	Analyze quality of/ risk to order backlog	Renegotiate prices and accelerate variabilization	Prioritize/inform customers/ orders for operations			
	Analyze effects of the German government's 14-point plan	Reorganize and rightsize workforce	Reallocate production capacity			
	Establish cash office	Take advantage of temp. commercial competitors' weaknesses	Analyze and improve supply chain efficiency	Further diversify supplier base	Improve asset management	Initiate an (outside-in) performance improvement program
	Identify business & operational risks	Flexibilize logistics & accelerate global sourcing	Review risks/restructure real estate portfolio	Increase competitive advantage, push for green/ sustainable transformation	Identify fields and prepare+ invest in R&D	Evaluate portfolio performance and construction exposure for financial planning adjustments
	Plan scenarios for most critical economic factors	Launch operational excellence program	Launch sales efficiency program (+tactical)	Adopt modern building practices (time and money saving) i.e. pre-fabs	Integrate BIM more broadly	Shift portfolio exposure to crisis-resilient segments/ companies
Strategic		Prepare short/mid-term commercial scenarios	Review organization, retain talent + prepare for selective hiring	Prepare for inorganic growth opportunities (to compensate for '24/25)	Strategically (re)allocate operational capacity globally	Use an anticyclical investment strategy to buy high value targets below fair value
Goal and status	• Ensure sufficient liquidity • Identify risks, prepare to react quickly to changing situations driven by geopolitical events • Reduce costs and forward prices	• Resize & implement more flexible organization – retain competencies & capacity • Proactively turn crisis into opportunity where possible, launching operational performance, de-costing and sales excellence programs		• Become the first player to benefit from the rebound, seizing operational and strategic market opportunities • Move into the field of energy efficiency for renovation and new construction		• Re-evaluate the investment strategy • Use the crisis as an opportunity for lucrative investments
	Already done? ✓	Already done? ✗		Already done? ✗		Already done? ✗

Source: Roland Berger

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