

Israel Q1 2022

As exports and investment picked up in 2021, Israel recorded strong economic growth of 7.1%, following a challenging 2020. Consumer spending, however, has been slower, with just moderate increases seen. The IMF is forecasting 4.1% growth this year, although given the current market dynamics globally, a number of factors may lead to a revision of this forecast.

The construction industry rebounded in 2021, up by 6.2% following the contraction seen in 2020, driven by COVID-19 restrictions. Industry growth of 2.6% is expected this year, as the government remains focused on investments in public infrastructure and driving economic growth, and a particular emphasis on renewable energy projects, in an effort to achieve clean energy targets. Of course, material price escalation and supply chain bottlenecks will continue to impact the industry locally, as is the case for the majority of countries worldwide.

As material costs will continue to represent a challenge for the construction industry for the foreseeable future, Linesight will publish quarterly updates to track commodities and provide insights about future projections on movements.



Shay Dahan Director shay.dahan@linesight.com



Lumber

The Israeli wood market has developed rapidly over the past two decades, importing significant quantities for construction, roofing and infrastructure. The disruption to supplies from Ukraine and Russia will be a factor in driving up prices.



Concrete and aggregates

Israel has become increasingly reliant on imported cement, with domestic producers losing market share in recent years owing to cheaper imports from Turkey. Nesher is now the only domestic producer. Soaring production costs locally and in Turkey will contribute to continued upward pressure on domestic prices. Concerns over shortages of aggregates recently resulted in a pilot program to allow Palestinian trucks to avoid security checks and deliver aggregates directly to construction sites in Israel.



Concrete blocks and bricks

The construction industry has recovered from the COVID-19 crisis and the residential sector in particular is continuing to expand supported by the government's plan to build new houses to meet the demands of rising population and ongoing urbanisation. This combined with rising production costs will keep prices for blocks and bricks at a high level.



Steel (rebar and structural)

Prices of steel in Israel have been heavily impacted by the Russia-Ukraine conflict, given the importance on Ukraine as a supplier of hot-rolled steel and steel bars. Prior to the war, Oleksandr Pavlov, head of the Ukraine-Israel Business Council, reported that it would be extremely difficult to replace these products with other sources. Demand will also be high, supported by government investments in the development and the modernisation of the country's transport infrastructure. In its 2022 Budget, the government allocated ILS150 billion (\$46 billion) to develop metro projects.



Copper

Following a dip in December 2021, copper prices resumed on an upward trajectory in early 2022, with a price spike in March as a result of the Russia-Ukraine conflict. Prices will remain elevated and volatile in the coming quarters given the solid demand and continued supply disruptions.



Israel - Commodity Report



	Q4 2021	Q3 Q4 2022 (f)		Q4 - Q1 (e) 2022
Materials	ILS	ILS	2021-22 (f) % change	% change
Copper (ILS/MT)	30,061	34,932	16.2% ↑	5.7% ↑
Steel rebar (ILS/MT)	2,235	3,152	41% ↑	12.8% 个
Steel flat (ILS/MT)	3,768	4,867	29.1% ↑	12.8% ↑
Lumber (ILS/M3)	826.5	856	3.6% ↑	-0.9% ↓
Asphalt (ILS/MT)	2,280	2,486	9.1% 个	3.8% ↑
Limestone (ILS/MT)	212.1	227.3	7.2% ↑	2.0% ↑
Cement (ILS/MT)	272	368	35% ↑	15.7% ↑
Concrete (ILS/M3)	315.5	375	19% 个	10.0% ↑
Welded mesh (ILS/unit)	212.3	256	20.8% 个	12.8% ↑
Bricks (ILS/'000 unit)	3,120	3,294	5.6% 个	1.5% ↑
Plasterboard (ILS/unit)	40.4	44.2	9.3% 个	4.5% ↑
Diesel (ILS/litre)	6.5	7.4	14.6% ↑	3.8% ↑

Q3 Q4 2022 (f): Forecasted average	
2021-22 % change: % change from Q4 2021	to Q3 Q4 2022 average

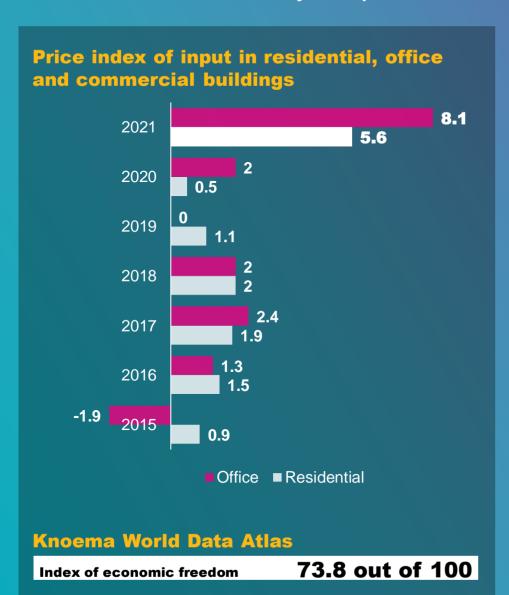
				The state of the s
	Material	% change Q1 – Q2 2022 (f)	Level of im	pact of pricing on construction procurement and supply chain *
	Copper	+6.7%↑	o () () High	Reflecting global pressures, copper prices in Israel have been volatile in recent quarters, and increasing demand and tight supply will keep prices at high levels.
	Steel prices - Steel rebar - Flat steel	+21.4%个 +11.2%个	o 0 0 0 0 High	The price of steel in Israel jumped sharply in March, with rebar rising by 24% in that month alone, having remained fairly stable during 2021 at a relatively high level. The disruption in trade caused by the Russia-Ukraine conflict, along with higher energy costs, will keep prices elevated for steel and related products.
	Cement Concrete	+13.3% ↑ +5% ↑	o DOD High	Cement prices have soared in recent months and are expected to remain at high levels in the coming months, reflecting the jump in prices of cement imports from Turkey, which accounts for around 60% of cement supplies in Israel. With increases in fuel prices and international coal and pet coke prices, Turkish cement manufacturers are facing much higher production costs and this will feed through into higher prices for Israel's cement imports from Turkey.
A	Asphalt	+2%个	o 0 0 0 0 High	The price of asphalt has trended upwards, and the high price of crude oil will keep asphalt at high levels. In October 2021, the Finance Ministry allocated ILS20 billion (\$6.3 billion) towards transportation projects that are currently underway, including extending Route 65.
0000	Limestone	+2%↑	●0000 High	Limestone prices have been increasing, and given shortages of aggregates, prices are expected to remain high.
	Lumber	+1.5%↑	o 0 0 0 0 Moderate	Lumber prices have fallen from highs reached in the second half of last year, but reflecting increases in logistics and transportation costs along with disruptions in supplies from Russia, prices will trend upwards in the coming months.

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.



Israel - Commodity Report





	Material	% change Q1 – Q2 2022 (f)	Level of im	pact of pricing on construction procurement and supply chain *
	Welded mes	h +4% ተ	o 0 🛭 📗 High	The price trend for welded mesh will reflect the increase in the price of steel.
盘	Bricks Plasterboard	+1% ↑ d +1.5% _↑	• 0 0 0 0 Low	With the construction industry recovering in 2021 and set to expand further in 2022, demand for bricks and plasterboard will strengthen. Alongside this increase in demand, prices will face upward pressure owing also to the jump in energy and transportation costs.
	Diesel	+7.2%↑	o 0 0 0 0 0 0	In line with the jump in crude oil prices in the wake of the Russia-Ukraine conflict, diesel prices in Israel have risen sharply and will remain high.

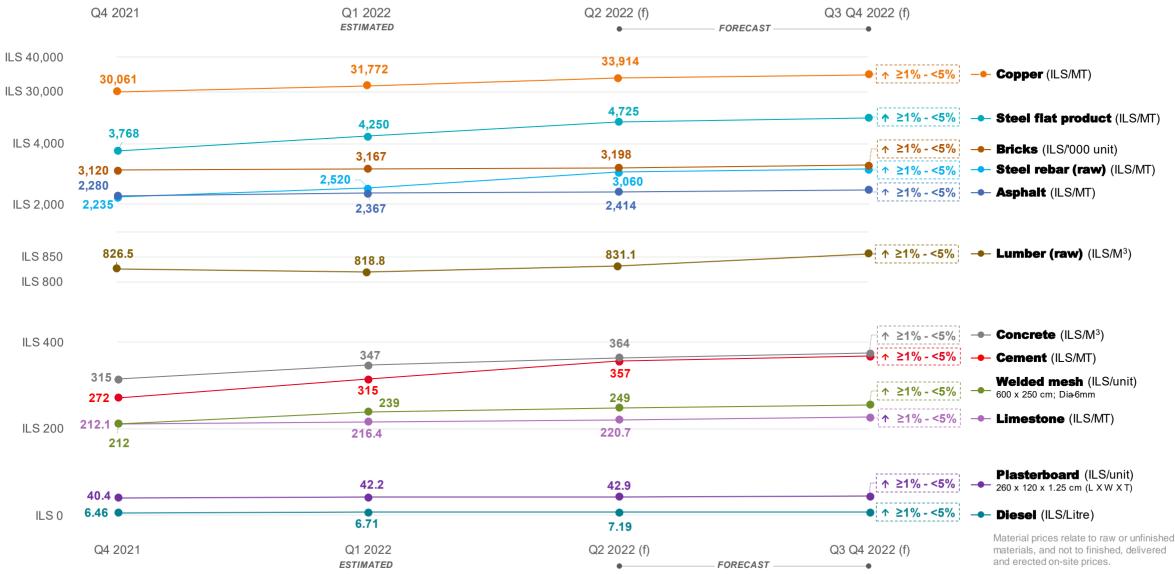
Please note that commodity prices are based on representative materials available in the respective countries, and as these materials may not be standard across all markets, cross-country comparisons on prices can be ineffective. For example, asphalt types can vary between hot, cold or a bitumen price, and standard unit sizes for materials can vary across countries.



^{*} 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.

Israel - Construction Materials Pricing (2021-2022)







Israel - Macroeconomic overview



Economic indicators



4.07%

GDP growth in 2022 (f) and 7.06% in 202



1.82% inflation rate in 2022 (f), and **1.41**% for 2021



4.1M people employed in 2022 (f) and 3.97M in 2021



4.60% unemployment rate in 2022 (f) and 5.10% in 2021



103.9 Consumer Price Index in 2022 (f) and 102.8 in 2021

Weather conditions



5°C to 30°C

typical temperature range throughout the year



550mm

average annual rainfall

Political stability



Political stability index (-2.5 weak; 2.5 strong)

The index of Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood that the government will be destabilised or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.

National holidays



11 official holidays in Israel. Most holidays are taken during September and October.



Israel - Macroeconomic overview







Labour costs



ILS 115,732

average construction worker gross annual salary in Israel or an equivalent hourly rate of ILS 56

- An entry level construction worker (1-3 years of experience) earns an average salary of ILS 86,207.
- A senior level construction worker (8+ years of experience) earns an average salary of ILS 140,381.



Israel - Macroeconomic overview



Output 2021 and 2022 (f) (in millions)

Sector	Total 2021	Total 2022(f)	% change	
Commercial	₪ 17,403.59	₪ 18,020.32	3.5%	
Energy and utilities	₪12,826.90	₪13,183.33	2.8%	
Industrial	₪ 6,339.22	₪ 6,566.16	3.6%	
Infrastructure /:\	回 15,035.79	₪ 15,550.49	3.4%	
Institutional	₪ 18,242.68	回 18,717.81	2.6%	
Residential	回 92,069.14	回 94,061.22	2.2%	
Total output	₪161,917.32	回 166,099.65	2.6%	

Long-lead equipment (LLE) - time risks

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:

- 1. Demand: The demand for long-lead equipment in the data centre sector has increased exponentially with the IT boom. More data centre and crypto mining providers are joining the market, and this new demand far outweighs the capacity of the supply chain. Entry onto the production line has become a significant challenge, with suppliers reporting fully booked capacity until Q1 2023. Opportunities exist for the development of Tier 2 and Tier 3 suppliers to Tier 1 status. However, it will take time to develop an extended supply chain.
- 2. Material shortage: The end of Q1 2022 saw a significant drop in the availability of raw materials used for LLE production. Global factors such as the Russia-Ukraine conflict and the resurgence of COVID-19 has halted production, which is at its lowest levels in recent years. The ethical approach in the supply chain to manoeuvre away from the use of Russian gas and oil has reduced production levels and added longer lead times within the supply chain. The raw material shortages are expected to continue into Q2 2022, whilst there is uncertainty for the security of the supply chain.
- 3. Freight durations and costs: Heightened by the increase in fuel costs and compounded by the shortage of labour and low supply of shipping containers, freight durations have soared as suppliers look for ways to mitigate these challenges. The demand for freight services has grown across all markets in recent years and the competition amongst industries has had a negative effect on availability and durations. As clients consider alternative solutions, it almost becomes cost prohibitive to use quicker forms of transport, such as air freight, due to increasing fuel costs.

Construction health & safety practices and culture



The Israel Institute for Occupational Safety and Hygiene (IIOSH) is its national public institution, which oversees workplace safety and health.



Israel – Average construction costs



Composite trade rates	Unit	Quantity	Israel Shekel	US Dollar
Excavate basement (m³) (1,800m³ job) <5m depth> [60mx60mx5m depth]	т³	1,800	₪78,228	\$24,446
Excavation &/or rock excavation 3m to 5m deep for basements or other underground structures	m³	1,800	回89,676	\$28,024
Excavate basement (m³) (1,800m³ job) <13+ m depth> [30mx30mx20m depth]	m³	1,800	₪141,192	\$44,123
Dry drilled sheet piles	LM	2,400	₪249,312	\$77,910
Concrete piles, drilled and cast-in-place, B-30 concrete, 70cm diameter, 15 to 30m deep	LM	2,400	₪786,096	\$245,655
Reinforcing cage of all diameters for concrete piles	ton	1	₪7,400	\$2,313
Excavate footings (strip) <3+ m depth>	LM	240	回19,843	\$6,201
Continuous footings, B-30 concrete up to 1m wide	m³	1,200	₪1,373,760	\$429,300
Concrete in slab (m³) (1,500m³ job)	m³	1,500	₪1,865,070	\$582,834
Reinforcement in beams (tonne)	ton	1	₪6,200	\$1,938
Formwork to soffit of slab (m²)	m²	1	回76	\$24
Blockwork in wall (m²) (10,000 block job)	m²	10,000	回2,141,200	\$669,125
Structural steel beams (tonne)	ton	1	₪21,836	\$6,824
Pre-cast concrete wall (m ²) 22cm overall thickness	m²	1	回1,166	\$364
Pre-cast concrete wall (m²) 12cm overall thickness	m²	1	₪848	\$265
Pre-cast concrete wall (m²) 15cm thick	m²	1	₪382	\$119
Curtain wall glazing including support system (m²) (1,000m² job)	m²	1,000	₪2,504,750	\$782,734
Plasterboard 13mm thick to stud wall (m²) (3,000m² job)	m²	3,000	回451,500	\$141,094

Composite trade rates	Unit	Quantity	Israel Shekel	US Dollar
Plasterboard partitions, double-sheet (both sides + fire rated rock wool) double construction, total thickness of 150mm, painted 3 coats	m²	1	₪415	\$130
Single solid core door including frame and hardware (no) (50 door job)	ea	50	回76,325	\$23,852
Single-wing galvanized sheet metal door, dimensions 100/210, wing consists of two galvanized steel plates with polyurethane or rockwool filling, PVC coating or oven-baked paint finish, including 1.5mm thick galvanized sheet metal door frame, cylinder lock and metal handles	ea	50	๗122,013	\$38,129
Painting to walls primer + 2 coats (m²)	m²	1	₪31	\$10
Ceramic tiling (m ²) (1,000m ² job)	m²	1,000	₪292,110	\$91,284
Vinyl flooring to wet areas (m²) (500m² job)	m²	500	№112,350	\$35,109
Carpet medium tufted (m²) (4,500m² job)	m²	4,500	₪1,035,225	\$323,508
Lighting installation (m²) (5,000m²+ job)	m²	5,000	₪1,203,750	\$376,172
Conference room lighting (large)	compl	1	₪14,111	\$4,410
Lighting point,single-phase, including ducts, cables, insulated with PVC, from board to ceiling to the switch	compl	1	₪229	\$72
Polypropylene piping for domestic water 20mm (1,000m+ job)	lm	1,000	回82,390	\$25,747
Pexgol' piping for domestic water 16mm (1,000m+ job)	lm	1,000	回80,250	\$25,078
Aluminum core (SP or M.G) piping for domestic water 16mm (1,000m+ job)	lm	1,000	回78,110	\$24,409

Israel - Average construction costs

V

Labour costs	Unit	Quantity	Israel Shekel	US Dollar
Tradesman e.g. carpet layer, tiler, plasterer (hourly)	Hour	1	₪100	\$27
General labourer (hourly)	Hour	1	₪85	\$21
Experienced labourer (hourly)	Hour	1	₪113	\$27
Site foreman (monthly) {10+ years experience}	Monthly	1	₪31,000	\$8,857
Material costs	Unit	Quantity	Israel Shekel	US Dollar
Concrete 30 MPa (m³) (1,500m³ job)	m³	1,500	回562,500	\$162,353
Portland Cement B30 (m³) (1,500m³ job)	m³	1,500	₪874,000	\$240,857
Reinforcement bar 16mm (tonne) (120 tonne job)	ton	120	๗744,000	\$181,029
Concrete block (400x200) per 1,000 (>10,000 block job=800m²)	m²	800	๗41,472	\$10,971
Standard brick per 1,000	ea	1,000	₪3,024	\$800
Structural steel beams (tonne) (100 tonne+ job)	ton	100	₪20,077	\$5,311
Steel columns of RHS section, galvanized & protected with four coats of paint, various dimensions	ton	100	回1,965,600	\$520,000
Glass pane 10mm tempered (m²)	m²	1	₪257	\$68
Fixed position all-glass show window, 10mm thick tempered glass, installed in 30/20mm "U" profile	m²	1	₪972	\$257
Softwood timber for framing 100mm x 50mm (m)	ml	1	n 9	\$2
13mm plasterboard (m²)	m²	1	₪25	\$7
Emulsion paint (litre)	ltr	1	№28	\$8
Copper pipe 15mm (m) (1,000m+ job)	ml	1,000	₪22,464	\$6,118
Copper cable (m) (3C + E, 2.5mm PVC) (100,000m+ job)	ml	100,000	₪518,400	\$141,176
Plant	Unit	Quantity	Israel Shekel	US Dollar
Hire 60t mobile crane + operator (day)	day	1	回8,500	\$2,314

Notes:

- 1. Costs are based on March 2022 prices.
- Average costs as indicated should not be used for insurance valuation purposes. The costs are
 representative of typical specifications for each type of project. Unique designs or challenging sites may not
 be within the cost range shown. The rates shown are average construction build only costs and do not
 include VAT, professional fees or allow for future inflation.



Israel - 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 - Israel

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

- IMF
- Economy.com
- The Global Economy
- · Weather Spark
- · The Central Bureau of Statistics
- Israel Institute for Occupational Safety and Hygiene (IIOSH)
- GlobalData's Construction Intelligence Center (CIC)
- Conference-board.org





