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COMMODITY INSIGHTS

YEARBOOK 2026



PRICING IN INDIA

Central to Economic Growth and Market Development

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PRICING IN INDIA: CENTRAL TO ECONOMIC GROWTH AND MARKET DEVELOPMENT

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PREFACE



India's journey towards becoming a developed economy is one of the defining narratives of the 21st century. As the nation advances towards its vision of Viksit Bharat 2047, the strength of its markets will be as important as the scale of its production and consumption. At the heart of every efficient market lies one of its most fundamental outcomes—credible price discovery. Prices are more than numbers; they are signals that guide investment, allocate resources, influence production decisions, and shape economic outcomes. An efficient pricing ecosystem is therefore indispensable to sustained economic growth, competitive markets, and long-term resilience.

The theme of this year's Commodity Insights Yearbook, "Pricing in India: Central to Economic Growth and Market Development," reflects this perspective. As India emerges as one of the world's largest consumers, producers, and trading economies, it has an unprecedented opportunity to strengthen its role in the global commodity pricing ecosystem. The evolution of robust domestic markets that reflect India's own economic fundamentals is essential not only for improving market efficiency but also for enhancing the country's influence in determining prices that increasingly matter to global trade and commerce.

Price formation in India is shaped by a unique interplay of global factors and domestic realities. Government policies, taxation, logistics, infrastructure, exchange rates, and changing consumption patterns influence how prices are discovered in the domestic economy and transmitted across markets. The evolution of India's pricing ecosystem, therefore, extends beyond market mechanics—it reflects the maturity of institutions, the depth of markets, and the confidence of market participants. Building transparent, efficient, and credible pricing mechanisms therefore hinges on the strength of market institutions, and is critical for enabling informed decision-making, fostering investment, and improving the competitiveness of Indian industry.

As India's markets continue to deepen, the aspiration should not merely be to respond to prices discovered elsewhere, but to progressively strengthen India's ability to contribute meaningfully to global price discovery. Achieving this requires liquid markets, broad-based participation, strong market infrastructure, and a regulatory environment that inspires trust and innovation. Such an ecosystem will not only serve market participants but will also reinforce India's position as a resilient and influential economy in an increasingly interconnected world.

This edition of the Commodity Insights Yearbook brings together perspectives from distinguished industry leaders, market practitioners, academicians, and subject-matter experts – all on the theme named above. Their diverse insights explore the evolving dynamics of pricing in India, the opportunities and challenges ahead, and the role of market institutions in supporting the nation's economic aspirations. Together, these contributions present a comprehensive view of the forces shaping India's pricing landscape and its growing significance in the global marketplace.

I extend my sincere appreciation to all our contributors for sharing their invaluable insights and to the editorial team for their dedication in bringing this publication together. I hope this Yearbook serves as a valuable resource for policymakers, researchers, market participants, industry leaders, academicians and all those interested in understanding the evolving role of commodity pricing in India's growth story.

I wish you an engaging and insightful reading experience.

Praveena Rai
MD & CEO

PRICING IN INDIA: CENTRAL TO ECONOMIC GROWTH AND MARKET DEVELOPMENT



Throughout history, economic growth of nations has been supported by access to essential commodities. The metals that build infrastructure, the energy that powers factories, the agricultural inputs that feed populations — commodities lie at the heart of a growing economy. What distinguishes the world's most economically consequential nations is not merely their consumption of commodities, but their influence over how those commodities are priced.

India today stands at a defining crossroads in this regard.

India is already among the world's largest consumers of several critical commodities. The country consumes approximately 165 million tonnes of steel annually, making it the world's second-largest consumer. India accounts for nearly 25 percent of global gold demand — over 700 tonnes per year. India is the third-largest consumer of crude oil globally, consuming about 5 million barrels per day. In base metals, India's consumption footprint is expanding rapidly in line with infrastructure development, renewable energy deployment, and manufacturing growth.

Yet despite this scale of physical presence, India remains largely a price-taker in global commodity markets. Prices for the commodities that Indian businesses consume, produce, and trade are set in trading hubs outside the country. What this means is that Indian manufacturers, importers, and producers must navigate price volatility generated by markets that often reflect conditions in other economies rather than India's own supply-demand realities.

The concept of 'Price in India' addresses this structural gap. It is not about rejecting international benchmarks — global commodity prices serve an important coordination function across supply chains. The opportunity is to develop credible, transparent domestic price discovery mechanisms that reflect India's growing economic weight: its physical consumption, production realities, quality standards, logistics structures, and financial market depth.

The Cost of Not Having Domestic Price Benchmarks

The absence of robust domestic commodity benchmarks is not an abstract problem. It translates into measurable economic costs for Indian businesses every day.

Consider aluminium. India hosts some of the world's largest integrated aluminium smelting operations. Indian companies produce millions of tonnes of primary aluminium annually from Indian mines, through Indian refineries, to Indian smelters. Yet aluminium transactions in India are routinely priced against a benchmark derived from an offshore marketplace. When its aluminium price spikes due to its own warehouse dynamics or geopolitical developments in, say, Russia that affect Russian exports elsewhere, Indian buyers of aluminium from Indian sellers absorb that volatility regardless of whether Indian domestic supply-demand fundamentals warrant it.

This basis risk — the difference between the global benchmark and actual domestic realities — represents a persistent cost for Indian industry.

The cumulative cost of this dependence is difficult to quantify, but it manifests in three ways: first, as an unnecessary volatility exposure for Indian businesses; second, as sub-optimal risk management, since hedging against a poorly correlated international benchmark provides incomplete protection; and third, as lost opportunity to build the financial market depth that makes India's capital markets globally influential.

Creating and nurturing credible benchmarks

Credible commodity price benchmarks are not created by regulatory fiat or financial market activity alone. History shows that they develop organically when markets are deeply connected with actual production, consumption, storage, logistics, and trading ecosystems. By this standard, India's physical commodity market strengths are substantial and underutilised as a foundation for price discovery. The strategic opportunity is to connect these powerful physical ecosystems more deeply with transparent financial market infrastructure — transforming India's role from a large consumer absorbing international price signals to an active participant in creating them.

Physical markets and financial markets in commodities are not separate systems — they are deeply interdependent. When physical market participants — producers, processors, manufacturers, and traders — actively use financial markets for price discovery and risk management, the two systems reinforce each other. India's commodity derivatives market has made significant strides in building this connectivity, especially in connecting commercial and retail financial participants. The next phase of development requires deeper participation from institutional investors and expanding commercial hedger engagement — particularly from those who currently lack the tools or awareness to manage commodity price risk effectively.

Creating deeper commodity derivatives markets also calls for broadening institutional participation. The window of participation for some categories of permitted institutions, such as Mutual Funds and Foreign Portfolio Investors is rather narrow currently, while some categories like banks, insurance companies and pension funds are not allowed at all in India's Exchange Traded Commodity Derivatives market. Addressing this gap would significantly deepen the market and bring in new participants, viz. the customers of these institutions, which would in turn substantially improve price discovery, leading to creation of price benchmarks.

Presenting Commodity Insights Yearbook 2026

This edition of the Commodity Insights Yearbook focuses on creating and nurturing Indian commodity prices as benchmarks. It features thirteen articles encompassing multiple facets connected to this theme.

Damodharan N. presents the characteristics of a benchmark and suggests ways for an Indian price series to become internationally useful by being transparent, liquid, standardised, hedge-able, and trusted by the market. **Mayuri Singh** goes a step further and mentions a distinct 'Benchmark Formation' phase that commodity prices need to undergo to build trust, integrity, and widespread adoption. Explaining the need for domestic commodity price benchmarks, **Joymalya Bandopadhyay & Rachit Kumar** point out to a few benchmark-able prices already available and prescribe ways to further build upon these 'green shoots'.

Sandeep Daga observes that India's growing economic footprint has triggered a shift toward domestic pricing systems which better reflect country-specific realities, trade flows, and currency advantages. Similar observations are made by **Sachin Shetty**, who highlights that Indian commodity prices—driven by taxes, duties, and local supply-demand—serve as more accurate transactional references than global benchmarks, best evidenced by sector-specific trends in steel and gold. The thought is also echoed by **Pranay Shukla** with evidence from ferrous metals markets. Driven by a massive investment cycle, surging infrastructure spending, and a strategic return to net-exporter status, India's ferrous market is decoupling from global benchmarks and transforming from a passive price follower into a vital regional price reference, he articulates.

Other authors too have provided rationale for nurturing domestic price benchmarks in specific commodity contexts. In the context of Lead, **Vijay Pareek** explains the need for a local benchmark that considers local factors, taxation being a prominent one, which global benchmarks do not consider. The need is accentuated by fragmentation across regional markets and prices, he comments. Also writing from the Lead market's perspective, **Amol Mehra** observes the transition from fixed-pricing models to pricing in more sophisticated marketplaces, and finds India's Lead sector possessing the potential to become a global pricing hub, provided it adopts a unified, formal price discovery mechanism to replace fragmented, informal systems.

Prof. Vivek Rajvanshi holds that international commodity benchmarks are unsuitable in India as they fail to account for Indian factors such as taxes, logistics, and exchange rates, which necessitates establishing credible domestic commodity benchmarks. **Dr. Mili Kar** contextualises the theme in the ongoing volatile global environment, which underscores the critical need for domestic policies to sustain the nation's economic growth momentum.

Authors from the financial services sector too echo many of these views. **Mudit Singhania** remarks that India is transitioning to creating domestic commodity benchmarks to better reflect its status as a major global consumer and producer, thereby reducing reliance on external pricing. **Sirshendu Basu** opines that pricing power in a commodity like Gold can come to India from creation of a strong formal market architecture marked by strengths in liquidity, vaulting, transparent delivery, hedging depth and international participation. **Anil Ghelani** sums up the theme commenting that 'Price in India' is not merely a slogan; it is about building the institutional conditions under which India's prices, already shaped by Indian policy, logistics, currency, and behaviour, can become transparent, referenceable, and contract-ready.

INSIGHTS AND PERSPECTIVES

PRICING IN INDIA: CENTRAL TO ECONOMIC GROWTH AND MARKET DEVELOPMENT

From Price-Taker to Price-Maker:
India's Benchmark Moment



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Partner - KPMG

Joymalya Bandopadhyay is a Partner in KPMG's Financial Services practice, backed by over 18 years of industry expertise across Banking, Insurance, and Capital Markets. He focuses on strategy development and large-scale digital transformation programs, helping companies with their growth and profitability agenda. Joymalya's deep market insights span a diverse global footprint, including India, Southeast Asia, the Far East, the Middle East, Europe, and North America.



RACHIT KUMAR
Assistant Manager - KPMG

Rachit Kumar is a strategy consultant currently working as an Assistant Manager at KPMG's financial services practice, where he leads engagements spanning mergers, AI strategy, process improvements and policy-driven transformation for leading Indian and international clients. He previously worked with EY Parthenon as a strategy consultant, and interned with McKinsey & Company. Prior to his MBA, Rachit worked as an Applications Engineer with Oracle India, specialising in cloud computing and DevOps.

An alumnus of FMS Delhi (MBA) and NIT Calicut (B.Tech), Rachit has also published research papers in Springer on AI-driven supply chain optimization and represented India in U-17 basketball at an international youth exchange programme.

> *India produces, consumes and finances commodities at continental scale — yet the prices that govern its mines, tenders and balance sheets are still written elsewhere. That is an outcome of architecture and can be rebuilt.*

Walk the value chain of almost any key commodity in India - gold through Zaveri Bazaar, copper for the transmission grid, crude oil into a west-coast refinery - and you will encounter a quiet constant. The material is Indian or destined for Indian use. The buyer and the seller are Indian. The logistics, the taxes and the risks are Indian. The price is not.

The paradox is one of scale. India, the second-largest consumer of gold,is the world's largest consumer of gold and silver jewellery[1], the third-largest consumer of crude oil[1], and a significant producer and consumer of the base metals — copper, aluminium, and zinc — on which its energy transition depends. By volume, by value, and by the number of livelihoods involved, India is a first-order participant in nearly every major commodity market. Yet in the determination of price it remains, across most of those markets, a spectator.

That price is set, more often than not, in London — on the London Metal Exchange (LME) for base metals, against the London Bullion Market Association (LBMA) for bullion — or against some other offshore assessment, and then imported into Indian commerce through royalty formulas, customs valuations, procurement tenders and long-term sales contracts. A recent diagnostic of India's commodity ecosystem catalogued more than fifty key benchmarks in active use across multiple commodities spanning metals, bullion, energy and agriculture — the very segments in which India's own exchanges, led by the Multi Commodity Exchange of India (MCX) with 97%+ market share[2], already run deep and liquid markets. The noticeable finding was not the number. It was the structural reality: offshore references are not a market habit that Indian participants happen to indulge; they are hardwired into the legal and procedural fabric of Indian commerce.

Consider a telling example. The Mines and Minerals (Development and Regulation) Act,1957 (MMDR) framework- the statute governing mineral royalties — pegs royalty calculations for key minerals to LME and LBMA prices[3]. A zinc mine in Rajasthan therefore pays a royalty whose arithmetic begins in London, even as a liquid, rupee-denominated zinc contract trades in Mumbai. The observation is uncomfortable but revealing; price-taking in India is largely an outcome of inherited architecture rather than a deliberate market verdict. And architecture, unlike geography, can be redrawn.

THE ANATOMY OF DEPENDENCE

Why does the dependence persist? Three structural barriers recur across every commodity examined, and it is their interaction — not any one of them — that keeps Indian contracts and indices internationally referenced.

The first is template hardwiring. Royalty schedules, tariff formulas, tender documents and legacy contracts name international benchmarks explicitly[4], so CFOs, tender committees and drafting lawyers who follow the standard text renew the dependence — usually without ever making a conscious choice.

The second is liquidity and participation depth. Where domestic reference prices exist, some are still building the trading volumes and breadth of contributors that their offshore counterparts have accumulated over decades, and a treasurer will naturally ask whether a price can absorb a large contract before anchoring to it.

The third is trust, governance and basis risk. An established offshore benchmark carries a long record of methodology, audit and practice, and a domestic alternative builds comparable familiarity over time; until that familiarity accrues, the offshore reference often remains the more convenient default.

It is worth noting what would help most. As yet, there is no widely settled convention — formal or informal — that points participants toward a credible Indian reference where one is available. In its absence, and with physical-market contracts still only loosely linked to exchange-determined domestic prices, the existing default tends to carry forward of its own accord. Convention, in pricing, is self-

[1] Gold: As per 2025 joint report by Apex Trade Association of India (ASSOCHAM) and Indian Credit Rating Agency (ICRA). Silver: As per World Silver Survey 2025. Crude: As per PIB Backgrounder, GoI, dated 27 January 2026.
[2] MCX's FY25 annual report states that MCX accounts for 98.10% of the total traded value of commodity futures and 97.4% of commodity options traded across all Exchanges.
[3] As described in the second schedule of Mines and Minerals (Development and Regulation) Act, 1957.
[4] Multiple sources including Second schedule of MMDR Act, Average Sale Prices published by Indian Bureau of Mines, Domestic Natural Gas Pricing Guidelines (2014), CERC Composite Index for coal etc.

reinforcing — which is also why a few well-chosen examples can begin to shift it.

WHAT INDIA STANDS TO GAIN

The case for reversing this is financial, fiscal and strategic.

For producers and consumers, a domestic reference price reflects domestic fundamentals — monsoon-driven demand cycles, freight differentials, duty structures, the actual clearing price of Indian supply and demand — rather than conditions on the other side of the planet. For hedgers, it collapses basis risk: an Indian corporate hedging against an offshore benchmark today carries the gap between the reference price and its own realised price, with a currency overlay on top. That gap is one reason India's hedging story remains so thin — barely 2 per cent of the roughly ₹.1 lakh crore[5] of commodity exposure carried by India's top seven commodity-exposed firms are hedged domestically, even though domestic contracts in bullion and energy already offer meaningful depth. Pricing and hedging are two halves of one architecture: credible domestic benchmarks make onshore hedging rational, and onshore hedging deepens the very liquidity that makes benchmarks credible.

For the exchequer, royalties and tariffs aligned to domestic realities track conditions that are genuinely Indian, rather than movements in faraway markets that may bear little relation to local supply and demand. For markets, benchmarks are the flywheel: references support contracts, contracts support liquidity, and liquidity in turn supports better references. And for policy, an India-authored price spine is valuable infrastructure — a data asset for inflation management, strategic procurement and trade negotiation that an imported index can rarely replicate. History suggests reference prices are built rather than inherited. Brent and the regional crude markers became anchors because the surrounding architecture — contracts, participants and assessment standards — was deliberately developed around them. Emerging markets have shown that the same is achievable in a single generation: China's Shanghai exchanges, for instance, have grown domestic contracts[6] in gold, copper and crude into references that the region increasingly watches. There is no structural reason a credible Indian bullion or energy reference cannot, in time, come to serve a similar role across South Asia. There is also a quieter, institutional benefit. Benchmark administration is itself an export industry — the assessments, data services and settlement infrastructure that surround a trusted reference price generate fees, talent and standing. London earns from the LME long after the metal has left its warehouses. There is no reason Mumbai should not earn similarly from prices the world will eventually need: an Indian price for Indian demand is, sooner or later, a price the world will watch.

GREEN SHOOTS, ALREADY PRICED

The most encouraging finding of the diagnostic is that domestic anchoring is not a hypothesis. It is already happening — and the most developed examples sit squarely in the exchange-traded universe.

There is no reason Mumbai should not earn similarly from prices the world will eventually need: an Indian price for Indian demand is, sooner or later, a price the world will watch.

MCX bullion spot prices already underpin gold and silver Exchange Traded Funds (ETFs): domestic, regulated investment products marking to a domestic, regulated price. The Reserve Bank uses Indian Bullion and Jewellers Association (IBJA) assessments for Sovereign Gold Bonds — the sovereign, in effect, already trusts an Indian benchmark with its own instrument. And in base metals and energy, liquid rupee-denominated futures on commodity exchanges like MCX provide exactly the raw material — transparent, continuous, audited price formation — from which credible reference prices can be built. The instinct is spreading in the wider economy too, with producers and index bodies beginning to reference internal and national price series; but it is in bullion, metals and energy that the foundations are deepest.

Each green shoot carries the same lesson. Each required three things: a credible compiler, a willing first user, and a use-case where the domestic price was simply better than the imported one. That is the template. The task now is not to invent the model but to systematise it — to move from incidental adoption to deliberate architecture. Benchmarks are built commodity by commodity, use-case by use-case — and a handful of working proofs is how every pricing regime in history has started.

FROM INTENT TO ARCHITECTURE: FOUR MOVES WORTH MAKING

What might a methodical architecture look like? Four moves suggest themselves, each building on the last.

The first is to prioritise the green shoots. Rather than attempting all commodities at once, the effort could begin where Indian benchmarks and liquid domestic markets already exist — bullion above all, followed by the energy and base-metal contracts where exchange depth is greatest. A simple screening framework — availability of data, market depth, procurement relevance, legal complexity — would surface the best candidates; pilots could then document the lessons before the harder commodities are attempted. Early wins matter, because they create the confidence on which everything else depends.

The second is to reflect Indian benchmarks in formal pricing formulas

[5] As per FY24 annual reports of RIL, Hindalco, Tata Steel, JSW Steel, Hindustan Zinc, Vedanta and NALCO.

[6] Shanghai Gold Exchange (SGE) has launched the Shanghai Gold Benchmark Price (SHAU), Shanghai Futures Exchange (SHFE) has launched INE Bonded Copper (BC) futures and crude oil futures.

over time. This is where dependence actually lies — in royalty schedules, procurement formulas and standard tender language — and it is also where the gentlest transitions are possible. A weighted-average glide path is one option worth examining: for illustration, 80 per cent offshore and 20 per cent domestic in year one, 60/40 in year two, 40/60 in year three, with weights adjusted on the evidence of back-testing. Such an approach would give every treasurer operational clarity and every auditor a defensible formula — and no participant would face a cliff.

The third is to keep investing in benchmark credibility itself. Trust and repeatability are the currency of any reference price, and they are earned through architecture: published methodology papers for each commodity, defined contributor networks and data-submission controls, audit trails, exception handling and fallback logic, all aligned with the IOSCO (International Organization of Securities Commissions) principles that govern benchmarks globally. Over time, a commonly accepted Indian benchmark code — shaped through open consultation among market institutions, users and authorities — could give every participant a shared standard to reference. The direction matters more than the instrument: confidence is built in layers.

The fourth is to convert benchmarks into market standards. Creation alone is insufficient; commercial, OTC and exchange usage is what makes a reference price real. Contract templates, benchmark-linked products and committed pilot users all play a part — as does an honest scoreboard: the share of contracts, procurement flows and market products referencing Indian benchmarks, tracked and published, so that progress is measured in adoption rather than announcements.

What is striking about this agenda is how little of it needs to wait. Some elements would naturally mature through consultation and policy evolution over the years ahead; others can begin tomorrow through market initiative alone. The two tracks are complementary, not sequential — and the green shoots already in place suggest that progress on either reliably strengthens the case for the other.

CONTRIBUTION OF COMMODITY EXCHANGES: BUILDING IN THE OPEN

Which brings me to the role commodity exchanges like MCX can play — and, in several respects, are already playing. An exchange occupies a unique vantage point in this story: it sees the prices form, holds the data lineage, and serves the very participants whose adoption decisions will determine the outcome. That vantage point creates an opportunity to contribute — openly, neutrally and substantively — to the ecosystem's evolution.

Several contributions suggest themselves. The first is research: an authoritative, peer-reviewed atlas of India's domestic benchmark landscape, built on the exchange's own data lineage, contract history and trading volumes and validated by academic and industry reviewers, would give every subsequent conversation a common factual foundation. The second is technical depth: fully worked illustrations — transition formulas, back-tested weight paths, simulation results — that any institution examining benchmark adoption could draw on, shortening the distance between intent and implementation. The third is recognition: partnering with established industry platforms to celebrate pricing and procurement innovation wherever it occurs, on terms broad enough that the recognition is genuinely about innovation rather than any single market's promotion. The fourth is participation: public contributions to consultations on benchmark governance, modelled on global best practice and offered in the spirit of strengthening the commons. And the fifth is capability: tools, education and analytics that make domestic reference prices easier for treasurers, auditors and boards to use with confidence.

None of this presumes any particular policy outcome. All of it adds to the shared foundation — data, evidence, standards, capability — on which good outcomes are built. That, in my experience, is how market institutions earn their place at the centre of a reform: not by asking for it, but by being indispensable to it.

THE DECADE OF THE INDIAN REFERENCE PRICE

Benchmarks are discreet infrastructure. Nobody celebrates a reference price; people notice it only when it misprices their world. But that is precisely why this agenda matters. India's commodity economy has the scale, the participants and the ambition. What it has lacked is authorship of its own numbers.

The green shoots demonstrate that authorship is possible — and that the exchange-traded markets in bullion, metals and energy are where it has advanced furthest. The four moves sketched above suggest that it is plannable. And the parallel nature of the work means it can begin immediately, without waiting for any single piece to fall into place. What remains is tempo — and tempo, in my experience, is decided by those who begin. The institutions that help build India's reference prices over the next decade will be the ones the market quotes for the fifty years after that. The journey from price-taker to price-maker is, in the end, a choice of architecture. India should make that choice deliberately — and make it now.

The institutions that help build India's reference prices over the next decade will be the ones the market quotes for the fifty years after that. The journey from price-taker to price-maker is, in the end, a choice of architecture. India should make that choice deliberately - and make it now.

Domestic Demand, Policy, and Trade Reshape India's Ferrous Price Signals



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Pranay Shukla is Head of Metals Trading Research and CAS Dry Bulk Shipping at S&P Global Energy, where he leads trading-focused analysis across the metals and dry bulk value chains. His work focuses on identifying market dislocations and translating supply–demand dynamics into actionable insights for trading houses, funds, shipowners, and industrial clients.

Prior to S&P Global, Pranay spent nearly a decade at Mercuria Energy Trading and began his career at Drewry Shipping Consultants. He holds a BSc in Mathematics and an MBA in Finance and is a member of the Institute of Chartered Shipbrokers (Singapore).

Driven by massive investment, surging infrastructure demand, and a return to net-exporter status, India's ferrous market is decoupling from global benchmarks to become a standalone regional reference point. With steel production accelerating, shifting local demand patterns for HRC and rebar are redefining domestic pricing as a vital, independent market signal.

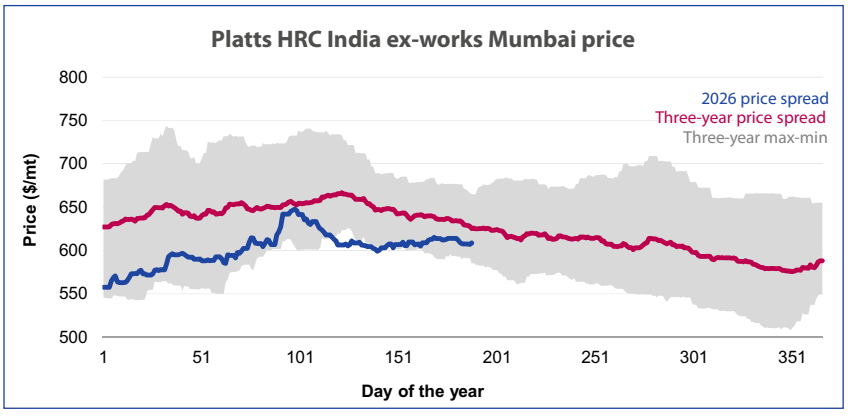
India's economic transformation is increasingly reflected in the growth of its metals and mining sector. Whether it is housing, transport infrastructure, renewable energy, manufacturing, industrial corridors or defence, steel consumption is an important indicator of industrial and infrastructure activity. India's crude steel production has already surpassed 169 million MTMT annually and continues to expand through a multi-billion-dollar investment cycle involving major and emerging producers. The Government's long-term objective of reaching 300 million MTMT of steelmaking capacity has strengthened the country's position in global ferrous markets.

While India still references global benchmarks for many key inputs, an increasingly important question is whether Indian prices are becoming commercially relevant reference points for market participants within India and are beginning to gain greater relevance across the region. In this regard, India's steel, metallurgical coal and iron ore markets provide growing insight into market fundamentals that often differ from those observed in China, Europe or North America.

The story of India's ferrous market demonstrates why domestic price formation matters. Steel demand has remained resilient despite periods of global economic uncertainty, with apparent finished steel consumption reaching 164 million MT in fiscal year 2025-26, representing growth of nearly 8% compared with the previous year.

India also returned to net exporter status after two years of net imports, as exports increased by 36% while imports fell by nearly 32% during fiscal year 2025-26. At the same time, domestic steelmakers benefited from safeguard measures, rising infrastructure spending, manufacturing growth and continued investments in downstream industries. These developments created pricing conditions that often diverged from global benchmarks, thereby generating spreads that reflect how international market developments are transmitted through domestic market conditions.

The story of India's ferrous market demonstrates why domestic price formation matters. Steel demand has remained resilient despite periods of global economic uncertainty, with apparent finished steel consumption reaching 164 million MT in fiscal year 2025-26.



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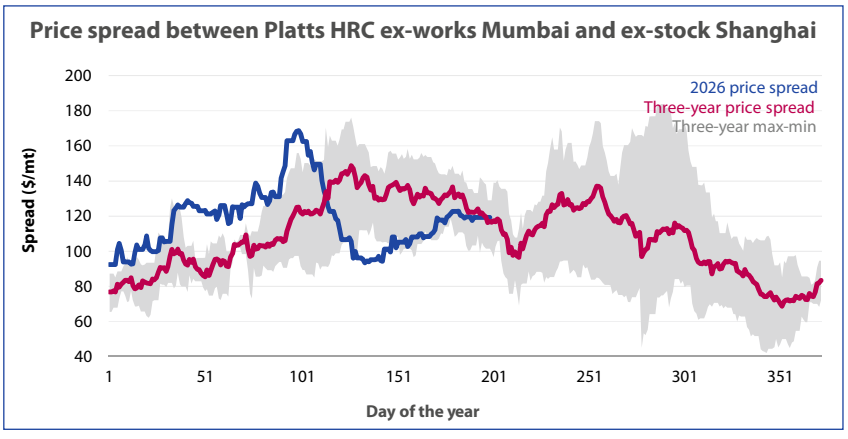
The clearest starting point is India's hot-rolled coil (HRC) market. Platts ex-works Mumbai prices strengthened sharply during the first four months of 2026, rising from around $560/MT at the start of the year to above $640/MT by April before moderating during the second quarter. The rally was initially driven by safeguard-duty related sentiment, lower steel imports, declining inventories and financial year-end restocking. Higher freight costs, a weaker Indian rupee and rising imported raw material costs also supported domestic steel prices as mills sought to protect margins.

The subsequent pullback reflected softer spot demand rather than a collapse in market fundamentals. As prices rose, buyers became increasingly reluctant to restock and instead consumed existing inventories. Imports became more attractive as the premium over international markets widened, while utilization rates eased and inventories began rebuilding.

Notably, 2026 HRC prices remained below the three-year average for much of the year despite the strong first-quarter rally. This largely reflects the influence of exceptionally elevated steel prices recorded during 2023-24, when global raw material costs, supply disruptions and stronger international steel prices lifted the historical average.

encouraged greater overseas offers, including China-origin material, while domestic buyers became more cautious after the first-quarter rally. At the same time, Chinese prices found some support from periodic supply-side measures and improved sentiment around industrial activity. The extreme premium observed early in the year therefore proved difficult to sustain.

The significance of the early-year premium is that Indian HRC was not simply tracking China-led Asian price direction. Instead, domestic policy, demand and trade conditions temporarily pushed Indian prices onto a different path. This is the first clear indication that Indian prices are



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The divergence between Indian and international market conditions is apparent in the spread between Platts HRC ex-works Mumbai and ex-stock Shanghai. At the beginning of 2026, the spread widened significantly and traded well above historical norms.

The widening spread reflected a clear divergence in domestic fundamentals: Indian HRC was supported by safeguard-related sentiment, lower imports and firmer demand expectations, while Chinese HRC remained pressured by overcapacity and weak property-linked demand. The result was a substantial Indian premium over Chinese material.

The spread subsequently narrowed during the second quarter as arbitrage and demand normalization reasserted themselves. High Indian prices

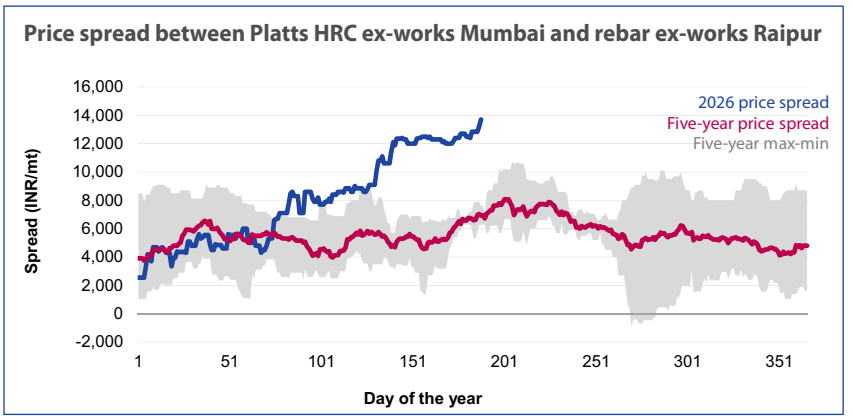
becoming more useful as standalone reference points.

The same pattern is visible within India itself. While the Mumbai-Shanghai spread shows India's divergence from an external benchmark, domestic steel spreads show how price formation is also becoming more differentiated across India's own steel value chain.

A second indication of India's growing pricing relevance can be observed through the spread between Platts HRC ex-works Mumbai and rebar ex-works Raipur. This spread reflects differences in conditions between India's flat and long steel markets. During 2026, the spread widened significantly, recently reaching a high of 13,700/MT, as flat steel prices substantially outperformed long products.

HRC prices received support from safeguard measures, export opportunities in overseas markets and higher raw material costs linked to freight disruptions and currency depreciation. Rebar prices, by comparison, faced a more challenging demand environment. Construction activity slowed seasonally amid inflationary pressures and rising project costs, while monsoon-related disruptions weighed on consumption expectations.

The widening differential may also reflect changes in the composition of steel demand within India. Steel demand is increasingly supported by sectors beyond real estate and traditional construction. Growth in automotive manufacturing, engineering products, capital goods, renewable energy and industrial production has increased the relative importance of flat steel consumption. As India continues to industrialize, these sectors are likely to exert a larger influence on domestic steel pricing.



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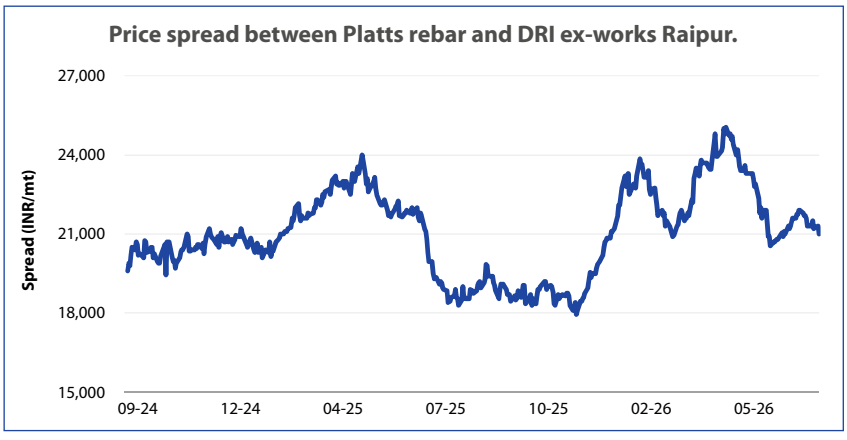
India's growing pricing relevance can be observed through the spread between Platts HRC ex-works Mumbai and rebar ex-works Raipur. This spread reflects differences in conditions between India's flat and long steel markets.

steel producer margins from late-2025 lows.

However, that improvement was not sustained. As construction activity slowed, buyers became more cautious, project execution softened and monsoon-related disruptions weighed on demand. Rebar prices came under pressure, compressing the spread from earlier highs.

The evolution of the rebar-DRI spread highlights how Indian steel prices



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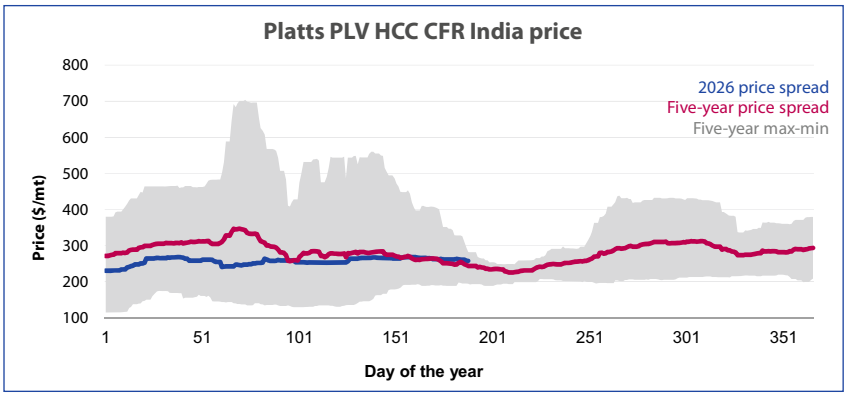
The long steel value chain provides a more direct view of how these domestic demand shifts affect producer margins.

The spread between Platts rebar ex-works Raipur and direct-reduced iron (DRI) ex-works Raipur provides insight into value creation within India's long steel value chain. DRI is a key metallic input for induction furnace and electric arc furnace producers, making the spread a useful indicator of downstream pricing power.

While rebar underperformed HRC during much of 2026, it still strengthened relative to key metallic inputs during late 2025 and early 2026. Rebar prices benefited from the broader first-quarter recovery in India's steel market, supported by safeguard measures, lower import pressure and higher replacement costs associated with freight disruptions. DRI prices also increased, but lagged gains in finished steel. As a result, the rebar-DRI spread widened, supporting a recovery in long

increasingly reflect domestic construction activity, infrastructure spending and seasonal demand patterns. The spread captures shift in pricing power and profitability within India's domestic steel supply chain.



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Raw materials show a similar pattern. Indian prices remain linked to global supply shocks, especially in coking coal, but delivered values are increasingly shaped by local procurement behaviour, steel production needs and substitution between coal and coke.

Platts premium low-volatile hard coking coal (PLV HCC) CFR India prices rose sharply during the first quarter of 2026 and briefly approached $270/MT

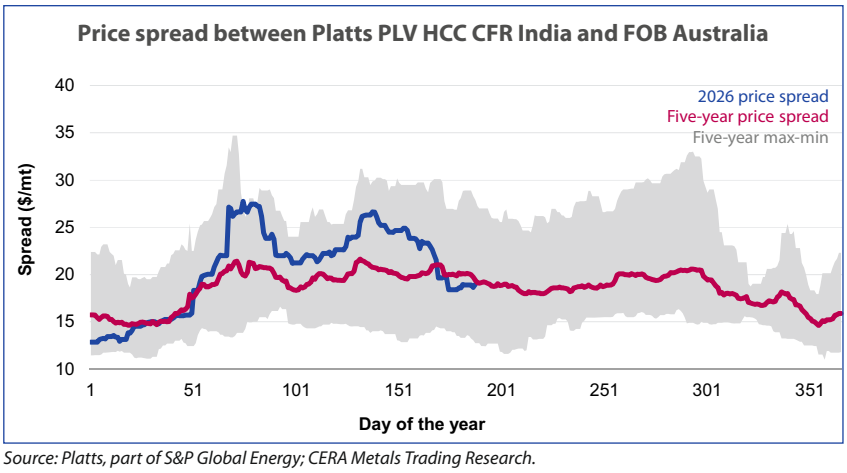
Indian prices remain linked to global supply shocks, especially in coking coal, but delivered values are increasingly shaped by local procurement behaviour, steel production needs and substitution between coal and coke.

before declining during the second quarter. The initial rally was primarily driven by severe weather disruptions and force majeure declarations in Queensland, Australia, which reduced spot cargo availability and tightened export supply. Indian steel producers continued purchasing despite high prices because domestic steel production remained strong and inventory replenishment was required.

Prices subsequently weakened as Australian supply recovered, Indian mills became increasingly price-sensitive, and more buyers shifted their requirements toward long-term contracts. Increased domestic coking coal production, greater use of imported Indonesian coke and weaker spot buying activity also reduced demand for seaborne premium hard coking coal.

Despite the first-quarter rally, CFR India prices remained below the five-year average for much of 2026. This reflects the inclusion of the exceptional coal price spikes recorded during 2021-22 and parts of 2023, when supply disruptions and energy market volatility pushed coking coal prices to historically elevated levels. Relative to those years, the 2026 market was considerably better supplied despite periodic Australian disruptions.

The spread later retreated toward historical norms for several reasons. First, Australian supply began recovering as weather-related disruptions eased. Second, Indian steel demand softened, and mills became increasingly price sensitive. Several producers shifted toward long-term contracts rather than spot purchases, reducing immediate buying pressure. Third, domestic coking coal production improved materially during the first



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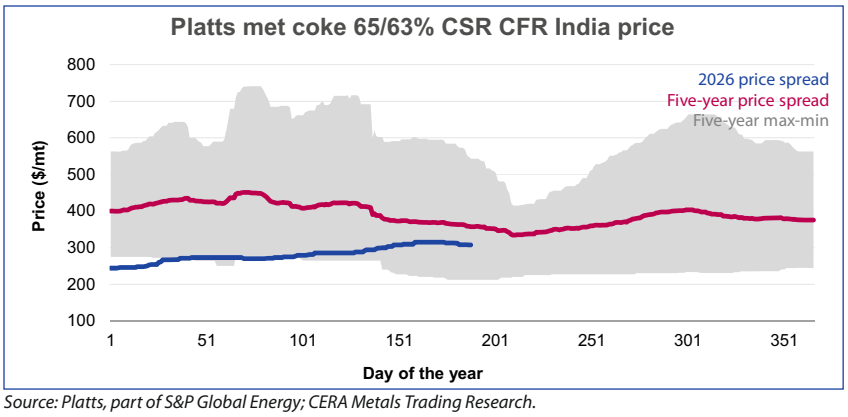
The evolution of metallurgical coal pricing provides another compelling example. The spread between Platts PLV HCC CFR India and FOB Australia spent much of early 2026 close to its historical average before widening temporarily and then narrowing again.

Following the weather-driven rally, the CFR India premium over FOB Australia widened as Indian buyers continued to secure cargoes despite elevated prices and constrained supply. Although weather-related disruptions lifted FOB Australia prices sharply, CFR India values increased even more as Indian buyers continued securing cargoes despite tightening supply, pushing the spread above historical norms. The spread analysis focuses on how Indian purchasing behaviour influenced relative pricing rather than the outright coal price trend itself. The market was also adapting to India's growing dependence on imported coking coal, which continues to account for approximately 95% of requirements despite government efforts to increase domestic production.

half of 2026, helping moderate import requirements. Finally, growing imports of Indonesian metallurgical coke reduced the need for certain coal purchases. Together, these developments weakened CFR India premiums and brought the spread back toward average levels.



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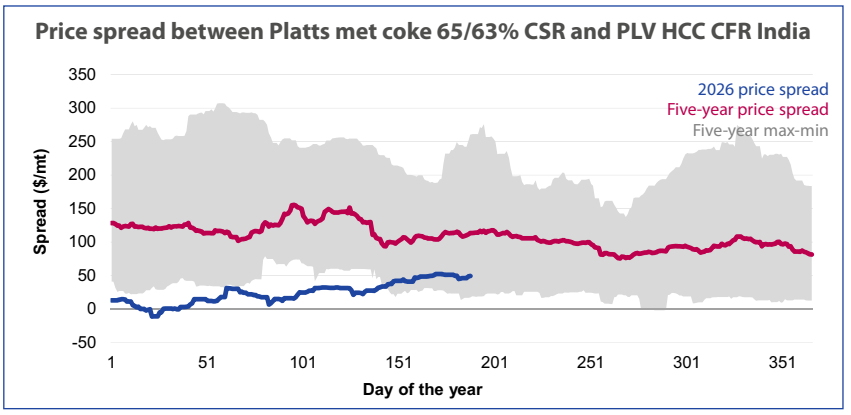
Platts metallurgical coke 65/63% coke strength after reaction (CSR) CFR India prices remained weak throughout 2026 and traded well below the five-year average despite a modest recovery later in the year. A key driver was policy. India initially imposed quantitative restrictions on metallurgical coke imports before transitioning to antidumping measures. At the same time, competitively priced Indonesian coke increasingly entered the market. For many steelmakers, imported coke became more economical than purchasing premium coking coal and producing coke domestically. This increased competition within the coke market and placed sustained downward pressure on prices.

The modest recovery visible later in the year was generally linked to periods of tighter coal availability and seasonal improvements in steel demand. However, the broader trend remained subdued as alternative coke supply routes and changing raw material procurement strategies continued to weigh on pricing.

Another important relationship is the spread between metallurgical coke and coking coal, represented by the spread between metallurgical coke 65/63% CSR and PLV HCC CFR India. This spread reflects the economics of coke production, relative raw material costs and supply availability. During 2026, the spread remained substantially below its five-year average, indicating unusually weak coke prices.

The weakness in the spread reflected the divergence between coke and coking coal pricing during 2026. While metallurgical coke prices remained under pressure, coking coal prices were relatively well supported by weather-



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related supply disruptions in Australia, freight volatility and continued demand from major steel-producing regions. As a result, the cost of coking coal remained elevated relative to coke values, compressing the margin available within the coke production chain and keeping the spread below historical norms.

Periodic improvements in the spread were largely driven by temporary supply tightness in Australia and seasonal rebounds in Indian buying activity. However, the spread remained historically weak because coking coal prices recovered more strongly than coke prices, preventing a sustained widening in coke production margins.

As production, consumption and trade volumes continue to expand, domestic prices are likely to become increasingly important indicators for Indian stakeholders and may play a larger role in forming regional trade decisions across Asia.

Taken together, these spreads illustrate a common theme. Indian commodity prices are increasingly shaped by domestic fundamentals that are not always reflected in international benchmarks. Safeguard duties, monsoon seasonality, infrastructure spending cycles, LNG availability, currency movements, capacity additions and evolving trade policies can produce pricing outcomes that differ materially from those in other major markets.

This distinction becomes increasingly important as India's role in global ferrous markets expands. Iron ore imports increased 15% year over year during January–April 2026, while India remained a major importer of metallurgical coal and an increasingly significant participant in regional steel trade.

The growing relevance of Indian pricing reflects the increasing scale and complexity of India's commodity markets. As production, consumption and trade volumes continue to expand, domestic prices are likely to become increasingly important indicators for Indian stakeholders and may play a larger role in forming regional trade decisions across Asia.

The Rise of Indian Benchmarks: Shaping the Future of Domestic Commodity Pricing



SANDEEP DAGA
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Sandeep Daga has 26 years of experience in currency and commodity risk management. His career includes key roles at Aditya Birla Group in Mumbai and Standard Bank Plc in London. Regsus, which he founded in 2009, provides advisory services on risk management and commodity hedging. Regsus owns Metal Intelligence Centre (MIC) which is a one-stop portal for base metal news, research, data, and analyses. Sandeep is a Chartered Financial Analyst and Certified Treasury Manager from ICFAI and ranked 13th nationwide in Chartered Accountancy in 1996.

> *While India has historically relied on global commodity benchmarks, its growing economic footprint has triggered a shift toward domestic pricing systems. These local systems better reflect country-specific realities, trade flows, and currency advantages, helping small and medium enterprises manage risk efficiently. However, the transition from a "price-taker" to a "price-setter" is still determined by domestic balances, tariff structures, and market depth across specific commodities like copper, aluminium, and gold.*

INTRODUCTION

The history of global economic development shows that commodity prices have deeply influenced industrial profitability, investment cycles, inflation, trade competitiveness, government revenues, and consumer behaviour. Therefore, a fair and transparent pricing mechanism that closely reflects a country's demand & supply dynamics is essential to all stakeholders (producers, manufacturers, recyclers, traders, consumers, and policymakers) as well as for the long-term health of an economy.

Indian commodity prices continue to be influenced by movements in global benchmarks, keeping India largely as a price-taker. This raises an important question - can India evolve into a meaningful price maker and influencer?

For decades, Indian prices of many commodities have largely been derived from global benchmarks such as the London Metal Exchange (base metals), Brent Crude (crude oil), London Fix (precious metals), and others. However, as the Indian economy expanded, the industrial base grew, commodity consumption increased, and financial infrastructure deepened, local pricing mechanisms and benchmarks emerged through domestic exchanges, gradually gaining mainstream acceptance.

Yet, this transition remains incomplete. Indian commodity prices continue to be influenced by movements in global benchmarks, keeping India largely as a price-taker. This raises an important question - can India evolve into a meaningful price maker and influencer?

The answer is not straightforward. Let us explore.

TWO PRICING SYSTEMS

Commodity pricing broadly operates through two systems:1. International benchmarks2. Local pricing systems

International benchmarks, generally quoted in US dollars, are prices discovered through the interaction of global demand and supply on recognised exchanges, international trading hubs, or through large traders. Examples include the LME for base metals and the CME for precious metals and agricultural commodities.

The long-standing existence of these benchmarks, their time-tested contract design, proven convergence with physical markets, and deep trading liquidity (supported by active participation from producers, consumers, traders, and institutions) have helped them gain widespread trust across the industry.

Local pricing, on the other hand, evolves around domestic factors and is typically denominated in local currency. These systems reflect country-specific demand and supply dynamics, import as well as export duties, non-tariff barriers, local taxes, transportation costs, currency movements, inventory conditions, and other domestic factors.

A country may operate under an international pricing system, a local pricing system, or a combination of both.

WHY LOCAL PRICING SYSTEMS MATTER?

A local system for commodity price discovery is more closely aligned with domestic realities, regulations, government policies, seasonality, and local market events. As a result, such systems often provide businesses with more relevant and actionable price signals.

A local pricing system offers several advantages:

1. Truly local

While international benchmarks are

driven by global demand and supply conditions, country-specific fundamentals are often diluted in the aggregation process. Local pricing systems help bridge this gap.

For example, metal prices on MCX and SHFE periodically diverge from LME prices in order to reflect domestic market conditions. Such divergences provide valuable signals regarding the state of the local industry and can create business opportunities for domestic market participants.

2. Encourages trade flows

Periodic divergences between domestic and international prices create opportunities for imports & exports to rebalance shortages and surpluses. This improves market efficiency and enhances industrial competitiveness over time.

3. Convenience and access

Local currency-denominated pricing systems offer practical advantages to domestic businesses, particularly small and medium enterprises that primarily operate within the local market. The ability to transact and hedge in local currency also makes risk management more accessible and efficient.

4. Improved market transparency

Well-functioning domestic pricing systems improve transparency across the value chain. Transparent prices reduce information asymmetry and help market participants compete more fairly and efficiently.

DETERMINANTS OF LOCAL PRICING SYSTEMS

The existence and robustness of a local pricing system in any country are determined by several factors.

1. Domestic metal balance

Generally, commodities with high import dependency are more likely to use global benchmarks for "shadow pricing" in local transactions.

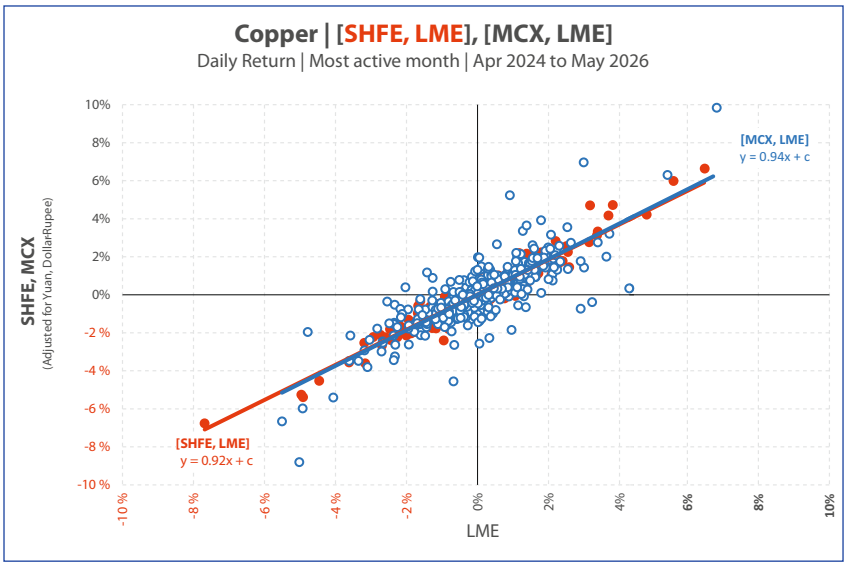

Figure 1: Relationship between daily changes in SHFE and LME Copper (Red) Vs those between MCX and LME Copper (Blue)

As shown in Figure 1, local copper prices on SHFE and MCX maintain a strong relationship with the global benchmark, the LME, as represented by coefficient of 0.92 and 0.94 with LME prices (1.00 = 100% correlation). This is primarily because both China and India depend significantly on imported copper.

In contrast, commodities with a net surplus are likely to exhibit a weaker linkage with global benchmarks and a stronger alignment with domestic fundamentals.

As illustrated in Figure 2, MCX aluminium exhibits a weaker relationship with LME prices (coefficient of 0.75) when compared to MCX copper (coefficient of 0.94); 1.00 represents 100% correlation. This can be explained by the fact that India exports approximately 25% of its primary aluminium output while importing around 44% of its copper requirements. Consequently, domestic factors exert greater influence on aluminium prices than on copper prices.

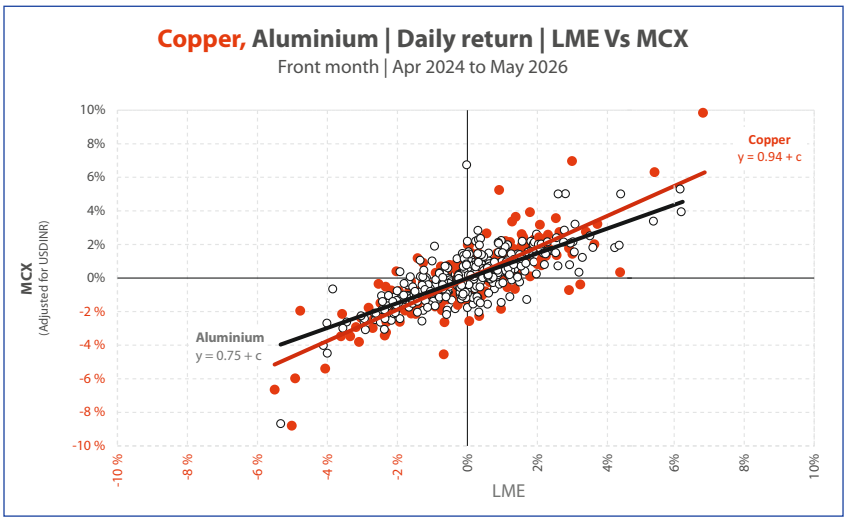

Figure 2: Relationship between daily changes in MCX and LME Copper (Red) Vs those between MCX and LME Aluminium (Black)

2. Tariff structure

By acting as a cushion between local and international prices, tariffs and non-tariff barriers reduce the transmission of performance of global benchmarks into domestic markets. This strengthens the role of local pricing systems in domestic transactions.

Commodities subject to export tariffs, export restrictions, or other trade barriers tend to align more closely with domestic fundamentals. China's experience provides a useful example.

China's self-sufficiency in aluminium production has weakened the relationship between its domestic prices and the LME benchmark, as illustrated in Figure 3

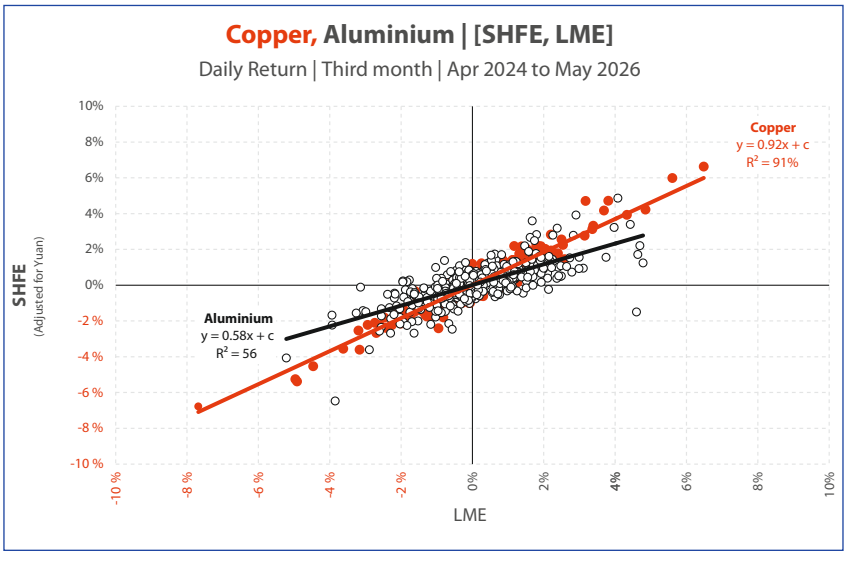

Figure 3: Relationship between daily changes in SHFE and LME Copper (Red) Vs those in SHFE and LME Aluminium (Black)

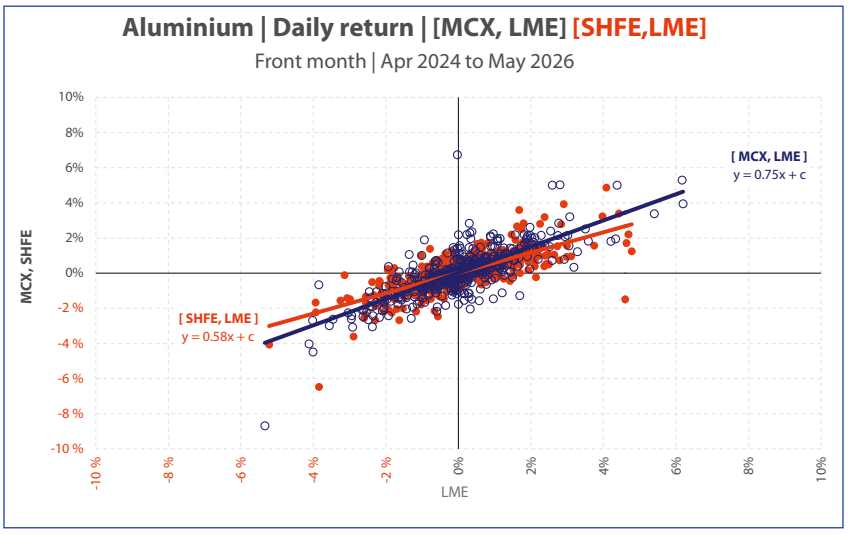

Figure 4: Relationship between daily changes in SHFE and LME Aluminium (Red) Vs those between MCX and LME Aluminium (Blue)

Moreover, the existence of a 15% export tariff on refined aluminium further reduces the influence of global benchmark prices on Chinese local prices.

The Figure 4 shows MCX aluminium exhibiting higher dependence on LME when compared to SHFE aluminium's dependence on the global benchmark. MCX aluminium displays a coefficient of 0.75 with changes in LME prices as against SHFE aluminium's 0.58, highlighting the stronger role of domestic factors in Chinese aluminium price discovery, helped by tariff structure.

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3. Breadth and depth

Local pricing systems evolve over time as participation expands across the value chain and market depth increases. Indian gold prices are one of the best examples of this process.

India is among the world's largest consumers and importers of gold. Beyond importing, physical trading, value-added manufacturing & retail consumption, gold has developed a comprehensive ecosystem encompassing recycling, financing through gold loans, investment products such as ETFs, as well as participation from banks, traders, jewellers, refiners, and retail investors.

The presence of multiple stakeholders generates continuous price discovery and trading activity. Broad participation improves market liquidity, enhances confidence in domestic pricing, and supports the development of a robust local pricing system.

Although Indian gold prices remain influenced by international benchmarks, domestic demand patterns, seasonal consumption, investment flows, and recycling activity play a significant role in local price discovery.

Metal	Global Benchmark Exists	Local Exists Pricing	Local Benchmark	Global Dominance
Gold/Silver	✔	✔	✔	✔
Steel Primary	✘	✔	✘	✔
Metals	✔	✔	✔	✘
Secondary Metals	✘	✔	✘	✘

(**Table 1:** Global and local pricing structures across commodity groups)

4. Existence of a secondary market

The presence of a strong recycling ecosystem enhances the development and significance of local pricing systems. Lead provides one of the best examples.

India is among the world's largest recyclers of lead. The country has eight brands registered for delivery into LME warehouses, the highest for any metal. Notably, approximately 72% of LME lead inventories originate from Indian recyclers. These figures highlight the dominance and importance of India's lead recycling industry.

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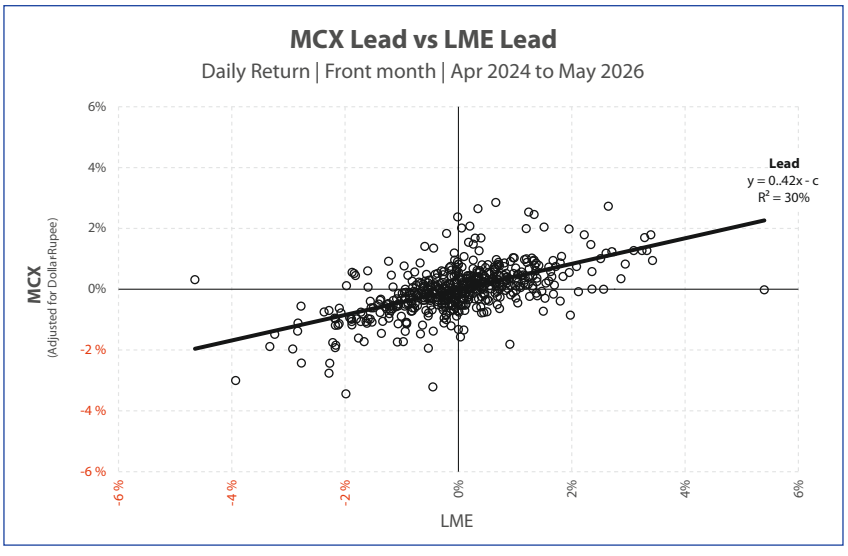

Figure 5: Relationship between daily changes in MCX and LME Lead

As shown in Figure 5, MCX lead prices exhibit a very weak relationship with the LME, with coefficient of 0.42 with LME price and R-squared value of just 30%, the lowest among all base metals.

Viewed differently, this displays the strength of India's well-established recycled lead market, where domestic demand, scrap availability, battery demand, and recycling economics play a much greater role in price discovery than international benchmark movements.

5. Existence of a local benchmark

A credible local benchmark is a key pillar of any successful domestic pricing system. It provides a transparent, unbiased, and market-determined reference price that can be used for trading, hedging, settlements, and commercial contracts.

In India, the Multi Commodity Exchange of India (MCX) has played a significant role in developing domestic benchmark prices across industrial commodities. Through transparent exchange-based trading, MCX offers rupee-denominated price discovery that reflects both international market developments and domestic factors such as currency movements, duties, taxes, and local demand-supply conditions.

Over the years, MCX contracts have gained acceptance among producers, consumers, traders, importers, exporters, and financial participants. Its delivery mechanism has helped strengthen convergence between futures and physical markets.

As a result, MCX prices for base and precious metals have gained increasing acceptance within the domestic industry and are widely used in commercial transactions.

WHERE DOES INDIA STAND?

1. Maturing steadily

India's commodity pricing system is undergoing a gradual evolution. While it remains anchored to global benchmarks, the influence of local factors is becoming increasingly visible in domestic price discovery.

As shown in Figure 6, the correlation between prices on MCX and the LME has gradually declined over the past year for all base metals. This points at local market dynamics becoming increasingly important in domestic price discovery.

The growing role of local factors in Indian metal pricing is further reflected in the rise in base metal inventories at MCX-registered warehouses from 6,467 MT in April 2025 to 23,733 MT in May 2026.

Among metals, copper exhibits the strongest linkage with LME prices due to India's import dependency. In contrast, India's strong domestic recycling ecosystem marks lowest correlation with the international benchmark for lead.

Irrespective of this, the trend suggests that while global benchmarks remain influential, domestic factors are gradually playing a larger role in determining local prices.

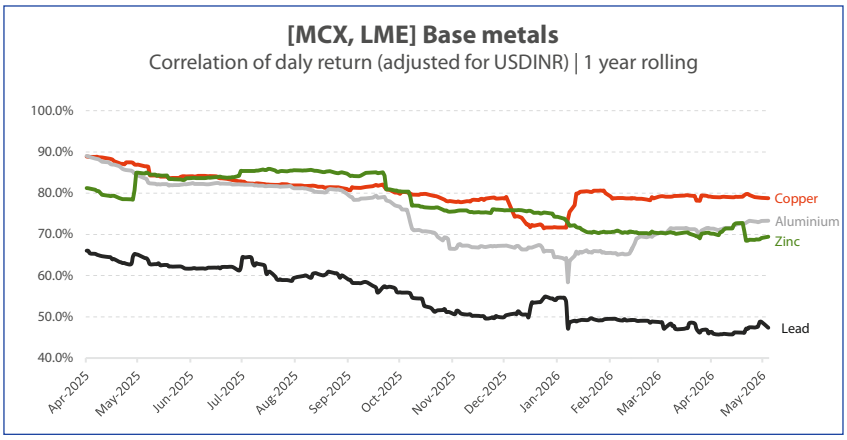

Figure 6: MCX-LME rolling correlation in base metals

2. Relatively higher volatility

Annualised Implied Volatility
May 2024 to May 2026

	Copper	Aluminium	Zinc	Lead
MCX	25%	21%	22%	14%
SHFE	20%	16%	18%	13%
LME	21%	22%	24%	18%
CME	35%			

Calculated on daily returns of the most active contracts after adjustment of currency movements.

Table 2: Annualised implied volatility across commodity exchanges

By design, local price benchmarks are generally less volatile than international benchmarks because they are more closely aligned with physical market fundamentals and are exposed to lower levels of speculative participation.

As shown in Table 2, SHFE's base metal contracts exhibit lower implied volatility than international benchmarks such as the LME and CME. However, MCX contracts present a more mixed picture.

This can partly be explained by relatively lower market depth and liquidity in certain MCX contracts. Also, higher speculative participation in copper, when compared to other base metals, explains its relatively higher volatility.

International experiences suggest that as market participation broadens and liquidity improves, domestic benchmarks exhibit lesser volatility when compared to international benchmarks.

WHAT TO EXPECT?

Global linkages are inevitable

Local prices of commodities, e.g. base metals, that are actively imported and exported, generally remain linked to global benchmarks. As a result, price movements in one region inevitably influence prices elsewhere through arbitrage, trade flows, and shifting demand-supply dynamics.

Correlation of Daily Return
MCX vs LME | SHFE vs

	Copper	Aluminium	Zinc	Lead
SHFE	93%	76%	84%	68%
MCX	81%	78%	74%	54%
CME	74%	—	—	—

May 2024 to May 2026

Table 3: Correlation between daily return of MCX, SHFE and CME prices w.r.t. their metals' respective LME contracts

As shown in Table 3, even highly developed local pricing systems such as SHFE continue to maintain meaningful correlations with global benchmarks.

Therefore, the strength of a local pricing system should not be measured by its ability to disconnect from global markets. Rather, its robustness lies in its ability to reflect domestic fundamentals while remaining integrated with the broader global pricing system.

PRICE MAKER: AN EVOLUTION PROCESS

Empirical evidence suggests that during the early stages of economic development, most countries remain price-takers due to the small size of their domestic markets and an efficient, read-to-use reference provided by global benchmarks. However, as industrial activity expands, domestic consumption rises, and financial markets deepen, local pricing systems gradually gain importance.

In other words, becoming a commodity price maker or price influencer is typically the outcome of long-term economic evolution, industrial growth, market development, and increasing global relevance. The influence and acceptance of local benchmarks develop gradually as a nation gains meaningful participation in global production, consumption, processing, trade, or inventories of a commodity.

Over time, economies begin influencing global prices through the sheer scale of their production, consumption, and trading activity. This influence often emerges even before their domestic exchanges attain international dominance.

China offers one of the clearest examples of this evolution. Its influence on global commodity prices did not emerge solely through the development of SHFE, but through decades of industrial expansion, infrastructure growth, rising consumption, and increasing participation in global trade.

India is now moving along a similar path. As its manufacturing base expands, infrastructure spending increases, and commodity

consumption rises, the role of domestic pricing systems is likely to strengthen further.

CONCLUSION

India is witnessing a gradual but meaningful localisation of commodity prices. The process is likely to accelerate over the coming months and years. Government policies that support domestic manufacturing, encourage value addition, strengthen recycling industries, and deepen financial markets will play an important role in this transition.

While the role of domestic factors may rise in determining local prices over time, a complete or significant detachment from global benchmarks is unlikely especially for commodities of international trade.

The journey from price-taker to price influencer is evolutionary rather than revolutionary. India has already begun that journey.

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- ***Metal Intelligence Centre (MIC):*** Internal analysis based on historical price data, correlation studies, implied volatility calculations, import dependency assessment, recycling industry analysis, and commodity market structure evaluation.
- ***London Metal Exchange (LME):*** Official market data, warehouse stocks and metals pricing information.
- ***Shanghai Futures Exchange (SHFE):*** Daily futures prices, inventory data and market statistics.
- ***Multi Commodity Exchange of India (MCX):*** Commodity futures prices, contract specifications and market statistics.
- ***Chicago Mercantile Exchange (CME):*** Commodity market data and futures pricing information.
- ***Ministry of Commerce and Industry:*** Foreign trade statistics, import and export data.
- ***Metal prices made in China? A network analysis of industrial metal future (May 2022)*** by Pierre L. Siklos, Martin Stefan and Claudia Wellenreuther.
- ***Revisiting price linkages between London and Shanghai base metal futures markets:*** A time-frequency connectedness analysis (April 2026) by Cunhai Pan and Wei Shen.



Crude Oil

Crude oil lies buried deep, yet when refined, it fuels the world. Our inner potential, too, transforms into power when we refine our efforts with purpose

Why Indian Prices Matter
From Benchmark Adoption to Benchmark Creation



MUDIT SINGHANIA
Partner, Liquid Alternatives – Alpha Alternatives

Mudit Singhania leads the Commodities business at Alpha Alternatives, bringing over two decades of expertise in the commodities industry. A recognized person in the industry, Mudit has been instrumental in positioning commodities as a viable alternative asset class in India. His entrepreneurial vision led to the creation of India's largest advisory platform for commodity investments and the launch of the country's first commodity-focused Category III Alternative Investment Fund. Prior to Alpha Alternatives, Mudit played a pivotal role at Edelweiss, where he successfully built and scaled the agri-commodities business, contributing significantly to its growth and success. Beyond his professional achievements, Mudit is a fitness enthusiast.

> *India is transitioning from relying on international benchmarks to creating domestic commodity price benchmarks to better reflect its status as a major global consumer and producer, thereby reducing reliance on external pricing. This shift aims to lower basis risk, reduce currency exposure, and enable more effective risk management for domestic businesses.*

INTRODUCTION

Every day, benchmark prices for commodities are discovered in financial centres and exchanges across the world. These prices influence what Indian refiners and manufacturers pay for raw materials. They shape inventory decisions at manufacturing plants across Gujarat, Maharashtra and Tamil Nadu, and affect the working capital calculations of exporters, processors and traders who may never have heard of the exchanges where those benchmark prices originate.

That number is not discovered in India, even when the commodity is ultimately consumed in India. This reality extends beyond metals. From crude oil, edible oils and precious metals to several internationally traded agricultural commodities, India remains largely a consumer of prices discovered elsewhere. Global benchmarks are adjusted for freight, duties, taxes, logistics costs and exchange rates before finding their way into domestic supply chains, but the underlying reference price is often formed outside the country.

Historically, this arrangement was understandable. India represented a relatively smaller share of global commodity demand and had neither the market depth nor institutional ecosystem necessary to influence international price formation. Today, however, the situation is changing. India is now among the world's largest consumers of crude oil, gold, silver and industrial commodities. It is a leading producer of rice, sugar, cotton and spices. It is one of the fastest-growing major economies and is expected to contribute significantly to incremental global commodity demand over the coming decades.

Yet despite its growing economic weight, many of the benchmark prices that shape economic decisions in India continue to originate outside the country. This distinction matters because pricing is not merely an outcome of economic activity. It is an essential component of economic infrastructure. Just as roads facilitate transportation and ports facilitate trade, pricing systems facilitate the allocation of capital, the transmission of information and the management of risk.

The relationship between pricing and economic development is therefore not simply correlational. It is causal. Economies that possess robust mechanisms for discovering prices allocate resources more efficiently, manage volatility more effectively and create stronger foundations for long-term growth.

As India's economic footprint expands, an important question emerges: can prices discovered within India evolve into trusted reference points for commercial decision-making, alongside established global benchmarks?

PRICING AS ECONOMIC INFRASTRUCTURE

Pricing systems rarely receive the attention given to highways, power plants, ports or digital networks. Yet they perform an equally important economic function.

Every day, millions of decisions are made based on prices. Farmers decide what to plant. Manufacturers determine production schedules. Traders allocate inventory. Investors decide where capital should flow. Banks assess credit risk. Policymakers evaluate inflationary pressures.

Prices coordinate these decisions without requiring central direction. Economists often describe prices as information systems. They aggregate dispersed information about supply, demand, inventories, transportation costs, weather conditions, policy changes and market expectations into a single observable signal.

When prices function efficiently, resources move toward their most productive uses. When pricing systems are weak, distorted or disconnected from local realities, resources are allocated less efficiently. Capital may flow into sectors that appear profitable because of distorted signals while genuinely productive opportunities remain underfunded.

This is why benchmark development should be viewed as economic infrastructure rather than merely

financial market development. The world's major economic centres invested not only in physical infrastructure but also in pricing infrastructure. Benchmark contracts for crude oil, natural gas, metals, grains and interest rates evolved into institutions that reduced uncertainty, lowered transaction costs and improved resource allocation.

India's physical infrastructure has improved dramatically over the past two decades. The next stage of development requires a parallel strengthening of pricing infrastructure.

WHAT PRICE DISCOVERY ACTUALLY DOES

Price discovery performs three essential economic functions.

First, it **allocates resources**. A rise in cotton prices encourages farmers to increase acreage. Higher aluminium prices incentivise investment in production capacity. Lower prices discourage inefficient production and encourage consumption.

Second, prices **transfer information**. A futures curve reflects collective expectations regarding future supply and demand. A processor, exporter or importer can use these signals to make informed decisions months before actual physical transactions occur.

Third, prices **transfer risk**. Commodity producers and consumers operate in environments characterised by uncertainty. Futures and options markets allow this uncertainty to be transferred to participants willing to assume it. The farmer selling futures before harvest, the refinery hedging crude purchases, and the jewellery manufacturer locking in bullion prices are all using markets to reduce uncertainty.

When price discovery occurs outside the domestic market, these functions become less effective. The resulting inefficiencies may not always be visible, but they influence investment decisions, financing costs, inventory management and ultimately economic growth.

THE ANATOMY OF INDIA'S IMPORTED PRICING SYSTEM

India's commodity pricing framework has historically followed an import-parity model.

For commodities such as crude oil, edible oils and several metals, domestic prices are largely derived from international benchmarks adjusted for freight, insurance, duties, taxes and exchange-rate movements. The approach is logical and often unavoidable for a large importing nation. However, it creates several structural challenges.

The first is **basis risk**. The price paid by an Indian participant frequently differs from the international benchmark used for hedging. Domestic logistics costs, regional demand conditions, quality differentials, taxation and seasonal factors create divergences between global and local prices. As a result, international hedges often provide only partial protection.

The second challenge is **currency exposure**. Most global commodity benchmarks are denominated in US dollars. Consequently, Indian businesses face two layers of uncertainty: commodity price risk and currency risk. An aluminium producer must forecast both aluminium prices and the rupee-dollar exchange rate. A gold importer faces the same challenge. This dual exposure increases hedging costs and operational uncertainty.

The third challenge is **policy responsiveness**. When prices are primarily determined outside the country, domestic policymakers often find themselves responding to developments they neither initiated nor can directly influence. Energy markets provide a powerful illustration. Periods of heightened tension around the Persian Gulf often trigger increases in crude oil prices, freight rates and insurance costs, even before physical supplies are disrupted. An industrial unit in Coimbatore or a logistics company in Nagpur may have no connection to the underlying conflict, yet their operating costs can rise within days as global markets reprice risk. Price discovery transmits global events into domestic economies regardless of whether those economies were involved in the event. For policymakers, the challenge is often responding to price signals generated thousands of kilometres beyond India's borders.

A stronger domestic benchmark ecosystem would not eliminate global influences, but it would improve visibility into local supply-demand conditions and support more targeted policy responses.

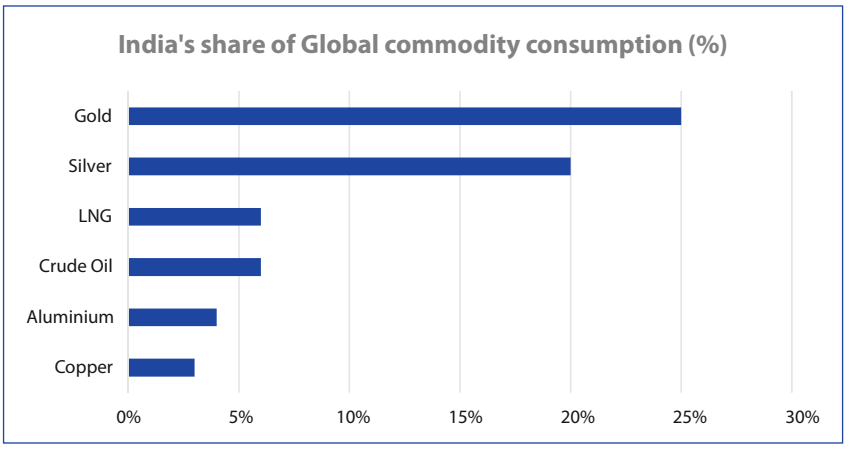
WHY INDIAN PRICES DESERVE ATTENTION

Global benchmarks perform an essential function in commodity markets. Brent provides a common reference point for crude oil, the London Metal Exchange anchors much of the world's industrial metals trade, and bullion markets in London and New York continue to influence precious metal pricing globally. These benchmarks facilitate trade across jurisdictions and provide a common language for market participants.

Yet the prices that ultimately matter to Indian businesses are rarely identical to these global benchmarks.

An Indian refiner purchasing crude oil, a jeweller importing bullion, or a manufacturer sourcing copper does not transact at the benchmark price itself. The final price incorporates freight costs, insurance, exchange-rate movements, import duties, taxes, financing costs, logistics expenses and local supply-demand conditions. By the time a global benchmark reaches an Indian buyer, it has evolved into something distinctly Indian.

This distinction is important because the additional layers are not merely adjustments; they are economically meaningful signals. They reflect information about domestic inventories, consumption patterns, infrastructure constraints, policy decisions and market sentiment. In



Source: EIA, WGC, SI, WBMS

many cases, these factors influence business decisions more directly than the underlying global benchmark.

The question, therefore, is not whether global benchmarks will remain relevant. They undoubtedly will. The more important question is whether prices discovered within India can evolve into trusted reference points that better reflect Indian market realities and support domestic decision-making.

As India's role in global commodity markets expands, the value of this local information is likely to increase. The development of credible Indian reference prices is not about replacing international benchmarks; it is about complementing them with signals that are more closely aligned with domestic economic conditions.

FROM TRADING PLATFORMS TO REFERENCE PRICES

India's commodity market ecosystem has evolved significantly over the past two decades. Electronic trading platforms, improved regulatory oversight, physically delivered contracts and expanding warehouse infrastructure have strengthened domestic price discovery and risk-management capabilities across several commodities.

Yet building efficient markets is not the same as building reference prices.

Copper illustrates how domestic price discovery can coexist with international benchmarks. While Indian copper prices remain anchored to the LME benchmark, the growth of physically delivered contracts and exchange-accredited warehousing has improved transparency around domestic inventories and availability. As physically delivered contracts have gained greater acceptance, market participants have benefited from improved visibility into local supply-demand conditions, resulting in more meaningful domestic premiums and discounts over global benchmarks. For fabricators, importers and consumers, these local signals are often as important as the benchmark itself. The result is not the replacement of international pricing, but the emergence of a richer pricing ecosystem that better reflects Indian market realities.

As physically delivered contracts have gained greater acceptance, market participants have benefited from improved visibility into local supply-demand conditions, resulting in more meaningful domestic premiums and discounts over global benchmarks.

Bullion markets offer a different but equally interesting perspective. India remains one of the world's largest consumers of gold and silver, yet benchmark bullion prices continue to be discovered internationally. At first glance, this appears to reinforce India's status as a price taker. However, large consuming markets influence commodity pricing in ways that are not always visible through benchmark ownership alone. The silver market in 2025 provides an instructive example. During the year, substantial quantities of silver were drawn out of LBMA vaults and transferred to COMEX warehouses, pushing COMEX inventories to a record 16,485 tonnes in Q4 2025. At the same time, LBMA stocks declined as metal was redirected to the United States and increasing volumes were allocated to physically backed ETFs amid sustained investor inflows. As available inventories tightened, concerns around physical availability intensified.

India's role in this process was significant. Ahead of the festive season, silver imports reached 1,012 tonnes in September 2025 and 1,785 tonnes in October 2025, helping push annual imports beyond 7,000 tonnes. Indian demand was a big driver of market tightness and arrived at a time when the global silver market was already experiencing inventory constraints. The resulting pressure was reflected in record high lease rates, with 1-month rates touching annualised 39% at the peak. It also led to episodes of backwardation and a rare premium of nearly $2 per ounce for London silver over New York prices causing silver prices to remain elevated for several months. The episode illustrates an

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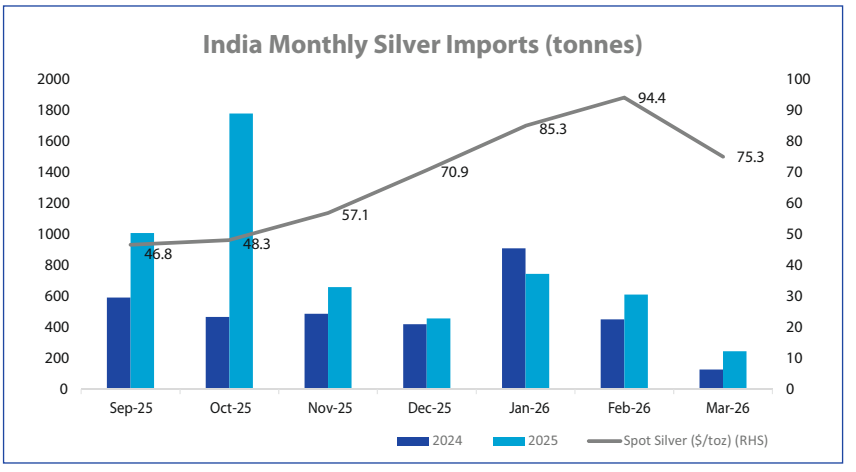

Source: Dept of Commerce

important point: ownership of a benchmark and influence over market dynamics are not necessarily the same thing. Large consuming nations like India can materially influence physical flows, inventory distribution and liquidity conditions even when benchmark prices continue to be discovered elsewhere.

Another noteworthy development is the establishment of the India International Bullion Exchange (IIBX). The initiative reflected an important shift in policy thinking. Rather than participating exclusively through overseas trading centres, India sought

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to develop a domestic ecosystem for bullion imports and trading. The broader objective was not simply operational efficiency but the gradual development of a transparent and credible domestic spot market. The longer-term aspiration was to create an ecosystem that could support the evolution of Indian bullion reference prices. While still evolving, the initiative signals recognition that large consuming nations benefit from developing pricing infrastructure that reflects their own market realities.

For IIBX to evolve from a trading venue into a meaningful reference pricing centre, participation, liquidity and adoption must continue to deepen. Successful benchmarks emerge when market participants consistently reference a price for contracts, inventory valuation, financing and risk management. The long-term significance of IIBX will therefore depend less on its existence as an exchange and more on the extent to which its prices become embedded in day-to-day commercial decision-making.

These examples point toward a broader lesson. The objective of benchmark development is not merely to create liquid trading venues. It is to create prices that market participants

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trust, reference and adopt for commercial decision-making. Reference prices emerge when users believe they accurately reflect underlying market conditions. Liquidity attracts participation, participation builds confidence, and confidence gradually transforms prices into benchmarks.

FROM BENCHMARK ADOPTION TO BENCHMARK CREATION

Benchmark creation is ultimately a process of adoption. Prices become benchmarks when producers, consumers, financiers and policymakers repeatedly choose them as reference points for contracts, inventory valuation and risk management. Liquidity attracts participation, participation builds confidence and confidence strengthens benchmark relevance.

India's challenge is therefore not simply to create markets, but to create prices that market participants trust. In many commodities, global benchmarks will continue to dominate. In others, Indian reference prices may gradually emerge alongside them, reflecting domestic realities that global benchmarks cannot fully capture.

THREE REFORMS THAT COULD ACCELERATE BENCHMARK DEVELOPMENT

The broader adoption of Indian reference prices will require continued

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institutional development across markets, infrastructure and regulation.

First, broader participation by financial institutions could deepen market liquidity and strengthen risk-transfer mechanisms. Banks already play an important role in commodity ecosystems through inventory financing, working-capital lending and trade finance. As a result, they are indirectly exposed to commodity price risk through their lending portfolios. A carefully calibrated framework that enables greater participation by banks in commodity risk management could enhance market depth, improve liquidity and support more efficient hedging across the value chain.

Second, warehouse receipt financing has the potential to become a far more important pillar of India's commodity market architecture. Continued digitisation, stronger legal recognition and closer integration with financial markets could significantly improve the utility of warehouse receipts as collateral. For farmers, traders and processors, this would expand access to credit while reducing the need for distress sales. For markets, it would strengthen the link between physical inventories and price discovery.

Third, regulatory consistency remains critical for long-term benchmark development. Credible benchmarks are built over years through sustained participation and confidence in market institutions. Market participants must have assurance that contracts, once established, will remain reliable tools for price discovery and risk management, particularly during periods of heightened volatility when hedging needs are greatest. This does not preclude appropriate regulatory intervention where necessary, but predictable and stable market frameworks are essential for fostering participation and building trust.

Ultimately, benchmark development is a cumulative process. Stable rules encourage participation which in turn creates liquidity and strengthens price discovery. Over time, these reinforcing effects can help create deeper, more resilient and more representative commodity markets.

THE GLOBAL OPPORTUNITY

The rise of Chinese benchmarks demonstrates that pricing influence is rarely created by policy alone. It emerges when economic scale, liquidity, physical market relevance and institutional confidence reinforce one another over time.

India's opportunity exists within a rapidly changing global commodity landscape.

Over the past three decades, China has systematically expanded its influence in commodity pricing. Chinese exchanges now account for a significant share of global commodity derivatives activity and increasingly influence regional trade flows.

India's path might not replicate China's experience. However, the broader lesson remains relevant. Pricing influence follows economic relevance only when supported by market infrastructure, institutional credibility and policy consistency.

India possesses the underlying economic scale. The next step is ensuring that domestic pricing mechanisms evolve alongside the country's growing role in global commodity markets.

CONCLUSION: PRICING AND ECONOMIC SOVEREIGNTY

The objective is not to replace global benchmarks, but to ensure that prices formed within India increasingly reflect, communicate and transmit information about Indian market realities. As India's role in global commodity markets grows, the value of that information is likely to grow as well. The future of pricing in India may therefore depend not only on how effectively the country responds to global benchmarks, but on how confidently it develops reference prices of its own.

India's path might not replicate China's experience. However, the broader lesson remains relevant. Pricing influence follows economic relevance only when supported by market infrastructure, institutional credibility and policy consistency.

From Price Takers to Price Makers: The Rise of 'Price in India'



ANIL GHELANI
Head of Passive Investments & Products, DSP Asset Managers

Anil Ghelani has been working with DSP Group since 2003 and currently is the Head of Passive Investments & Products managing a range of ETFs and Index Funds across equities, fixed income and commodities. Previously, he served as the CEO & Chief Investment Officer at DSP BlackRock Pension Fund Managers. Earlier in his career at DSP, he led the Risk and Quantitative Analysis team providing quantitative research inputs and buy-side credit research on companies across various sectors.

Prior to joining DSP, Anil worked at IL&FS Asset Management Company and at S.R. Batliboi a member firm of EY.

He has been a volunteer with the CFA Society India for more than a decade and has served as the Vice Chairman on the board.

> ***Price in India" aims to transition from reliance on global benchmarks to establishing transparent, domestic reference prices for key commodities, enhancing market efficiency and risk management. This initiative, exemplified by developments in coal and bullion, focuses on incorporating local factors like import duties, logistics, and demand into India-specific price benchmarks.***

When the "Make in India" initiative was announced in 2014, our ambition was not just to produce more in India. The ambition was about building India as a strong platform and capability which can potentially give us best-in -class manufacturing standards, supply chains, financing, and with that, win global confidence. The analogous ambition to this in the world of commodities would be "Price in India" which gives us the ability to discover and disseminate credible reference prices that we as institutional investors and various other stakeholders can use with confidence, and that global participants can also refer to when they trade with India.

The theme of this year's annual magazine "Pricing in India: Central to Economic Growth and Market Development" perfectly frames a central question: *Why and how can commodity prices discovered and formed in India be adopted by stakeholders in India and abroad?* In many commodities for example gold and silver in which we as ETF Fund Managers invest in, the "final" price paid in India already differs meaningfully from the global benchmark because of regulation and import duties, logistics costs, currency, and most important – our local market behaviour based on the demand and supply. So, in some way we are already working with "Indian prices," but often without a formal "Indian Benchmark" that captures and communicates those prices transparently.

The power of "and" is always stronger than "or" so the idea is to complement global benchmarks with India-grounded reference prices that can potentially help to improve contracting, deepen risk management and strengthen market efficiency. Global trades and the demand-supply dynamics are most certainly very important. Hence the idea is not to reject or replace the global market prices but to make a complementary domestic reference prices.

Across many commodities, we frequently begin with imported price signals, for example, gold, silver, Brent and other global references. But India's economic decisions of procurement, contracting, consumer pricing, inflation management are often dependent on a different object: a delivered, policy-adjusted, INR-relevant price. For crude oil as an example, rather than only a global reference of Brent we have a formally published reference price of a derived basket reflecting the grades India actually imports, which gets reports systematically as a domestic reference series. Similar is the case for edible oils there are requisite measures which explicitly note that import duties and related levies materially affect landed cost and domestic prices which highlights that the price is not simply a global number translated into rupees.

This creates a practical framework which in some manner is already in place for certain commodities. We need credible reference prices that align with India's consumption reality, policy structure, and delivery ecosystem. This will ensure it reflects our actual economic needs and fair pricing in a better manner.

We have seen a recent example of benchmark pricing for coal. We have in some manner created a new benchmark by way of a market

We need credible reference prices that align with India's consumption reality, policy structure, and delivery ecosystem.

discovery via auctions anchored to domestic reference prices. And this also factors in various different metric-based pricing. We have seen that quality differentials can be pre-defined and published, so that price discovery becomes easier to interpret. What we have in place for coal can prove to be a useful example of how a large sector can move toward metric-based, transparent domestic price formation.

When Indian firms hedge exposure using global benchmarks, they often carry a gap which comes from duties, freight, currency, domestic availability, and local premia can move independently. This "basis risk" makes hedging less effective. A domestic benchmark designed around India's delivered reality can reduce that wedge, improving risk management outcomes. In my view, the gradually emergence of domestic reference series like we have seen in crude and coal, is a recognition that India's

A domestic benchmark designed around India's delivered reality can reduce that wedge, improving risk management outcomes.

exposure is not identical to headline global benchmarks.

Policy effectiveness often depends on how price signals transmit. In edible oils, the government explicitly observes that import duty impacts landed costs and domestic prices, meaning policy changes create measurable price effects. A credible domestic benchmark system allows policymakers to evaluate transmission more precisely, separating global shocks from domestic policy impulses.

Coal shows the path, but "Price in India" becomes transformative when replicated across other key commodities especially where India is structurally large as importer,

A credible domestic benchmark system allows policymakers to evaluate transmission more precisely, separating global shocks from domestic policy impulses.

consumer, or processor. A next step is not to replace Brent in Indian discourse, but to normalise India basket-linked contracting, budgeting, and risk metrics where relevant, because it expresses India's true import-cost exposure more faithfully. India remains highly import-dependent in edible oils, and domestic prices are strongly shaped by duty structures and policy choices.

This creates a clear "Price in India" agenda:

- Build transparent, India-specific reference series.
- Institutionalise predictable policy frameworks.
- Encourage contract referencing to domestic indices that incorporate duties and local premium or discount rather than relying only on overseas quotes.

Similar to crude, India is one of the large users and participant of bullion market i.e. gold and silver. We have a very large consumption, but it is benchmarked externally. Recent institutional developments aim to change that. The India International Bullion Exchange (IIBX) publishes daily market data and supports a structured platform for bullion trading in GIFT IFSC. Parallelly, a robust institutionalised process of polling-based prices on MCX and recent industry initiatives such as IBJA-IGM benchmark have made a superb start by providing an INR-denominated benchmark for gold with transparent governance and two daily fixings explicitly positioning the benchmark as "built for India, by India."

The bullion story matters because it highlights the broader "Price in India" direction. We have large institutional platforms, clearly published methodologies, standardised products and credible governance which can gradually shift markets from global price-taking to a combination of domestic reference adoption.

It is natural to ask whether India should aim to set global commodity prices. In some commodities, global price setting is shaped by historical trade and liquidity centres, which established delivery mechanisms and entrenched institutional networks. Attempting to "replace" those centres is neither needed nor immediately feasible. Hence in my view, the "Price in India" initiative does not require India to become the global benchmark setter. The pragmatic sequence would be:

- Domestic adoption first: Indian procurement, hedging, contracts, reference benchmarks, pricing of ETFs and SGBs or Sovereign Gold Bonds where India-specific factors dominate.
- Regional adoption next: counterparties trading with India adopt Indian references where they better reflect delivered reality.
- Selective global influence over time: where India is structurally significant in consumption or processing, credible domestic benchmarks can begin influencing global price conversation.

Coal already embodies this sequencing: develop metric-based pricing, create an index reflecting Indian channels, and allow competitive discovery via domestic auctions linked to Indian references. Very soon this can be feasible in gold and silver.

"Price in India" is not a slogan; it is a market infrastructure agenda. It is about building the institutional conditions under which India's prices, already shaped by Indian policy, logistics, currency, and behaviour, can become transparent, referenceable, and contract-ready. It is a positive agenda that can strengthen India's economic foundations by making prices clearer, contracts sturdier, and markets deeper.



Zinc

Zinc shields and strengthens like integrity, invisible but indispensable

The Rise of India's Metal Recycling Industry Amidst Shifting Global Economic Trends



VIJAY KUMAR PAREEK
Executive Director and Global Business Head - Aadishakti Group

Vijay Kumar Pareek is a distinguished corporate leader with over 30 years of experience steering strategy, finance, M&A, and market analysis across India's top conglomerates, including Grasim, Larsen & Toubro, Aditya Birla Group, and Gravita India. His extensive expertise spans the power, engineering, and non-ferrous metal sectors.

Currently, Vijay serves as the Executive Director and Global Business Head at Aadishakti Group. An expert in sustainability, he is a frequent international speaker on lead recycling. He is an MBA graduate, holds a Diploma in Business Finance, and is an Engineering Gold Medalist in Metallurgy.

India is emerging as a global hub for metal recycling and consumption, with the lead-acid battery market driving demand for critical minerals amid a robust 7.5% projected GDP growth for FY2026. The sector is shifting toward a formal, circular economy, supported by stringent environmental regulations and rising localized demand for lead in batteries and power infrastructure.

GLOBAL ECONOMIC SCENARIO

Global GDP grew by approximately 3% during FY 2026, though expansion remained fragmented and uneven across regions. This economic growth was largely driven by the US, which expanded at a rate of 2.2% with strong support from the AI and service sectors. In contrast, Europe witnessed stagnation due to geopolitical tensions, while China—the world's second-largest economy—saw a slower recovery in its industrial and manufacturing activities. Faced with multiple challenges, the dynamics of global trade shifted, resulting in a distinct focus on local preferences.

INDIAN ECONOMIC SCENARIO

Despite uncertainties in the global arena, India continues to outperform as the fastest-growing major economy, with the GDP growth projected at 7.5% for FY2026. The strong domestic demand, massive government infrastructure spending, and a strategic push towards becoming a global hub for manufacturing of critical components, are the driving force for sustainable growth. The 'China+1 strategy' is also one of the powerful catalystsin this scenario.

The overall macroeconomic situation in terms of inflation, monetary comfort and inflation remains stable vis-à-vis many nations who were struggling during this period, although inflation got affected during last two months due to energy crisis in the region. This period of high growth - low inflation extends a supportive macroeconomic position.

The geopolitical scenario affected the entire world market but in contrast to that, India's economy was supported by well-designed bilateral trade agreements. Uncertainties due to the US tariff, risk to oil import cost surfaced out challenges but structural international strategies and export focus neutralised partially. India has managed to support the rupee despite global dollar strength up to a certain extent. India exhibited remarkable stability while navigating complex geopolitical headwinds including the Russia-Ukraine conflict, US-China trade tensions and recent energy crisis. The manufacturing sector remains a standout and is well-supported by domestic consumption.

The economic situation for India is expected to remain positive, driven by rising consumer demand, improved investment activity and supportive, well-designed policy measures. The combination of declining inflation and lower interest rates is expected to further boost credit growth and investment activity.

METAL SECTOR OVERVIEW AND OUTLOOK

The Indian industry has navigated a complex situation of geopolitical tension, supply chain restructuring, and shifting policies. The consumption and demand scenario is reshaping towards a metal-consumption economy. Government investments in infrastructure, energy self-reliance sectors, AI infrastructure, electrification, and renewable energy are leading to an increase in metal demand. As a result of this, metal sectors like copper, aluminium, silver and zinc are outperforming. The battery energy storage system is another booming sector where critical minerals will be high in demand.

The economic situation for India is expected to remain positive, driven by rising consumer demand, improved investment activity and supportive, well-designed policy measures. The combination of declining inflation and lower interest rates is expected to further boost credit growth and investment activity.

Finally, futuristic scenario will be a time where success depends on strategic sourcing and domestic policy rather than traditional economic cycles, favouring producers well-positioned in the increasingly electrified global economy. The global shift towards cleaner energy, infrastructure development, and electrification has created strong, long-term demand for critical metals. Metals like lead, zinc, silver, tin, antimony are not finding any substitute in their respective areas.

India is emerging as one of the top five nations in the global recycling landscape. As most energy-centric metals are getting recycled and reused, the concept of circularity will continue to trend. Furthermore, as a net importing country for metal resources, India is deploying policies which can place recycling in focus.

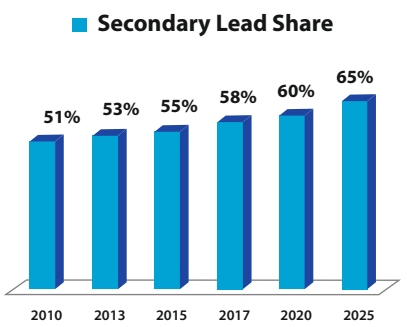
INDUSTRY UPDATE

Lead-acid batteries are an undisputable option for powerful, affordable and sustainable energy storage devices. Lead metal constitutes to more than 70% of their cost. The lead-acid battery market consumes more than 80% of lead globally.

Lead can be recycled a number of times without diminishing any quality; consequently, recycled lead as well as primary lead are traded at the same price on the London Metal Exchange (LME).

The sources of lead are typically virgin (or mined) lead and recycled lead. Virgin lead constitutes 35% of total lead consumption and the remaining 65% is recycled lead. China consumes more virgin lead (60% of its total lead consumption), whereas the European and US markets consume close to 90% recycled lead. The acceptability of recycled lead has increased significantly during last 15 years.

As a net importing country for metal resources, India is deploying policies which can place recycling in focus.



Except China, globally more than 80% lead is recycled and hardly 20% of global requirement available in virgin form.

India consumes 15% virgin lead out of their total lead requirement. Hindustan Zinc is the only producer of mined lead in India.

Besides 85% recycled lead consumption, Indian lead recycle industry operates close to 20% in an informal way although this segment has reduced drastically.

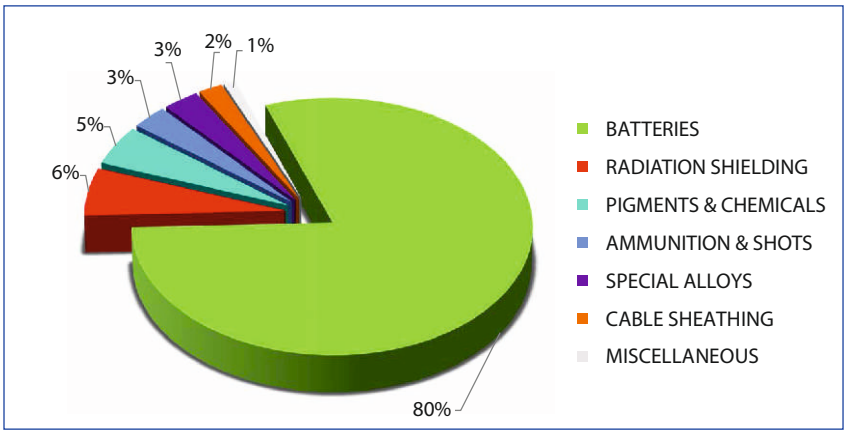
The efficiency and productivity in the process of lead recycling are key to the entire industry. The process involves handling of used lead-acid batteries, transporting them to recycling centres, and processing them while ensuring environmental norms to make lead available for reuse in the complete recycling process are adhered to. Environmental compliance is a concern for the industry, specifically in developing and underdeveloped nations. The recycling industry, and now what is called 'circularity', does not only conserve resources but also ensures a clean environment.

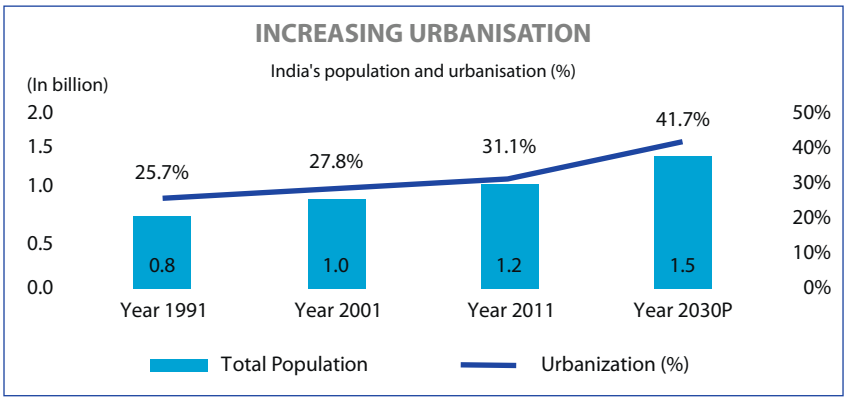
MARKET DRIVERS

Lead metals and associated alloys are largely used in lead-acid battery manufacturing globally. Close to 80% of the lead is being used for this segment followed by power cables, lead chemicals, constructions and radiation protection segment.

Among lead-acid batteries also, the automobile segment is a prominent segment followed by the telecom sector, energy storage devices and non-conventional power sector.

The power cables are known underground cables and usage of these cables are in increasing trend. Power cable sheathing market is growing with the rapid pace due to increasing trend of urbanisation. Underground power cables are widely used, and their adoption continues to grow rapidly. The power cable sheathing market is expanding rapidly, driven by accelerating global urbanisation.





Source: CRIS Estimates, McKinsey Global Institute, P - Projected

Space constraints in urban areas have led to a rise in multi-story buildings, where overhead power lines present significant challenges. Consequently, underground power transmission is often the only viable option, driving momentum in this sector, Indian companies like KEC, KEI, Sterlite power and PolyCab are increasing their capacity and capabilities in this segment. This segment needs stringent specification of lead alloys since life expectancy is more than 30 years.

The radiation industry is another fast-growing segment. Healthcare industry, airports and the defence industry are major users of lead. Unlike other metals, lead -a high-density metal that is also cost-competitive, hence it is widely used in form of lead sheets, lead blocks, lead bricks and lead balls.

The lead chemical industry is on diminishing trend due to the hazardous nature of this metal.

The overall market of this segment is expected to grow more than 10% in India and more than 4% globally.

INDIA'S CHANGING SCENARIO

Over the past decade, India has witnessed a significant shift toward industrialisation, driven by an increasing with focus on domestic production. India is becoming a net exporter in specific market segments, such as the lead-acid battery sector. Since India is dependent on imports for this metal, the government and industry associations initiated a focus on circularity, where used scrap is being collected and recycled at designated locations.

The recent implementations of battery waste management regulations, GST and Extended Producer Responsibility (EPR) frameworks are all driving the industry towards a formal way of recycling, while considering the safety and health of people, as well as environment protection practices in India.

STATE OF PRICING AND CHALLENGES

The Indian recycling market is highly scattered and fragmented. The price of scrap and recycled products are largely driven by local markets in the North, South and East of India. There is no clear rationale behind the pricing, as a few intermediaries or groups of people drive the market pricing.. So, on one end there are several scrap dealers or recycling companies, and on the other end, there are a set of formal organisations, like EXIDE Limited or Amara Raja Batteries. While these companies typically buy based on LME formulations, there has been no historical correlation between the LME and this specific market. The local market prices are also influenced by many factors with taxation playing a prominent role in the pricing model. Furthermore, the regional markets – the North,East and South lack any correlation or price synchronization. Under this scenario, India lacks formal market indices that are equivalent to the LME or SHFE or COMEX, preventing the establishment of formalised buy-sell mechanisms or effective hedging strategies. The formalisation of the industry in terms of pricing mechanism and operational mechanism were need of the hour, where scrap prices and recycled prices are in correlation and the buyer or seller can hedge their position with surety of material availability.

The recent implementations of battery waste management regulations, GST and Extended Producer Responsibility (EPR) frameworks are all driving the industry towards a formal way of recycling.

WAY FORWARD FOR PRICING MODEL IN INDIAN CONTEXT

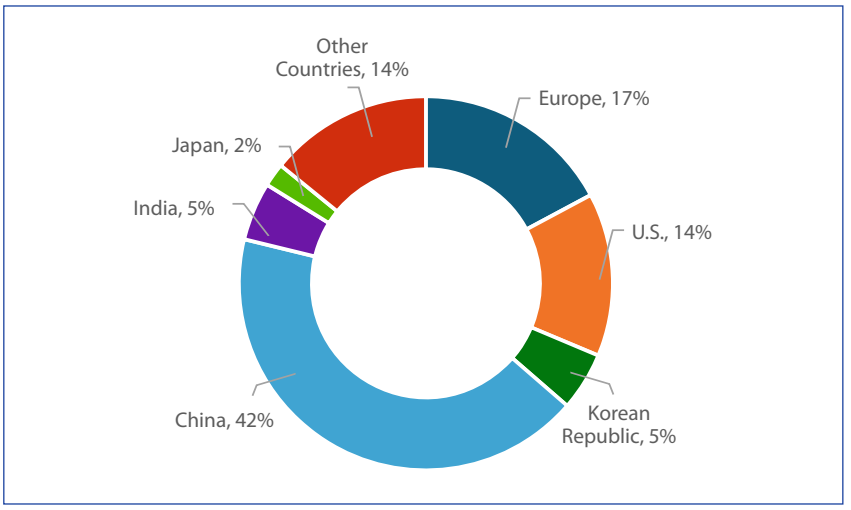
The global demand-supply cycle including China's consumption trend and the Indian scenario, creates a complex structure for arriving the pricing. Moreover, availability of commodities in their warehouses are area of concern. In the present scenario, India does not have any global warehouse location for LME priced goods.

The formation of warehousing in different locations (coastal locations) where global trading companies or manufacturers can place their goods and those goods can be moved to Indian industries or nearby countries. The Indian metal companies will also have flexibility to get international exposure. Establishing warehouses in strategic coastal locations will allow global trading companies and manufacturers to stock their goods for efficient distribution to Indian industries or neighbouring countries. This infrastructure will also help Indian metal companies have the flexibility to gain international market exposure. Pricing linkage or synchronisation can be established between the LME, MCX and forex markets which can be driven by market demand-supply dynamics within the country and nearby countries. The market level playing field will inherently offer both Indian and global commodity players a fair pricing model facilitating a seamless inflow and outflow of commodities.

The formalisation of the industry in terms of pricing mechanism and operational mechanism were need of the hour, where scrap prices and recycled prices are in correlation and the buyer or seller can hedge their position with surety of material availability.

MCX EVOLUTION FOR 'ONE NATION ONE PRICING'

Global market adopts indices like LME, SHFE and COMEX, rather largely LME in reference where global trades are being executed. Scrap prices and finished goods prices both sides are traded worldwide. China has their own index SHFE for the commodity market.



CREATING DOMESTIC BENCHMARKS

There is a need for greater awareness among market participants before they adopt transparently discovered prices within the domestic economy, such as those discovered on regulated commodity exchanges, as the referenceable price. Further, other factors such as warehouse location, being close to consumption centres, price formulation, settlement types, quality parameters and dispute resolution would also play a role in popularising domestic prices as benchmarks.

There is a need for greater awareness among market participants before they adopt transparently discovered prices within the domestic economy, such as those discovered on regulated commodity exchanges, as the referenceable price.

A transparently discovered exchange price may be accepted by market participants on a pilot basis, in terms of reference pricing. Once such a price gets accepted, then it can be implemented PAN India basis.

CONCLUSION

India is becoming second largest market for the commodities and also consuming country after China. The secondary / scrap processing industry is facing challenges in pricing elasticity since there is no correlation between scrap prices and recycled metal output.

Circularity is gaining momentum through policies like Extended Producer Responsibility (EPR), Vehicle scrappage policy and GST. The Indian secondary market industry stands to benefit through energy savings, lower emissions, access to green finance and participation in global value chains amid the China+ shift. It is positioning itself as a hub for clean tech manufacturing and innovation.

India is also closely monitoring the global tariff landscape and is formulating a calibrated response. Despite persistent global uncertainties, India's strategic collaboration with the developed nations and the Middle East to improve bilateral trade will provide a robust foundation for sustained economic growth.

It is a win-win model where global scrap segment and finished goods buyer can work with Indian outfits on long run business model once pricing structure is well-accepted, like in case of China.

A well-accepted pricing model extends comfort to the global commodity suppliers in terms of transparency in pricing. In reference to other markets, India market prices also bring market arbitrage in contrary to international market. This situation depends upon demand and supply dynamics. The demand and supply in the Indian market depends upon availability of raw material from different sources, market demand of lead-acid batteries in India and exporting countries. When exchange-discovered prices are well-accepted by a large number of user and producer industries, can domestic benchmarks become popular and commodity hubs emerge in India with greater and easier flow of commodities as well as capital. This would ultimately also be associated with realization of the bigger vision of achieving "One nation One Pricing".



Electricity

Electricity is invisible, but it powers everything, just like our energy that shapes everything we achieve

India's Gold Paradox:
A Gold Superpower Without Pricing Power



SIRSHENDU BASU
Head of Product Management & Strategy - Bandhan AMC

Sirshendu Basu is the Head of Product Management & Strategy at Bandhan AMC, bringing over 25 years of distinguished banking and financial services expertise to the role. He oversees product management of mutual funds and alternative investments across both equity and fixed-income asset classes. He is also responsible for conceptualising products and crafting effective go-to-market strategies.

Prior to joining Bandhan AMC, he served as the Head of Investment Products and Investment Strategy at Standard Chartered Bank, and as the Chief Investment Strategist at Standard Chartered Securities (India) Limited. His extensive career also includes specialised roles in equity research at HSBC InvestDirect (India) Limited, ABN AMRO Broking, and ICICI Securities.

Sirshendu holds an MBA in Finance and a Chartered Financial Analyst (CFA) designation from ICFAI Business School.

> *India is a global gold superpower holding an estimated 25,000 tonnes of private gold, yet it remains a structural price taker heavily influenced by Western ecosystems. While consumer demand shifts towards financialised instruments, heavy reliance on imports and high tariffs cause significant Current Account Deficit exposure.*

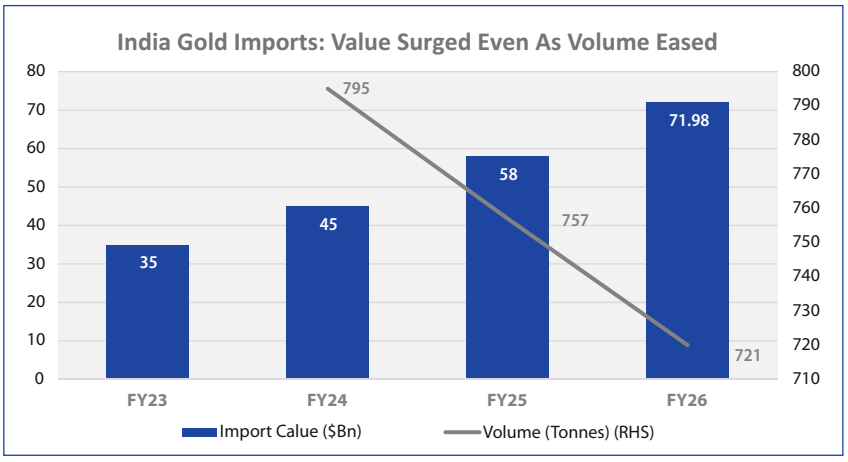
India's position in gold is almost uniquely contradictory among major economies. It consumes gold at scale, imports gold at scale, stores gold at scale, and the Reserve Bank of India has steadily increased gold in its official reserves. Yet India remains largely a price taker in a market where the reference price is discovered elsewhere, principally through London's LBMA benchmark, global OTC trading, COMEX futures, and, increasingly, Shanghai's reference markets.

The result is a strategic oddity: India is one of the world's largest gold demand centres, but it has not converted that demand into market architecture. India's FY26 gold imports hit a record US$71.98 billion, even though import volume declined to 721.03 tonnes, according to Commerce Ministry data reported by ETBFSI/PTI.

The chart captures the core macroeconomic problem: India's gold import bill keeps rising even when physical import volumes fall. In other words, India bought less gold by weight but paid significantly more for it which is a classic symptom of a country exposed to global price discovery without commensurate pricing influence.

THE CONTRADICTION IN ONE SENTENCE

India's households, temples, jewellers, banks, exchanges, refiners and central bank together represent one of the most gold-intensive ecosystems in the world. Yet India's role in global price formation remains far smaller than its share of global consumption. Indian households and temples are estimated by the World Gold Council and industry sources to hold around 25,000 tonnes of gold, while India's official gold reserves are around 880–881 tonnes. The RBI's gold holdings crossed 880 tonnes in FY26, with gold valued at about US$95 billion as of 26th September 2025.



Data Source: Commerce Ministry

This scale is staggering. Indian household and temple gold holdings of about 25,000 tonnes are roughly 28 times India's official reserves of about 881 tonnes and far larger than India's annual FY26 gold imports of 721 tonnes. But most of this gold is fragmented, privately held, emotionally attached, and only partially financialised. That makes India rich in gold stock but poor in gold market power.

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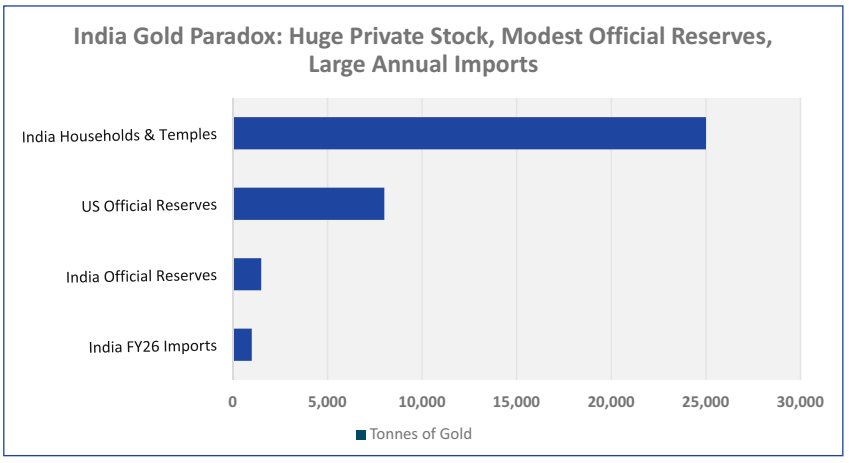
DEMAND IS CHANGING, BUT THE MARKET STRUCTURE IS NOT

India's gold demand is no longer only a jewellery story. In Q1 FY26, India's total gold demand rose 10% year-on-year to 151 tonnes, while demand value nearly doubled to 2,275 billion, according to the World Gold Council. Jewellery demand fell 19% year-on-year to 66 tonnes, but investment demand rose sharply: bars and coins reached 62

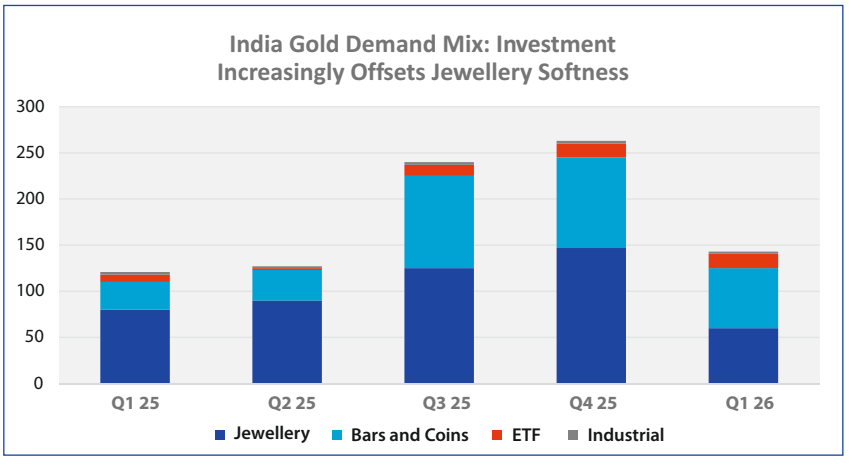


Source: World Gold Council and Industry

tonnes, and ETFs reached 20 tonnes, with ETF tonnage up 197% year-on-year.

This matters because it shows a structural shift. Gold in India is increasingly becoming not just an ornament or wedding asset, but a financial asset: bars, coins, ETFs, gold loans, digital gold, and gold-backed products are gaining relevance. The

but global reference pricing still depends primarily on London and New York benchmarks. The World Gold Council's gold price data explicitly distinguishes the LBMA Gold Price, MCX reference prices, and Shanghai Gold Exchange prices, underlining that India has a regional market price but not the dominant global benchmark.



Source: World Gold Council

World Gold Council noted that in Q1 FY26 investment demand was the main driver of growth, with bar-and-coin demand nearly matching jewellery demand, while ETFs reached a record high.

Yet the infrastructure of influence has not kept pace with the behaviour of investors. India has the Multi Commodity Exchange (MCX) for derivatives trading, deep jewellery ecosystem for spot market, large banks, refineries, vaulting capacity, and government-backed gold products,

THE IMPORT CHANNEL IS INDIA'S ACHILLES' HEEL

India imports most of the gold it consumes because domestic mine production is small. DGCI&S notes that domestic gold production has historically been minimal. That gap makes India structurally dependent on imports, and therefore on US dollars, exchange rates, customs duties, global prices, and international bullion supply chains.

In FY26, India's gold imports rose 24% to US$ 71.98 billion, a record high, while import volumes declined 4.76% to 721.03 tonnes. The Commerce Ministry attributed the rise to higher prices, with average gold import prices rising from US$ 76,617/kg in FY25 to US$ 99,825/kg in FY26. This is precisely why gold is not just a household issue; it is a current-account issue.

The World Gold Council also noted in May 2026 that gold accounted for about 8% of India's merchandise imports in 2025, placing it among India's top five imports. In response to pressure on the Indian rupee and foreign-exchange reserves, India raised gold import duty from 6% to 15% in 2026, reversing the July 2024 duty cut. But this also reveals the policy trap: when duties are cut, official imports surge; when duties rise, unofficial flows and discounts can rise. The World Gold Council explicitly warned that past trends show higher duty increases unofficial inflows, even if official imports remain relatively resilient.

WHY DOES INDIA NOT INFLUENCE THE GLOBAL GOLD PRICE?

The issue is not demand. India has demand. The issue is institutional concentration. Global pricing power comes from where bullion is traded, vaulted, financed, cleared, hedged, and benchmarked. London's LBMA ecosystem provides globally accepted good-delivery standards and benchmark prices, while the LBMA Gold Price is the global benchmark for unallocated gold delivered in London. COMEX futures provide deep financial liquidity and continuous risk transfer, while Shanghai has built a strong regional reference point for Chinese demand. The World Gold Council notes that gold has the LBMA Gold Price and several regional prices, with the LBMA benchmark important across the global market and regional prices important locally.

India's demand, by contrast, is distributed across millions of households, thousands of jewellers, seasonal buying patterns, cash-flow cycles, weddings, festivals, and import channels. It is vast, but it is not organised enough to become a global

price-discovery force. Indian gold demand often reacts to price rather than setting price: high prices reduce jewellery volumes, encourage exchange of old jewellery, and shift demand toward investment products. High prices have been reshaping consumer buying behaviour and that many consumers were staying on the sidelines or exchanging old jewellery.

The deeper irony is that India's private gold hoard is large enough to matter globally, but too illiquid to matter daily. Estimates place Indian household and temple holdings near 25,000 tonnes, worth around US$ 2.4 trillion in some estimates, equivalent to about 58% of India's GDP. But if that gold sits in lockers, temples, and family vaults, it does not create market liquidity. A large gold stockpile does not automatically translate into market liquidity or pricing power.

THE RBI UNDERSTANDS GOLD STRATEGICALLY

The Reserve Bank of India has been increasing gold in official reserves. RBI gold reserves crossed 880 tonnes in the first half of FY26, rising from 879 tonnes at the end of FY25 to 880 tonnes by September-end, according to RBI data. During FY25, the RBI added 54.13 tonnes of gold, and gold's value in reserves rose with the global price rally.

This is not accidental. Central banks globally have been adding gold as a hedge against currency risk, sanctions risk, reserve concentration, inflation uncertainty and geopolitical volatility. For India, gold provides a reserve asset that is not someone else's liability. But the RBI's gold position is still small compared with India's private gold stock. Official reserves of about 880–881 tonnes are meaningful, but household and temple holdings of around 25,000 tonnes are the real national gold balance sheet.

HOW INDIA CAN BECOME A PRICE-INFLUENCING GOLD POWER?

India cannot influence global gold prices merely by being a large buyer. Pricing power comes from liquidity, benchmarks, vaulting, transparent delivery, hedging depth, trusted standards, and international participation. India's path should therefore be to convert its cultural and physical gold depth into a formal market architecture.

1. Build GIFT City/IIBX into an Asian gold price-discovery hub

India has already created the foundation through the India International Bullion Exchange (IIBX) at GIFT City, which is India's first international bullion exchange and was designed as a gateway for bullion imports, bullion trading, investment products and vaulting in IFSC. But to influence global prices, IIBX may consider moving beyond being an import facilitation platform and become a liquid international marketplace where banks, refiners, jewellers, miners, funds and foreign institutions actively trade spot, forwards and futures.

The benchmark lesson is Shanghai. While SGE was established in 2002, it emerged as a globally prominent gold-market player from around 2014–2016, following the launch of its International Board and the yuan-denominated Shanghai Gold Benchmark Price. The Shanghai Gold Exchange now operates daily benchmark pricing, giving China a stronger Asian reference point alongside London and New York. India needs a comparable "India Gold Benchmark", preferably dollar-linked for global adoption and rupee-linked for domestic relevance, with transparent auction rules, physical delivery, vault backing and wide participation.

2. Deepen physically deliverable futures and hedging markets

Global price influence requires futures depth. COMEX influences gold because it provides continuous price discovery and risk transfer. India has MCX domestically and IIBX internationally, but the next step is to connect physical bullion, jewellery demand, imports, refiners and institutional hedging into one seamless ecosystem.

A positive development is that IIBX has introduced gold futures trading at GIFT City, opening a route for gold price-risk hedging in the IFSC framework. This needs to be scaled aggressively. Contracts must have strong market-makers, low transaction costs, clear delivery rules, vault integration, and participation from banks, bullion dealers, ETFs, jewellery chains and foreign suppliers. If Indian futures become liquid enough during Asian trading hours, global traders will start watching Indian prices as a real-time signal of physical demand.

3. Convert household gold from dormant stock into market liquidity

India's biggest hidden advantage is not annual demand; it is the estimated 25,000 tonnes of gold held by households and temples. But this stock is fragmented and emotionally held, so it does not translate into price-setting power. India must create trusted channels that allow families to earn, borrow, pledge, lease or digitally represent gold without forcing outright sale.

The old Gold Monetisation Scheme struggled, and in March 2025 the RBI discontinued the medium- and long-term government deposit components, leaving short-term bank deposits to banks' discretion. The policy response should not be to abandon monetisation, but to redesign it. A revamped model should be jeweller-integrated, digital, assaying-led, tax-simple, and backed by strong consumer trust. Industry bodies have already proposed a jeweller-integrated digital gold monetisation framework that would convert physical gold into dematerialised gold balances within the banking system.

4. Make India the global centre for recycled gold

India should build a national recycled-gold infrastructure: certified collection centres, hallmark-linked buyback, transparent scrap pricing, refinery incentives, and GST/tax clarity. If India can recycle even a meaningful fraction

of its private stock annually, domestic supply would rise, import dependence would fall, and India's local premiums/discounts would become more globally relevant. In gold markets, the country that controls marginal physical supply can influence price signals more than a country that only imports.

5. Create "India Good Delivery" standards accepted globally

London's influence rests partly on the LBMA Good Delivery ecosystem and the trust around bars, refiners, vaulting and settlement. LBMA describes itself as setting standards for the global precious metals industry, including responsible sourcing, good delivery and market conduct. India needs a globally trusted 'India Good Delivery' standard linked to accredited refiners, responsible sourcing, chain-of-custody tracking, assaying integrity and vault auditability.

India should build a national recycled-gold infrastructure: certified collection centres, hallmark-linked buyback, transparent scrap pricing, refinery incentives, and GST/tax clarity.

This would allow Indian-refined bars to become more acceptable in international settlement and trading.

India needs a globally trusted 'India Good Delivery' standard linked to accredited refiners, responsible sourcing, chain-of-custody tracking, assaying integrity and vault auditability.

Over time, if Indian bars, vaults and contracts become trusted by global banks and refiners, India's bullion market can graduate from domestic consumption hub to global settlement hub.

6. Link gold ETFs, SGB successors, banks and bullion exchange liquidity

India's demand mix is shifting from jewellery to investment. In Q1 FY26, India's total gold demand rose 10% year-on-year to 151 tonnes, led by investment demand, while ETF demand rose 197% year-on-year to 20 tonnes. This financialisation should be linked directly to exchange liquidity.

Gold ETFs, bank gold deposits, gold loans, digital gold and future sovereign gold products should source, hedge and settle through transparent Indian exchanges. That would create a domestic institutional bid-offer market large enough to influence regional pricing. The more India's investment gold moves through formal market rails, the stronger India's price signal becomes.

IN CONCLUSION

India's gold paradox is not that Indians buy too much gold. The real paradox is that India has not built enough institutions around the gold it already owns, imports and values.

Indian households behave rationally: gold is liquid, trusted, inflation-resistant, socially accepted, and useful as emergency collateral. India's central bank also behaves rationally: gold diversifies reserves and reduces dependence on fiat assets. The irrationality lies in the gap between India's gold scale and India's gold influence.

India does not need to abandon gold. It needs to upgrade gold — from passive household stock to productive collateral, from import pressure to recycled supply, from regional exchange activity to credible benchmark participation, and from fragmented demand to organised market depth.

If India can do that, gold will stop being merely a drag on the current account and start becoming a pillar of financial sovereignty.

Until then, India will remain: a gold superpower without gold pricing power.

Source: Reserve Bank of India, World Gold Council, Commerce Ministry, Press Information Bureau, Reuters, India International Bullion Exchange and Shanghai Gold Exchange.



Mentha Oil

Mentha's cool essence hides in the roots, reminding us that calm strength often grows quietly beneath the surface

Forging the Benchmark:
How Indian Exchanges Are Unlocking Economic Growth and Pricing Power



AMOL MEHRA
President & Chief Procurement Officer, Exide Industries Ltd.

Amol Mehra is a Mechanical Engineer and MBA with over 28 years of global leadership experience across the mining, trading, and manufacturing sectors. He currently serves as President & Chief Procurement Officer at Exide Industries, the largest lead consumer in India and among the top-five global battery manufacturer. At Exide, Amol orchestrates primary and recycled lead sourcing while spearheading the company's strategic battery circularity initiatives.

Throughout his career, Amol has managed massive global portfolios and driven pioneering digital transformations. Prior to Exide, he was the Chief Business Officer at Adani Group, where he steered the world's second-largest coal trading book. A recognised innovator, he pioneered the commodity sector's digital evolution by launching groundbreaking platforms like *Sterlite Connect* (the first consumer-facing non-ferrous platform) while he was Sales Head , Run & develop Lykos was a wholly-owned subsidiary and the first online refined metal retail platform launched by Trafigura, one of the world's leading commodity trading houses as CEO - Lykos , and *IRM* (a transparent coal pricing & delivery based trading platform for selling coal to MSMEs).

Amol's career spans marquee organizations including The Great Eastern Shipping, Ballarpur Industries, Vedanta Group, Trafigura and Adani Group, alongside a successful stint as an independent trading entrepreneur in Mumbai. Having operated at scale as both a buyer and a seller, he possesses a rare, 360-degree mastery of the Indian & International coal and non-ferrous metals landscapes (copper, zinc, aluminium, lead, tin,cobalt and nickel). A respected industry authority, Amol frequently shapes & is part of Indian/Global thought leadership through prominent international conferences, advisory forums, and industry committees.

> ***India's commodity market has come of age. From the simplistic monthly fixed-pricing structures of 2001 to navigating complex global volatility in 2026, the nation has emerged as a non-ferrous powerhouse. Now ranking as the world's second-largest lead producer and consumer, India's unique recycling capabilities and open trade policies offer a golden opportunity to break away from traditional benchmarks and establish itself as a premier global pricing hub.***

It was 2001 when I joined as a young Assistant Manager in the Sales department at Sterlite Copper. This was my first exposure to the world of commodities. During that era, copper was sold in India at one fixed price for the entire month—no LME booking, no forward or spot booking, and no PNDL/DNPL terminology, which is so commonly used today. There was just one price for the month, and based on the quantity lifted during that month, volume discount slabs were applied. Therefore, the only differential between two companies in terms of raw material pricing was the discount slab.

Competition between downstream brands was primarily based on the slab discount they received at the end of the month. Price volatility was minimal, and the only justification we could offer customers for price changes was disruptions in major mine production, worker strikes, or shipping issues. In short, life was simple—there were no discussions about customs duty, landed price, premiums, or the "why" behind every price movement.

One consistent theme was the comparison of the Indian market with the Chinese market and the belief that India would grow over the next 10 years. Presentations and factsheets were created and discussed, yet global traders were not particularly interested in India—neither for selling nor for buying.

Things evolved over time. With the boom, production capacities increased across commodities. Companies like Vedanta, Hindustan Zinc, Hindalco, and Kutch Copper took centre stage, replacing & complimenting traditional players such as National Aluminium and Hindustan Copper. Consumer buying patterns changed significantly. For battery producers, lead accounts for 70–80% of their cost, and the same rationale applies to cable manufacturers and strip/busbar producers for their purchase of Non-Ferrous metals.

Commodity prices and their movements have become central to boardroom discussions thereafter and now. Strategy around pricing is now critical to an organization's growth, orders, and survival. It directly impacts the balance sheet. Disruptions have become more frequent and more impactful. We have witnessed record-high prices across commodities, extreme USD/INR volatility, and have navigated through events like COVID, the 2008 commodity meltdown, and multiple wars.

EVOLUTION OF INDIAN MARKETS

Over the years, India has evolved into a key producer of copper, aluminium, zinc, and lead. It has become both a net importer and exporter, depending on the commodity. The industry has embraced price variation clauses in contracts, and price discovery has become essential for survival. Organizations have recognised the importance of pricing, hedging, and arbitrage between importing raw materials and buying from domestic producers, considering factors like VAT/CST, dollar funding, and interest rates.

Indian producers of non-ferrous metals, as well as downstream players, have increasingly explored export markets, aligning with BIS standards and global norms. Global traders have shown growing interest in India, with many establishing offices here. MCX, India's own price discovery exchange, began functioning in the non-ferrous market and has evolved from a price discovery platform to a delivery-based exchange. Concepts like spot price, forward price, backwardation, and contango have become part of common industry language. Commodity pricing, hedging, and associated risks now play a central role in business success and failure narratives.

As of 2026, India has established itself as a significant player in the global commodity market across non-ferrous metals. It is strategically positioned near Southeast Asia, the Middle East, and China. While China's consumption accounts for 50–70% of global demand across many non-ferrous commodities, India's production volumes make it a key global supplier of raw materials, even though domestic consumption still lags.

INDIA'S OPPORTUNITY TO EMERGE AS A GLOBAL LEAD PRICING HUB

Lead is one of the world's most strategically important industrial metals, driven primarily by its indispensable role in energy storage,

automotive batteries, telecommunications, renewable energy, and backup power systems. Despite the emergence of new battery technologies, lead-acid batteries continue to account for a significant share of global energy storage applications owing to their reliability, cost-effectiveness, and near-complete recyclability. As global supply chains become increasingly diversified and countries seek resilient sources of critical raw materials, transparent and efficient price discovery mechanisms have become essential for facilitating trade, managing risk, and attracting investment.

Lead is one of the world's most strategically important industrial metals, driven primarily by its indispensable role in energy storage, automotive batteries, telecommunications, renewable energy, and backup power systems.

As a product, lead is quite unique. Indian producers have emerged as major global players. One advantage Or disadvantage India has over China is consumer price sensitivity. Out of approximately 76 LME-registered lead brands, 8 are from India (around 10%), and several more are in the process of registration. LME recognizes lead from recycled processes, and recycling plants can be set up with investments ranging from as low as INR 5 crore to advanced facilities costing INR 100–150 crore.

India has an estimated lead production capacity of 672 Units, 3.5 million tonnes through recycled route (as per Central Pollution Control Board Published data point) however actual usable capacity is way lower & around 0.24 Million through Primary Concentrate Route , though this figure may need revision due to plant closures and capacity expansions over period of time . The recycled and primary lead markets are nearly equal in size globally with recyclability capacity being a key advantage in India . However, India remains a net importer of lead, heavily dependent on scrap batteries and scrap lead imports, as domestic production does not fully meet the requirements of top battery manufacturers.

India is uniquely positioned to capitalise on the opportunity of rising demand for energy storage. With a rapidly expanding manufacturing base, a well-developed recycling ecosystem, and a strong presence in the global

India is uniquely positioned to capitalise on the opportunity of rising demand for energy storage.

lead trade, the country possesses many of the structural advantages required to establish itself as a regional—and eventually global—pricing hub for lead. Achieving this objective, however, requires deeper market participation, stronger integration with international markets, and a robust ecosystem for transparent price discovery.

THE INDIAN LEAD MARKET: A STRATEGIC GLOBAL PLAYER

India has emerged as one of the most significant participants in the global lead industry and is widely regarded as the second-largest producer and consumer of lead after China. The country has built a robust ecosystem around lead production, recycling, and battery manufacturing, positioning itself as a critical player in global supply chains. Indian battery manufacturers rank among the around top Ten globally, while several domestic lead recycling companies command market capitalisations that exceed those of many battery manufacturers, reflecting the growing importance of the recycling sector.

India is also one of the world's largest exporters of lead and lead alloys, supplying several leading international battery manufacturers. A key competitive advantage is India's open trade policy, which permits imports of lead in all forms, including scrap, unlike China, where imports of lead scrap remain heavily restricted. This has enabled India to develop a strong secondary lead industry and establish itself as a reliable global sourcing destination. Furthermore, lead is one of the few industrial metals that is 100% recyclable without any loss of quality, making it a cornerstone of the circular economy and an essential metal for sustainable industrial growth.

The Indian lead market has a unique price discovery mechanism, largely driven by secondary players, though there is a gradual shift toward primary markets. A parallel price discovery system exists, influencing the informal market. Additionally, regional markets declare their own daily price

A key competitive advantage is India's open trade policy, which permits imports of lead in all forms, including scrap, unlike China, where imports of lead scrap remain heavily restricted.

references. There is a strong need for a formal, structured price discovery model that serves both buyers and sellers.

THE ECONOMICS OF THE GLOBAL LEAD TRADE

The global lead market operates on well-established economic principles that facilitate efficient allocation of resources across regions. Demand and supply imbalances create trade opportunities, while arbitrage between local physical prices and internationally recognised benchmarks ensure price convergence across markets. Interest rate differentials and the structure of futures markets—whether in contango or backwardation—also play an important role in determining inventory decisions, financing costs,

and trading strategies. Together, these factors drive the movement of lead across borders and influence pricing dynamics in both physical and derivative markets.

THE ROLE OF INDIAN COMMODITY EXCHANGES

Commodity exchanges play a pivotal role in connecting India's physical lead market with global price discovery mechanisms. They enable consumers to procure raw materials at transparent and competitive prices while providing producers with access to a wider pool of buyers beyond their immediate regional markets. This improves market efficiency and enhances the competitiveness of Indian producers in international trade.

At the same time, exchanges create opportunities for Indian traders to participate in global commodity markets through standardised contracts and efficient risk management tools. For investors, commodity derivatives provide an additional asset class that complements traditional investments such as equities and fixed income, thereby supporting portfolio diversification and improving overall market depth.

Most importantly, commodity exchanges provide the platform for convergence of multiple and diverse views on prices, based on market information available with multiple entities on buy and sell sides, leading to emergence, in a highly transparent manner, of the best available reference prices of the commodities.

Commodity exchanges provide the platform for convergence of multiple and diverse views on prices, based on market information available with multiple entities on buy and sell sides, leading to emergence, in a highly transparent manner.

DEVELOPING INDIA AS A GLOBAL LEAD PRICING HUB

Transforming India into a globally recognised lead pricing hub requires coordinated efforts across industry, regulators, and exchanges. The first priority is to broaden participation by encouraging producers, recyclers, battery manufacturers, and other physical market participants to actively hedge and trade on domestic exchanges. Simplifying onboarding procedures and improving market accessibility can significantly accelerate participation. Greater involvement from financial institutions, domestic institutional investors, and foreign portfolio investors would further enhance liquidity and strengthen confidence in the price discovery process. Exchanges should also focus on contracts linked to the most actively produced and traded lead products to ensure relevance and market acceptance.

Integration with global markets is equally important. International participants, particularly those already approved on established exchanges such as the LME, should be provided with a simplified pathway to participate in Indian exchanges. Such an approach would encourage global traders to transact in India using familiar trading practices, much like they do on other leading commodity exchanges, thereby increasing international participation, liquidity, and the global visibility of Indian benchmark prices.

Operational and regulatory frictions also need to be addressed. Simplifying taxation, documentation, delivery procedures, and compliance requirements would reduce transaction costs and improve the ease of doing business for both domestic and international participants. In addition, well managed eco system of recycled battery is key perquisite to increase fair participation & market growth – Need of Zero GST on recycled battery sale, education to ensure batteries are recycled by approved & certified recycler only and ensuring right management of end-of-life batteries is key for taking this Industry to next level.

On the supply side, strengthening the domestic lead value chain would reduce dependence on imports while supporting India's ambitions to become a global manufacturing hub. Aligning exchange-led pricing initiatives with flagship government programs, such as 'Make in India' and the Production Linked Incentive (PLI) scheme, can further stimulate domestic production, investment, and consumption, statutory compliance & strict rules for management of end of life batteries.

Another important step is the development of a transparent and credible spot pricing ecosystem. Independent Price Reporting Agencies (PRAs) should be authorised to assess and publish daily spot prices across major trading centres such as Mumbai, Chennai, and Mandi Gobindgarh. These benchmark prices would complement exchange-traded futures, improve transparency in the physical market, and support the development of reliable domestic reference prices.

Finally, maintaining uniform quality standards remains essential for a successful pricing benchmark. Standardised BIS-aligned specifications for lead, which have already been implemented, provide confidence to market participants by ensuring consistency in product quality, facilitating smoother delivery, and strengthening the credibility of Indian benchmark prices in global markets.

REALISING INDIA'S POTENTIAL

India possesses many of the fundamental strengths required to emerge as a global lead pricing hub—a large and growing domestic market, a globally competitive recycling industry, strong manufacturing capabilities, and an expanding presence in international trade. However, these advantages must be complemented by a transparent, liquid, and internationally credible pricing ecosystem.

By increasing participation across the value chain, integrating more closely

with global markets, simplifying operational processes, strengthening domestic production, and developing reliable spot and futures benchmarks, India can establish a robust price discovery mechanism that reflects its growing importance in the global lead industry. Such a benchmark would not only improve risk management and trading efficiency for domestic stakeholders but also enhance India's strategic influence in global commodity markets. As the country's role in the lead value chain continues to expand, developing a trusted Indian lead benchmark represents both a natural progression and a significant opportunity to shape the future of global lead pricing.

One key lesson from global markets is the importance of strong domestic exchanges. Establishing a single, standardised benchmark for price discovery, rather than multiple regional indices, will help India move to the next level of growth. We continue to have multiple benchmarks - Delhi Price, Hyderabad Price, Kolkata Price, Mumbai Price etc complicating the already complicated business landscape whereas – whereas life is simple – If we follow one Benchmark Price Pan India to start with.

Disclaimer: *All the above views are personal and based on years of experience. They have no relation to or connection with my current employer or any organizational strategy. The data points mentioned are based on my experience attending various meetings and conferences and may not be exact; the numbers provided are approximate.*



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Building Indian Commodity Benchmarks: From Market Depth to Global Confidence



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> *Establishing credible domestic commodity benchmarks in India requires deep liquidity, broad participation, and strong spot-futures convergence to accurately reflect local market conditions, going beyond global reference prices. While international benchmarks (Brent, WTI, LME, COMEX) serve as a starting point, they fail to account for Indian factors such as taxes, logistics, and exchange rates, making robust local derivative markets crucial for price discovery and risk management.*

India occupies a distinctive position in global commodity markets. It is a major producer, consumer, importer, and trader of commodities such as gold, crude oil, natural gas, base metals, cotton, edible oils, pulses, and several agricultural products. Yet, in many of these markets, Indian stakeholders continue to rely heavily on global reference prices such as Brent, WTI, LME, COMEX, and international bullion benchmarks. These benchmarks are useful, but they do not always fully capture India-specific realities such as import duties, taxes, quality differences, inventory conditions, policy interventions, and local demand-supply imbalances.

For a developed commodity derivatives market, the emergence of credible benchmarks is essential. However, a price can serve as a benchmark only when it satisfies certain core standards of benchmark quality. These include fair and efficient price discovery, adequate market liquidity, broad and diversified participation, and a reliable linkage with the underlying physical market.

Futures markets are important in this process because they aggregate dispersed information and perform the dual role of price discovery and risk transfer (Garbade & Silber, 1983). In market microstructure terms, the market that incorporates new information more efficiently contributes more to price discovery (Hasbrouck, 1995).

In developing countries such as India, credible domestic benchmarks are important for at least four reasons. First, they improve risk management for key market participants across the commodity value chain. Second, they support market development by encouraging hedging, wider participation, liquidity, and price discovery (Joseph et al., 2014; Inani, 2018). Third, reliable domestic reference prices can improve economic decision-making in procurement, inventory management, and investments. Fourth, benchmark credibility strengthens India's global economic position by allowing Indian prices to reflect not only international signals but also domestic fundamentals.

However, benchmark status cannot be created by policy declaration alone. It requires deep liquidity, broad participation, reliable delivery systems, transparent regulation, strong spot-futures linkage, and effective hedging performance. Studies on Indian commodity futures show that hedging effectiveness varies significantly across commodities, highlighting the need to strengthen contract design, delivery infrastructure, and market participation (Gupta et al., 2017). Thus, the challenge is not simply to discover prices in India, but to build prices that India and the world can trust.

Benchmark status cannot be created by policy declaration alone. It requires deep liquidity, broad participation, reliable delivery systems, transparent regulation, strong spot-futures linkage, and effective hedging performance.

From Global Reference Prices to Indian Price Realities

Global commodity benchmarks such as Brent and WTI for crude oil, LME prices for base metals, COMEX prices for precious metals, and international bullion benchmarks, play an important role in shaping Indian commodity prices. These benchmarks provide the first reference point for importers, exporters, manufacturers, and traders.

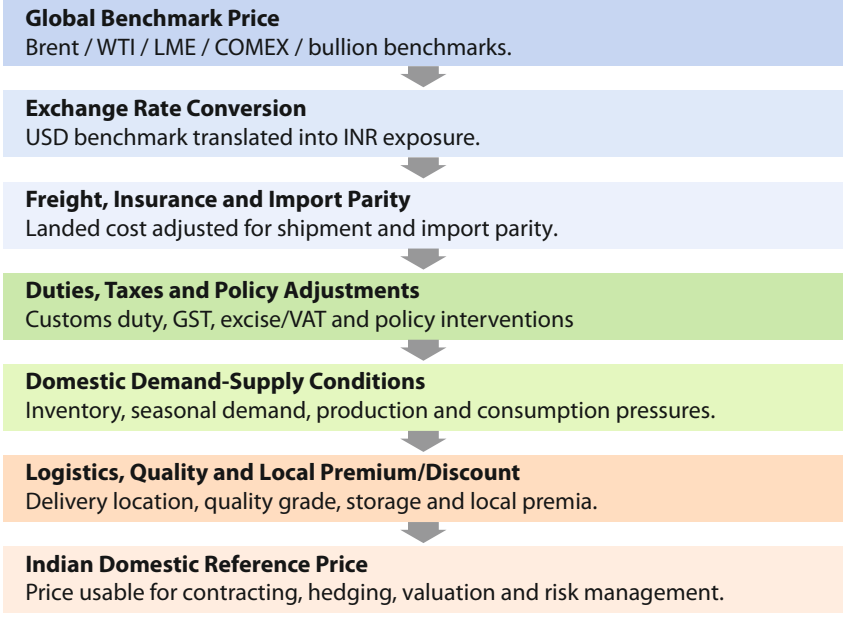
Table 1: Global Benchmark Prices and Indian Commodity Price Adjustments

Commodity segment	Global reference point	Indian price adjustments	Example
Crude oil	Brent, WTI, NYMEX Crude oil front-month settlement price	INR/USD, freight, insurance, refining margins, excise, VAT, pricing policy	Brent may rise 5%, but rupee depreciation can make the landed Indian cost rise more than 5%.
Gold	LBMA / COMEX bullion prices	INR/USD, customs duty, GST, local jewellery demand, local premium/ discount	International gold may be stable, but domestic gold can rise if the rupee weakens.
Base metals	LME copper, aluminium, zinc, nickel	Freight, import duty, warehouse stock, domestic manu-facturing demand, quality grade	LME copper guides Indian copper prices, but local shortage can create a domestic premium.
Agriculture	Global and domestic mandi/ spot prices	MSP, export-import restrictions, monsoon, storage, logistics, stock limits	Domestic wheat or pulses prices may diverge from global prices due to policy intervention.

However, Indian commodity prices are not mechanical copies of global prices. A global benchmark becomes an Indian price only after passing through several domestic filters. In the case of crude oil, the relevant Indian price is influenced not only by Brent and WTI but also by the rupee-dollar exchange rate, ocean freight, insurance, refining margins, excise duties, state taxes, and domestic fuel pricing policies. Similarly, for base metals, LME prices provide the international signal, but Indian prices also reflect import parity, freight, inventory conditions, quality specifications, domestic industrial demand, and logistics.

Global benchmarks are necessary but not sufficient for India. They provide the external price signal, while domestic benchmarks translate that signal into an India-specific economic reality. A credible Indian benchmark should therefore capture both global information and domestic fundamentals.

Figure 1: Global Benchmark Prices to Indian Domestic Reference Prices, Roadmap



Indian commodity prices are not mechanical copies of global prices. A global benchmark becomes an Indian price only after passing through several domestic filters.

WHAT MAKES A PRICE A CREDIBLE BENCHMARK?

A commodity price becomes a credible benchmark only when market participants are willing to use it for contracting, hedging, valuation, and risk management. A benchmark is therefore more than a quoted price; it is a trusted reference price that reflects real market conditions.

The first condition is fair and efficient price discovery. Futures markets aggregate dispersed information and reflect it in prices. However, such price discovery is credible only when markets are liquid, deep, and not dominated by a few participants. Liquidity lowers transaction costs, while market depth ensures that prices are not easily distorted by small trades or temporary imbalances.

Second, a credible benchmark requires broad participation. Producers, processors, importers, exporters, traders, investors, hedgers, and intermediaries bring different information to the market. A wider participation base helps prices reflect collective market expectations rather than the views of a few traders. As Hasbrouck (1995) suggests, price discovery depends on where new information is most effectively incorporated into prices.

Third, transparency and regulatory oversight are essential for benchmark credibility. Participants must clearly understand price formation, settlement, delivery, and safeguards against manipulation. Strong governance, accountability, and reliable input data, as emphasised by IOSCO (2013), further strengthen trust in the benchmark.

Fourth, a benchmark must be closely linked to the physical market. This

requires sound contract design, standardised quality, reliable warehousing, assaying, delivery, and settlement systems. If futures prices fail to converge with spot prices near expiry, users may lose confidence in the benchmark.

Finally, low manipulation risk is essential. An illiquid, opaque, poorly regulated, or physically disconnected benchmark cannot build trust. Indian commodity benchmarks will gain credibility only through deep markets, transparent rules, strong institutions, and a reliable link with physical-market realities.

Commodity derivatives play a central role in the creation of credible benchmarks because they bring together diverse market participants and convert their expectations into observable prices.

Table 2: Benchmark Credibility: Conditions and Indian Market Implications

Benchmark condition	Why it matters	Indian commodity-market implication
Fair price discovery	Reflects available market information	Futures prices should incorporate domestic and global signals efficiently.
Liquidity and depth	Reduces price distortion and transaction cost	Contracts need active trading across maturities.
Broad participation	Makes prices more representative	Hedgers, producers, processors, traders, FPIs, and institutions, should participate.
Transparency	Builds confidence in price formation	Trading, settlement, delivery, and margining rules should be clearly understood.
Regulatory oversight	Reduces manipulation and abuse	Surveillance and position limits must support market integrity.
Delivery linkage	Anchors futures to physical markets	Warehousing, assaying, delivery centres, and quality standards are crucial.
Spot-futures convergence	Confirms benchmark reliability	Futures prices should align with spot prices near expiry.
Reliable settlement	Enables use in contracts and hedging	Settlement prices must be rule-based, transparent, and auditable.

ROLE OF COMMODITY DERIVATIVES IN BENCHMARK FORMATION

Commodity derivatives play a central role in the creation of credible benchmarks because they bring together diverse market participants and convert their expectations into observable prices. Futures and options markets do not merely reflect existing prices; they actively contribute to price formation by aggregating information about demand and supply. The demand and supply are built up based on inventories, currency movements, geopolitical risks, weather, policy changes, and expectations of future scarcity or surplus. In short, derivatives markets are institutional mechanisms through which dispersed information becomes a common reference price.

The price-discovery role of futures markets has long been recognised in academic literature. Garbade and Silber (1983) show that futures and cash markets are linked through the transmission of price information, and that futures prices can play an important role in guiding cash-market prices. Hasbrouck (1995) further explains that price discovery refers to the market in which new information is incorporated most efficiently into prices. In commodity markets, this is important because spot markets may be fragmented, localised, and influenced by short-term physical constraints, while futures markets provide a transparent and standardised platform for continuous trading.

In India, commodity derivatives are particularly important because domestic users face both global and local price risks. Exchanges such as MCX play an important role in this process because they provide exchange-traded contracts across key commodity segments such as bullion, base metals, energy, and selected agricultural commodities. These contracts create organised platforms for trading, hedging, settlement, and information aggregation. In markets such as gold, silver, crude oil, natural gas, copper, aluminium, zinc, and other commodities, exchange-traded derivatives help translate global and domestic information into prices that Indian stakeholders can observe and use. Over time, as liquidity deepens and participation broadens, such prices can evolve from traded prices into credible domestic benchmarks.

INDIA'S BENCHMARK POTENTIAL ACROSS COMMODITY SEGMENTS

India's benchmark potential varies significantly across commodity segments. It is difficult for any country to become a global price-maker in every commodity, especially where global production, inventory, and financial trading are concentrated elsewhere. However, India can build strong domestic reference prices in selected markets where it has large consumption, active physical trade, deep user participation, and a growing derivatives ecosystem.

Gold and bullion offer one of the strongest cases for domestic

benchmark development. India is one of the world's largest gold-consuming economies, with a deep physical market involving jewellers, bullion dealers, investors, and domestic institutions. International bullion prices remain the first reference point, but Indian gold prices also reflect the rupee-dollar exchange rate, customs duty, GST, local premiums, festival demand, investment demand, and jewellery-sector inventory. Therefore, a credible Indian bullion benchmark can serve domestic contracting, hedging, inventory valuation, and financial-product pricing. Gupta et al. (2017) also find that hedging effectiveness differs across commodities, with precious metals showing relatively stronger hedging relevance compared with some other segments.

A credible Indian bullion benchmark can serve domestic contracting, hedging, inventory valuation, and financial-product pricing.

Base metals represent another important area. India's manufacturing, infrastructure, construction, power, automobile, and electrical-equipment sectors depend heavily on metals such as copper, aluminium, zinc, lead, and nickel. Although LME prices remain the dominant global reference, Indian users face domestic basis risks arising from freight, import duties, inventory conditions, quality specifications, local supply constraints, and rupee movements. A strong domestic reference price can help manufacturers, traders, and industrial consumers plan procurement, hedge input costs, and manage working capital. Pani et al. (2022) show that price-discovery relationships in Indian bullion, metal, and energy commodities differ across commodities, suggesting that benchmark potential must be assessed commodity by commodity.

Energy commodities present a different challenge. Crude oil and natural gas are globally benchmarked through markets such as Brent and WTI. India is unlikely to independently define global crude or gas prices in the near term because it is largely import-dependent. However, India's objective in energy may be less about global price leadership and more about creating effective domestic risk-management tools linked to global benchmarks and therefore domestic derivatives remain highly relevant and important.

Agricultural commodities are more complex. India has large production and consumption in several agricultural products, which gives it natural benchmark potential. However, agricultural prices are affected by monsoon conditions, MSP, procurement, stock limits, export-import restrictions, storage, mandi structure, and political economy.

Overall, India's path should be selective. Rather than seeking global price-making power in all commodities.

Table 3: Indian Commodity Markets: Benchmark Potential and Key Constraints

Segment	Benchmark Potential	Reason	Key limitation
Gold and bullion	High	Large domestic consumption, deep physical market, active financial use	Dependence on international bullion prices and import policy.
Base metals	Medium to high	Strong industrial demand from manufacturing and infrastructure	LME dominance and import -parity pricing.
Energy	Medium	High domestic risk-management need	Global benchmarks dominate; India is import-dependent.
Agriculture	Selective	Large production and consumption in many commodities	Policy intervention, quality variation, and fragmented spot markets.

CHALLENGES IN BUILDING INDIAN COMMODITY BENCHMARKS

India has significant potential to build credible domestic commodity benchmarks, but benchmark credibility cannot be created merely by declaring a price as a reference price. A benchmark becomes credible only when market participants trust it for contracting, hedging, valuation, procurement, and settlement. This requires deep and transparent markets, strong linkage with the physical market, and broad participation from both commercial and financial users.

A key challenge is the fragmentation of Indian spot markets. Regional differences in mandis, logistics, storage, quality, taxes, and local demand-supply conditions cause price variation. This makes it difficult for one futures price to represent the entire market, weakening spot-futures convergence and increasing basis risk.

A second challenge is uneven participation by physical-market players. Natural hedgers such as producers, farmers, processors, jewellers, refiners, manufacturers, importers and exporters, still use commodity derivatives only to a limited extent. This weakens price quality, as markets may rely more on traders and short-term financial participants than real-sector users. Gupta et al. (2017) also show that hedging effectiveness varies across Indian commodities.

Third, regulatory uncertainty and policy intervention create difficulties, especially in agricultural commodities. Stock limits, export-import restrictions, MSP operations, procurement policy, and occasional suspension of contracts can affect market confidence.

Fourth, quality standardisation,

warehousing, assaying, and delivery infrastructure remain critical. Commodity benchmarks require standard grades, credible storage, reliable warehouse receipts, and transparent delivery systems. If the quality of the deliverable commodity is uncertain, or if delivery centres do not represent actual trade flows, the benchmark may lose credibility.

Finally, low institutional participation limits market depth. Wider participation by banks, mutual funds, FPIs, insurance companies, and pension funds, subject to safeguards, can improve liquidity and price discovery. Therefore, India's challenge is not only to create commodity contracts, but to build the ecosystem of trust, participation, delivery, regulation, and transparency that allows those contracts to become credible benchmarks.

assessments of producers, processors, importers, exporters, jewellers, refiners, manufacturers, traders, financial investors, and market makers. Futures markets support price discovery by aggregating dispersed information into traded prices, but this function becomes stronger only when liquidity and participation are broad-based (Garbade & Silber, 1983; Hasbrouck, 1995).

The immediate priority should be to encourage greater participation by real-sector players. This requires awareness-building, simpler hedging products, accounting clarity, margin efficiency, and internal risk-management capacity within firms. Wider participation by physical-market users can improve the informational quality of prices and strengthen the link between futures markets and actual commodity flows.

Table 4: Challenges Affecting the Credibility of Indian Commodity Benchmarks

Challenge	Why it matters	Impact on benchmark credibility
Fragmented spot markets	Prices differ across mandis, regions, quality, and logistics.	Weak representative value of one benchmark price.
Low hedging culture	Real-sector users may not participate actively.	Prices may not reflect commercial risk fully.
Policy intervention	Export bans, stock limits, MSP, and contract suspensions affect confidence	Reduces continuity and market trust.
Quality variation	Commodities differ by grade, location, and specification.	Creates delivery disputes and basis risk.
Warehousing limitations	Delivery and storage systems may be uneven.	Weakens spot-futures convergence.
Low institutional participation	Limited participation reduces depth and liquidity.	Higher volatility and lower benchmark acceptance.
Basis risk	Domestic price may diverge from futures/global benchmark.	Limits hedging effectiveness.

ROADMAP: FROM MARKET DEPTH TO GLOBAL CONFIDENCE

For Indian commodity prices to become credible domestic benchmarks and gradually gain international relevance, the first requirement is deeper and more representative participation. A benchmark price cannot be built on thin trading or narrow participation. It must reflect the expectations and risk

Second, India must strengthen the linkage between spot and futures markets. A credible benchmark requires convergence between futures and spot prices near expiry. This depends on robust delivery infrastructure, reliable warehousing, transparent assaying, standardised grades, and well-designed delivery centres. If physical delivery is uncertain, quality specifications are disputed, or warehouse receipts are not trusted, futures prices may fail to become reliable reference prices.

Third, institutional participation should be expanded with suitable safeguards. Participation by mutual funds, banks, insurance companies, pension funds, foreign portfolio investors, and market makers, can improve market depth and liquidity. However, such participation must be accompanied by strong surveillance, position limits, risk controls, and transparent disclosure so that liquidity improves without increasing manipulation or systemic risk.

Fourth, policy stability is essential. Frequent changes in import-export rules, stock limits, taxation, or contract suspensions weaken confidence in commodity markets. This is especially important in agricultural commodities, where policy intervention can disrupt price discovery. Indian evidence shows that price discovery and market efficiency vary across commodities and market conditions, suggesting that credibility must be built commodity by commodity rather than assumed uniformly (Inani, 2018; Joseph et al., 2014).

Finally, India should promote transparent and accessible market data. Reliable data on prices, volumes, open interest, deliveries, warehouse stocks, quality, and regional spot prices can improve confidence among users. Global acceptance of Indian commodity prices will follow only when domestic users first trust and adopt them. Therefore, the roadmap is sequential: deepen domestic participation, strengthen market infrastructure, improve transparency, ensure regulatory credibility, and then build international confidence.

CONCLUSION

India's journey towards commodity price leadership should not be understood as a rejection of global benchmarks. International reference prices such as Brent, WTI, LME, COMEX and global bullion benchmarks will continue to remain important because

commodities are traded across borders and influenced by global demand-supply conditions. However, India should not remain dependent on global benchmarks in areas where domestic market realities are distinct. Exchange-rate movements, freight, duties, taxes, local demand-supply conditions, policy interventions, quality differences and logistics often create a gap between international prices and the prices actually faced by Indian market participants.

The objective, therefore, should be to develop Indian commodity prices that are credible enough for domestic contracting, hedging, valuation, procurement and policy analysis. Once domestic producers, processors, importers, exporters, jewellers, refiners, manufacturers, farmers, traders and financial institutions begin to trust and use Indian reference prices, these prices can gradually gain wider relevance. Global confidence will follow only after domestic confidence is established.

India may not become a global price-maker in every commodity. In some markets, such as crude oil and natural gas, global benchmarks will continue to dominate because of the structure of international production and trade. However, in selected segments such as bullion, base metals and certain agricultural commodities, India has the scale, physical-market depth and user base required to build strong domestic benchmarks.

The transition from price-taking to price-making will depend on market depth, liquidity, broader participation, reliable delivery systems, transparent settlement, quality standardisation, regulatory credibility and sustained policy support. Benchmark leadership cannot be created by announcement alone; it must be earned through trust. If India can build such trust, domestic commodity prices can become not only instruments of risk management, but also markers of India's growing role in global market development.

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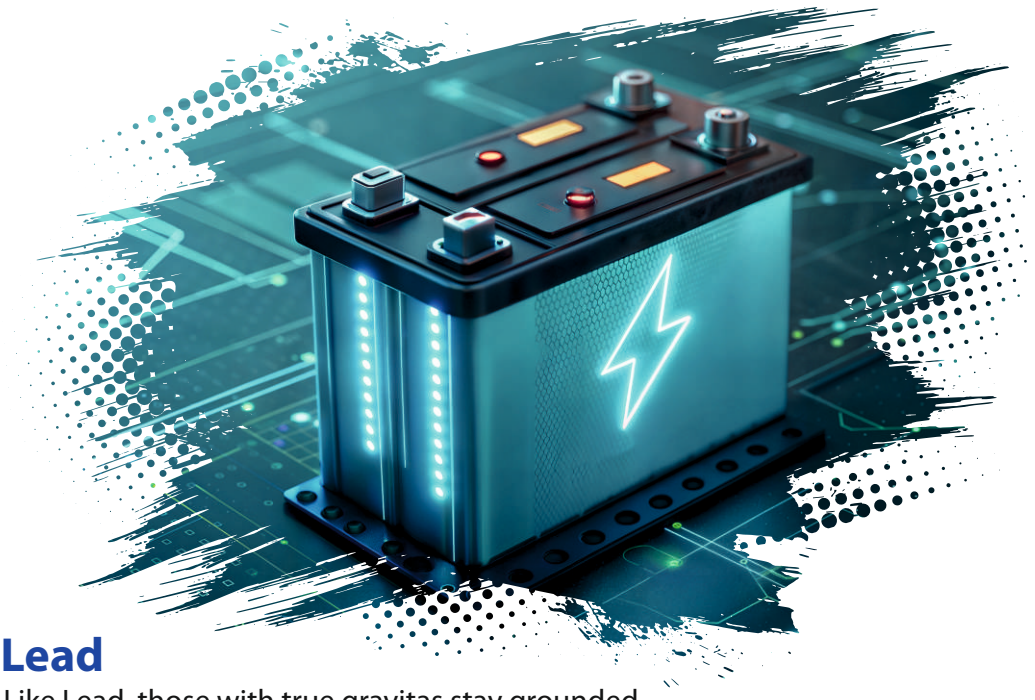

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Commodity Pricing in India:
Challenges, Resilience and the Road Ahead



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Dr. Kar actively contributes to curriculum development, academic administration, and research mentoring.
She brings a powerful blend of academic rigor, research insight, and practical financial perspectives to all her speaker engagements.

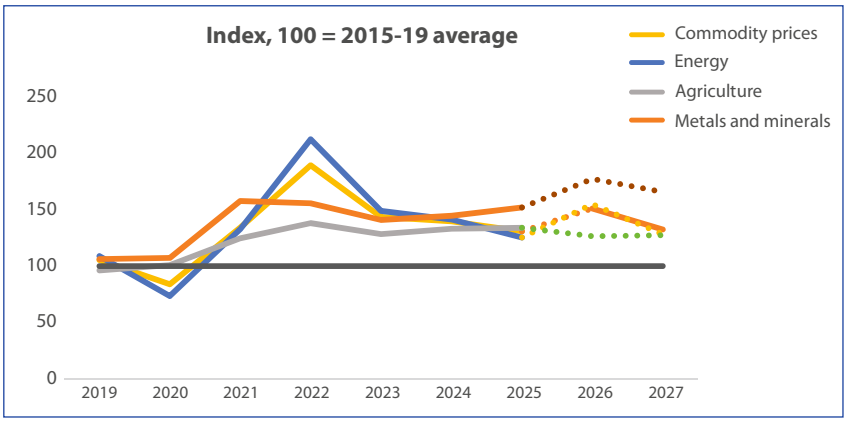
Geopolitical conflicts and supply chain disruptions are driving global commodity prices upward, with energy costs facing the most significant impact. As a major importer of crude oil and industrial raw materials, India faces a heightened wholesale inflation environment that increases corporate input costs and threatens consumer purchasing power. While India's retail inflation has shown structural resilience due to stable domestic food pricing, ongoing external volatility underscores the critical need for strategic domestic policies to shield private spending and sustain the nation's economic growth momentum.

I. BACKGROUND AND CONTEXT

The recent outbreak of war in the Middle East has sent shockwaves through commodity markets, resulting in the largest loss of oil supply on record in March2026. Commodity prices are expected to rise by 16 % this year, marking the first annual rise since 2022. The World Bank Group (Commodity Markets Outlook, April 2026) forecasted that globally, prices will be around 25 % higher than the previous estimation. Energy prices, particularly, are estimated to jump by 24 % in 2026 as both oil and natural gas prices escalate due to ongoing supply chain disruptions. To substantiate this fact, the following figure exhibits the predictions of the commodity price.

Figure 1.1 provides the trends and forecasts for global commodity prices for the period 2020 to 2027. Following the Covid-19 pandemic, there was a sharp increase in commodity prices, reaching a peak in 2022, mainly driven by energy prices resulting from supply chain disruptions and the Russia-Ukraine conflict. Energy prices saw the highest spike, exceeding an index of 200, while metals, minerals, and agricultural commodities also enjoyed substantial increases. Prices eased from the year 2023 as supply conditions improved and global demand softened. Looking ahead to 2025-2027, forecasts indicate a steady decline in energy prices, though they are expected to remain above pre-pandemic levels.

Figure1.1- Projected International Commodity Price



Source: Prepared from World Bank Report (Commodity Market Outlook, April 2026).
Note: Commodity prices line refers to the World Bank commodity price index, excluding precious metals. Dashed lines indicate forecasts.

Despite some recent developments suggesting that geopolitical tensions in West Asia may be easing, global commodity prices are predicted to remain elevated in the near future. This is mainly because supply chains need time to bounce back and ongoing weather-related disruptions, such as the El Niño effect, continue to influence agricultural production.

In today's interconnected global economy, commodity prices are no longer just reflections of market activity; they have evolved into strategic signals that impact inflation, industry competitiveness, investment choices, trade balances, and overall economic resilience. Unswerving and effective commodity pricing systems play a crucial role in fostering economic growth by promoting investment, improving resource

In today's interconnected global economy, commodity prices are no longer just reflections of market activity; they have evolved into strategic signals that impact inflation, industry competitiveness, investment choices, trade balances, and overall economic resilience.

distribution and growing market confidence. On the other hand, high price volatility can lead to uncertainty, escalating inflation and economic instability.

The ongoing geopolitical developments, climate-related disruptions, currency fluctuations, and shifts in demand patterns have all contributed to significant changes in commodity prices in India. A recent report of Bank of Baroda published in The Economic Times (dated 16th June 2026) offers an excellent contemporary perspective on Commodity Pricing and Economic Growth in India. It demonstrates how international commodity price movements continue to shape India's inflation outlook, industrial costs, and macroeconomic stability. The report's analysis predicts that prices for oil, energy, metals, fertilisers, food commodities, and industrial raw materials will rise, putting further financial strain on commodity-importing economies like India.

II. Commodity Pricing and Inflationary Pressure

Elevated commodity prices enhance the cost of production and transportation, resulting in rises in both wholesale and retail pricing. Rising wholesale costs frequently trickle down to consumers, causing inflationary pressures that can erode purchasing power and reduce domestic demand. Between February and May 2026, the world economy has seen many changes. The World Bank reported a noteworthy rebound in its commodity price index, which soared by 30.7%. This rise was primarily fuelled by a steep jump in crude oil prices, mainly attributed to disturbances in the Strait of Hormuz. Energy commodities have played a significant role in escalating the recent surge in commodity prices. Energy prices were the largest contributor to the rise, with the energy index jumping 44.9 % throughout the period. The average price of crude oil increased by 47.7 %, while natural gas prices increased by 33.2 %. Coal prices climbed by 10.9 % as rising fuel costs drove up transportation costs.

Recently, on the international front, inflation reached a peak of 8.7 % in 2022, mainly caused by supply chain issues and geopolitical tensions, and then eased to 5.4 % in 2024. On the contrary, despite enduring challenges related to food prices, retail inflation in India has declined from 5.4 % in FY24 to 4.9 % FY25 from April to December. It is regardless to mention that Consumer Food Price Index (CFPI) is a decisive factor in shaping retail inflation, and food items make up about 40 % of the consumer price index in India.

The WPI statistics indicate significant variations in commodity inflation during the study period between 2019-20 and 2024-25. This study period is characterised by major macroeconomic shifts viz. the pandemic, supply chain challenges, and geopolitical conflicts. Throughout this period, primary articles, especially food commodities, steadily experienced inflationary pressures. On the other hand, manufactured goods have seen more stable inflation levels.

Table 2.1 - Index Numbers and Annual Rate of Inflation (Y-o-Y in %) *

All Commodities/ Major Groups	Weight (%)	Feb-26 (F)		Mar-26 (P)		Apr-26 (P)	
		Index	Inflation	Index	Inflation	Index	Inflation
All Commodities	100.00	158.40	2.26	160.80	3.88	167.00	8.30
I. Primary Articles	22.62	192.80	3.21	197.30	6.36	202.40	9.17
II. Fuel & Power	13.15	147.50	-3.85	153.70	1.05	181.70	24.71
III. Manufactured Products	64.23	148.50	3.13	149.50	3.39	151.60	4.62
Food Index	24.38	192.90	1.85	192.80	1.85	195.10	2.31

Source: compiled from Press Release, Ministry of Commerce & Industry, Govt. of India.
Note: F: Final, P: Provisional, *Annual rate of WPI inflation is calculated over the corresponding month of previous year

The above data shows a notable hike in WPI inflation in April 2026 as compared to its corresponding month of the previous year. The overall commodity inflation went up 8.30 %%, and the data reveals that the highest rate of inflation is reflected by fuel and power (24.71 %) and primary articles (9.17 %), respectively. On the other hand, manufactured products reflected a moderate rate of inflation of 4.62 %, while food inflation showed a relatively low at 2.31 %.

The following table indicates a more classified commodity-wise annual inflation rate trend:

This trend underscores that energy commodities are the chief determinants of variations in wholesale prices, indicating India's sensitivity to global commodity price shifts and possible effects on price level changes and, in turn, economic growth.

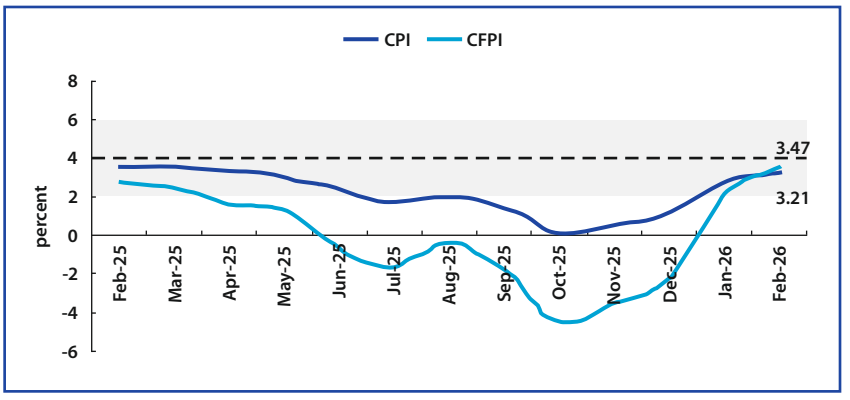
Further, to gauge a better insight into how commodities impact the price level changes, let us look at the trend of headline inflation and food inflation as follows:

Table 2.2- WPI (Base = 2011-12) Average Annual Inflation Rate (%)

Description	Weight	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All Commodities	**100**	**1.7**	**1.3**	**13**	**9.41**	**-0.7**	**2.31**
Primary Articles	**22.6**	**6.8**	**1.7**	**10.3**	**10.04**	**3.53**	**5.19**
Food Articles	15.3	8.4	3.1	4.1	7.27	6.58	7.32
Non-Food Articles	4.1	4.5	1.4	21.1	8.85	-5.61	-0.43
Minerals	0.8	13.2	6.7	19.6	3.21	7.04	5.19
Crude Petroleum & Natural Gas	2.4	-7.7	-17.5	56.7	43.7	-3.04	-1.5
Crude Petroleum	1.9	-12.7	-15.8	77.9	29.93	-7.79	-2.5
Natural Gas	0.5	6.6	-21.5	4.3	NA	9.78	0.78
Fuel & Power	**13.2**	**-1.8**	**-8**	**32.6**	**28.08**	**-4.53**	**-1.32**
Mineral Oils	7.9	-4.6	-14.2	59.3	NA	-8.04	-1.76
Manufactured Products	**64.2**	**0.3**	**2.7**	**11.1**	**5.61**	**-1.69**	**1.71**

Source: MCX Commodity Insights (Yearbook 2025).

Figure 2.1- Headline Inflation vis-à-vis Food Inflation



Source: MoSPI

The figure illustrates that the headline CPI witnessed a gradual fall, reaching a low point in October and then climbing to 3.47% in February 2026. On the contrary, food inflation, known as CFPI, exhibited much greater volatility, moved negative during the mid-period of 2025, but then rebounded to 3.21% by February 2026 i.e, moving closer to the inflation target of 4 % (Monthly Economic Review, March 2026).

III. Commodity Pricing and Economic Growth

The economic advancement of India is shaped by a nuanced combination of domestic policies, fluctuations in international commodity prices, and structural reforms, underscoring the need for strategic policy interventions to maximise growth outcomes. In an emerging economy like India, private spending and investment are increasingly becoming the key to the growth of the engine.

Commodity pricing and economic growth in India are closely intertwined, and it influences the economy in multiple ways. As a major importer of crude oil, natural gas, edible oils, industrial metals and fertilisers, India is greatly impacted by international market volatility. Although the Indian commodity derivatives market has demonstrated resilience, especially after the 2008 financial crisis, highlighting its potential to foster economic expansion. The influence of commodity prices on GDP per capita varies by income category, and

As a major importer of crude oil, natural gas, edible oils, industrial metals and fertilisers, India is greatly impacted by international market volatility.

commodity pricing occupies significant importance, especially since energy imports, primarily crude oil, hold a major share of India's import bill.

Stable commodity prices help to protect household purchasing power by keeping inflation in check, which in turn boosts discretionary spending and makes up for business optimism. Similarly, reduced input costs enable businesses to ramp up production and embark on fresh investments, thereby creating a positive cycle of consumption, investment, employment, and growing income. On the flip side, fluctuations in commodity prices create uncertainty in corporate planning, minimise profit margins, and postpone capital employment, ultimately dampening the momentum of economic expansion.

Considering the changing nature of international trade and supply chains, India is shifting its approach by expanding its trade partnerships and strengthening its manufacturing sector through initiatives like 'Make in India' and 'Atmanirbhar Bharat'. To foster these initiatives and maintain a competitive edge in exports, achieving efficient commodity pricing is

India is shifting its approach by expanding its trade partnerships and strengthening its manufacturing sector through initiatives like 'Make in India' and 'Atmanirbhar Bharat'.

becoming increasingly imperative. In addition, India can enhance its manufacturing efficiency and integrate better into global value chains (Majumdar & Ghatak, 2026).

The key relationships between commodity pricing and economic growth

- Stable commodity prices play a crucial role in controlling inflation and ensuring that households can maintain their purchasing power.
- When input costs are lower, industries become more competitive, leading to enhanced profitability for businesses.
- Predictability in commodity pricing fosters private investment and supports infrastructure development initiatives.
- Effective supply chain management of agricultural commodity prices is imperative for the betterment of food security and boosting rural incomes

IV. Concluding Remarks

The aforesaid discussion opines that commodity markets are now more impacted by geopolitical and structural factors than by traditional demand-supply led dynamics. The World Bank Group forecasts highlight a shift from the extreme volatility seen in recent years to a landscape of greater price stability, with commodity prices expected to stay relatively higher than historical norms. Although India has shown resilience in checking inflationary conditions by applying monetary strategies and appropriate government measures on a time-to-time basis, its excessive dependency

on energy imports and other essential commodities leaves our economy exposed to external price shocks.

Commodity pricing plays a vital role in India's economy, given the country's dependence on imported energy, a robust agricultural sector and a growing industrial landscape. To fully harness the advantages of commodity pricing and mitigate its potential downsides, it is essential to strengthen commodity markets, enhance price discovery methods, promote risk management through derivatives and consider a range of economic growth strategies.

Establishing a stable and transparent commodity pricing framework will not only aid in maintaining macroeconomic consistency but also foster sustainable, inclusive, and better economic prosperity in an increasingly uncertain global landscape.

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Aluminium

Aluminium bends, not breaks, reminding us that flexibility is the quiet force of endurance

India's Price, India's Reference

Making the case for domestic benchmarks in a Global Commodity System



SACHIN SHETTY
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Sachin Shetty is Founder and CEO of Quesrow Research & Strategy Co., a research-led strategic advisory firm serving capital-intensive industries and their value chains, through five service lines: business case development, business growth, input-material security and supply chain, decarbonisation pathways, and StreetSense, an always-on, dynamic platform. Coverage spans the full material chain, from industrial enablers and suppliers to the demand and capital that fund it, guiding corporates, producers, investors and PE firms, trade bodies, and policy groups.

Over 28 years, Sachin has worked across engineering and project execution in mining and construction at AFCONS, research-based consulting at Feedback Consulting, and marketing leadership at Softoria Infotech, before founding Quesrow to bring sector-specific rigor to decade-long capital allocation decisions.

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In India, domestic commodity prices—driven by taxes, duties, and local supply-demand—serve as more accurate transactional references than global benchmarks, as evidenced by sector-specific trends in steel and gold. While industries like steel, gold, and agriculture rely on localized pricing mechanisms to reflect true transaction costs, crude oil remains a price-taker reliant on global rates due to high import dependence.

THE PARADOX AT THE COUNTER

India produced 168.4 million tonnes of crude steel in FY2025-26, up 10.7 percent year on year, enough to hold its position as the world's second largest steel producer. It is also the world's largest single buyer of gold jewellery and among its largest importers of crude oil, importing more than 90 percent of what it refines and consumes. On paper, this is a country with genuine weight in three of the largest physical commodity markets on earth. Yet ask a steel trader in Raipur, a bullion dealer in Zaveri Bazaar, or a fuel retailer in Coimbatore what price actually governs their next transaction, and none of them will quote you the Shanghai rebar contract, the LBMA gold fix, or the Brent futures curve without a long list of adjustments first. What they quote is a domestically formed number: a BigMint assessed ex-works / yard price, an MCX or local Sarafa association rate net of duty and GST, a state-wise retail pump price set after tax and subsidy arithmetic that has nothing to do with what a barrel costs in Rotterdam.

This is not a peculiarity of Indian markets. It is the central fact the Yearbook's theme asks us to sit with. Global benchmarks are reference points, not settlement prices. The commodity price that actually clears a transaction inside India is layered with import duty, freight across a subcontinent-sized geography, GST and state levies, currency conversion at a depreciating rupee, quality specifications set by Indian regulators, and demand patterns shaped by festivals, sowing seasons, and construction cycles that no international index was built to capture. The question this article takes up is a narrower, more immediate one than whether India can someday set the London or Shanghai price: Is the price already being discovered inside India the more economically correct reference for Indian stakeholders, even when it diverges sharply from the global number? The argument here is that it is, and that recognising this explicitly, institutionally and statistically, is the more urgent task ahead of the harder ambition of shaping global benchmarks.

Global benchmarks are reference points, not settlement prices. The commodity price that actually clears a transaction inside India is layered with import duty, freight across a subcontinent-sized geography, GST and state levies, currency conversion at a depreciating rupee, quality specifications set by Indian regulators, and demand patterns shaped by festivals, sowing seasons, and construction cycles that no international index was built to capture.

THE ANATOMY OF AN INDIAN PRICE

Consider two case studies from the past eighteen months, one in steel and one in bullion, that illustrate how much work the word "local" is doing in every Indian commodity price.

In April 2025, India's Directorate General of Trade Remedies concluded that a sudden and sharp surge in imports of flat steel products, hot rolled coils, cold rolled coils, and metallic and colour coated sheets, was causing serious injury to domestic producers. The government responded with a three year, tapering safeguard duty: 12 percent from April 2025 to April 2026, stepping down to 11.5 percent and then 11 percent over the following two years. The effect was immediate and measurable. Landed import parity for Chinese and Vietnamese flat steel, priced off Platts' FOB China HRC assessment, was pushed structurally above where it would otherwise sit, while domestic HRC prices, tracked by BigMint's Indian indices, held comparatively stable even as global steel markets stayed oversupplied and soft through 2025. The Platts number and the BigMint number are describing two different

economic realities for the same physical grade of steel, and the gap between them runs to 12 percentage points of deliberate trade policy, plus whatever freight and BIS quality-certification costs sit on top.

Gold tells a sharper version of the same story. In May 2026, facing a rupee that had slid roughly 7 percent year to date and a gold import bill running near 8 percent of India's total merchandise imports, the government raised the customs duty on gold from 6 percent to 15 percent, the steepest single increase on record. Official quarterly imports had been running a steady 175 to 236 tonnes even through earlier duty regimes, evidence of how inelastic Indian gold demand really is. What happened to price in the days after the hike is the more telling number: the discount at which domestic gold traded relative to the official international-parity price widened from roughly 14 dollars an ounce before the announcement to nearly 150 dollars an ounce after it, as the market absorbed the duty change unevenly across the trade before it was fully reflected in retail tags. For a few weeks, the "Indian gold price" and the "London gold price adjusted for known duty" were simply not the same forecast, because the adjustment itself was a live, evolving variable that only domestic price discovery, not any global index, could capture in real time.

Contrast both of these with crude oil, where India has almost no domestic price-setting mechanism at all. Domestic crude production has fallen from a peak of 35.9 million tonnes in FY2012 to around 26 million tonnes in FY2026, even as consumption has grown, pushing import dependence past 90 percent. Here India is close to a pure price taker: Indian refiners buy at Brent or Dubai-linked formulas, and the only "domestic" layer is what oil marketing companies choose to pass through to the retail pump, a political and fiscal decision more than a market one. The contrast is instructive. Where India has scale, institutional infrastructure and policy instruments of its own, in Iron Ore, Coal, Steel and Gold, a clearly distinct domestic price emerges and holds. Where it does not, in crude, the domestic price is simply the global price plus a tax and subsidy wrapper decided in Delhi, not discovered in a market.

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Agriculture sits in a more complicated quadrant, and it belongs in this discussion because it is the commodity space where the largest number of Indians actually transact. The Minimum Support Price, set by the Cabinet on the Commission for Agricultural Costs and Prices' A2+FL cost formula across twenty-two notified crops, is often described as India's domestic reference price for agri commodities, though not in the way BigMint's steel data or MCX gold settlement prices are. MSP is a procurement floor announced for a small number of crops, actually paid to only a fraction of farmers who can physically reach a procurement centre, while the price that clears most real transactions is the mandi rate, negotiated locally under the Agricultural Produce Market Committee system and varying meaningfully across a few hundred kilometres depending on local arrivals, storage capacity and transport cost. India does not lack a domestic agri price. It has thousands of them; none aggregated into a single trusted reference the way BigMint or MCX aggregate steel and bullion. NCDEX was built to solve exactly this fragmentation problem, and where its contracts have real depth, guar seed, mustard, cotton, it does function as a real national reference. Where they do not, agri pricing remains the clearest illustration in the Indian commodity landscape of how much value is left on the table when a large, real domestic market has no single, credible, published number to anchor it.

WHY THE DOMESTIC PRICE IS THE MORE CORRECT REFERENCE, NOT A DISTORTED ONE

It is tempting to describe the gap between BigMint's domestic HRC index and Platts' FOB China assessment, or between MCX gold and the LBMA fix net of duty, as a distortion, a market inefficiency to be arbitraged away as India "matures." That framing gets the economics backwards. For an Indian steel buyer negotiating a contract, a rebar producer setting a sale price, or a jeweller quoting a customer, the relevant question is never "what does this commodity cost somewhere else." It is "what does this commodity cost me, landed, taxed, financed and delivered, right here." A global benchmark stripped of duty, freight, currency and specification differences is not a purer number, just an incomplete one, missing exactly the variables that determine whether a transaction is profitable in India.

This is precisely why India's steel trade balance flipped so decisively in FY2025-26. Exports rose 35.9 percent to 6.6 million tonnes while imports fell 31.7 percent, and India returned to net exporter status for the year. That shift did not happen because global steel prices moved in India's favour, they were broadly flat to soft through the period. It happened because the safeguard duty altered the domestic price relative to the landed import price enough to change real commercial decisions, on both the buy and sell side, inside India. The domestic price was the signal that actually governed 168 million tonnes of production and consumption decisions, not a distortion of some truer global one.

The same logic extends to how India should think about MCX and NCDEX's role. Market Insiders' comparison of CME, MCX and LME put it precisely: MCX prices "guide domestic Indian

commodity pricing, influencing inflation, imports and consumption" and "may diverge from global benchmarks due to currency and policy factors." That divergence is MCX's price discovery doing its job: pricing risk for Indian participants operating under Indian duty, tax, freight and currency conditions, not for a generic global participant who does not exist in this market. A domestic exchange whose prices tracked London or Chicago one-for-one would not be adding any information; it would be a currency-converted mirror, and Indian hedgers would have no reason to use it over the original.

None of this argues that India should ignore global prices. Global benchmarks remain the correct starting point, the pre-adjustment anchor, for any Indian price. But the Yearbook's core question, whether domestic prices can serve India's economic needs for a reference price, deserves a more confident answer than "eventually, once markets mature." The domestic price, properly constructed, transparently published and statistically robust, already is the economically correct reference for the vast majority of transactions that occur inside India's borders. The task ahead is less about proving this and more about building the institutional infrastructure, benchmark administration, index methodology, data transparency, and regulatory recognition. Those are administrative gaps, not economic ones.

INHERITING VERSUS DEFINING, AND THE GAP THAT REMAINS

Having a credible domestic reference price is not the same as shaping the global one, and it is worth being honest about the distance between the two. India inherits far more commodity prices than it defines, and three structural gaps explain why.

The first is liquidity depth. MCX and NCDEX serve Indian participants well within Indian trading hours, but global open interest and participation remain concentrated in London, Chicago and Shanghai. Foreign portfolio investors face meaningful restrictions on direct participation in Indian commodity derivatives, which caps the depth and diversity of the order book relative to CME or the LME. A benchmark used only by domestic hedgers, however accurate for them, cannot become a global reference price by definition, because a global price requires global participants willing to transact against it.

The domestic price, properly constructed, transparently published and statistically robust, already is the economically correct reference for the vast majority of transactions that occur inside India's borders.

The second is standards and fungibility. LME's warehouse and brand-approval system, and CME's delivery specifications, work as global benchmarks because a tonne of LME-registered Aluminium, Copper or a barrel against a CME contract is fungible anywhere in the world. Indian BIS quality specifications, by contrast, are calibrated for Indian construction and manufacturing codes, which is appropriate for their purpose but means Indian-graded steel or Indian-refined gold does not automatically clear as an equivalent global delivery unit. Until Indian product standards are mapped to, or accepted as equivalent to, international grading conventions in at least some categories, Indian exchange prices cannot function as global settlement references even where the underlying market is large.

The third is currency and capital account architecture. Every major price-setting benchmark, Brent, LBMA gold, LME copper, is dollar-denominated, which lets global participants transact without taking a currency view alongside a commodity view. Rupee-denominated contracts, even if the underlying commodity view is correct, force an international participant to also underwrite a currency and convertibility view, which most are simply not set up to do. This does not mean India should abandon rupee pricing domestically, but it does mark a real constraint on how far BigMint, MCX or NCDEX contracts can travel outward as global references, absent currency convertibility reform or dollar-settled contract variants for international participants.

A STRATEGIC AGENDA: WHAT WOULD CERTAINLY MOVE INDIA FROM INHERITING PRICES TO DEFINING THEM

Six moves would do more to advance India's pricing influence over the next cycle of this Yearbook than any general call for deeper markets.

1. Formalise domestic benchmark administration to international index standards. BigMint's assessed indices, and MCX and NCDEX settlement prices should be published under a transparent, audited methodology comparable to how Platts or Argus construct their assessments, with clear panel composition, outlier rules and revision policies. A benchmark that meets IOSCO-aligned principles for financial benchmarks is one that banks, courts, tax authorities and international counterparties can reference without a credibility discount. India already has the underlying data; it does not yet have the administrative rigor that turns data into a benchmark.
2. Widen participation in Indian commodity derivatives selectively, not universally. Rather than a blanket opening of MCX and NCDEX to all foreign participants, a calibrated expansion, starting with categories where India already has natural scale and a credible domestic reference, Iron ore, Coal Steel, Gold, select agri commodities, would deepen liquidity where it matters most without diluting regulatory control over more sensitive contracts.
3. Pursue standards convergence in the categories where India has a

genuine cost or scale advantage, rather than everywhere at once. Green and low-carbon steel is the clearest candidate, and ferrous, non-ferrous scrap, recycled copper, lead, zinc etc. are the following ones. India's National Steel Policy ambitions around a 300-million tonne capacity target by 2030–31 and its emerging green steel roadmap could be paired with an internationally recognised low-carbon steel certification, giving Indian producers a differentiated category to lead.

4. Use IIBX deliberately as a transparency and aggregation tool rather than overselling it as an immediate price-setting mechanism. The exchange has already improved import-side competition and disclosure for Indian jewellers; the honest next step is deepening its role as the reference point for South Asian and Middle Eastern jewellery trade corridors where India has real demand-side weight, before claiming influence over the LBMA-COMEX complex where it currently has very little influence since it sources its own bullion from those exchanges.
5. Treat currency policy as commodity policy. Rupee invoicing pilots for specific bilateral trade corridors, alongside continued RBI reserve management, would reduce how much of any Indian commodity price move is actually a currency story wearing a commodity mask, a distinction the gold duty episode of May 2026 made unusually visible.
6. Extend the BigMint and MCX model of published, methodology-backed pricing to agriculture, where it is needed most and exists least. A single, daily, arrival-weighted national mandi price series for India's major crops, published with the same rigor as a steel or bullion index and reconciled against MSP and NCDEX settlement data, would do more for farmer income and downstream food-processing investment than any single subsidy scheme, simply by giving both sides of every transaction a trusted number to negotiate around.

CONCLUSION

The Yearbook's theme asks whether India inherits commodity prices or defines them, and whether it is even necessary for India to shape global prices at all. The honest answer is that India does both, in different measures, across different commodities, and that the more useful ambition for the next several years is not a single sweeping claim to global price leadership but a disciplined, commodity-by-commodity build-out of what is already working. Where India has scale, policy instruments and institutional data, as it does in Iron Ore, Coal, Steel, Agri and, increasingly, in gold, the domestic price is not a discounted or distorted version of a truer global number. It is the correct number for Indian decisions, and it deserves to be treated, published and referenced as such, formally and with the same rigor the world extends to Platts or the LBMA fix. Where India remains structurally a price taker, as it does in crude, the honest strategy is hedging and diversification, not premature claims of influence. And where the domestic price exists but is fragmented, as in agriculture, the task is aggregation, not invention. Getting this distinction right, commodity by commodity, is what will let India stop asking whether its prices matter and start building the institutions that assume they already do.

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Natural Gas

Natural gas lies dormant till sparked, so too, our potential ignites when we take challenges head on

Benchmark Formation in Commodity Markets: An Institutional Framework



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Mayuri Singh is a lawyer, regulatory expert, and strategic communications advisor with over 20 years of experience across India's power and energy sector. She is the Co-founder of Comm'fident, a strategic communications advisory that partners with organisations in regulated and infrastructure-intensive industries. Her specialized work sits at the intersection of law, regulation, policy, and market design, focusing heavily on how governance and stakeholder confidence shape competitive electricity markets.

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> ***Commodity markets require more than just efficient price discovery (liquid trading) to influence long-term economic activity; they must undergo a distinct "Benchmark Formation" phase that builds trust, integrity, and widespread adoption. True economic influence, or Pricing Influence, emerges only when external stakeholders trust a price as a reliable reference, requiring a deliberate shift from simply increasing trading volume to establishing institutional confidence in four key areas: representation, trust, integrity, and adoption.***

WHY DO ONLY SOME PRICES BECOME BENCHMARKS?

Commodity markets discover prices every day. But only a handful of those prices become benchmarks that continue to influence commercial decisions after the original trade has concluded. Most prices disappear with the next trading session. A few become enduring economic references. Why?

The significance of a benchmark lies in its ability to travel beyond the transaction that produced it. It becomes a common point of reference for commercial and financial decisions across a much wider market.

This distinction is important for market development. Organised markets routinely generate prices through competitive trading, but only a small number produce benchmarks that attract sustained confidence across an industry. Liquidity, transparency and trading efficiency explain how prices are discovered. They do not fully explain why certain prices acquire a wider role in economic coordination.

The question has particular relevance for India. As commodity markets deepen, attention naturally focuses on improving participation, strengthening trading infrastructure and enhancing market efficiency. Those objectives remain essential. The larger opportunity, however, lies in creating the institutional conditions under which domestically discovered prices become sufficiently trusted to guide decisions well beyond the exchange.

International benchmark markets illustrate the point. Brent crude, Henry Hub natural gas and the London Metal Exchange's reference prices became influential over time because market participants came to rely on them as credible representations of value. Their histories are different, reflecting the characteristics of their underlying commodities and market structures. What they share is representative trading, trusted institutions and sustained commercial acceptance.

Between Price Discovery and Pricing Influence lies an intermediate institutional process that receives comparatively little attention. The Benchmark Formation framework proposed here explains how market-generated prices evolve into trusted economic references. The distinction helps explain why some markets gradually become reference-setting, while others continue to rely primarily on benchmarks established elsewhere, despite achieving increasingly efficient price discovery.

India's evolving electricity markets provide a useful institutional laboratory for examining this process. Although electricity serves as the principal illustration, the framework is intended to contribute to broader discussions on commodity market development and benchmark creation across India's commodity ecosystem.

THE LIMITS OF PRICE DISCOVERY

Price discovery occupies a central place in the study of commodity markets. It describes the process through which dispersed information about supply, demand, expectations and risk is incorporated into prices through competitive trading. Well-functioning markets strengthen this process by encouraging participation, improving liquidity and supporting transparent price formation.

Without credible price discovery, markets cannot allocate resources efficiently or support effective risk management. Much of the policy discussion surrounding commodity exchanges therefore concentrates, quite appropriately, on market design, surveillance, settlement systems, participation and trading infrastructure.

Even so, efficient price discovery does not by itself explain why some prices become enduring economic references.

Many organised markets generate transparent and economically efficient prices. But fewer markets generate prices that become embedded in commercial contracts, procurement practices, financing arrangements or valuation across an industry. A discovered price and a benchmark are not the same thing. Something changes between those two stages.

Much of the discussion on benchmark governance has focused on issues such as methodology, transparency, governance and protection against manipulation. International reforms have further strengthened expectations around benchmark integrity and oversight. The question considered here comes earlier - how do market-generated prices acquire the institutional characteristics that allow them to become recognised benchmarks in the first place?

The distinction is straightforward. Price Discovery explains how markets reveal value. The Benchmark Formation framework explains how those prices acquire sufficient institutional credibility to function as shared economic references. Pricing Influence emerges when market participants begin organising commercial decisions around those references.

Benchmark emergence is therefore better understood as an institutional process than as a direct consequence of successful trading. Markets produce information through prices. Whether those prices shape behaviour beyond the exchange depends on the confidence that participants place in the institutions producing them. For economies seeking greater influence through the prices they generate, that distinction becomes consequential.

THE BENCHMARK FORMATION FRAMEWORK

If Price Discovery explains how markets generate information about value, a second question follows naturally - how does that information come to influence decisions beyond the market in which it originated?

A price discovered through competitive trading reflects prevailing market conditions at a particular moment. It conveys information about supply, demand and expectations, enabling buyers and sellers to transact with greater confidence. Most such prices, however, remain confined to the markets that generate them. Only a small number acquire a wider role, serving as common reference points across an industry. The transition from

A price discovered through competitive trading reflects prevailing market conditions at a particular moment. It conveys information about supply, demand and expectations, enabling buyers and sellers to transact with greater confidence.

market price to benchmark cannot be explained by trading activity alone.

The Benchmark Formation framework describes that transition as the institutional process through which market-generated prices acquire the credibility, transparency and market acceptance necessary to become trusted economic references.

Institutions occupy the centre of this process. Regulation can establish market architecture, but it cannot decree benchmark status. Likewise, active trading and growing liquidity do not automatically produce benchmark prices. Markets generate information. Institutions determine whether that information becomes sufficiently credible for others to rely upon.

Four conditions shape this evolution: Representative Markets, Institutional Trust, Information Integrity, and Market Adoption. They are analytically distinct, but they reinforce one another as markets mature.

REPRESENTATIVE MARKETS

Benchmark formation begins with the quality of the underlying market.

Representative prices emerge where participation is broad, liquidity is sufficient, price formation is genuinely competitive, and market design allows diverse information to be reflected in trading outcomes. Markets that remain thin, fragmented or persistently distorted may still facilitate transactions, but participants are less likely to regard their prices as reliable indicators of prevailing market conditions.

International benchmark markets such as Brent crude, Henry Hub natural gas and the London Metal Exchange reference prices illustrate the principle. Each evolved within its own institutional and commercial context, shaped by the characteristics of the underlying commodity and the market it served. Despite those differences, all came to be regarded as credible representations of value because market participants developed confidence in the markets and institutions producing those prices.

INSTITUTIONAL TRUST

Representative prices are only the starting point. Market participants must also trust the institutions through which those prices are produced.

That confidence rests upon governance arrangements, regulatory oversight, surveillance mechanisms, settlement systems, benchmark administration and the consistent application of market rules. Collectively, these reduce uncertainty about whether prices are being generated fairly and transparently.

Benchmark users frequently extend far beyond active traders. Manufacturers, lenders, investors, procurement agencies and policymakers may rely upon benchmark prices without participating directly in the underlying market. Their confidence depends less on individual transactions than on confidence that the institutions supporting the market remain credible over time.

The experience of international benchmark reform following the investigations into manipulation of the London Interbank Offered Rate (LIBOR) illustrates the point. Confidence in a benchmark ultimately depends as much upon institutional credibility as it does upon market efficiency.

INFORMATION INTEGRITY

Institutional confidence must be supported by confidence in the information surrounding benchmark prices.

Information integrity concerns the transparency, accessibility and consistency with which benchmark prices are calculated, disseminated and explained. Market participants are more likely to rely upon a benchmark when they understand how prices are generated and when the underlying methodology is applied consistently over time.

Transparent methodologies, publicly available market data and clear governance arrangements reduce informational asymmetry and allow participants to evaluate benchmark credibility independently. In that sense, information performs an institutional function comparable to clearing or settlement infrastructure. It strengthens confidence in the prices that markets produce.

Transparent methodologies, publicly available market data and clear governance arrangements reduce informational asymmetry and allow participants to evaluate benchmark credibility independently.

It does not, by itself, create benchmark adoption. It does, however, make adoption substantially more likely.

MARKET ADOPTION

A benchmark derives its significance from use rather than existence.

Prices begin to function as benchmarks when they are adopted for purposes extending beyond the transactions that originally produced them. Long-term supply contracts, procurement formulas, indexed invoices, financing arrangements, collateral valuation, portfolio management and hedging decisions all represent observable forms of benchmark adoption. At that stage, participants are no longer responding only to market prices; they are organising commercial relationships around them.

The process is cumulative. Wider adoption attracts additional participation and liquidity, strengthening the credibility of the benchmark itself. Greater credibility, in turn, encourages broader adoption. Confidence and usage reinforce one another.

Benchmark status is therefore neither automatic nor permanent. Markets experiencing declining liquidity, weakened governance or diminishing participant confidence can gradually lose benchmark relevance.

FROM BENCHMARK FORMATION TO PRICING INFLUENCE

The four conditions are best understood as a reinforcing institutional system rather than a linear sequence. Representative markets generate credible prices. Institutional trust and information integrity encourage confidence in those prices. Market adoption extends their influence into commercial and financial decision-making. As reliance expands, deeper participation and stronger confidence reinforce one another.

The relationship between the three concepts proposed in this analysis is therefore straightforward. Price Discovery reveals value. Benchmark Formation establishes confidence in that value as a shared reference. Pricing Influence emerges when those references begin shaping decisions across the wider economy.

India's organised electricity markets provide an opportunity to observe this evolution while it is still unfolding. They do not yet exhibit the characteristics of a mature international benchmark. They do, however, illustrate how benchmark formation develops through institutional change rather than through trading activity alone.

INDIA'S ELECTRICITY MARKETS: AN INSTITUTIONAL ILLUSTRATION

The Benchmark Formation framework is intended to explain how benchmark prices emerge across commodity markets. India's organised electricity markets offer a particularly useful illustration because the process remains visible. Rather than examining an established benchmark retrospectively, electricity allows the institutional evolution itself to be observed.

Electricity occupies a distinctive position within India's commodity ecosystem. Long-term power purchase agreements (PPAs), regulated tariffs and bilateral procurement continue to dominate the sector, while organised markets are assuming a steadily larger role in operational and commercial decision-making. That coexistence makes electricity especially useful for examining benchmark formation as an evolutionary process rather than as a completed outcome.

The first element of the framework, Representative Markets, has strengthened as organised electricity markets have expanded over the past decade. Market segments such as the Day-Ahead Market (DAM), Real-Time Market (RTM), Green Day-Ahead Market (GDAM) and ancillary service mechanisms have broadened opportunities for competitive price discovery under changing system conditions. Growing participation and continuing product innovation have, in turn, improved the representativeness of market-generated prices.

Institutional development has progressed alongside market expansion. Successive regulatory interventions by the Central Electricity Regulatory Commission (CERC) have refined market design, scheduling, settlement arrangements, surveillance mechanisms and trading rules. Current discussions on market coupling, capacity adequacy and market integration indicate that institutional development remains active rather than complete. Confidence grows when market participants see that market design continues to evolve alongside the sector itself.

Information Integrity has strengthened in parallel. Exchange platforms publish prices, traded volumes and operational

data through transparent methodologies that enable participants to understand how prices are formed. Utilities, traders, large consumers, investors and regulators are therefore able to assess prevailing market conditions using information that is both timely and openly available.

Perhaps the clearest indication of institutional progress is the changing role of exchange-derived prices. They increasingly inform short-term procurement decisions, commercial planning and market assessments undertaken by utilities, traders and large consumers, even though bilateral contracts and long-term PPAs remain the dominant procurement mechanism. Exchange prices have not displaced established contractual arrangements. Their role has gradually expanded alongside them.

India's electricity markets should therefore be viewed neither as a completed benchmark nor as simply another organised exchange. They illustrate how representative markets, institutional development and growing commercial confidence can gradually extend the influence of market-generated prices. The broader lesson is relevant across commodity markets. Trading platforms create the opportunity for benchmark emergence. Whether benchmarks ultimately develop depends upon the institutions that sustain confidence in the prices those markets produce.

BUILDING BENCHMARK MARKETS

The distinction between Price Discovery and Benchmark Formation has implications that extend well beyond electricity. It offers a broader way of thinking about how commodity markets acquire economic influence.

Much of the discussion on strengthening India's commodity markets focuses, understandably, on expanding liquidity, broadening participation, improving warehousing and logistics, strengthening assaying and delivery infrastructure, introducing new products and deepening financial participation. These are essential elements of market development because they improve the quality and representativeness of price discovery.

They do not, however, answer a different question - why do some market-generated prices become reference points for an entire industry while others remain confined to the exchanges on which they originate?

The experience of internationally recognised commodity benchmarks suggests that benchmark influence develops gradually. No benchmark becomes influential simply because trading volumes increase or market infrastructure improves. Commercial users must first come to regard the prices as sufficiently representative, transparent and institutionally reliable to organise their own decisions around them.

Although electricity provides the principal illustration, the underlying institutional logic is not unique to electricity. Agricultural commodities, metals and energy products differ in their physical characteristics, storage economics and trading structures, but benchmark development across each depends upon broadly similar conditions. Markets must generate representative prices. Institutions must sustain confidence in those prices. Commercial users must then choose to rely upon them.

That final stage is often the least visible, still it determines whether benchmark influence actually emerges.

Benchmark adoption becomes evident when market-generated prices begin appearing outside the exchange itself. They are incorporated into long-term supply contracts, procurement formulas, indexed invoices, financing arrangements, collateral valuation, portfolio management and risk management practices. At that point, prices are no longer serving only traders. They begin coordinating commercial activity across a much wider market.

Benchmark adoption becomes evident when market-generated prices begin appearing outside the exchange itself.

As benchmark use expands, a reinforcing cycle develops. Wider adoption attracts greater participation. Deeper participation improves price quality. Better prices strengthen confidence, encouraging still broader adoption. Benchmark influence is therefore sustained as much by continuing market confidence as by trading activity itself.

The policy implications are straightforward. Investments in market infrastructure should be viewed not only as measures to improve trading efficiency, but also as investments in institutional confidence. Transparent governance, credible regulation, reliable market information and consistent market design all contribute to the conditions under which market-generated prices become trusted economic references.

This perspective becomes increasingly relevant as India seeks to strengthen benchmark development across metals, energy and agricultural commodity markets. Market depth will remain indispensable, but enduring benchmark influence will depend just as much upon the credibility of the institutions supporting those markets.

For analytical purposes, it is useful to distinguish between price-taking economies and reference-setting economies. Price-taking economies organise commercial activity around benchmarks established elsewhere. Reference-setting economies generate benchmarks that others voluntarily adopt because they are regarded as credible representations of value. The transition from one to the other depends less on the absolute size of markets than on the confidence that market institutions are able to sustain over time.

CONCLUSION

Commodity markets are widely recognised for their role in discovering prices. Their wider economic significance lies in the ability of those prices to become trusted reference points beyond the market in which they originate.

This paper has argued that an important institutional process connects Price Discovery and Pricing Influence. The Benchmark Formation framework describes that intermediate stage through which market-generated prices acquire the credibility, transparency and market acceptance necessary to function as shared economic references. Benchmark status, in other words, is not produced by trading activity alone. It emerges through the interaction of representative markets, institutional trust, information integrity and sustained market adoption.

India's organised electricity markets illustrate this process while it is still evolving. Exchange-derived prices continue to coexist with long-term power purchase agreements, regulated tariffs and bilateral procurement. But their expanding role in commercial planning, operational decisions and market assessment shows how benchmark influence can develop incrementally, without displacing existing market arrangements. The value of the electricity example lies less in the sector itself than in the institutional insights it offers for commodity market development more broadly.

The framework proposed here also suggests a broader way of assessing market development. Market depth, broad participation and competitive trading remain indispensable because they enable effective Price Discovery. Whether those prices evolve into benchmarks depends upon institutional confidence. Benchmark Formation is the process through which that confidence is established. Pricing Influence is the consequence when market participants begin relying upon those benchmarks across an expanding range of economic decisions.

For India, the long-term challenge is therefore larger than improving the efficiency of price discovery. It is to build markets whose prices command sufficient confidence to become reference points for others. That is ultimately how commodity markets extend their influence beyond trading floors and become institutions that help coordinate economic activity.

How India Can Transform Local Prices into Global References



DAMODHARAN NAVANEETHAKRISHNAN
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Damodharan has authored insights, facilitated workshops, and contributed to thought leadership initiatives that shape industry dialogue on evolving trends and regulatory impacts. By combining rigorous analysis with practical advisory, he delivers solutions that help clients uncover the drivers behind market shifts and translate insights into actionable strategies. This approach ensures decisions are informed, value-oriented, and aligned with long-term resilience—giving clients' confidence that they are supported by CRU's proven expertise and market perspective.

> *The key differentiator of an international benchmark from a published price number — and why India, despite being a significant player in the metals, mining and fertiliser industries, has no international reference for its prices.*

EXECUTIVE SUMMARY

India is a major player across metals, mining and fertilisers. It is the second largest producer of aluminium, steel and urea, the 4th largest producer of iron ore and one of the most globally important importers of metallurgical coal and fertilisers. In several of these markets, India sits at the centre of global supply or demand flows, yet, outside of fertilisers, no single Indian price series has become the internationally recognised benchmark. In markets where commercial contracts depend on references, independent market intelligence helps companies judge whether a price series is robust enough to rely on.

In this insight, we examine why certain price series are preferred to use as global benchmarks in contracts, what structural conditions they require, and why Indian price series, despite their market significance, have not yet penetrated. We study what makes a price series eligible for use in commercial contracts, and what steps are needed for it to become a credible international reference.

HOW WILL THE USE OF INDIAN DOMESTIC PRICES IN COMMERCIAL CONTRACTS BY INTERNATIONAL COMPANIES BENEFIT INDIAN INDUSTRY?

A domestic benchmark matters when it improves day-to-day commercial decisions. If the reference price reflects Indian market conditions more closely, buyers and sellers can price contracts with less basis risk, manage margins more effectively, and reduce repeated disputes over freight, duties, port charges, and local supply conditions. It also makes budgeting and working-capital planning more reliable, because finance and commercial teams can forecast revenue and cost against a price that better matches reality.

A credible local benchmark can also improve the financing discussion indirectly. Lenders, investors, and trading houses are generally more comfortable where future cash flows are easier to explain, compare, and stress-test. A benchmark that is widely used and trusted can therefore make mines, smelters, mills, terminals, and trading businesses easier to assess and finance, because pricing risk becomes more visible and easier to manage.

A benchmark that is widely used and trusted can therefore make mines, smelters, mills, terminals, and trading businesses easier to assess and finance, because pricing risk becomes more visible and easier to manage.

DEFINING A CONTRACT-GRADE BENCHMARK

After examining the existing price series widely used in commercial contracts in international markets such as Aluminium Rotterdam/MJP/US Midwest premium, or Iron Ore 62% Fe CFR China or Metallurgical Coal HCC FOB Australia; it becomes clear that a price series should contain these six characteristics:

- **Physical Liquidity:** concentrated and continuous trade between diverse buyers and sellers at a defined hub.
- **Product Standardization:** The price series must reference a clearly defined, commercial-grade specification that the industry produces, trades, and recognizes as fungible.
- **Governance & Methodology:** The price series should adhere to independently administered principles such as those of the International Organization of Securities Commissions (IOSCO), with a clear, transparent methodology and sufficient checks and balances against manipulation.
- **Cleared Derivatives:** Enabling industry participants to hedge their exposure via futures or swaps. This increases the adoption of the price series in commercial contracts.
- **Currency & Convertibility:** The price series should be quoted in USD or in a fully convertible local currency. This enables foreign counterparties to participate in transactions without FX or capital-control friction.
- **Track Record & Resilience:** A long track record builds confidence and trust, as the price series will have endured global crises, financial shocks and geopolitical events, increasing the confidence to use in contracts for the long term.

In practice, the challenge for market participants is not simply identifying a

price, but understanding whether it is sufficiently robust, transparent and repeatable to support commercial contracts. This is where independent market analysis and price assessment become especially valuable.

Below is a reference to key price series and their characteristics. The price series mentioned are only samples and not a complete list across commodities or regions. I have plotted how these price series fare against each of these characteristics.

Characteristic	Rotterdam Aluminium Premium	Coal - HCC FOB Australia	Iron Ore - 62% Fe CFR China	Steel - US Midwest HRC	Urea - FOB Middle East
Physical liquidity	Europe responsible for 29% of global (ex-China) primary aluminium consumption	Large seaborne trade	Massive China-bound flow	Strong US domestic flow	Large tender-driven flow
Product standardisation	P1020A ingot spec	Premium Low-Vol HCC	62% Fe fines	HRC commercial grade	Granular 46% N
Governance & methodology	PRA-assessed	PRA-assessed	PRA-assessed	PRA-assessed	PRA-assessed
Cleared derivatives	CME futures	SGX/CME futures	SGX futures	SGX/CME futures	SGX/CME futures
Currency & convertibility	USD denominated	USD denominated	USD denominated	USD denominated	USD denominated
Track record & resilience	Long, crisis-tested	Long, crisis-tested	Long, crisis-tested	Long, crisis-tested	Long, crisis-tested

Among these, three are must have characteristics: Physical Liquidity, Product Standardisation, and Governance & Methodology.

WHAT MAKES A PRICE SERIES UNDESIRABLE AS A BENCHMARK?

The very purpose of using a price series is to maintain neutrality and to reflect the market. Of course, there are other benefits, but these form the core objectives. Certain factors can make a price series undesirable, such as:

- **Prices are administered** (subsidies, tenders, mill list prices).
- **Monopoly or Duopoly markets - Supply or demand is concentrated** in 3–4 players or locked inside captive/integrated chains.
- **No single dominant logistic centres** - multiple hubs with no dominant delivery point.
- **The currency is not freely convertible** – to reduce friction for global participants to freely trade.
- **Trade policy is volatile** - export duties, bans and anti-dumping break multi-year continuity.
- **No cleared derivative exists** to allow hedging.

The very purpose of using a price series is to maintain neutrality and to reflect the market.

ATTEMPTS TO GET INDIAN PRICES RECOGNISED INTERNATIONALLY

Indian entities have made efforts to use domestic prices in international contracts, but in most cases these references have not become widely adopted by international counterparties. The attempts tend to fall into two categories: domestic industrial contracts and aspirational benchmark launches.

WHERE AND WHY INDIAN DOMESTIC PRICE SERIES FALL SHORT

Indian price series generally fall short on the same core characteristics that make a benchmark internationally usable. They are often too concentrated, too opaque or too policy sensitive. In many cases, prices are still driven by bilateral negotiation, administered pricing, subsidies, or trade restrictions rather than continuous market clearing. That means international counterparties may see the price as informative, but not yet contract-ready.

Price Series	Commodity	Outcome
NMDC monthly iron ore prices	Iron ore	Worked domestically, not internationally
Indian HRC mill list prices	Steel	Worked locally, not internationally
India aluminium premium initiatives	Aluminium	Did not take off
CFR India met coal calls by Indian steel mills	Metallurgical coal	Did not materialise as a benchmark, due to less liquidity of CFR India transactions
Indian fertiliser tender outcomes	Urea / DAP	Moved global prices, but not as a benchmark

For an Indian price series to be used in commercial contracts by international companies, it must pose characteristics of a real benchmark market, not just a local reference price. That means the underlying market needs regular spot trading, consistent product definitions, transparent reporting, independent assessment, and enough liquidity for counterparties to use and hedge it with confidence. The objective is not to create a "national price" for prestige, but to make the reference **credible, repeatable, and contract-grade** for cross-border buyers and sellers.

1. How Indian companies enable this?

Indian producers, traders and large consumers need to move away from opaque, bilateral pricing and help

Commodity	Market structure	Desirable characteristics	Where it stands today?	Why not preferred?
Indian aluminium premium	Highly concentrated oligopoly — 3 major producers dominate	Thin domestic liquidity; no deep derivative; no widely accepted premium assessment	Local reference at best	Net exporter market; no liquidity hub; no derivative
Indian HRC	Concentrated oligopoly — a few large mills dominate, but many smaller players exist	Standardised grades exist, but pricing is fragmented; limited hedging	Domestic pricing reference only	Fragmented pricing, import parity, policy volatility
Indian iron ore	Concentrated / semi-administered market — NMDC and captive miners dominate	High domestic volume, but low merchant trade and weak price discovery	Administered domestic price, not benchmark	Captive mining, export restrictions, low-grade exports
CFR India met coal	Fragmented supply market — many global producers; not monopoly/duopoly	Large import volume, but fragmented by grade and port	Import cost reference, not benchmark	Too fragmented by grade/port; derivable from FOB Australia + freight
Indian fertilisers	State-influenced, procurement-led concentrated market — demand concentrated through public importers	Standardised products, but pricing is tender-driven and policy-heavy	Tender-driven demand signal, not benchmark	Subsidy-driven market, state procurement, no continuous spot price

build a visible market. That means reporting more spot transactions, using one clear product specification, and writing more contracts on an index-linked basis rather than fully fixed prices. This will in turn open opportunities for hedging and risk management, because a benchmark only becomes meaningful when market participants actually rely on it in day-to-day business.

2. What role do regulators play?

Regulators need to protect the credibility of the reference price. That means clear and stable methodology rules, market surveillance, anti-manipulation safeguards, and consistent treatment of benchmark data. They should also avoid actions that break continuity or distort discovery, such as sudden export bans, ad hoc duties, distorting subsidy programmes or arbitrary restrictions. If Indian prices are to be adopted internationally, the market must be seen as independent, stable, and rule-based.

3. How can government support?

The government influences how the market functions. It should reduce policy uncertainty, limit abrupt trade interventions, and where possible allow more market-based pricing and less administered pricing or subsidy-driven procurement. In sectors such as fertilisers, iron ore and steel, that means supporting continuous trade, clearer logistics hubs, and freer price discovery. In simple terms: if India wants its prices to matter globally, the market must be allowed to form those prices more often than policy does.

CONCLUSION

India's scale in metals, mining and fertilisers is undeniable, but scale alone does not create a global benchmark. A price series becomes internationally useful only when it is transparent, liquid, standardised, hedge-able, and trusted by the market. Where Indian prices fall short on these conditions, they remain commercially important but local in nature. For Indian companies and policymakers, the implication is clear: if Indian prices are to be used in international contracts, the market must become more market-led, more consistent, and less policy-distorted. Until then, global contracts will continue to rely on established international references, with Indian prices used mainly as domestic signals and differentials. In markets that are still evolving, the most useful support comes from independent analysis that helps companies distinguish between a local number and a true contract-grade reference. That is where transparent market insight becomes most valuable.



Copper

Copper conducts power without resistance - a reminder that flow, not force, often leads to brilliance