



Taiwan

Country Insights and Commodity Report

Q3 2022



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Taiwan is expected to record 3.3% economic growth in 2022 according to the latest International Monetary Fund (IMF) forecast, which is a slight upward revision of 0.1 percentage points on its April prediction, contrary to what has been seen for many other countries. However, it expects to see a more moderate expansion of 2.8% for 2023. Inflation is anticipated to come in at 3.2% this year and 2.2% next year. Interest rates have been raised by Taiwan's central bank in recent weeks, albeit to a modest 1.625%, in an effort to curb inflation without weighing too heavily on its slowing economy. FX rates are particularly influential at the moment, with the US dollar recently hitting a six-year high against the Taiwanese dollar.

The construction industry is expected to grow by 3.4% in real terms over the full 2022 year, with investments in renewables, manufacturing and transport infrastructure driving growth – many of these fall under the Forward-Looking Infrastructure Development Program (FLIDP). The semiconductor sector is also performing well, with heavy investments underway from Taiwan Semiconductor Manufacturing Company (TSMC). However, it is worth noting that electricity prices, elevated materials and labour costs and ongoing supply chain constraints may hamper the industry in the near future.



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Lumber

Lumber prices have dropped from recent highs, with import prices falling in line with cheaper products in major source markets. The pace of growth in construction output has slowed, keeping demand down compared to the high pace of expansion recorded in recent years.



Cement and aggregates

Driven by domestic demand, high production costs and falling supplies in China, the price of cement has stayed at a high level in recent quarters. Taiwan Cement Corp has reported that high coal prices had impacted its bottom line, despite higher cement prices. In spite of uncertainty over the demand outlook, the company is pushing ahead with investment in the circular economy and new energy.



Concrete blocks and bricks

With domestic production falling, Taiwan has become more reliant on imports from China and Vietnam. Demand growth has weakened in China, but with high production costs in general, prices are set to remain relatively high.



Steel (rebar and structural)

China Steel Corp, the largest integrated steel maker in Taiwan, stated in September that it would keep domestic steel prices for deliveries unchanged in October, but would cut prices by 2.6% on average for Q4, given high levels of inventories among buyers as demand had been fairly weak. In 2023, demand is expected to pick up, primarily driven by works under the Forward-Looking Infrastructure Development Program, which covers a wide range of public infrastructure projects.



Copper

Copper prices have remained weak, reflecting a decline in demand growth locally and in mainland China. Although regional demand could improve, the outlook in other major regions is for sluggish demand amid rising interest rates.



Taiwan - Commodity Report



Materials	Q4 2022 (f)	Q4 2021 – Q4 2022 (f)	Q2 2022 – Q3 2022 (e)	
	NT\$	NT\$	2021-22* % change	% change
Copper (NT\$/MT)	226,612	260,035	-12.85% ↓	-12.7% ↓ ●
Steel rebar (NT\$/MT)	20,118	22,520	-10.67% ↓	-14.8% ↓ ●
Steel flat (NT\$/MT)	32,903	32,047	2.67% ↑	0.0% ↔ ■
Lumber (NT\$/M3)	6,857	6,540	4.84% ↑	-1.5% ↓ ■
Asphalt (NT\$/MT)	12,999	13,827	-5.98% ↓	-3.0% ↓ ●
Limestone (NT\$/MT)	1,866	1,717	8.71% ↑	1.0% ↑ ■
Cement (NT\$/MT)	3,856	3,260	18.27% ↑	3.1% ↑ ●
Concrete (NT\$/M3)	1,686	1,489	13.24% ↑	4.6% ↑ ●
Welded mesh (NT\$/unit (a))	357	350	2.03% ↑	-3.5% ↓ ■
Bricks (NT\$/'000 unit)	17,416	17,000	2.45% ↑	-1.2% ↓ ■
Plasterboard (NT\$/unit (b))	251	230	9.24% ↑	0.0% ↔ ■
Diesel (NT\$/litre)	26.85	27.07	-0.82% ↓	-3.0% ↓ ●

(a) 150x300cm, dia.-5mm
(b) 183x122x1.2cm (LxWxT)

● Q2 to Q3 2022 % change greater than estimation in our Q2 report
■ Q2 to Q3 2022 % change less than estimation in our Q2 report

Material	% change Q3 – Q4 2022 (f)	Level of impact of pricing on construction procurement and supply chain *	
 Copper	-2.0% ↓	High	Copper prices have declined sharply since reaching a high in May, a trend that has reflected weak demand in China, relatively high stocks, and an outlook for sluggish economic growth across major markets. Although the short-term outlook is one of declining prices, as copper is one of the most important metals needed for the booming EV industry, long-term copper demand is expected to strengthen. It is worth bearing in mind that with the current foreign exchange rates, copper purchased in US dollars will actually infer an increase in the price at present.
 Steel prices - Steel rebar - Flat steel	-1.7% ↓ -2.5% ↓	Moderate	Steel rebar prices dropped by around 20% from late April to early August, having peaked in March, and have since held relatively steady (minor pick-up in August seen on the ground). Prices are still at relatively high levels, with high production costs offsetting a weakening in demand. The price for flat steel products has been more robust. With the government's budget for public construction to increase by 32% in 2023 and with mainland China slowly but steadily resuming construction activities, demand for steel will improve in the region against a backdrop of weak demand in Europe.
 Lumber	+0.5% ↑	Moderate	Lumber prices have stabilised amid an improvement in the supply chain and domestic timber supplies. Prices are expected to remain fairly stable in the coming quarters, with demand growth easing but production and transportation costs remaining relatively high.
 Asphalt	-1.0% ↓	Moderate	Asphalt prices have eased in line with the recent fall in crude oil prices, but with the latter set to face renewed upward pressure globally because of production cuts by OPEC+, further declines in asphalt prices will be limited.
 Limestone	+0.5% ↑	Low	Limestone prices have stayed relatively stable compared to other building materials, and this trend is expected to be maintained in the short term.

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.

Taiwan - Commodity Report



Construction cost index 2015-2022

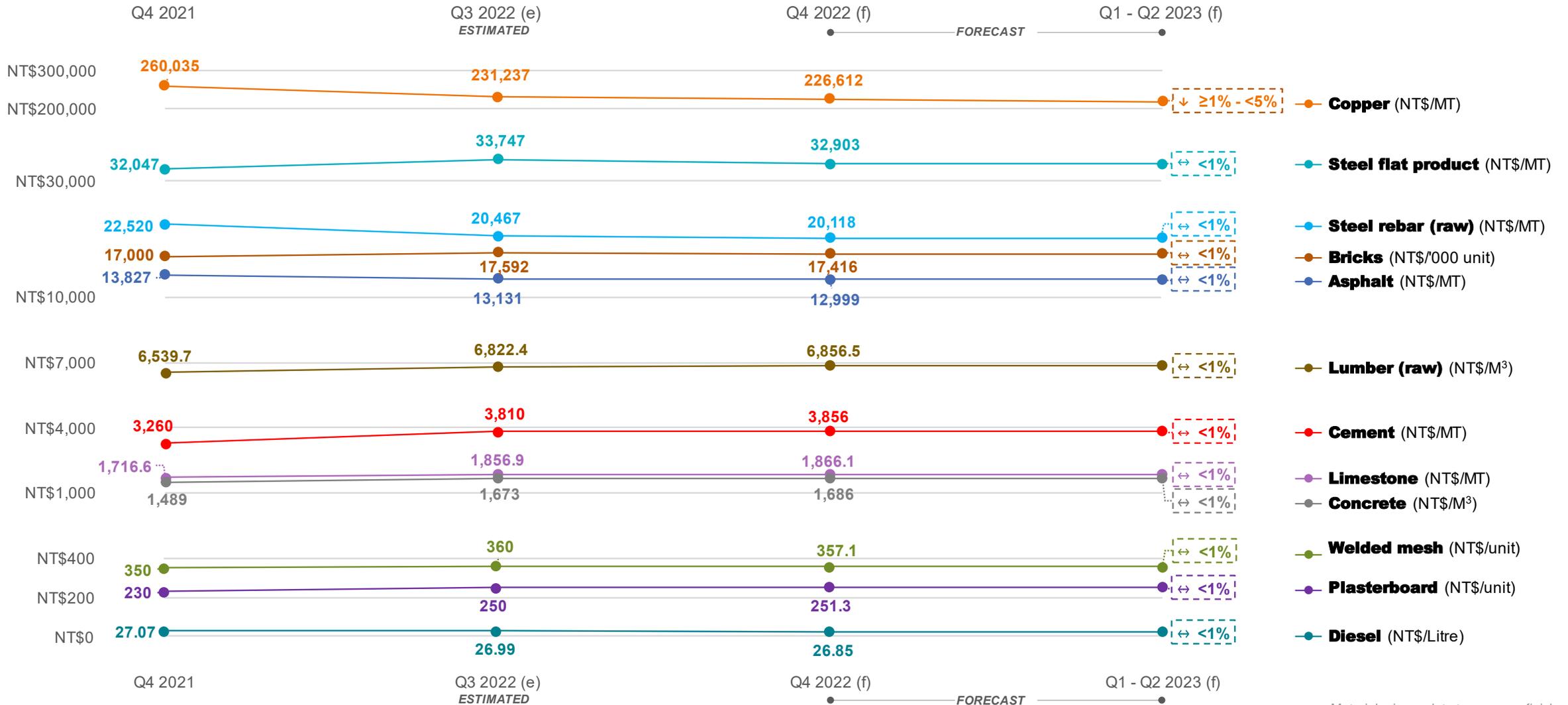


Material	% change Q3 – Q4 2022 (f)	Level of impact of pricing on construction procurement and supply chain *	
 Cement Concrete	+1.2% ↑ +0.8% ↑	Moderate	Having risen sharply between mid-2021 and mid-2022, cement prices have stabilised at a high level in recent months. Although growth in local demand is easing, higher production costs will keep pressure on prices in the coming quarters. Regional demand could pick up with mainland China set to invest heavily in infrastructure. On the ground, we have seen a moderate price increase in concrete over the January to August period.
 Welded mesh	-0.8% ↓	Moderate	The prices for welded mesh have stayed relatively high, but will weaken as steel prices edge downward.
 Bricks	-1.0% ↓	Low	Brick prices have fallen marginally, reflecting slightly weaker demand along with a slowing real state sector amid rising interest rates. Production costs will remain relatively high, preventing a marked decline in final prices.
 Plasterboard	+0.5% ↑	Low	With some increased uncertainty in the housing sector amid increasing interest rates, demand for building materials such as plasterboard is expected to remain relatively sluggish, but production costs are still high.
 Diesel	-0.5% ↓	Moderate	With international crude oil prices stabilising and Taiwan's government policy to keep oil prices in Taiwan lower than neighbouring countries, diesel prices had steadily declined in Q3 this year. However, with the recent announcement of OPEC+ nations to cut oil production output targets, diesel prices are expected to remain close to current levels in the coming months.

* 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.

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Taiwan – Construction Materials Pricing (2021-2022)



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

Taiwan – Macroeconomic overview



Economic indicators



3.3%

GDP growth in 2022 (f) and **6.57%** in 2021



3.18%

inflation rate in 2022 (f), and **1.96%** for 2021



11.09M

people employed in 2022 (f) and **11.17M** in 2021



3.75%

unemployment rate for 2022 (f) and **3.95%** in 2021



114.71

Consumer Price Index in 2022 (f) and **111.17** in 2021



118.7

Producer Price Index in Sept. 2022 and **105.21** in Sept. 2021

National holidays



14 days

national holidays in Taiwan

- New Year's Day (1 January)
- Lunar New Year's Eve (31 January)
- Lunar New Year's Day (1 February)
- Lunar New Year Holiday (2 February)
- Lunar New Year Holiday (3 February)
- Lunar New Year Holiday (4 February)
- Lunar New Year Holiday (5 February)
- Peace Memorial Day (28 February)
- Children's Day (4 April)
- Tomb Sweeping Day (5 April)
- Dragon Boat Festival (3 June)
- Mid-Autumn Festival Holiday (9 September)
- Mid-Autumn Festival (10 September)
- National Day (10 October)

Taiwan – Macroeconomic overview



Output 2021 and 2022 (in millions)			
	Total 2021	Total 2022 (f)	% change
Commercial 	NT\$112,633	NT\$114,356	1.5%
Energy and utilities 	NT\$346,148	NT\$350,924	1.4%
Industrial 	NT\$277,540	NT\$280,817	1.2%
Infrastructure 	NT\$501,128	NT\$521,048	4%
Institutional 	NT\$99,642	NT\$99,980	0.3%
Residential 	NT\$591,637	NT\$595,899	0.7%

Long-lead equipment (LLE) and Supply Chain narrative

Long-lead equipment (LLE) lead times have changed drastically since the start of 2022. Suppliers have seen the implications of material shortages, delays and price hikes throughout the supply chain, which is leading to extended lead times and reduced commitment from suppliers for new projects. The key areas in focus are:

- Demand:** The demand for long-lead equipment in the data centre sector has continued to increase in Q3 2022. More data centre and crypto mining providers are joining the market, and this continued demand far outweighs the capacity of the supply chain. Entry onto the production line remains a significant challenge, with suppliers reporting fully booked capacity until Q2 2024. There has been some growth in the development of Tier 2 and Tier 3 suppliers to support this demand. However, it will take time to build an extended supply chain. There has also been no sign of a decline in demand yet in early Q4 2022.
- Material shortage:** Just as material availability started to improve, the further threat of escalation with the Russia-Ukraine conflict has cast further uncertainties of future material stocks and reserves. The supply chain has continued to seek alternative sources of raw materials, and although this has been with partial success, market lead times remain conservative.
- Freight durations and costs:** Heightened by the increase in fuel costs, and compounded by the instability of labour and container availability, freight durations have been particularly volatile in recent times. Early indications from Q4 2022 suggest some stabilization in shipping durations is returning to the market, but the associated costs remain volatile due to the global fuel crisis. As clients consider alternative solutions, it almost becomes cost prohibitive to use quicker forms of transport, such as air freight, due to these increasing fuel costs.

Construction Health and Safety practices and culture



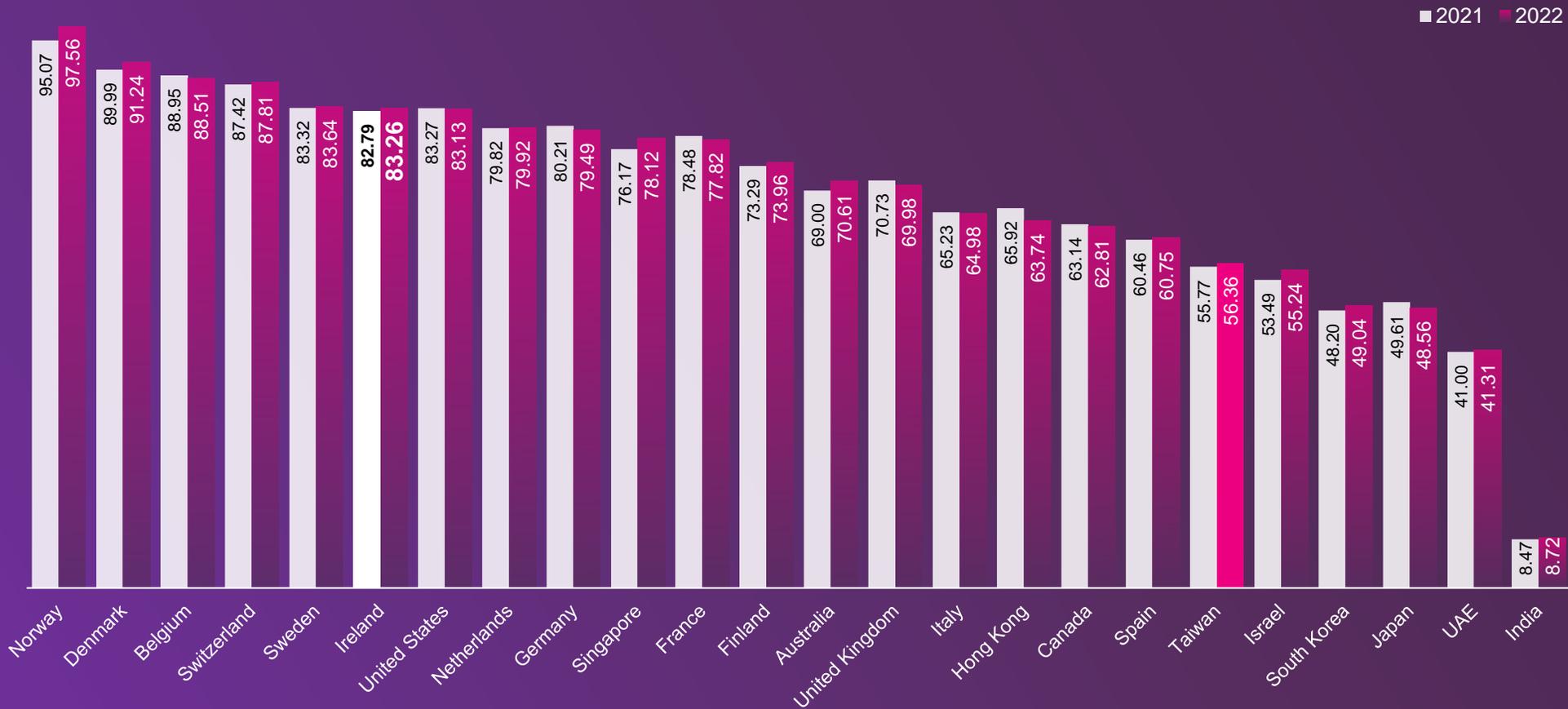
137

fatalities in the construction industry in 2021

Taiwan – Macroeconomic overview



Labour productivity



Labour costs



NT\$109.73

index of labour costs in July 2022, compared to NT\$100.47 in July 2021.

Labour productivity per hour worked in 2021 international dollars, converted using Purchasing Power Parities

Taiwan – 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. A more comprehensive list of sources is included below.

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 – Taiwan

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

- IMF
- National Statistics
- Department of Statistics
- GlobalData's Construction Intelligence Center (CIC)

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