

Construction Market Intelligence

KSA | Q4 2022



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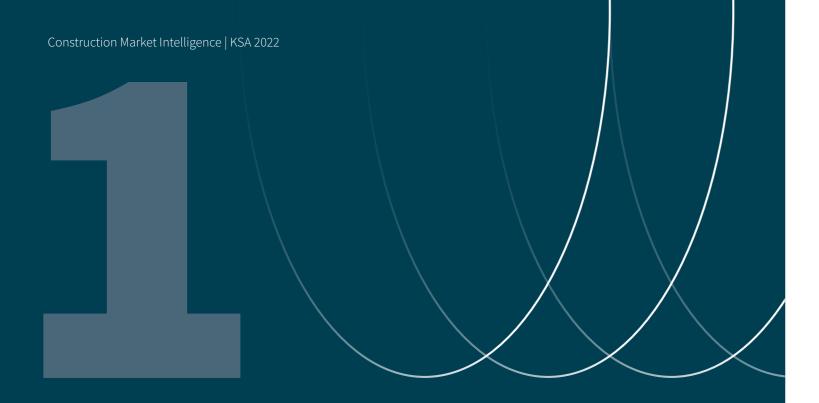
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Vision 2030 leading the way for a resilient construction sector for Saudi Arabia, JLL explores the opportunities and barriers within the Kingdom during 2022 with a look ahead to 2025.

The global construction sector faced headwinds, impacted by Covid-19 and the subsequent supply chain disruptions to the ongoing geopolitical unrest in Europe and macroeconomic volatilities, all of which increased construction material prices. JLL gathered market intelligence data between Q2 to Q4 2022 to evaluate current construction prospects and monitor costs within the construction sector, this included valuable data collated from the local supply chain to understand the true impact of economic and geopolitical headwinds.

Despite these headwinds and rise in material prices the Saudi Arabia construction sector remains active and is the leading market across the MENA region. With the highest value of project awards for 2022 continuing their Vision 2030 target driving economic diversification and transforming the country with social and economic reforms.



Statistical Overview

Saudi Arabia 2022

A rise in global demand, combined with economic headwinds and geopolitical tensions has resulted in a global inflation forecast of 8.3% for 2022 up from 4.7% in 2021. As of October, Oxford Economics inflation forecast for Saudi Arabia is 2.4% considerably lower than the global threshold, as along with other Gulf Cooperation Council (GCC) countries, KSA appears to be in an advantageous geographical position due to their varying import sources. The price of oil reached a peak of over \$120 in March with the average price per barrel reaching \$102 to November 2022. Saudi Arabia, who is the world's

largest oil exporter, forecast a fiscal surplus 90 billion Riyals for 2022 attributed to the oil price rebound. The KSA construction output growth is anticipated to rise by 3.2% in 2022, and a further annual average growth rate (AAGR) of 4% between 2023 to 2026 according to Global Data with the construction sector contributing 32.1 billion Riyals to the Kingdom's gross domestic product (GDP) in 2023. JLL reports as of Q3 2022 13,000 hotel keys are expected to be delivered in Riyadh, Jeddah and Makkah in the second half of 2022, accentuating the continuation of hospitality sector development.



3.2%

KSA Construction
Output Growth 2022

+6%

2021 (29%) to 2022 (35%) market share of project awards in MENA \$102/bbl

2022 average oil price

2.4%

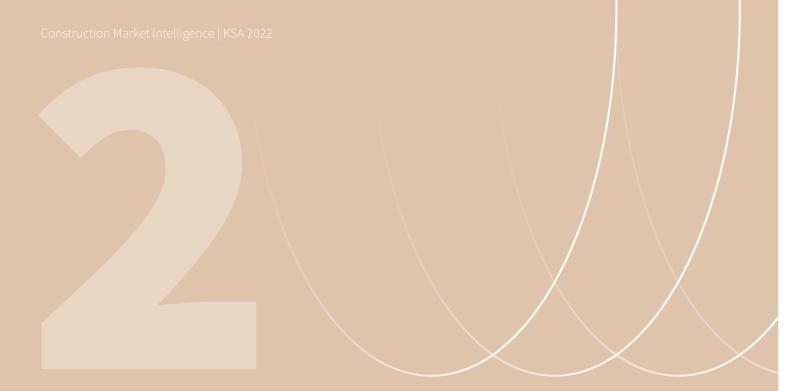
2022 Consumer Price Inflation

SAR 32.1B

Value of GDP from Construction 2023

13,000 keys

H2 2022 expected hotel key deliveries (Riyadh, Jeddah, Makkah hospitality)



Project Awards

Project Pipeline and Market Size

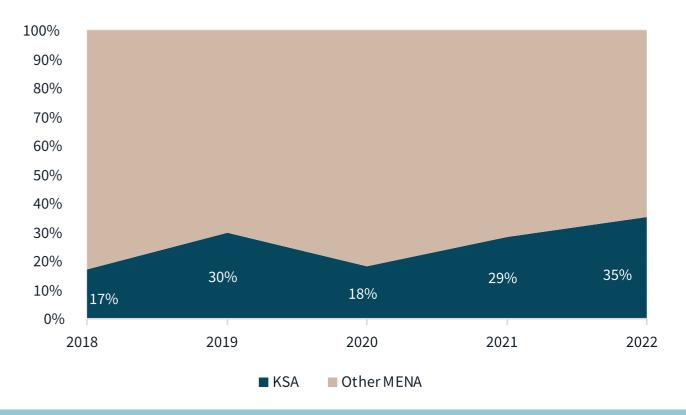
Across the MENA region Saudi Arabia have maintained their position as the strongest market with the highest total value of project awards for four consecutive years. As of October, KSA holds a 35% market share with a recorded \$31 billion worth of contract awards against an overall MENA total of \$87 billion as tracked by MEED Projects. Albeit, \$100 billion less than the 2021 total. Generally, the MENA region is performing well in the face of ongoing challenges across 2022 impacting economic sentiment. Oxford Economics anticipate the MENA region to be the fastest growing economy in 2022 with a Gross Domestic Product growth rate of 4.9%.

The pipeline value of unawarded (pre-execution) projects for Saudi Arabia is estimated at \$1.1 trillion consisting of projects from study stage through to main contractor bid with a planned

award date up to 2027. An estimated 70% comprise of 'construction' sector projects with residential, cultural, leisure and hospitality as sub-sector leaders and the driving forces behind economic diversification and the Vision 2030 strategy.

The top 20 contractors within KSA account for \$120 billion of projects currently under execution, representable as 11% of the total future pipeline value, \$1.1 trillion. MEED Projects forecast the total value of projects awarded in KSA between 2021 to 2025 will reach \$569 billion, with a total of \$85 billion (15%) awarded across 2021 and 2022 (October end) to date. Emphasizing the opportunity for greater competition into the Kingdom to support the ambitious Vision 2030 and associated gigaproject program.

KSA Construction Awards Market Share

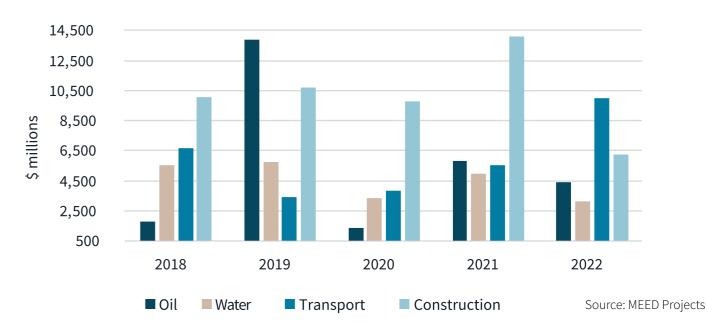




Project Awards Pipeline

KSA 35% market share of MENA region project pipeline value

Projects Award by Sector

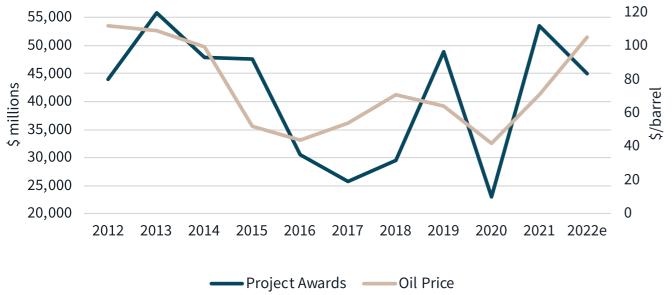


Value of project awards versus oil price

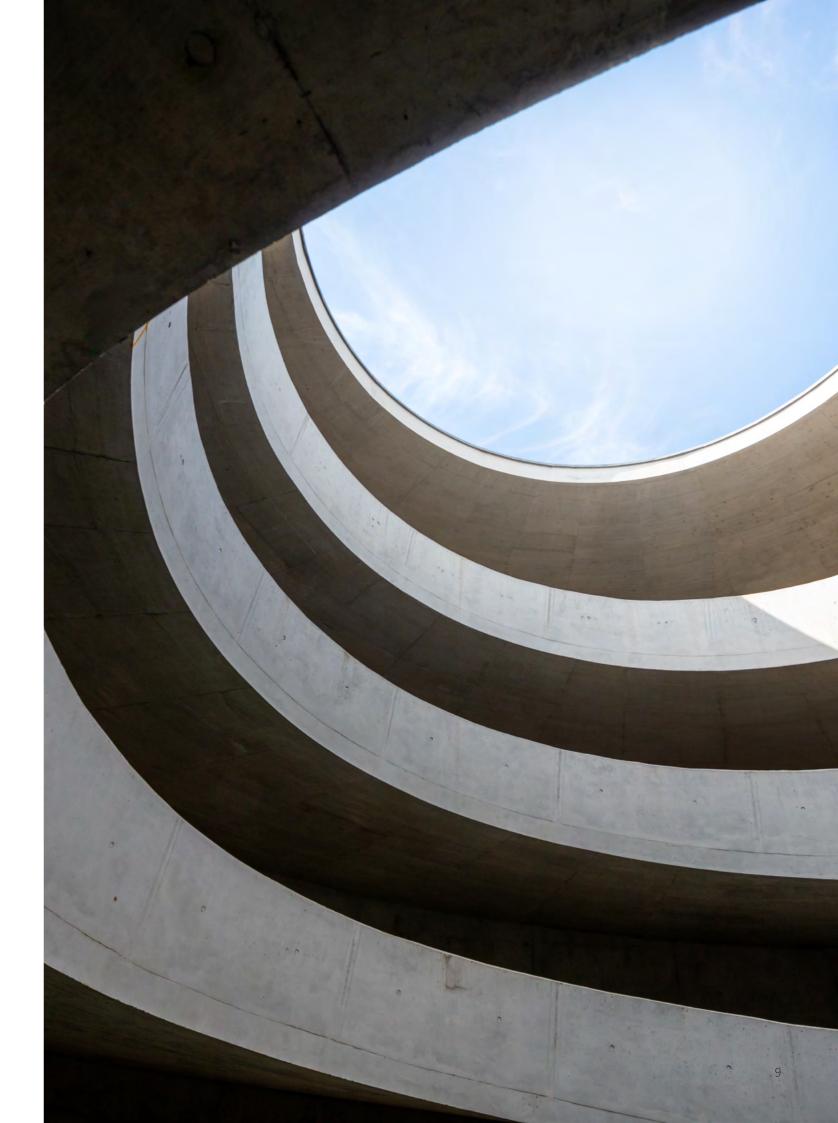
The rebounding oil price in 2022, triggered a fiscal surplus for oil exporting economies like Saudi Arabia, in September the Ministry of Finance announced a public spending increase of 18% for 2023 continuing the governments national strategic plans aligning with Vision 2030. Presenting the average annual oil price against the project awards value for KSA demonstrates a historical correlation trend of increasing award values following elevated oil prices. However, the

high oil price in 2022 has contributed to global inflation due to the application of oil across production processes thus resulting in higher economic activity costs. As of October 2022, OPEC+ announced oil production cuts in response to weakening global demand generated from rising interest rates and high levels of inflation, anticipating the cuts will support stabilizing oil prices for the remainder of 2022 and 2023, with a forecast average oil price of \$95 per barrel.

KSA Project Awards & Oil Price (annual average)



Source: MEED Projects, The World Bank





Price Watch

Geopolitical tensions in Eastern Europe elevated commodity and material prices in Q2 2022 causing an element of uncertainty within the construction sector. Supply chains were further disrupted following a turbulent period during the Covid19 pandemic leading to increased freight costs and shipping demand. Commodity prices have since flatlined following a peak in July 2022, overall aluminium has fallen 23% year-on-year to October 2022, copper -22% and iron ore by -25%. However the energy crisis has sustained upturned input costs (manufacturing and production) and transportation costs as the oil price increased 38% year-on-year from September 2021 correlating to higher construction prices. The supply (only) price for Rebar (12-32mm bars) peaked at SAR 3,200 per tonne during Q2 2022 before declining 13% to SAR 2,800 as of November 2022.

In October 2022 the World Steel Association (WSA) reduced the global steel demand forecast to -2.3% after increasing by 2.8% in 2021. The downgrade is a reflection of high inflation, rising interest rates (globally) and economic deceleration in China. The MENA region steel demand remains strong as JLL reports significant mission critical infrastructure demand in Egypt and substantial construction growth in KSA in line with the Gigaproject progams. Future price levels will be balanced against rising inflation, interest rates, input costs driven by the energy crisis and specific local market conditions including skilled labour shortages, rising labour costs and competition.

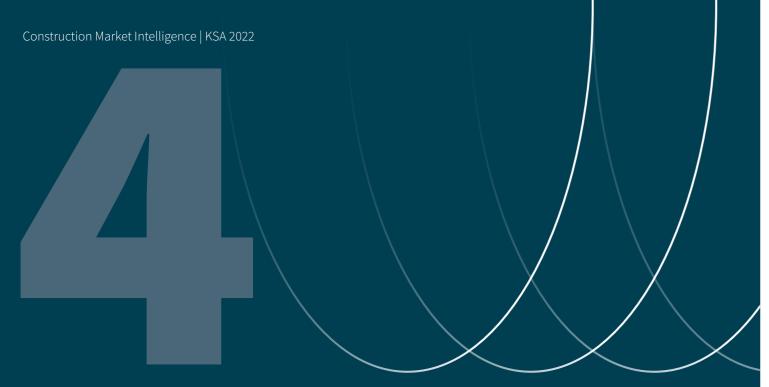
Metal Commodities 12,000 250 10,000 200 8,000 150 6,000 \$/t 100 4,000 2,000 Sep-22 Sep-21 Nov-21 Dec-21 Apr-22 Jun-22 Jul-22 Aug-22 Oct-22 Nov-22 Jul-21 Aug-21 Jan-22 Feb-22 Ma r-22 Ma y-22 Aluminium ---Iron Ore Source: The World Bank Rebar 3,200 3,100



Commodity Supply Price Movement November-to-November Change 2021 - 2022



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Market factors

JLL's market intelligence data obtained through discussions with local contractors and supply chain identified the cause and effect of global economic volatility in Q1 and Q2 2022 created challenges within the local construction market in relation to delivery lead times and instant price increases, with suppliers reluctant to guarantee prices for extended durations. Construction materials linked to aluminium like façade systems, along with Rebar and MEP elements such as generators and semi conductors witnessed the greatest impact in terms of delivery shipping times and financial impact with contractors citing the need to 'micromanage' the supply chain to mitigate risks and safeguard project programs and budgets. JLL recognized improvements between Q2 to Q3 2022 suggesting price peaks may have passed, however we believe fluctuations remain a significant risk due to the correlation to economic factors and observed trends since 2020.

JLL forecast future construction costs shall be balanced against local market and global economic factors, although commodity prices are softening, or already flatlined the KSA construction sector is heating up placing pressure on the existing supply chain and therefore highlighting the need for greater competition to achieve the pipeline of projects. Inflation forecasts for KSA are relatively soft in comparison to global averages, however, along with the wider MENA region, are reliant on importing construction materials from high inflationary countries, in turn impacting construction material prices.

Globally, skilled labour demand, combined with shortages particularly within the construction sector are facilitating rising construction costs, according to the World Economic Forum (WEF) the global talent shortage reached 75% (a 16-year high) with the Real Estate sector named as one of the most difficult sectors to fill roles in. The declining freight index price, which fell 66% year-on-year from September 2021 after a peak, signals decreasing global demand and easing of supply chain disruptions generated from Covid19 and the conflict in Eastern Europe.

Local Content

The Local Content and Government Procurement Authority have introduced regulated guidelines around government procurement spends. The guidelines provide context to Vision 2030, for all entities providing labour, goods and services to the government to adhere to. The requirements consist of providing training to Saudi nationals, enhancing their experience and skills, whilst encouraging expenditure on goods and services in Kingdom and increasing employment opportunities to higher value employment positions. The guidelines, which come into effect from 2022 are an important consideration for companies planning and sourcing services, materials and labour on construction contracts. JLL anticipates the reforms shall encourage manufacturing and industrial opportunities extra over to the current offering. With the increased expenditure supporting financial growth and economic diversification combined with achieving the Vision 2030 goal of greater Saudi participation in employment opportunities targeting reduced unemployment rate of 7%.

Health & Safety

Worker welfare alongside health and safety practices are a prominent factor on construction projects. Accentuated by enforced restrictions from Covid19 and the improvement of conditions and activities on construction sites and labour accommodation, JLL recognizes practices contractors are delivering to ensure strenuous processes are in place. The expected program of construction projects to 2030 emphasizes the opportunity for alternative methods of construction thus reducing the volume of labour on construction sites and risk mitigation strategies. Market intelligence data collated from contractors by JLL identify health and safety is always an important consideration with a contractor's technical compliance and capability being an overriding necessity upon contractor selection. Developers and employers are driving transformation within the construction sector and can catalyse further improvements by working with health and safety specialists, whilst endorsing compliance of construction supervision on projects.

Future construction price factors

Decreasing

- Global demand (economic deceleration in the short-term)
- Market confidence due to economic conditions (global)
- Commodity prices
- Freight (shipping) index
- MENA project awards value

Increasing

- Interest rates
- Skilled labour demand
- Fuel / energy prices (manufacturing & transportation)
- Cost of labour
- Global inflation (impacting imports)
- Experienced contractors and availability
- KSA construction sector heating up
- Concurrent Gigaproject programs
- MENA critical infrastructure (material and labour demand)

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Mitigation Strategies

Are there strategies to mitigate rising inflation, geopolitical and economic headwinds?

Mitigation strategies are high on the agenda intensified by volatile market conditions and rising construction material prices of which reached a substantial peak during in Q2 2022. JLL emphasizes the need for robust mitigation strategies, including a considered approach to contract execution and risk allocation. Moving forward the construction sector will focus on development needs aligned with evolving trends and demands with a focus on innovation and digitization which will play a significant part for the construction sector and the Vision 2030 projects. JLL highlights the importance and opportunities of traditional cost management mechanisms which can support developers when establishing budgets and during early stages of procurement in an effort to reduce program delays and support conflict avoidance.

- Life cycle costing
- Risk exposure and allocation of risk between construction contract parties
- Early contractor
 engagement, working with
 employer's design team
 and consultants
- Sourcing of local content & construction materials
- Appropriate construction & development budgets, consideration for risk contingencies & inflation
- Walue management studies
- Sufficient project program's, stringent procurement / prequalification processes



Construction Market Intelligence | KSA 2022



Benchmarking

How much are key construction rates in KSA as of Q4 2022?

50 - 80

Excavation & Disposal SAR/m3

400 - 600

Concrete (grade 40/50) SAR/m3

13,500 -17,000

Structural Steel SAR/t

5,400 - 6,500

Rebar SAR/t

JLL asset cost benchmarking based on GIA m2

Asset class		Low SAR/m ²	High SAR/m ²
Residential	High Rise	5,600	9,100
	Villas	4,700	6,400
Retail	Strip	3,150	4,800
	Community/Regional	5,000	7,000
Commercial	Mid Rise Office	4,200	6,500
	Fit Out	5,000	10,100
Car	Multi Storey	2,400	3,500
Parking	Basement	3,100	4,000
Public	Mosque	4,700	10,000
Amenities	Parks & Landscape	350	1,100
Hotels	5 Star Resort	11,100 / 2,200,000 per key	15,000 / 4,050,000 per key
	5 Star Hotel	11,000 / 1,298,000 per key	13,000 / 3,250,000 per key
	4 Star Hotel	9,000 / 810,000 per key	10,200 / 1,173,000 per key

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Definitions

Basis & Assumptions

- The m² area is based on GIA (RICS).
- The benchmark rates included are a range of indicative KSA construction costs based on JLL project data. Factors such as project location, contract type, contractor, building design e.g. façade type, specification level, economies of scale, building efficiency and structural solution can impact the cost.
- Low range: assumption is based on low-medium specification and verified against JLL benchmark projects.
- High range: assumption is based on medium high specification and verified against JLL benchmark projects.
- The rates are based on traditional design and construct (Employer and Contractor), i.e. not developer.

General Exclusions

Capital contributions to third parties, tenants or authorities

Client finance costs

Local authority charges, road closures, etc.

Client insurances

Value Added Tax (VAT) & other taxes

Development management cost & expense

Marketing cost & expense

Utilities outside the plot boundary

Land cost

Developer legal fees

Municipality connection cost

TV and AV system

Master infrastructure cost

Inflation

Grey & rain water recycling system

Professional fees

Waste management

Contingencies

Facility management equipment

Retail Notes

Excludes tenant fit out.

Residential / Commercial Office Notes

Excludes loose furniture, white goods, OS&E, artwork, internal planting, active IT equipment and leasing & acquisition costs.

Hospitality Notes

Excludes loose furniture, white goods, OS&E, artwork and internal planting.

- 5* resort low based on 200m2 / key, 5* resort high based on 270m2 / key
- 5^* hotel low based on 118m2 / key, 5^* hotel high based on 250m2 / key
- 4* hotel low based on 90m2 / key, 4* hotel high based on 115m2 / key

Carparking Notes

The benchmark rates are based on 35-40m² average parking space per bay.

Landscaping Notes

The benchmark data is a blended rate which includes hard, softscape, furniture, lighting, associated mechanical & electrical services, special features and earth works. Factors such as, volume and density, specification level and features will impact the complete SAR/m² cost.

Material Rates

Supply and installation, fittings and equipment. Actual project rates are dependant on the specific project, site condition and procurement route they are subject to commodity price fluctuations and inflation. Bulk excavation and disposal: based on sand soil material only, excludes any work related to hard rock, contaminated material treatment and special systems to support adjacent structures. Concrete: grade 40/50, excludes admixtures and additional temperature control costs, minimum load volumes are applicable. Rebar: cut & bend costs included, grade 60 12-32mm dia bars. Structural steel: excludes fire protection coating and corrosion protection.



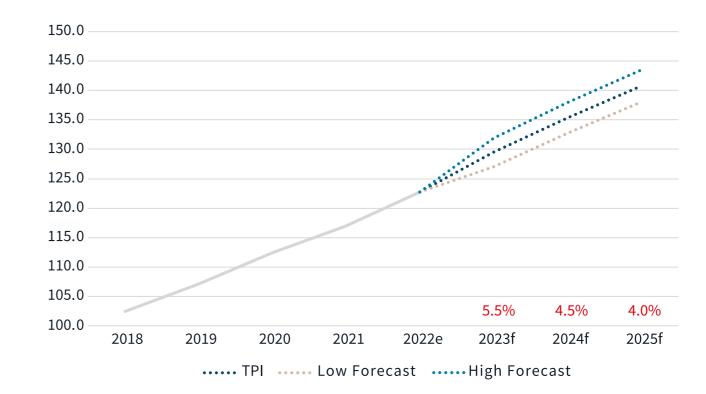
Tender Price Inflation

How much have construction costs increased in 2022?

JLL estimates tender price inflation (TPI) has increased by an annual average percentage change of 5% in 2022. Comparable with our initial forecast of 4% to 6%. The increase is representative of market factors such as growing contractor and labour demand, commodity and construction material price fluctuations, evaluated from tender return cost data, market testing and commodity price trends. JLL's midpoint TPI forecast represents year-on-year growth of 5.5% in 2023 associated to the estimated project pipeline value correlated to future demand and JLL's intelligence gathered from market sources. The TPI graph includes a 2% low / high sensitivity factor from the midpoint TPI up to 2025 which is the furthest point JLL have currently forecast.

Tender Price InflationJLL 2022

5%





Disclaimer: JLL endeavours to provide a prudent tender price inflation forecast, however it is impossible to fully determine expected future financial inflation. Actual project outcomes could differ substantially from our projections and therefore no warranty is given to the accuracy of this information. The TPI forecast excludes hyperinflation relating to gigaprojects and remote location project developments. Hyperinflation accounts for rapid inflation and excessive price increases outside of forecast norms which could be prevalent within KSA triggered by the volume and value of pipeline construction programs, impacting the growing demand on labour, resources and construction materials.

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