gleeds

Predicting Construction Costs in a Volatile Market

Q1 2022

Introduction

The world fought diligently against the impact of COVID-19 when green shoots of growth appeared across sectors despite the significant price inflation on commodities, food, and workforce only to witness the hostility between Russia-Ukraine. The geopolitical issues have significantly aggravated already high inflation in commodities due to the resultant impacts of COVID-19 and supply chain bottlenecks. Both the issues have led to unprecedented short to medium term increases in project development costs for project owners which have significantly eroded the business case viability, in some cases and led to return to the drawing board to optimize project costs.

Impact worldwide

The Ukraine conflict is an 'economic catastrophe' for the world at a time when inflation is already on the rise, and it will undoubtedly slow global economic growth. Russia–Ukraine crisis has impacted cost of commodities, particularly oil & gas, aluminium, copper, steel, while cargo ships in the area have been halted or delayed. The hit is particularly influenced by Russia being one of the world's largest exporters. The current price conflict is estimated to run for another 2 quarters. The conflict in Ukraine, as well as the west's response, are likely to have a wide-ranging impact on construction material costs and availability.

The following are Russia's exports that have an impact on the construction industry.

- Mineral fuels including oil: US$141.3 billion (42.1% of total exports)
- Iron, steel: $16 billion (4.8%)
- Machinery including computers: $8.3 billion (2.5%)
- Wood: $8.2 billion (2.5%)
- Copper: $5.6 billion (1.7%)
- Aluminium: $5.5 billion (1.6%)

Above products are expected to have volatility for short to medium terms with expectation that new levels will be established at the end of 2nd quarter / 3rd quarter. The impact of energy products such as natural gas, crude has impact on overall market inflation of consumer price index / wholesale price index as well - resulting increases in labour and indirect costs.

Construction material costs and availability include China's production slowdown in period preceding winter olympics on steel and aluminium mainly, increased demand of copper worldwide as demand of electric vehicles have soared.

Another major factor resulting in higher commodities demand is due to public sector spending. Worldwide, governments have rolled out ambitious agenda of infrastructure upgrade to support economy during COVID-19. Those large projects are being procured and delivered now, which again is causing higher demand while the supply is getting reduced.

Impact on India

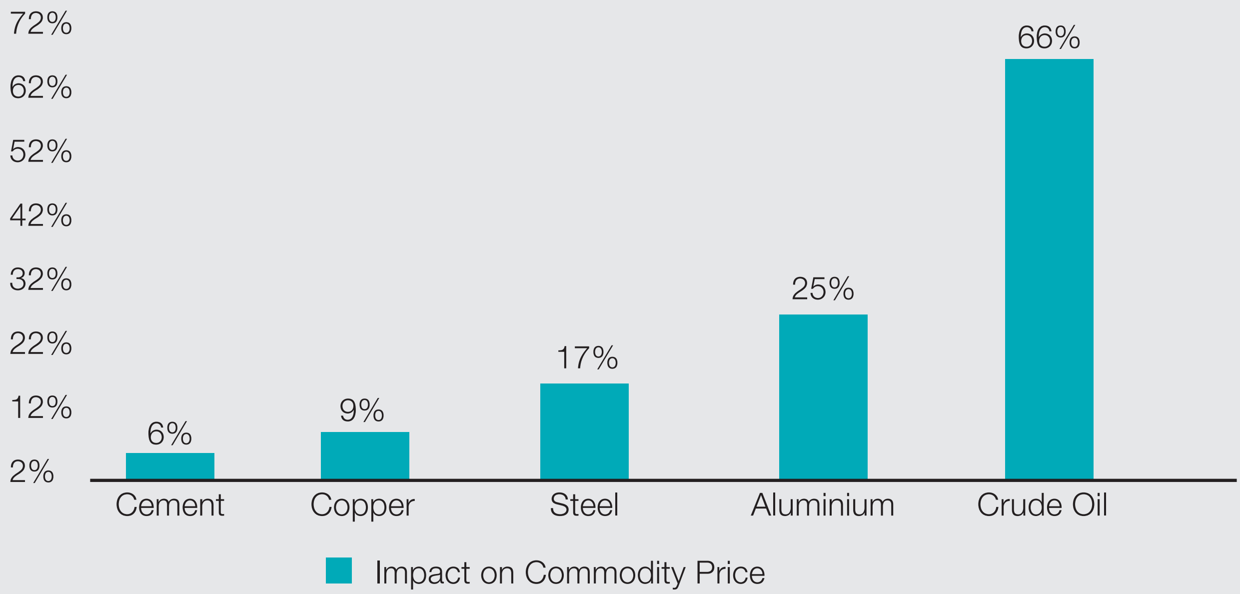
The Russia-Ukraine conflict has the potential of impacting the construction industry in two ways

- Unusual escalation due to supply-demand disruption and squeezing of margins due to increase in input costs.
- Trade and banking sanctions can cull India's export-import activity in the affected region until other options are found.

As raw material costs skyrocket, the project owners face significant challenges. During last year, the market had just recovered with great amount of sales / lease across the sectors. With upper limit fixed and increase costs of project delivery is resulting into muted profit levels. Hence, the developers are expected to increase the sale prices in coming quarters to offset some of the impact and will look for ways to optimize costs wherever possible.

Builders threaten to halt construction owing to the steep rise in rates of building materials which may directly impact the prices of residential sector. The cost of new construction has reportedly moved up across India.

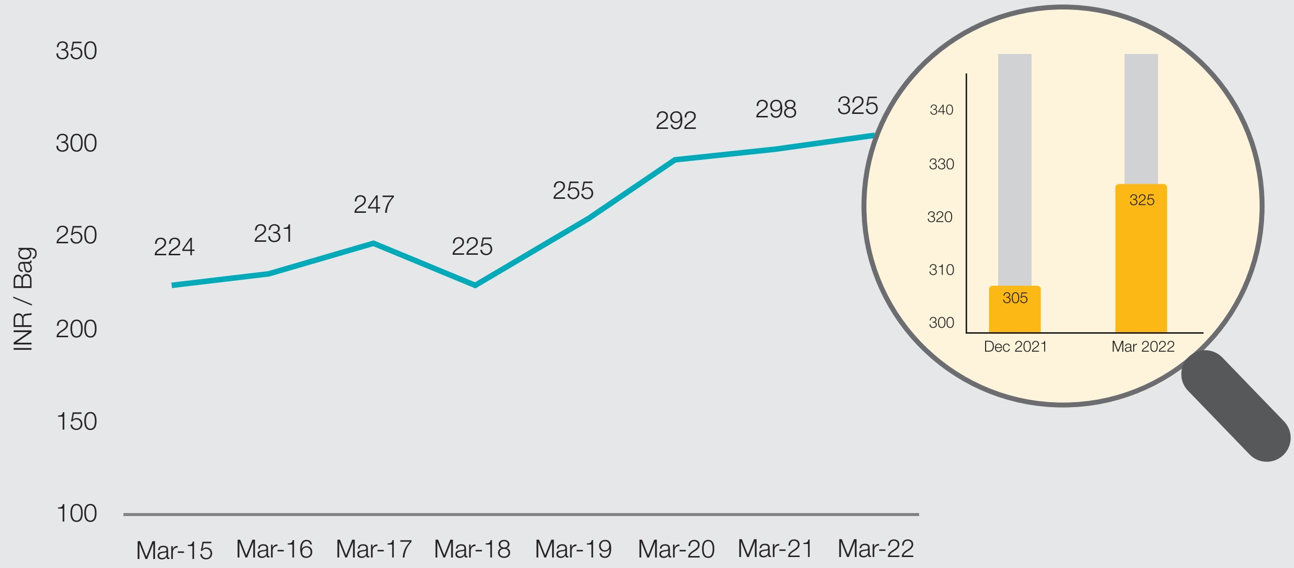
The rise in commodity prices (Dec 21 to Mar 22)



Major material prices

Cement

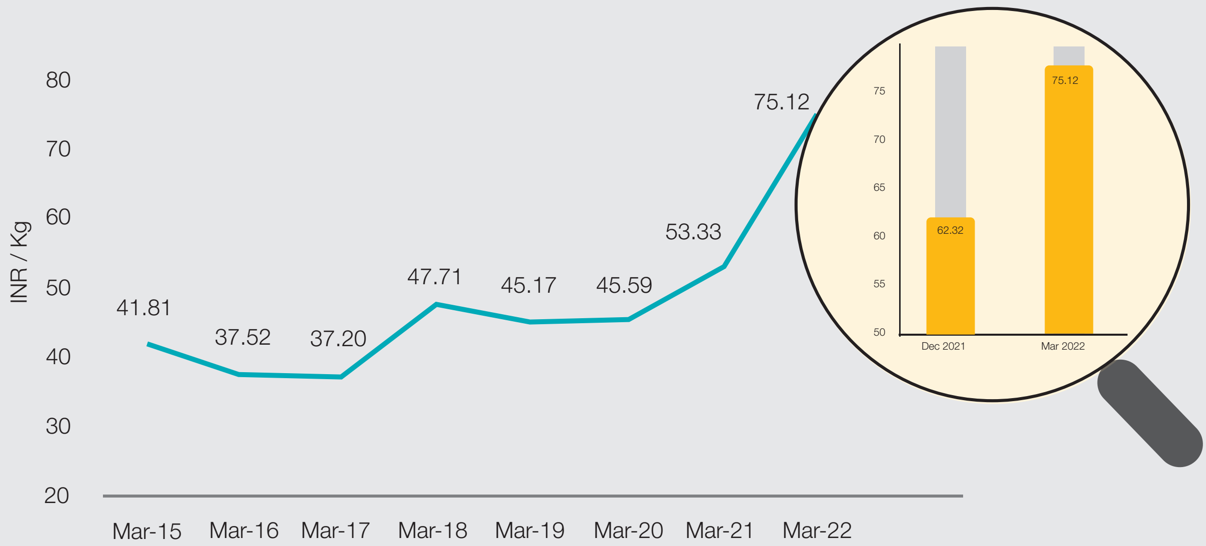
The rise in imported coal prices and volatile crude oil added cost pressure. All India average cement price increased by 5% year-on-year to Rs365 per 50 kg bag in January. In India, cement companies have decided to raise prices to maintain profitability in the face of rising input costs .



Source: Gleeds' Database for Mumbai

Steel

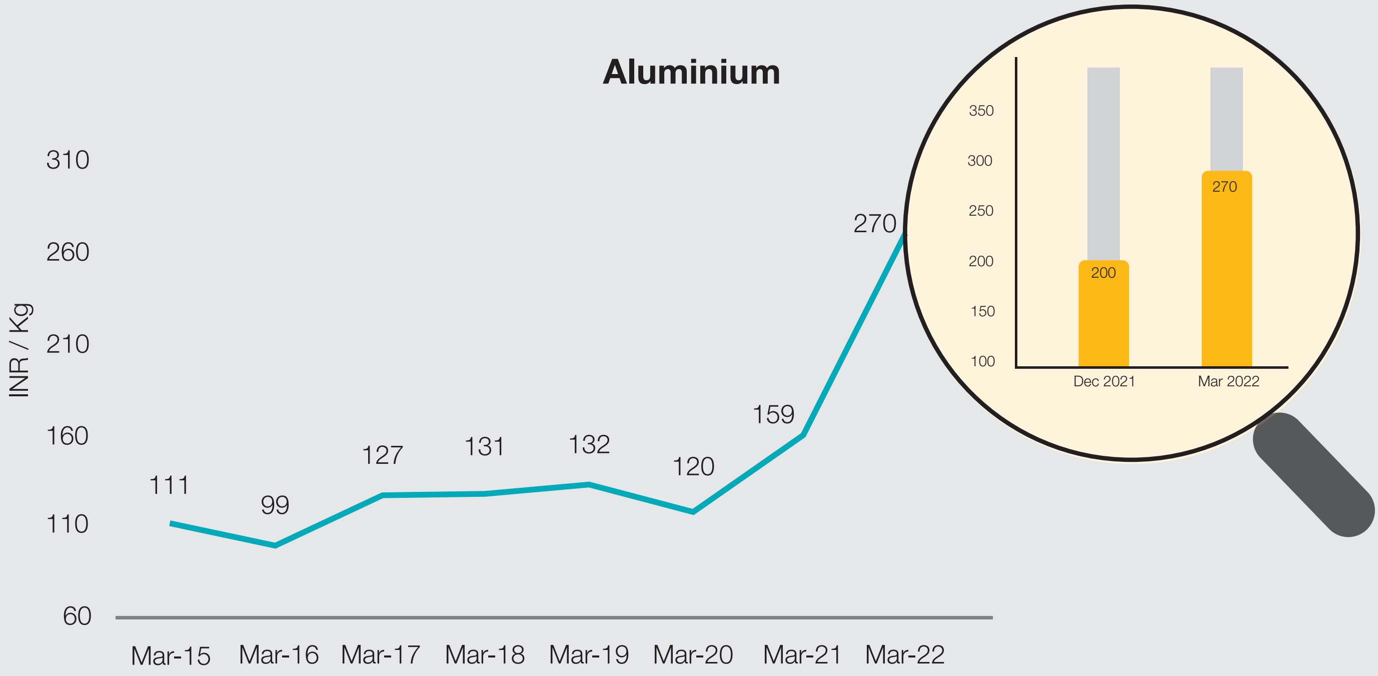
Steel prices will continue to rise due to "strong demand" and supply chain disruptions caused by the Ukraine-Russia conflict. Steelmakers across Europe are cutting back their operations as power prices surge to record levels in response to Russia's invasion of Ukraine. On the international market, prices have risen by roughly USD 135 per tonne. The construction industry in India will be severely impacted by rising energy prices, even as domestic steel producers seek to benefit from higher international pricing by increasing exports. Developers have started exploring grade 2/Non branded steel to offset the costs. As oil prices have gone up, freight rates of cargo ships, which currently stand at USD 20,000 a day, are likely to reach USD 30,000 per day. Crude oil is also utilised in the production of steel, and price increases are having an impact on steel prices, which have already climbed dramatically in the last two years.



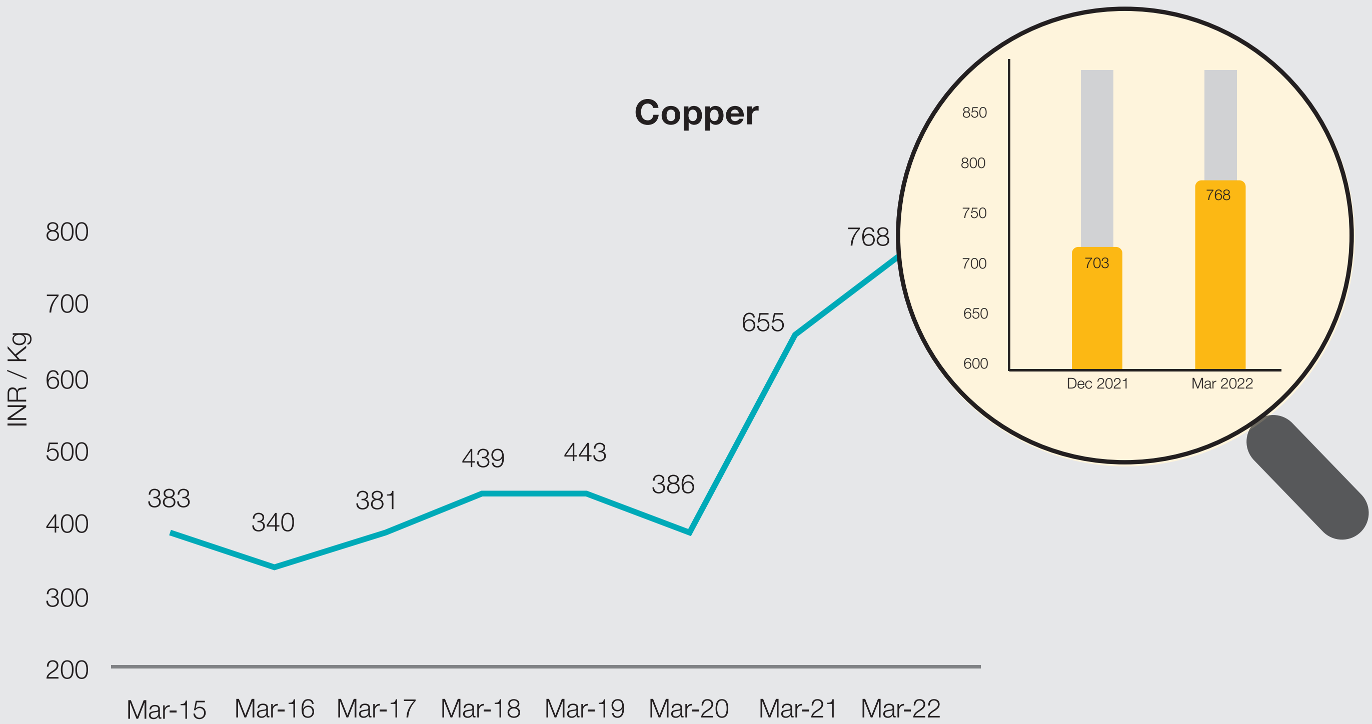
Source: SAIL for Delhi

Aluminium & Copper

Two key factors that are shaping the markets presently are the Russia-Ukraine issue and impending rate hikes by central banks. Metal prices have been soaring since the invasion of Ukraine by Russia and the economic sanctions slapped against the latter by the US and European countries. Russia is a big producer of base metals and supply disruptions have caused prices of these commodities to surge. Aluminium manufacturers in India stand to gain through higher exports because domestic prices are still lower than global prices. Copper also has been impacted with Russia controlling about 10% of global copper reserves.



Source: LME - PAN India

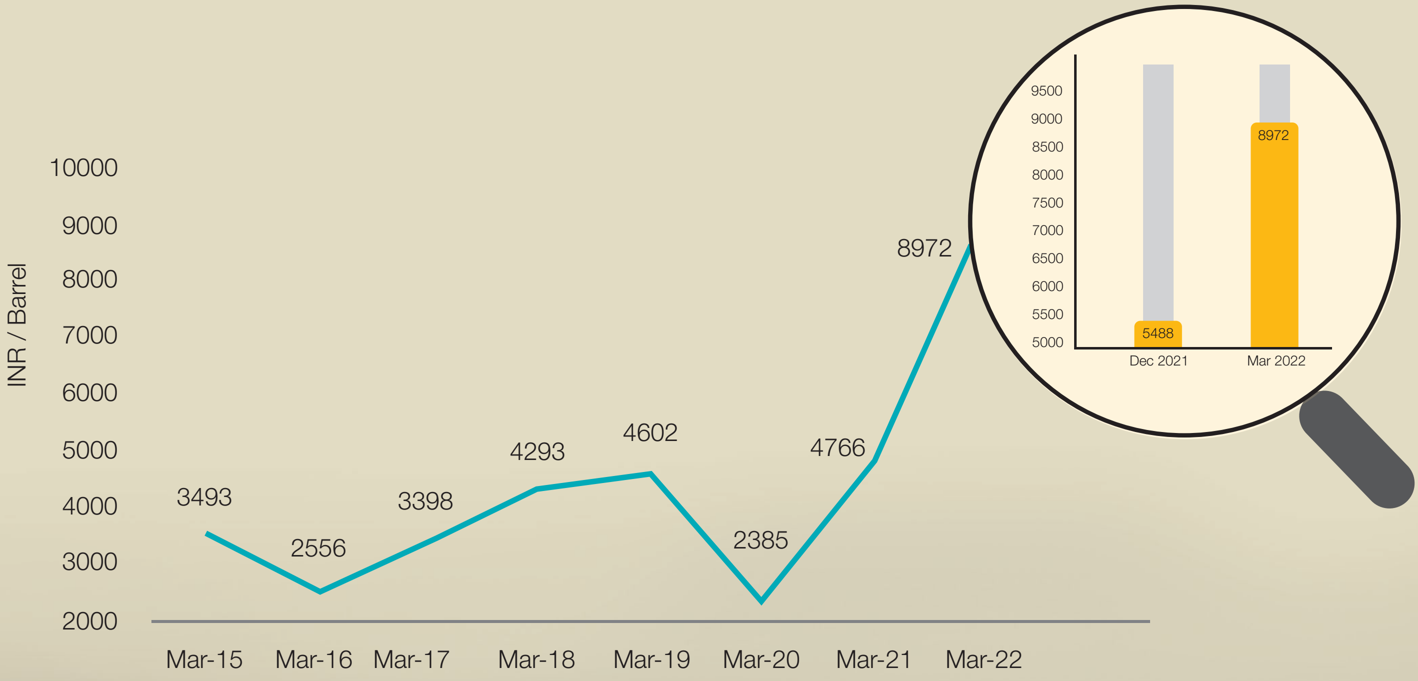


Source: LME - PAN India

Fuel

Crude oil

The building industry, which had been recuperating since the outbreak of COVID-19, will soon grind to a halt as the cost of construction rises due to the predicted increase in fuel prices. The price of crude oil is one of the most important economic indicators, and while no explicit sanctions have been imposed on it so far, any impact on it will be felt across various markets. This week, Brent crude, the global oil benchmark, reached a high of US$127.98 per barrel. The surge in crude oil prices is bound to feed into headline inflation, which has already breached the upper tolerance limit of the Reserve Bank of India's 2%-6% target range. Diesel is a key to inflation in India as majority of the transportation happens through roadways carriage. It is also the main source of energy input for various works in construction industry.

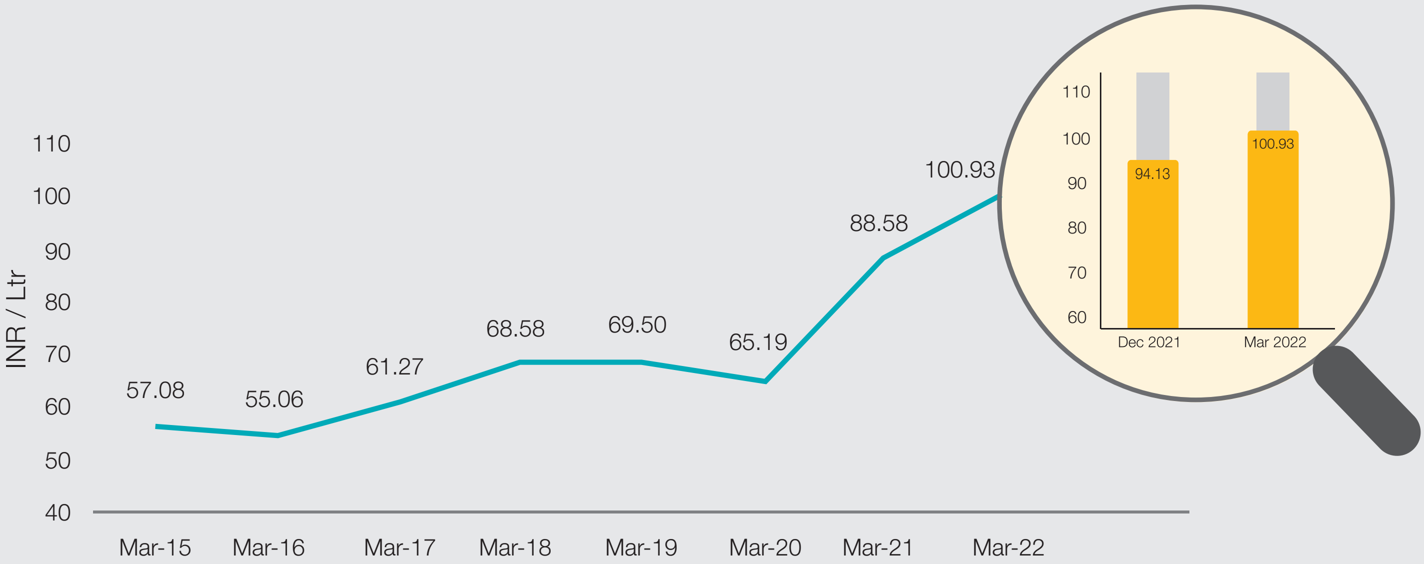


Source: Country Economy - PAN India

Diesel

Despite the fact that global crude oil prices have breached the three-figure mark and reached multi-year highs as a result of the Russia-Ukraine conflict, fuel prices in India have not changed in over four months. Prices in major cities were last collectively revised on November 4, 2021, when the central government reduced excise duty on two key fuels to bring retail rates down from record highs and urged state governments to reduce value-added tax (VAT) on fuel. Following that, various states reduced the value-added tax (VAT) on automobile fuels

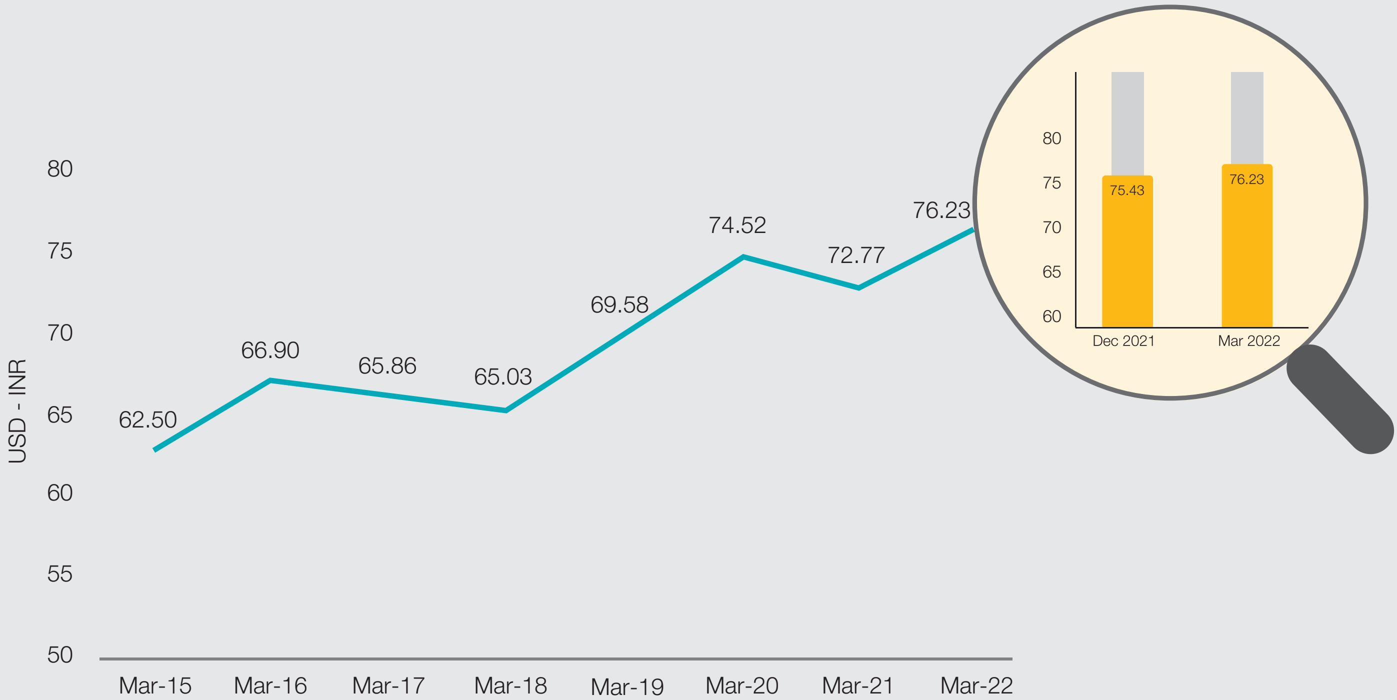
However, the Indian market has not yet been advanced to this price rise due to upcoming state election. As soon as elections are completed, the market will see massive price increase as government won't be able to absorb so much of price rise.



Source: My Petrol price for Mumbai

USD to INR trend

The fallout of the Russia- Ukraine conflict has been the weakness in the Indian rupee. Indeed, there has been a lot of volatility in the USD versus INR recently. Gleeds also foresee disruption in international supply chain market due to Russia-Ukraine conflict leading to increase in commodity pricing. The value of the nation's currency fluctuates primarily because it is based on supply and demand. The depreciation in the value of the rupee may be good for the country's export sectors, but there's adverse impact for the importers. The rupee has depreciated by around 1.5 percent in the last month after reaching an all-time low of 76.96 against the US dollar.



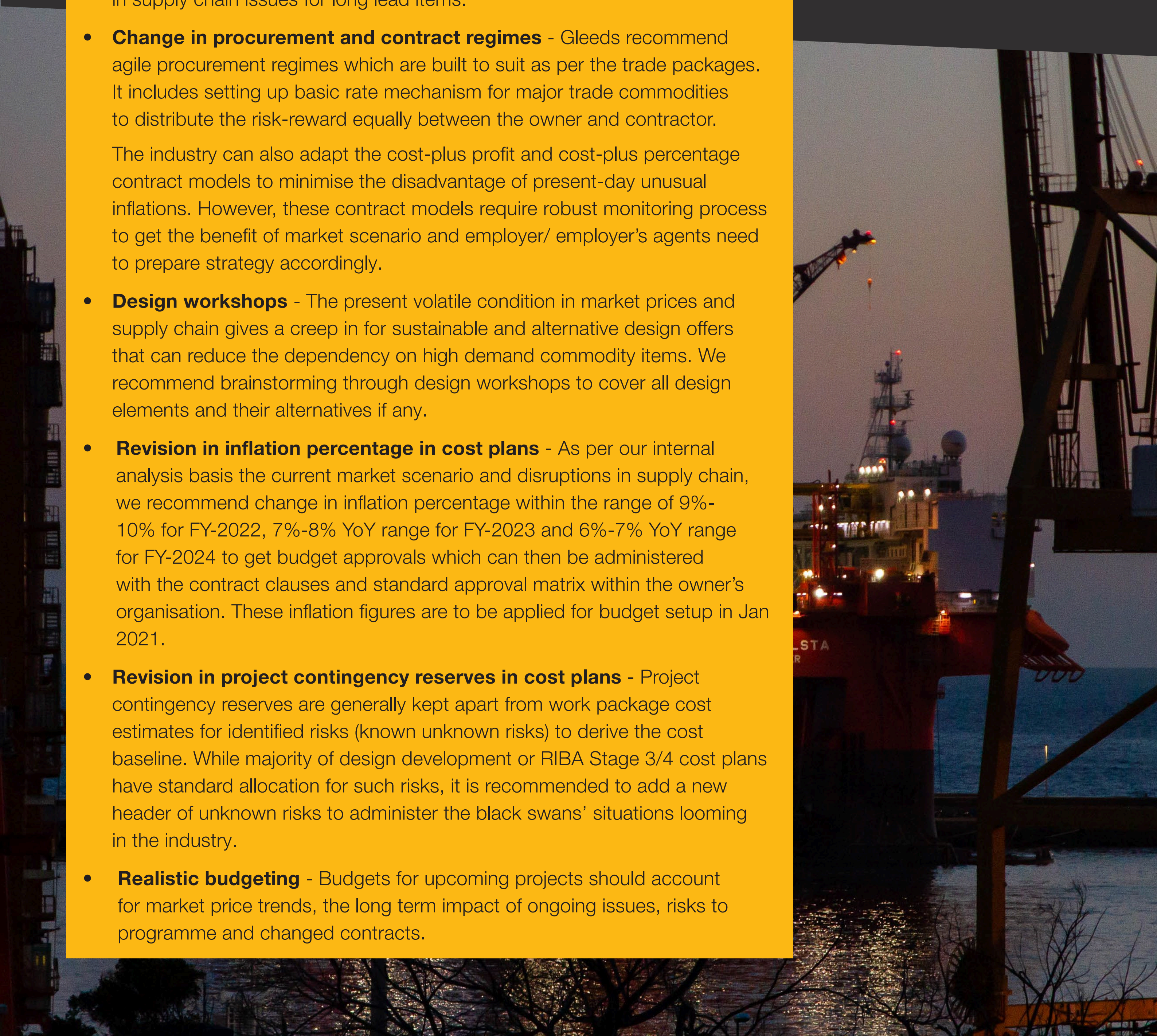
Source: XE Currency PAN - India

Approach to tackle the situation

The volatility in commodity prices has brought up a sense of fear to both owners and contractors. Lately, the concern of high prices was brought up by National Real Estate Development Council that asked for intervention of Ministry of Housing and Urban Affairs to arrest the increase of costs. The Central Government had already stated about the seriousness of setting regulators for steel and cement due to dense network growth in infrastructure sector. Few other solutions to tackle the ongoing unusual inflation and its ripple effects are as follows:

- **Local sourcing -** The vision of making India a self-reliant nation is more important than any time in the past. India needs to minimise its reliance on imported products to improve its circular economy and cease the disruption in supply chain issues for long lead items.
- **Change in procurement and contract regimes** - Gleeds recommend agile procurement regimes which are built to suit as per the trade packages. It includes setting up basic rate mechanism for major trade commodities to distribute the risk-reward equally between the owner and contractor.

  The industry can also adapt the cost-plus profit and cost-plus percentage contract models to minimise the disadvantage of present-day unusual inflations. However, these contract models require robust monitoring process to get the benefit of market scenario and employer/ employer's agents need to prepare strategy accordingly.
- **Design workshops** - The present volatile condition in market prices and supply chain gives a creep in for sustainable and alternative design offers that can reduce the dependency on high demand commodity items. We recommend brainstorming through design workshops to cover all design elements and their alternatives if any.
- **Revision in inflation percentage in cost plans** - As per our internal analysis basis the current market scenario and disruptions in supply chain, we recommend change in inflation percentage within the range of 9%-10% for FY-2022, 7%-8% YoY range for FY-2023 and 6%-7% YoY range for FY-2024 to get budget approvals which can then be administered with the contract clauses and standard approval matrix within the owner's organisation. These inflation figures are to be applied for budget setup in Jan 2021.
- **Revision in project contingency reserves in cost plans** - Project contingency reserves are generally kept apart from work package cost estimates for identified risks (known unknown risks) to derive the cost baseline. While majority of design development or RIBA Stage 3/4 cost plans have standard allocation for such risks, it is recommended to add a new header of unknown risks to administer the black swans' situations looming in the industry.
- **Realistic budgeting** - Budgets for upcoming projects should account for market price trends, the long term impact of ongoing issues, risks to programme and changed contracts.



Cost impact on construction costs – sector wise

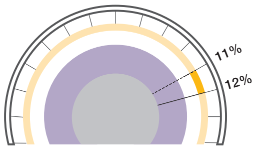
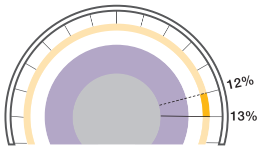
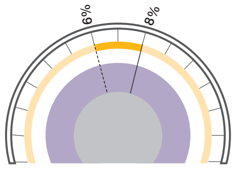
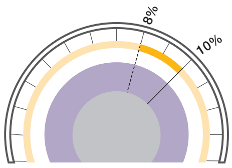
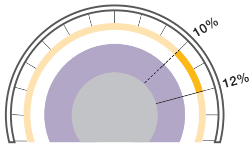
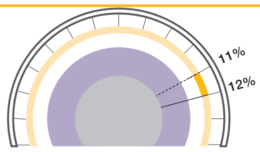
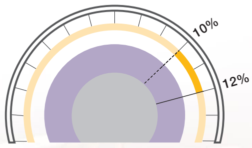
Costs have been on the rise from the onset of COVID-19, attaining some stability towards the last quarter of last year. India's indirect dependency on Russia for some parts of its metal and crude oil supply has further catapulted costs high. These impacts can be short term however, affects the projects in running for the next six months.

While there are numerous cost drivers that may impact the project cost volatility, to note that the data being referred to is an average cost range based on the Gleeds' database. The costs are only for hard construction expenditures and do not include any taxes or soft costs. Any site abnormalities, force majeure situations, FF&E charges for hotels, and client supplied data centre equipment are not included in the costs.

Short term cost influencers:

- Material price escalation for major construction materials (due to supply chain distortion Russia-Ukraine conflict)
- Geopolitical issues (Russia-Ukraine conflict & West's response likely to impact construction material costs & availability)
- Higher transportation and logistics costs
- Rise in demand for exports in India
- Market uncertainty (global impact)
- Foreign exchange

The surge in prices largely affect Europe and the West, however, the constraints on supply chain especially raw materials, production uncertainties and the unpredictable market is a risk to ongoing projects. Mitigation plans, programme revisions, alternative supplies and closely monitoring market dynamics can thin the inflation costs.

Project category	Basic Cost (INR/SF)	Short term impact
Residential – Premium	**3,500 – 4,500**	
Commercial - A Grade	**3,200 - 4,200**	
Fitout - Standard	**2,500 - 3,600**	
Fitout - Premium	**4,000 - 6,500**	
Data center	**9,500 - 13,500**	
Hospitality	**3,500 - 8,000**	
Educational - Campus	**4,500 - 6,500**	

Conclusion

The ‘demilitarisation and denazification’ of Ukraine by Russia triggered a global market reaction, with major indexes trading in a sea of red and just as the globe began to recover from the effects of the COVID-19 pandemic, fears of a worldwide disruption have resurfaced in the face of already mounting cost constraints and central bank rollbacks of pandemic-era policies. The prolonged crisis between Russia and Ukraine has the potential to have a huge influence on the Indian market, which will eventually affect the real estate market because markets all over the world are feeling the effects of uncertainty. The cost to the developer will rise as raw material prices, transportation costs, and energy prices all leading to increase in development costs and in turn - sale prices to end consumer.

Talk to an expert

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