



Japan

Country Insights and Commodity Report

Q1 2023



Japan

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The Japanese economy experienced a decline in its GDP growth rate, dropping from 2.1% in 2021 to 1.1% in 2022, which was largely attributed to a deceleration in its export growth. However, the latest report from the IMF anticipates a rebound and predicts a growth rate of 1.3% for 2023. Additionally, there is a noticeable relaxation of inflationary pressures, with the Consumer Price Index estimated to be 3.3% in 2022, showing a decrease from 3.8% in the previous year.

Japan's construction grew by 2.5% in real terms in 2022 and is expected to continue to expand with a growth rate of 0.9% in 2023. This is attributed to a surge in private investment in building construction, particularly in the renewable energy infrastructure, telecommunications, and manufacturing sectors. The industry is expected to maintain an annual growth rate of 1% from 2024 to 2027, supported by ongoing investments in these sectors. The government's emphasis on 6G communication and the semiconductor industry is also likely to spur investments in data centres and high-tech industrial sectors. Despite these positive developments, there are still risks to the industry's overall outlook, such as elevated material costs and shortage of skilled labour.



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Lumber

Weak residential investment in the final quarter of 2022 and sluggish demand for new housing construction, which is projected to expand by only 0.3% this year, is expected to weigh on lumber demand in 2023. New housing loans fell by approximately 1.5% in 2022, due entirely to a 5.0% decline in the second half of the year. Imports of softwood lumber, which accounts for a relatively significant proportion of Japanese lumber consumption, declined in the first two months of this year.



Cement and aggregates

While the increase in cement prices seen in Q1 2023 was not as sharp as in Q4 2022, despite thermal coal costs remaining elevated, prices are expected to continue to rise in the coming quarters. Major cement companies, such as Taiheiyo and Sumitomo Osaka, are in the process of deciding price revisions, which are likely to see cement prices rise. Sumitomo Osaka, which last increased its prices in October 2022, is expected to revise its prices from April 2023.



Concrete blocks and bricks

Brick and concrete block prices are projected to appreciate slightly in the short-term, with the latter impacted by the increase in cement costs. Increase in import costs will add further upward pressure to the pricing.



Steel (rebar and structural)

The continued decline in factory activity in Japan, which contracted for the fifth consecutive month in March 2023, and the weak outlook for the manufacturing sector is expected to see steel prices decline in the second quarter of this year. Elevated metallurgical coal costs and a strengthening of demand in China will soften the decline in domestic steel prices.



Copper

Copper prices continued to rise in Q1 2023 as Chinese demand continued to strengthen, though concerns of a potential global economic recession eased price growth during the quarter. With the global economic outlook appearing brighter, copper prices are expected to continue to appreciate in the second quarter of this year. Further upwards pressure on prices will be driven by efforts by the Japanese government to enhance electricity grid and transmission infrastructure to enable it to meet its decarbonisation targets.



Japan – Commodity Report



Materials	Q2 2023 (f)	Q2 2022 – Q2 2023 (f)		Q4 2022 – Q1 2023 (e)
	JPY	JPY	2021-22 % change	% change
Copper (JPY/MT)	1,254,788	1,297,000	-3.3% ↓	3.5% ↑ ●
Steel rebar (JPY/MT)	114,386	115,900	-1.3% ↓	0.4% ↑ ■
Steel flat (JPY/MT)	146,730	141,950	3.4% ↑	-0.5% ↓ ■
Stainless steel (JPY/MT)	173,705	NA	NA	-2.8% ↓ ●
Lumber (JPY/M ³)	71,453	70,000	2.1% ↑	-2.1% ↓ ●
Asphalt (JPY/MT)	96,929	104,000	-6.8% ↓	-17.1% ↓ ●
Limestone (JPY/MT)	81,152	90,722	-10.5% ↓	0.0% ↔ ■
Cement (JPY/MT)	15,368	12,992	18.3% ↑	2.0% ↑ ■
Concrete (JPY/M ³)	18,905	15,067	25.5% ↑	6.2% ↑ ●
Welded mesh (JPY/unit)	671	669	0.3% ↑	0.7% ↑ ■
Bricks (JPY/'000 unit)	136,576	127,589	7.0% ↑	1.0% ↑ ●
Plasterboard (JPY/unit)	1,603	1,540	4.1% ↑	3.9% ↑ ●
Diesel (JPY/litre)	149	151	-1.9% ↓	-0.4% ↓ ■

(f) Forecast (e) Estimated

- Q4 2022 to Q1 2023 % change greater than estimation in our Q4 2022 report
- Q4 2022 to Q1 2023 % change less than estimation in our Q4 2022 report

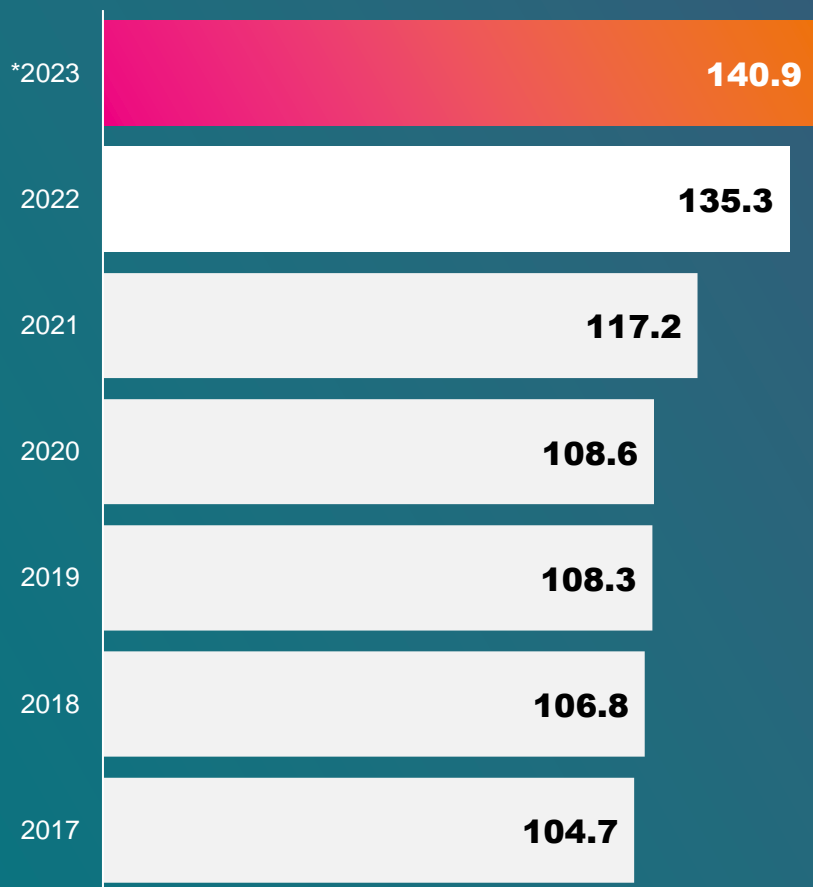
Welded mesh: 100 x 200cm, dia.-5mm Plasterboard: 182 x 91 x 0.95cm (L x W x T)

Material	% change Q1 – Q2 2023 (f)	Level of impact of pricing on construction procurement and supply chain *	
 Copper	+1.6% ↑	Low	Copper prices in Japan rose by around 3% in Q1 2023, in comparison to their Q4 2022 levels. Domestic prices fell marginally in March 2023 on a monthly basis, in part reflecting concerns over banking sector risks in the US, but prices picked up towards the end of the month and are expected to remain relatively high in the coming quarters.
 Steel prices - Steel rebar - Flat steel	-0.2% ↓ -0.4% ↓	Low	Trends in prices for steel rebar and flat products diverged in Q1 2023, with rebar prices edging up and flat prices falling marginally. This in part reflects weak manufacturing output in Japan, particularly in its automotive sector, which has constrained demand for flat products. Prices of both rebar and flat are expected to decline steadily, with weaker demand offsetting ongoing supply side pressures.
 Stainless Steel	-0.7% ↓	Low	Despite, rising input costs, with ferrochrome, nickel and iron ore prices all rallying on increase demand from China following its reopening, weak demand from the Japanese manufacturing sector is expected to see stainless steel prices soften in the coming quarters.
 Lumber	-1.3% ↓	Moderate	Lumber prices are estimated to have declined by 2% in the first quarter of this year. Driving down prices was a decline in demand from the residential construction sector. Private residential investment was weak in 2022, declining by 4.7%, and this trend is expected to have continued in early 2023. Lumber prices are expected to continue to decline in the second quarter of this year as a result.
 Asphalt	+1.3% ↑	Low	With the international crude oil prices stabilising, the prices of asphalt has witnessed a decline of more than 10%. However, with major road maintenance projects underway, the demand for asphalt is expected to remain strong. The asphalt price is expected to remain at current levels for next quarter.
 Limestone	-0.6% ↓	Low	Limestone prices remained unchanged from their Q4 2022 levels in the first quarter of this year. A softening of demand from the construction sector amid elevated inflation and weak investment levels is expected to keep prices around their current levels in the coming quarters.






Japan – Commodity Report



Building Construction Index 2017-^{*}2023 (2011=100)

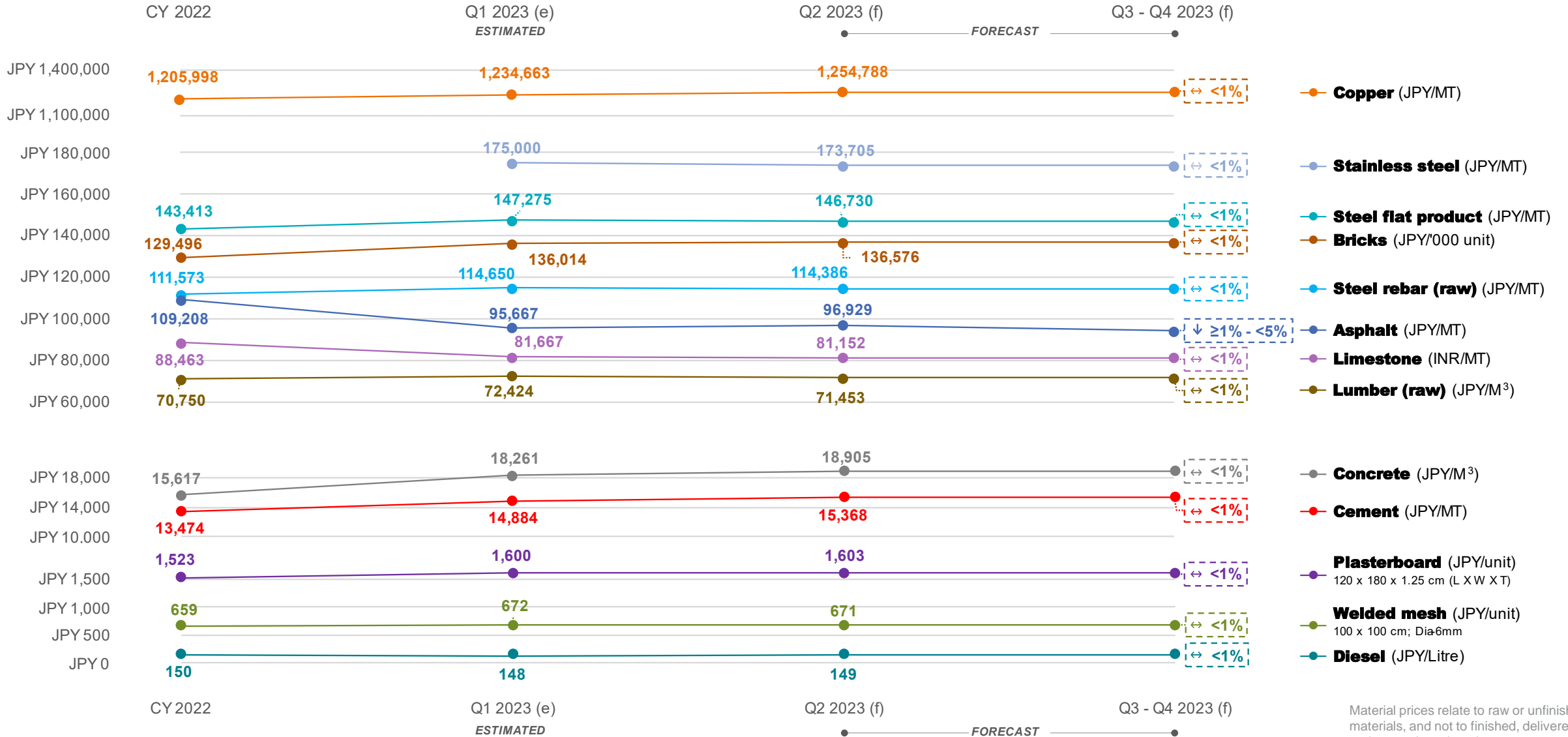


^{*}average of Jan and Feb 2023

Material	% change Q1 – Q2 2023 (f)	Level of impact of pricing on construction procurement and supply chain *	
 Cement Concrete	+3.2% ↑ +3.5% ↑	Moderate	The price for cement and related products rose in the first quarter of this year, in comparison to their Q4 2022 levels. Prices rose predominantly due to the passing on of elevated thermal coal costs. Prices are expected to continue to rise in the second quarter of this year, by 3-4%.
 Welded mesh	-0.1% ↓	Low	Welded mesh prices recorded a marginal increase in Q1 2023 in comparison to Q4 2022 in line with the rise in steel rebar prices. With steel rebar prices expected to soften in the coming quarters, the price of welded mesh is expected to decline further in Q2 2023.
 Bricks	+0.4% ↑	Moderate	Brick prices slightly increased in Q1 2023, in comparison to their Q4 2022 levels. Although demand will be relatively sluggish in the construction sector, containing growth in demand, elevated energy costs will keep the price of bricks around its current levels in the coming quarters.
 Plasterboard	+0.2% ↑	Low	Plasterboard price recorded a moderate increase of approximately 3% in Q1 2023, in comparison to prices in Q4 2022. High energy costs have been a major driver for this increase in price. However, with demand from the construction sector relatively soft, the price for plasterboard is expected to remain around its current levels in the coming quarter.
 Diesel	+0.5% ↑	Low	Diesel prices in Q1 2023 declined by 0.4%, in comparison to prices in Q4 2022. Prices fell through Q1 2023, with the average diesel price being 0.4% lower in March 2023 than in January 2023. Government subsidies and lower crude oil prices have driven this decline. However, with crude oil prices beginning to firm, diesel prices are expected to rise marginally in Q2 2023.

* Level of impact rating reflects a combination of factors: the price movement and also price level (compared to recent past beyond the last quarter), the importance of the material, and general state of the supply chain in terms of stability. Please note that commodity prices are based on representative materials available in the respective countries, and as these materials may not be standard across all markets, cross-country comparisons on prices can be ineffective. For example, asphalt types can vary between hot, cold or a bitumen price, and standard unit sizes for materials can vary across countries.

Japan – Construction Materials Pricing (2022-2023)



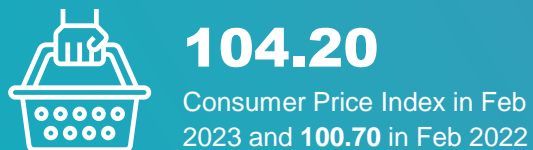
Material prices relate to raw or unfinished materials, and not to finished, delivered and erected on-site prices.

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Japan – Macroeconomic overview



Economic indicators

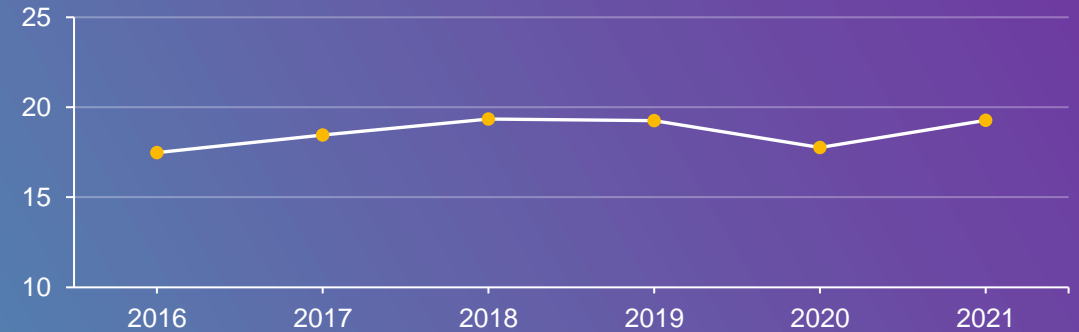


National holidays



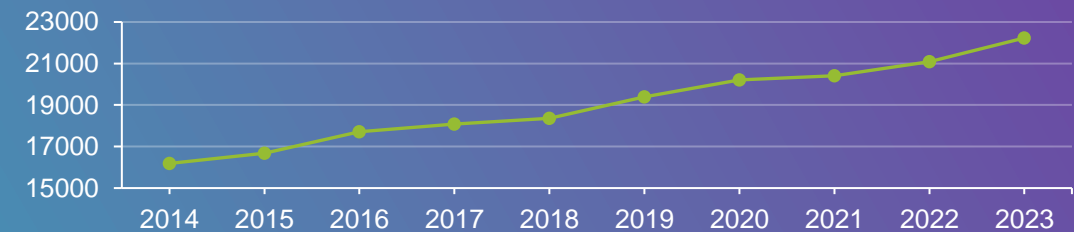
Japan Energy Prices

Electricity costs for the industry
in yen per kWh in Japan



Labour Unit Price Trends







Public works design labour unit price
Trends in the national average for all occupations



The chart shows the unit price of public works design labour published by the Ministry of Land, Infrastructure, Transport and Tourism Japan. As labour costs continue to rise in Japan over the past 11 years, they have increased by 5.2% in 2023 (a 9-year high), reflecting the latest labour market prices. The above-mentioned prices are in JPY per 8 hours, working within the prescribed working hours.

Japan – Construction overview



Output 2022 and 2023 (in JPY millions)			
	Total 2022	Total 2023 (f)	Total 2024 (f)
Commercial 	8,186,668	8,300,831	8,422,602
Energy and utilities 	11,040,562	11,090,321	11,156,688
Industrial 	4,848,901	4,884,348	4,894,561
Infrastructure 	17,821,699	18,092,623	18,368,676
Institutional 	2,774,342	2,815,624	2,859,029
Residential 	19,430,980	19,506,100	19,596,918

*The output is in real terms at constant prices with 2017 as base year

Long lead equipment (LLE) - Supply Chain Overview

2022 was a turbulent year for the global supply chain with the fallout from the global pandemic combined with the emergence of the Russia-Ukraine conflict, leading to supply chain disruptions across the globe. However, 2023 is showing signs of relief in the market for long lead equipment (LLE). The following are the specifics of the LLE supply chain dynamic:

- Demand:** Demand for LLE has remained exceptionally high across all regions and industry sectors. Organizations have moved to expand their supply chain portfolios and include secondary and tertiary suppliers, whilst most are continuing to invest in inventory management systems to prevent any supply chain disruptions. There is no sign of reduced demand, so the constraints to the supply chain will continue for the remainder of 2023.
- Supply:** The stock levels of raw materials finally started to stabilize, alleviating some recent pressures on manufacturers and suppliers. However, it is worth noting that most LLE suppliers have reported being at operational capacity, with order books full up to Q3 2024, which may cause some concern for those relying on their products. Nevertheless, there is some hope as Tier 2 and Tier 3 supply chains have started to increase their capacity and support the larger demand within the market, which may help to mitigate any negative impact of capacity restrictions.
- Freight durations and costs:** Freight durations have begun to shorten in early 2023 as the global infrastructure and operations have developed to meet the rising demand and freight companies are shipping much faster than they did during the pandemic. Average freight costs have also reduced to align with pre-pandemic levels suggesting a return to normality within the industry. The benefits have been experienced in early 2023 and further reductions are expected throughout the rest of 2023.

Construction Health and Safety practices and culture



288 fatalities due to occupational accidents in 2021 in construction* industry

21% reduction in fatalities due to occupational accidents in construction industry in the period 2012-2021

*construction industry includes building construction work

Japan – Report methodology



Linesight has commissioned independent global research to track construction materials and commodity prices. The approach and methodology for the collection of construction material pricing and other indicators is based on primary and secondary research.

Primary and secondary research

Primary research is conducted on a quarterly basis with stakeholders in the value chain, including manufacturers and suppliers/distributors of the target materials, to ascertain market information on prices in recent quarters, and also on projections for changes in the coming quarter and remainder of the year. The market analysis also involves a thorough assessment of secondary sources of data on materials and labour prices, in addition to underlying demand and supply trends that will impact market prices.

Sources include GlobalData's Construction Intelligence Center (CIC), the World Bank, IMF, OECD, as well as country specific national statistics offices, such as the U.S. Bureau of Economic Analysis, Bureau of Labor Statistics, and also industry specific associations and publications.

Definitions

- Commodity prices are net of taxes for all the countries
- Prices are not customer delivered
- All commodities are raw materials
- Nominal and real data

Nominal data series do not exclude changes in prices and are also referred to as current prices series.

Annual changes in nominal data for construction output will include changes in construction activity, as well as changes in costs for materials and equipment.

Real data series are calculated by keeping prices constant (so, are also referred to as constant price series), and therefore, they reflect changes in activity only. Growth rates in nominal terms can overstate the pace of growth in construction activity if there is high inflation stemming from rising prices for key inputs.

Sample sources – Japan

For Japan, sources for this report include, but are not limited to: IMF

- Japan Industrial Safety and Health Association
- Statistics Bureau of Japan
- GlobalData's Construction Intelligence Center (CIC)
- Bank of Japan (BOJ)
- Construction Prices Research Institute
- Statista
- Economic Research Institute
- Pubic Holidays
- Ministry of Land, Infrastructure, Transport and Tourism

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