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Vol. 21 No. 11 | November 2022

Registered-RNI No. MAHENG/2002/7908

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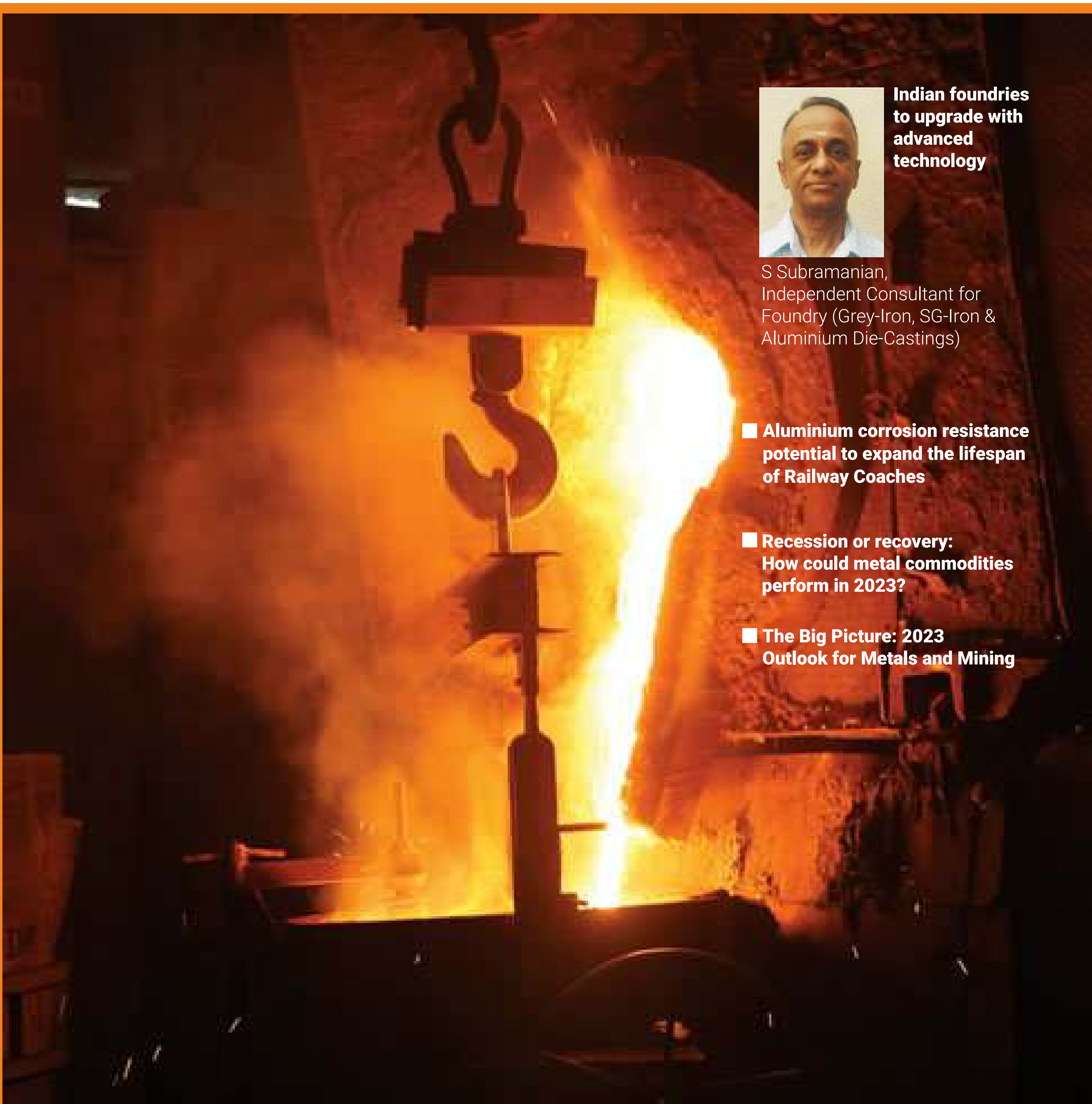

Indian foundries to upgrade with advanced technology

S Subramanian,
Independent Consultant for Foundry (Grey-Iron, SG-Iron & Aluminium Die-Castings)

- **Aluminium corrosion resistance potential to expand the lifespan of Railway Coaches**
- **Recession or recovery: How could metal commodities perform in 2023?**
- **The Big Picture: 2023 Outlook for Metals and Mining**

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Editorial Desk

D. A. Chandekar
Editor

Dear Readers,

The global IT industry headquartered in the US, has started job cuts on massive scale. Yes, the same IT industry which attracted millions of youth by its huge packages, designer offices, lavish and free working environment, is struggling to survive today. The job cuts have mainly happened in the US which is a clear sign of recession being just round the corner. I am afraid the job cut wave will soon hit the Eurozone too. In the last few years IT sector had become an integral part of 'The Great American Dream' of almost every teenager across the world and this sector was seen as the 'gateway to the US' for a quality and wealthy lifestyle.

In the pandemic period this sector first started the concept of 'work from home' on a mass scale and saved millions which were earlier being spent on the office infrastructure and employee welfare. If one scans through the balance sheets of IT companies, surprisingly many have shown rise in the profits in covid period, not by increasing the business but by reducing the costs. Again, I am not saying that this recession will dent the IT sector permanently but its impact will surely be felt till the world completely comes out of the recession tunnel. I do understand that one can not imagine a world without IT or ITES. Such is its impact on all walks of life !

In all these discussions and analysis, we tend to forget one basic fundamentally important fact. The IT is not an industry by itself. It is an enabler, supporting sector to the real world economy. This means if there would have been no brick and mortar industry, no IT would be required, isn't it ? We all know that for the last 2/3 years, the deadly pandemic not only damaged the human life but also made a deep blow in the world economy. The real world activity followed by the companies suffered tremendous losses during this period and it is natural that their IT budgets would get squeezed or at least deferred till the situation normalizes. Thus, though IT companies made temporary profits in the pandemic period, ultimately they have to follow the fortune of brick and mortar economy. If there are not enough IT projects in the market, the job cuts are inevitable, isn't it ?

The core activity in the real world economy is undoubtedly infrastructure development and the metals industry is positioned exactly in the center of this activity, assuming the most important position. Our industry not only imparts strength to the building or any structure, but to the whole economic activity all over. Thus strengthening of this core activity will ultimately impact positively on all the stakeholders of the economy including the IT sector. After all, a healthy, sustainable economy model will have the right amount of emphasis on every aspect of it, agriculture, industry (meaning brick and mortar) and the services (including IT & ITES).

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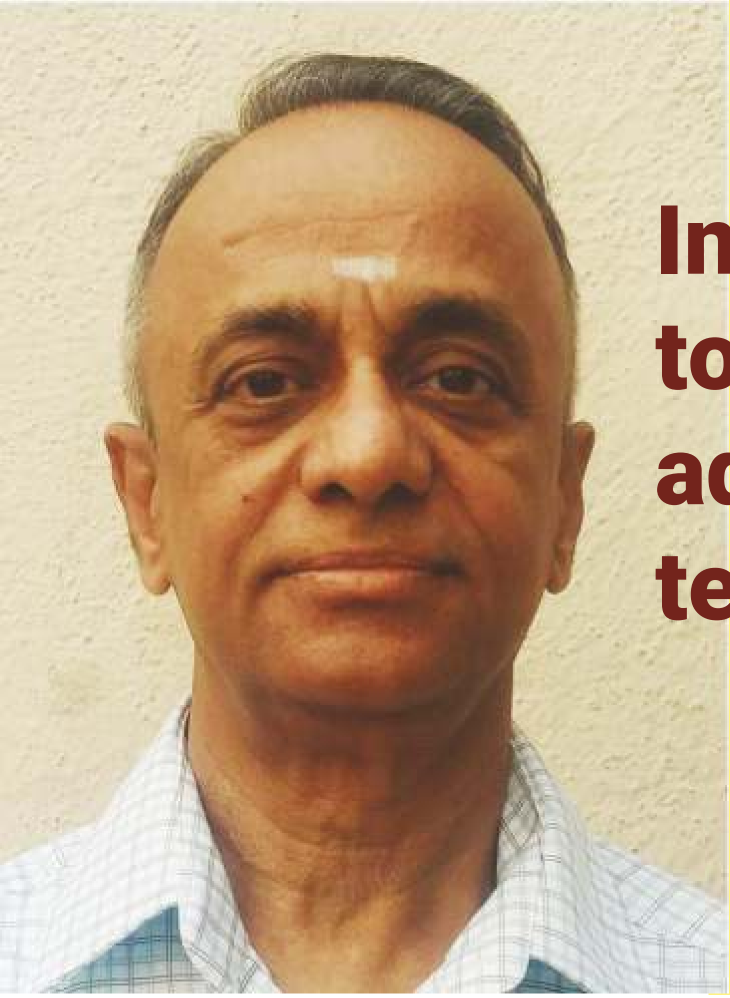


Indian foundries to upgrade with advanced technology

S Subramanian, Independent Consultant for Foundry (Grey-Iron, SG-Iron & Aluminium Die-Castings)

D.A. Chandekar, Editor & CEO of Metalworld Publication had a one-to-one discussion with S Subramanian, Independent Consultant for Foundry (Grey-Iron, SG-Iron & Aluminium Die-Castings) to understand the present status of the Indian Foundry Industry. Mr Subramanian also elaborated more on the importance of technology upgradation for the Indian Foundries at this stage and also highlighted more decisive factors that impact the foundries.

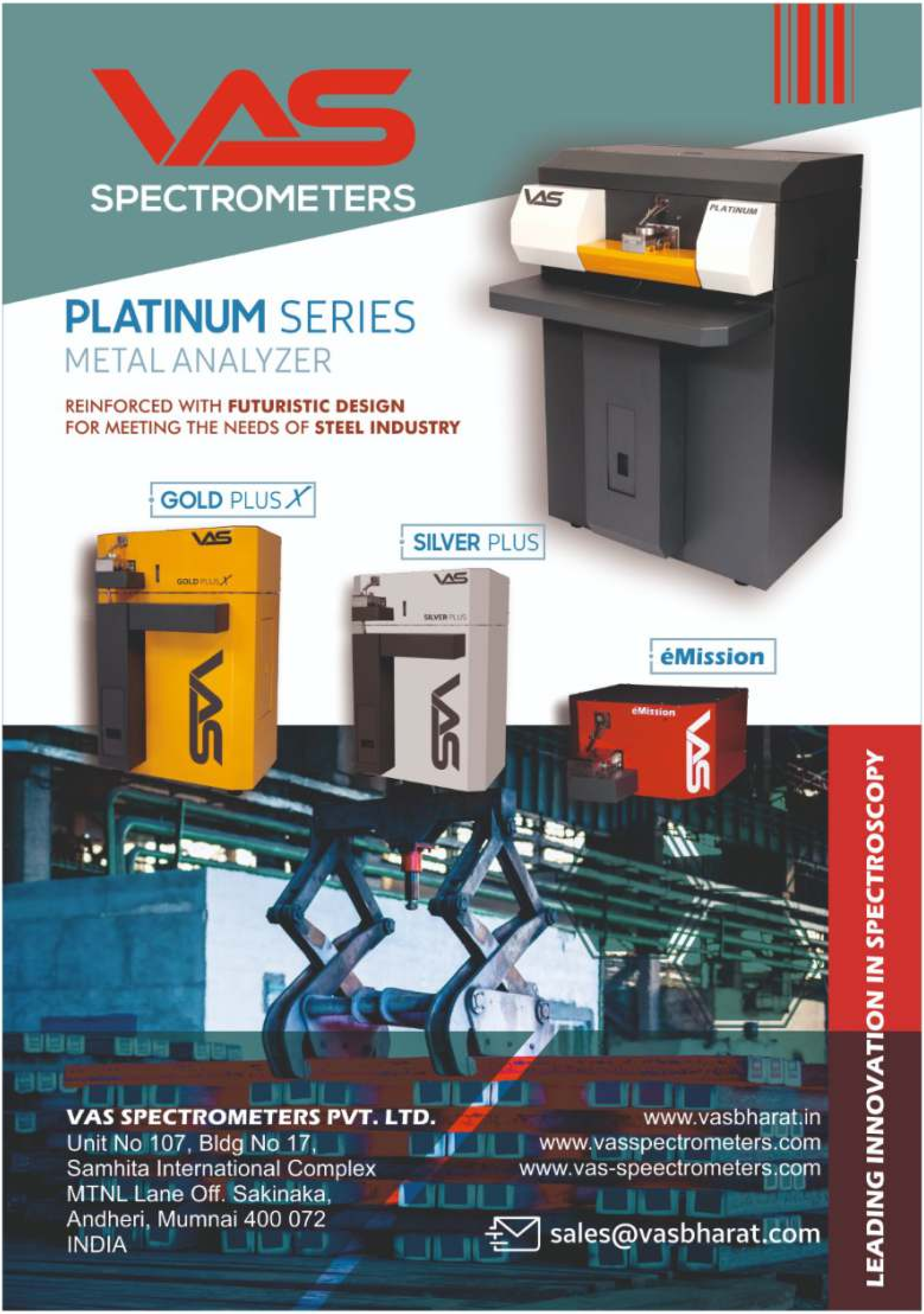
Excerpts :

How do you see the present status and future of the Indian foundry sector?

The foundry sector is looking up with bags full of orders both domestic and export. Having gone through a lean patch during the pandemic, foundries have embraced cost-effective solutions to meet future challenges. The advent of EVs in the automobile sector has encouraged preferential investments in the Aluminium alloy die-casting business deviating from the traditional Grey and Ductile iron-casting route. Investors not among the foundry sphere too are pitching in to grab the market for Aluminium castings. Foundries making iron castings for other sectors like construction and general engineering would continue to grow as industrial activity surges ahead.

How do you see that technological upgradation is necessary for foundries?

Technological upgradation is vital for meeting ever-increasing demands on volumes and quality of castings. The Indian scenario is a curious mix of sophistication and tradition. Foundries that embrace higher values in their cast products hold the edge in attracting end users who need them most. Technological upgradation in process equipment, automation, and integration of vigilance/measurement devices with manufacturing activities are the key drivers in value creation. Foundries rooted in archaic processes and machinery, substandard/ungraded input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materials, and unskilled manpower, need to shift their focus to upgradation and migrate in pursuit of superior quality.

What are the decisive factors that impact the performance of the foundry?

Leaving aside the manufacturing cost, which of course is the backbone of the business, the castings made must be saleable without aftersales ripples that upset the apple cart. In that perspective making good castings consistently is the axiom easier said than can be practised while the objective must be that. The sand casting process is replete with earth-based minerals processed / semi-processed/unprocessed and metallic inputs in limitless varieties. Operating procedures standardized at one point in time need course correction through validation when acceptance criteria are altered due to scarcity or economic decisions.

The case of die casting is a lot better with reliable alloy inputs, proven treatment techniques and close conformance to cast profiles. Nevertheless, die castings depend on tooling well designed for ease of operation, maintenance, and extended service. Many simulation packages are available today to verify design decisions and make suitable changes that would close in on the first-time-right paradigm. Still, the parametric assumptions and applications made at the operating workstation together with the capability of the software can impact foundry performance significantly.

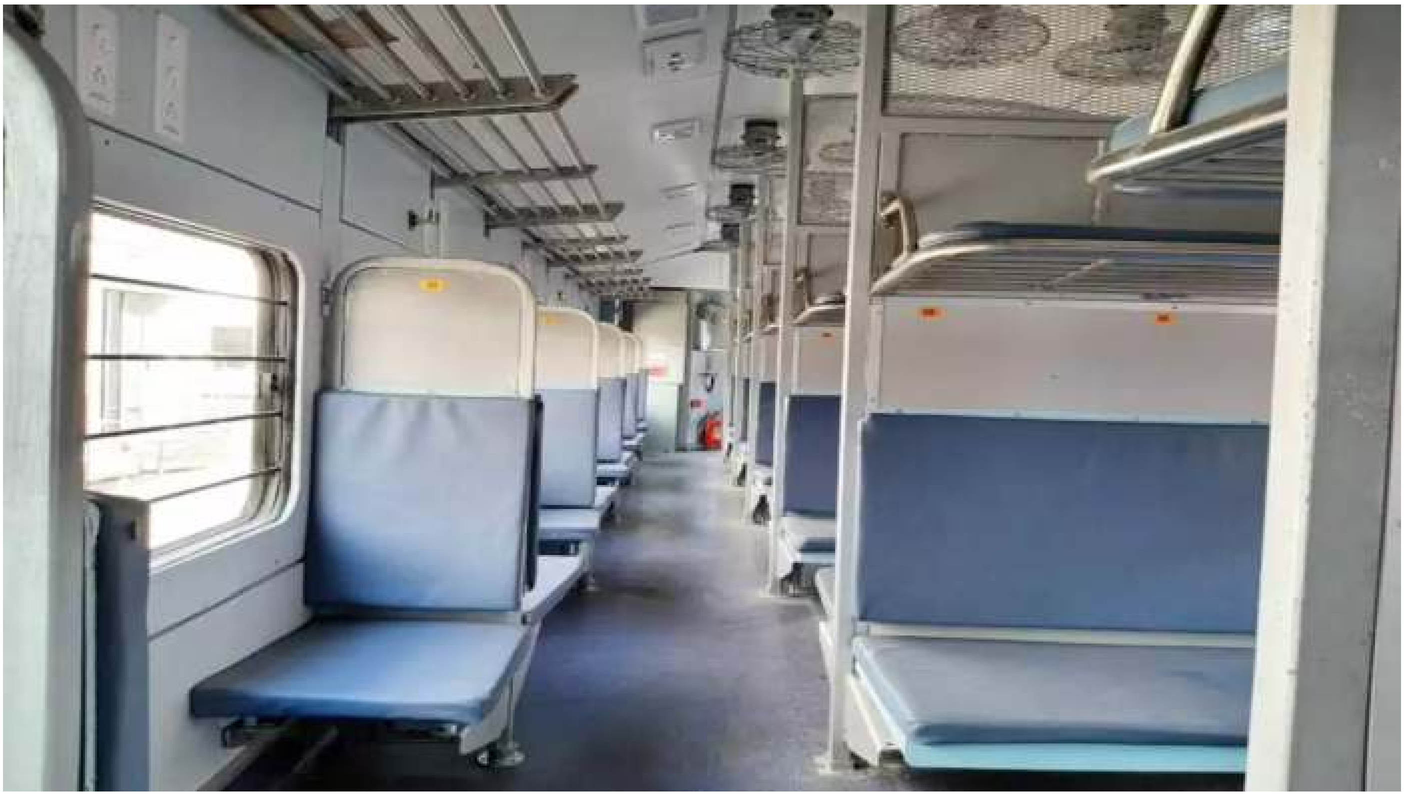
Your impressions on the implementation of Foundry 4.0

Under the umbrella of Industry 4.0, many discussions have taken place to place Foundry 4.0 to merit attention. The precision levels and aesthetics not

forgetting the internal soundness and integrity of the cast material require the elevated status of compliance and consistency to meet the challenges of 4.0 inclusivity. Vagaries in raw material quality, supply disruptions, state policy declarations, and more such uncertainties apart from the choice of process machinery and processing skills make it appear like a mirage. Many large foundries with sophisticated equipment still depend on manual operations at some locations within the mechanized flow. Less said about foundries that cannot afford to invest in fail-safe high-quality infrastructure. Exclude foundries staying at 1.0 with artisans who work with skilled hands as know-alls, in under-equipped layouts and unsafe conditions/environments. To sum up, there is a long way to go towards Foundry 4.0.

What does the foundry sector expect from policymakers?

Casting buyers are squeezing the margins of the foundries year after year while imposing stringent quality requirements that increase manufacturing costs. Besides these, inflationary trends and measures taken by state / central banks are escalating input and processing costs thus shrinking the margins available for businesses. The foundry sector requires sops for ease of manufacturing and to facilitate procurement of foundry materials at reasonable prices through intervention by the state to control prices, minimize the tax burden and by relaxing export restrictions.



Aluminium corrosion resistance potential to expand the lifespan of Railway Coaches

Pragun Jindal Khaitan

MD, Jindal Aluminium

Air pollution and greenhouse gas emissions that have resulted from the fast growth of human civilisation have threatened people for many years. As the transportation industry develops, energy conservation and pollution reduction are becoming increasingly important. The railways are a significant part of the transportation sector andour trains continue to be the favoured mode of transportation, carrying millions of passengers and tonnes of freight every year because of their more reasonable prices, comfort, and convenience. As a result, the railways have continued to improve their services and modernise their mechanics while beginning to prioritise energy conservation and reduce pollution. Finding its beginnings as a mode of transportation during the 19th century's Industrial Revolution, the railways have undergone continual development improving speed and safety while incorporating newer technology.

Reducing aerodynamic resistance, transmission loss, tyre rolling resistance, and weight are just a few strategies to increase energy efficiency and lower CO2 emissions. One effective option to make trains more efficient is a lightweight but robust structure. Metals, particularly cast iron and stainless steel, have historically been the primary material used in the manufacturing oftransportation machinery, the railways included. Aluminium due to its weight, corrosion resistance, formability, high specific strength, and comparatively low price could replace the traditional metals.

Using aluminium reduces the overall weight of a rail car body

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E-mail: info@saruaikoh.com, customer.support@saruaikoh.com, Website :- www.saru.co.in by 50%. It is one of the key raw elements that are enabling a transition for the railways. As a primary building material used in new age trains, aluminium now is also being used in contrails that join the train's floor to the sidewall, the ceiling, the sideboards, and the floor panels as well.

After successfully opting to use aluminium for its metro rakes, India is now keen on putting it to use in long-distance trains like the Rajdhani and Shatabdi Express trains as well. While the Government of India has cleared the use of aluminium for next-generation trainsthat will be part of its vast railway networks spanning a total route length of 67,956 km, Japan and several European nations have already been enjoyingthe benefits of using aluminium train coaches for over 15 years.

Versatile benefits

Because there are fewer parts and strong corrosion resistance, aluminium is easier to build than steel.With its qualities of being lightweight, having strong corrosion resistance, having good formability, having high specific strength, and being relatively inexpensive, aluminium delivers a balanced performance. Aluminium weighs about a third as much as steel, but because of strength requirements, the majority of aluminium parts used in the transportation industry weigh around half as much as the equivalent steel parts.

Aluminium has several benefits over other metals in applications ranging from rapid transit and suburban rail systems to high-speed trains and freight trains. In rapid transit and suburban rail systems, where trains must frequently stop, significant cost savings can be realised by using aluminium body coaches since less energy is used for acceleration and braking.According to a study published by Aluminium Insider, new aluminium waggons' energy consumption can be reduced by up to 60% by combining the light-weighting of trains with other similar techniques. On average, 5 tonnes of aluminium are used by each of these waggons.

Green Future

Aluminium is the future of railway architecture, be it with the coaches and wagons or even other signalling infrastructure and station furniture. Since aluminium is corrosion-resistant, it has the potential to extend the lifespan of railway coaches lasting nearly 40 years with lesser maintenance. The existing trains in use by the Indian Railways have a 35-year lifespan with aluminium adding another 5 years. This also ensures that coaches and wagons made of aluminium benefit from a higher salvage value when the metal is put to reuse at the end of its life cycle. The other benefit that makes aluminium a sought-aftermetal is that the production process is faster and coaches or wagons can be delivered within a lesser time frame.

Even though it is asserted that aluminium initially costs more than standard coaches and waggons, the railways will undoubtedly benefit in the long run. Aluminium waggons can carry 7-8% more weight up to 70 tonnes than a stainless-steel waggon, which can only transport about 65 tonnes. Finally, any project that generates a rate of return of more than 15% is seen as commercially feasible by the Indian Railways, which have made enormous strides in their offerings to their users. But with a higher rate of return of 25–30%, aluminium is a material that can be an effective collaborator in a bright future for railways all over the world.


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The Big Picture: 2023 Outlook for Metals and Mining

- Early 2022 was a robust period for the metals and mining sector, buoyed by record high prices for some commodities, supply chain constraints and rising energy transition-related demand. Macroeconomic conditions soured going into midyear, however, leading to weakening near-term demand expectations and declining commodity price trends. As 2023 approaches, we examine some of the key trends facing the industry, noting that near-term downside risks should only augment supply-side opportunities related to medium-term constraints.
- Deteriorating global macroeconomic conditions are expected to persist into early 2023, representing a downside risk to the metals and mining sector as many commodity prices slide and equity market support weakens. Producers will be impacted by narrowing margins, while the exploration sector will restrain activity amid tighter financing conditions. We anticipate conditions to improve during the year, however, as central banks gain the upper hand on inflation.
- Lower activity levels in the second half of 2022 and through 2023 will reinforce the industry's importance to the global energy transition. We forecast supply constraints affecting commodities critical to the effort to emerge as early as 2024, with demand expanding markedly on rising electric vehicle sales and the shift toward renewable energy technologies.
- As governments focus increasingly on meeting critical materials requirements through domestic and regional supply chains, the mining sector should gain additional support for project development in the near to medium term, buoyed by high prices through 2026 compared with pre-pandemic prices.

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- **Macroeconomic concerns counter fundamentals**

  Macroeconomic events have dominated commodities markets for most of 2022, and with the increasing threat of global recession, they will likely weigh on fundamentals again in 2023. In addition to multidecade-high inflation driven by supply chain issues arising from the COVID-19 pandemic, the major economies have been grappling with other concerns that are not expected to ease going into 2023.

- **Energy transition to fuel medium-term demand**

  Global efforts to decarbonize are driving the rollout of technologies that are increasing demand for raw materials, bringing about near-term challenges in the commodities sector. For many commodities whose supply and demand we cover through 2026, we now believe that the increasing consumption will outstrip the mining industry's ability to ramp up supply, resulting in commodity deficits as early as 2024.

- **Difficult financing conditions amid recession fears to impact exploration**

  As we approach the end of 2022, all signs point toward a reversal of fortunes for the exploration sector. As 2023 approaches, global inflation, geopolitical instability and recession fears are taking their toll on exploration financing. With the increasing uncertainty, exploration budgets will continue to focus on lower-risk exploration at mine sites and advanced projects, a worrisome trend since the reduced focus on grassroots projects has resulted in a notable decline in new major discoveries.

- **Copper supply constraints**

  After almost a decade of limited copper-focused exploration and project development, the outlook for future mined supply faces significant headwinds as demand for metals related to the global energy transition accelerates over the coming years. Many potential new mines will also face rising environmental, social and governance scrutiny, which will likely limit the number of new projects available for the global mined copper supply pipeline.

- **Battery metals: Strong headwinds dampen near-term demand; resource security supports supply increases**

  The battery metals market will enter 2023 with lingering production-side challenges for passenger electric vehicles and weaker demand. China's zero-COVID policy could cause more disruptions to passenger electric vehicle-related battery metal supply chains in the coming year. More expensive vehicles could shift the passenger electric vehicle market from being supply-capped back to being demand-constrained. These factors are playing out under increasing energy transition commitments by global policy makers.

- **Mining mergers and acquisitions: Inflation could dampen momentum**

  Mergers and acquisitions activity in the metals and mining sector has been robust to date in 2022, capitalizing on high commodities prices. The souring macroeconomic environment and resulting market volatility will likely make for cautious buyers in 2023, although these same factors may expand the pool of assets available for purchase. Other drivers may also be at play, particularly the increasing demand for energy metals against the backdrop of the green energy transition and mobility electrification.

Copper prices to reach $11,000 in 2023 :Goldman Sachs

Copper price rose on Thursday on hopes that an easing of coronavirus controls in China will increase demand, with Goldman Sachs predicting prices could reach a record high of $11,000 in a year.

Copper for delivery in March rose 1.3% on the Comex market in New York, touching $3.91 per pound or $8,602 per tonne.

Copper is up 3% this month after rising 10.6% in November as expectations began to build that China will retreat from its zero-covid policies. Recently, the country dropped key parts of those rules.

Analysts at Goldman Sachs said they now expect copper to be undersupplied in 2023 and "peak supply is now immovably fixed in mid-2024 … generating deficits from that point."

They said China may seek to rebuild depleted inventories next year, adding to copper demand, and predicted prices would average $9,750 a tonne in 2023 and $12,000 in 2024.

"A wave of new copper mine supply is washing through the market, with smelters reaping the benefits in higher treatment and refining charges (TCRCs)," wrote Reuters columnist Andy Home.

Copper rises to 3-week high on hopes of strong Chinese demand

London copper prices rose for a fourth consecutive session on Friday, heading for a second straight weekly gain, as an easing of COVID-19 curbs in China boosted demand expectations in the world's top consumer of the metal.

Three-month copper on the London Metal Exchange rose 0.6% to $8,592a tonne, as of 0324 GMT. The market, which hit its highest since Nov. 14 at $8,592 a tonne, as of 0324 GMT. The market, which hit its highest since Nov. 14 at $$8,598 earlier in the session, is up for a second week in a row.The most-traded copper contract on the Shanghai Futures Exchange added 1.2% to 66,830 yuan ($9,604.08) a tonne.

Glencore sees huge deficit in Copper coming

Glencore said in an investor update this week, reiterating warnings from other industry players and analysts that a supply crunch could slow the energy transition.

Commodity shortages are looming, and significant mine development is lagging, the mining giant said in a presentation.

"There's a huge deficit coming in copper, and as much as people write about it, the price is not yet reflecting it," Glencore's chief executive Gary Nagle told analysts at the presentation, as carried by Bloomberg.

According to Glencore's estimates, under the net-zero emissions pathway of the International Energy Agency (IEA), the world will be more than 50 million tons short of copper between 2022 and 2030.

"But increasing mine supply is challenging given heightened country and operational risks and the industry remains wary of multi-billion dollar investment decisions," Glencore said in the presentation.

The miner plans to expand its copper portfolio with a new project, El Pachon, in Argentina.

However, globally the copper industry's expansionary capex is expected in 2025 to be at $12 billion, which would be 61% below the 2012 peak of $32 billion, Glencore said in its presentation, citing estimates from Wood Mackenzie.

The IEA has said for years that rising deployment of clean energy is "set to supercharge demand for critical minerals." By weight, mineral demand in 2040 will be dominated by graphite, copper and nickel, the IEA said. The growing need for grid expansion will underpin a doubling of annual demand for copper and aluminum by 2040, the agency said last year.

Copper prices are set for a new record-high next year amid an "extremely" tight market, Goldman Sachs said this week.

"The sequential increase in policy targets and commitments to green transition, alongside a minimal supply response so far... have resulted in earlier and larger open-ended deficit conditions that essentially are already here, not beginning at some point in the future," Nicholas Snowdon, metals strategist at Goldman Sachs, said, as carried by Financial Review.

Goldman expects copper prices to top in 2023 the current record-high of $10,845 per ton hit in March 2022, and raised its 12-month price target to $11,000 a ton from $9,000 per ton.

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Odisha CM Naveen Patnaik lays foundation stone of Vedanta Aluminium Park

Odisha's chief minister Naveen Patnaik on Thursday laid the foundation of a mega aluminium park, to be set up by Vedanta Ltd. in the presence of Vedanta chairman Anil Agarwal.Spread over 253 acre at Jharsuguda, the Vedanta Aluminium Park will be one of India's largest metal parks. With its strategic location and features and a plethora of amenities, the park will provide aluminium-based businesses unmatched advantage to exponentially grow their business.

It is a joint venture between Vedanta Aluminium and the Odisha Industrial Infrastructure Development Corporation (IDCO).

"The Vedanta Aluminium Park will be a world-class industrial facility where companies can set up their manufacturing units and draw hot metal (molten aluminium) from Vedanta's smelter at Jharsuguda to manufacture their products," the company said.

Vedanta's aluminium smelter at Jharsuguda is among the largest in the world, with a capacity of 1.75 million tonne per annum.

"Odisha is fast emerging as a major investment destination in the country. We are a progressive state with clear focus on transformation in all sectors and inclusive development. At Odisha, we offer you better than the best services, support, and incentives – beyond the best in the country. Investor friendly initiatives and transformative governance put us on path of progress. We will continue to work with each of you and understand your requirements and provide the best support system," said CM Patnaik.

Aluminium industry operating margin to decline due to higher production : CRISIL

Operating margins of Indian primary aluminium producers is expected to decline more than 1,200 basis points (bps) this fiscal to 22-24% from a decadal high of 36% seen last fiscal, said CRISIL Ratings on Monday, adding that the decline is due to lower realisations and higher cost of production, mainly power.

As per CRISIL Ratings, domestic primary aluminium producers saw record earnings last fiscal on the back of strong realisations when prices reached a historical high amid post-Covid economic recovery, with the global aluminium market turning supply deficit. In the current fiscal, however, operating margin is seen retreating closer to past levels, but would still remain higher than the average of 17% over fiscals 2017-21.

"Despite the moderation in margin, operating profits may remain better than the past 5-year average, partly owing to strong domestic demand growth of 6-7 percent on-year for aluminium products, mainly from the power and construction sectors. The two comprise 70 percent of total sales volume for these manufacturers," it said.

The rating agency highlighted that London Metal Exchange (LME) prices for aluminium have fallen 40% from the March peak to $2,300 per tonne because of extended lockdown restrictions in China and growing recessionary pressures impacting global demand in the first half of calendar 2022. Global supply remained robust driven by production increases in China amid relaxation of power restrictions.

"Prices in the second half of the fiscal are expected to remain range-bound around current levels, supported by low inventory levels at LME and recent production cuts in Europe which may partly offset the impact of higher Chinese production. Overall, global demand is expected to contract 1-2% in calendar 2022 after growing over 5% in 2021, against an expectation of a moderate growth in global supply in the current year. Consequently, average LME price for the metal will range between $2,300- $2,500

per tonne through fiscal 2023 (against $2,774 per ton in fiscal 2022). Domestic realizations are also expected to dip in sync, as they are driven by the landed cost of imports," said Ankit Hakhu, director, CRISIL Ratings.

According to CRISIL, the cost of production for domestic producers can rise 10% on year, driven by rising coal prices. Power cost, constituting 30-35% of production costs is projected to increase the most among all costs, fuelled by an increase in energy demand and disruption in global supply chains brought on by the Russia-Ukraine conflict.

"Domestic producers rely on market purchases for 30 percent of their coal requirements. Further, for linkage coal, materialization will be lower this fiscal as priority is being accorded to the power sector. Despite the increased cost of production, Indian producers are still among the lowest cost in the world driven by highly integrated operations with 70-75 percent backward integration, on average. As a result, Indian producers currently export over 60 percent of their annual production," it added.

While capex intensity for domestic producers will increase, planned capex over the next five fiscals is likely to be around thrice that spent over the past five fiscals. Annual operating profit for this fiscal, despite moderation, is expected to be sufficient to cover ongoing capex.

WTO rules against Trump's steel and aluminium tariffs

Trump's tariffs of 25 per cent on foreign steel and 10 per cent on aluminium outraged America's long-standing allies, including the European Union and Japan, because he relied on a little-used provision of US trade law to declare their steel and aluminium a threat to US national security.China and other trading partners challenged the tariffs at the 164-nation WTO.

In a ruling issued on Friday, the WTO said it was "not persuaded" that the United States faced "an emergency in international relations" that would justify the tariffs.Friday's decision, however, will likely have little real-world impact. If the United States appeals the ruling, it will go nowhere. That's because the WTO's Appellate Body hasn't functioned for three years, ever since the US blocked the appointment of new judges to the panel.

And the Biden administration already reached agreements with the EU, Japan and the United Kingdom to essentially drop the tariffs and replace them with import quotas under which the Trump taxes do not apply. In return, the trading partners dropped their own retaliatory tariffs agianst the United States.

Still, the Biden administration criticised Friday's WTO decision.

"The United States strongly rejects the flawed interpretation and conclusions," said Adam Hodge, spokesman for the Office of the US Trade Representative. "The United States has held the clear and unequivocal position, for over 70 years, that issues of national security cannot be reviewed in WTO dispute settlement." The WTO, he said, "has no authority to second-guess" the national security decisions of member countries.

Biden's trade team has attempted to find a balance between mending fences with US allies angry over Trump's "America First" trade policies, and keeping tariffs that are popular with many US steel and aluminium producers and their workers.

Christine McDaniel, a trade analyst with George Mason University's Mercatus Centre, said the ruling against the Trump tariffs was not a surprise. "Everybody knew that it was clear protectionism," she said. "Technically speaking, countries are able to act in their own self-interest when it comes to national security." The WTO just didn't buy the US reasoning, she said.

Primetals Technologies to supply South wire Company with new SCR copper rod mill for Jinchuan Group

Primetals Technologies has been awarded a contract from Southwire Company to supply rolling mill equipment for a new Southwire Continuous Rod (SCR) copper rod system for the Jinchuan Group Company in Gansu province, China. Jinchuan Group will begin producing electrolytic tough pitch (ETP) copper from the new SCR copper rod mill in mid-2024. The company will use the new system to manufacture wire and cable for the construction industry.

A long-standing relationship

This is the third SCR copper rod system that Jinchuan has ordered, further strengthening the well-established long-term business relationship, and providing additional evidence of the value of the solutions offered by Primetals Technologies and Southwire. Primetals Technologies will engineer, supply, and implement the rolling mill, coiler, and a large portion of the coil handling equipment. The Southwire SCR 7000 rolling mill includes a Morgan No-Twist mill with 13 independently driven roll stands.

The contract also includes a 610-millimeters entry shear and table, one 457-millimeters roughing mill stand, four 305-millimeters roughing mill stands, one 320-millimeters rotary shear and downloop table, and eight 203-millimeters finishing mill stands, all with hydraulic roll mounting, a rod cooling and cleaning system with injectors and air wipes, rollerized turndown, two pinch rolls, coiler, designs for an inline conveyor system, and two oil lubrication systems.

Government to assess appetite of foreign funds in Hind Zinc before stake dilution

The government currently holds a 29.54 per cent stake in HZL, while a 5.54 per cent stake is with public shareholders. Mining mogul Anil Agarwal's Vedanta Ltd is the promoter with a 64.92 per cent stake in HZL.

The government will assess the appetite of large foreign funds in Hindustan Zinc before taking a decision on the timing of dilution of its minority equity stake in the Anil Agarwal-owned metal company, an official has said.

The government currently holds a 29.54 per cent stake in HZL, while a 5.54 per cent stake is with public shareholders. Mining mogul Anil Agarwal's Vedanta Ltd is the promoter with a 64.92 per cent stake in HZL.

The Cabinet Committee on Economic Affairs (CCEA) approved the sale of 124.79 crore shares or 29.54 per cent stake the government holds in the zinc producer. At the current price of Rs 316 a share, a 29.54 per cent stake would fetch about Rs 39,000 crore to the government.

The official said since public float is only about 5 per cent, it would not be feasible for big investors, who put in lump sum funds in the company, as share availability in the market is limited.

"Merchant bankers will first assess the interest of large fund houses in HZL. Once we get a fair idea of the demand, we will take a call on the timing and the quantum of stake that can be offloaded," the official said.

Markets being at an all-time high won't be an impediment in HZL stake sale as the share sale would mainly depend on the outstanding stock available in the market.

Also Read: Russia remains India's top oil supplier for second month in a row in November 2022

"If today foreign investors or sovereign funds want to put a lump sum amount, say Rs 100 crore, into the stock he won't be able to do so as there is not enough public float. In that case, they will wait for the government's offer for sale. The merchant bankers are assessing the appetite," the official said.

As per the latest stock exchange data, in terms of the number of shares, foreign institutional investors like banks have a negligible holding in HZL.

However, Foreign Portfolio Investors (Category I) have around 0.81 per cent holding in the company.

The government had in 2002 sold its 26 per cent shareholding along with management control to Sterlite, which is a part of Agarwal's Vedanta group, for Rs 40.5 per share -- thereby giving Vedanta group management control in HZL.

Vedanta group later bought 20 per cent from the market and another 18.92 per cent from the government in November 2003, raising its ownership in HZL to 64.92 per cent.

Vale in advanced talks with strategic partner for base metals unit

Vale's base metal unit is estimated to have capital expenditure of $20bn and will be headquartered outside of Brazil.

Brazilian mining company Vale is in advanced discussions with undisclosed potential partners for its new base metals investment vehicle, reported Reuters citing Vale chief financial officer Gustavo Pimenta .

A potential deal could be signed during the first half of 2023.

Vale plans to place its copper and nickel mines into a new legal structure, named Vale Base Metals.

Pimenta was cited by the news agency as saying to investors during a meeting at the New York Stock Exchange that Vale plans to hold a 90% stake in a new base metals unit to have control over the venture's decisions and divest a 10% interest to the selected partner.

To be based outside of Brazil, Vale's new company is estimated to have a capital expenditure of $20bn.

It will manage nickel assets in Canada, Indonesian joint ventures, the Onca Puma nickel mine and the Salobo copper project in Brazil, according to Bloomberg News.

Pimenta said: "We will change the way we manage base metals. We are looking to bring people with the capability to advise the board on investment decisions."

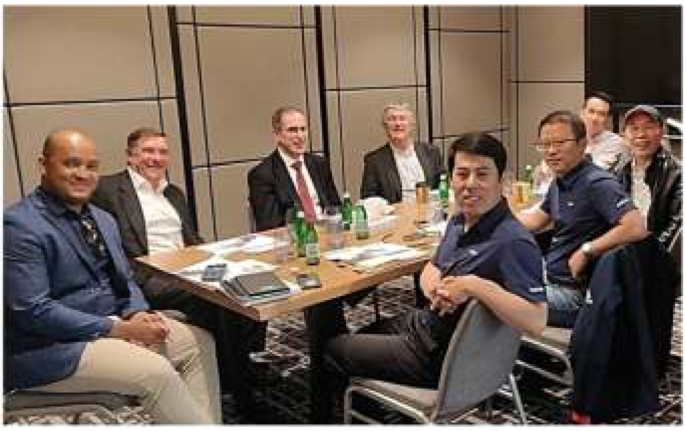
Vale's plan to separate the base metal assets from its iron ore operations follows several years of deliberations and comes in the wake of increased global demand for metals used in wiring and electric-vehicle batteries.

Pimenta was quoted by Bloomberg News as saying: "There is no business at this scale combining copper plus nickel in the world today."

Vale anticipates its nickel production to reach 230,000mtpa -245,000mtpa in the mid-term. This capacity is expected to exceed 300,000t by 2030.

By the end of this decade, the firm's copper production is expected to triple to 900,000t from existing levels.

St George Mining and battery giant SVOLT to jointly explore lithium projects



The firms will also consider joint development of the Mt Alexander lithium project in Western Australia.

t George Mining has agreed to partner with global battery manufacturing firm SVOLT Energy Technology (SVOLT) for the development and acquisition of lithium projects.

In relation to this, the two firms have signed a non-binding memorandum of understanding (MOU).

The firms will consider joint development of the Mt Alexander lithium project in Western Australia, as well as explore the acquisition of other lithium projects and lithium business opportunities.

Under the MoU, which has an initial two-year term, SVOLT will have the option to invest A$5m in St George by way of a share placement. This will be subject to the agreement on pricing and the completion of due diligence.

The two firms will also consider signing offtake agreements, whereby SVOLT will be able to secure up to 25% of the potential spodumene concentrate from the Mt Alexander project.

SVOLT will also provide St George with funding support for the development of other lithium projects.

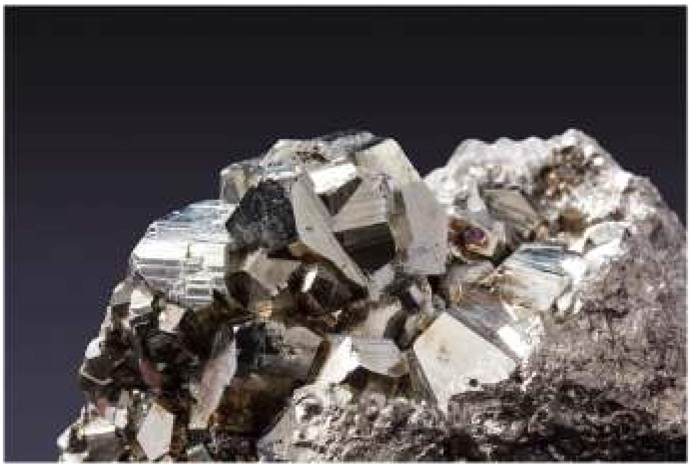
St George Mining executive chairman John Prineas said: "We are delighted that SVOLT has recognised this tremendous growth opportunity at Mt Alexander – located in the heart of Western Australia's newest hard rock lithium province.

"Our strategic relationship with SVOLT will strengthen our capacity to accelerate exploration and development at the project – particularly through the provision by SVOLT of technical advice for the marketing of lithium products, as well as the potential provision of development funding.

"Under the strategic relationship, we will also consider new project generation in Western Australia creating another potential growth engine for our respective companies."

The MoU follows the signing of a similar arrangement by St George with battery investment company Shanghai Jayson New Energy Materials

Canada unveils $2.78bn critical minerals strategy



The strategy aims to boost production and processing of the critical minerals, including lithium, nickel and cobalt, among others.

anada has announced Critical Minerals Strategy as part of its efforts to become a global supplier for critical minerals and clean digital technologies.

The strategy aims to boost the production and processing of the 'countrys 31 critical minerals, which include lithium, nickel, cobalt, graphite and zinc, among others, reported Reuters.

Critical minerals are considered vital in the making of electric vehicle (EV) batteries and contribute to the global transition towards cleaner technologies.

Canada Minister of Innovation, Science, and Economic

Development François-Phillipe Champagne said: "With our government's Critical Minerals Strategy, we are taking this generational opportunity to put our vision into action — from mines to manufacturing to recycling. It will help us build a strong and resilient ecosystem while also supporting innovation and well-paying jobs.

"Through this ambitious strategy, Canada is seizing the moment to be a leader in the low-carbon economy and the world's green supplier of choice for critical minerals."

As part of the strategy, the government aims to review the permitting process to reduce the time to commission mining projects. It will also ensure early indigenous consultation and engagement.

Supported by up to C$3.8bn ($2.78bn) in federal funding allocated in Budget 2022, the new strategy focuses on supporting economic growth, and job creation; enhancing global security and partnership; promoting climate action and environmental protection; promoting diverse workforces and communities; and advancing reconciliation with indigenous people.

Canada Minister of Natural Resources Jonathan Wilkinson said: "Canada's Critical Minerals Strategy will enable this country to seize the generational economic opportunity presented by critical minerals, creating sustainable, well-paying jobs while growing our economy.

"It will position Canada as the global supplier of choice for the critical minerals and clean technologies needed for the green, digital global economy — and it will help advance economic reconciliation with Indigenous Peoples."

Canada currently produces 60 minerals and metals at 200 mines, as well as 6,500 sand, gravel and stone quarries.

Glencore scraps plans for $1.3bn Australian coal project

The Valeria coal project would have production capacity of up to 20 million tonnes per annum Run of Mine coal.

lencore has abandoned plans to develop the A$2bn ($1.3bn) Valeria coal project in Bowen Basin, Queensland, Australia, citing increasing global uncertainty.

The move was also driven by the Queensland government's decision to increase coal royalties.

Glencore plans to withdraw the Valeria project from the current approvals process. It will then place the project under review.

The site would have a production capacity of up to 20Mtpa run-of-mine coal and an operational life of around 37 years.

Glencore was quoted by Bloomberg as saying: "This decision has been made in the current context of increased global uncertainty and is consistent with Glencore's commitment to a responsibly managed decline of our global coal business and our ambition of being a net-zero total emissions business by 2050."

As part of the project, Glencore planned to develop a greenfield open-pit thermal and metallurgical coal mine.

The mine is located nearly 27km north-west of Emerald in the Bowen Basin. Construction on the project was planned to begin in 2024.

It was anticipated to create 1,400 jobs during the construction phase and 1,250 jobs once operational.

Glencore was quoted by Miningweekly.com as saying: "We will continue to progress various brownfield coal extensions at existing mines in Australia, but note that within the next four years our Liddell, Newlands and Integra mines will close and undergo appropriate rehabilitation."

Glencore signs recycled battery metals supply agreement with ACE Green

Glencore will receive up to 100% of ACE's products from four lead-acid and lithium-ion battery recycling parks.

lencore is to sign a long-term agreement with recycling technology firm ACE Green Recycling, whereby the latter will supply recycled lead and key battery metal-based end products from recycled lithium-ion batteries.

Under the 15-year agreement, Glencore will receive up to 100% of ACE 's products from four of its proposed lead-acid and lithium-ion battery recycling parks in US, India and Thailand.

Planned for completion by 2024, the parks are expected to have a combined production capacity of 1.6 million tonnes of recycled metals containing lead, lithium, nickel and cobalt.

Glencore recycling head Kunal Sinha said: "Our partnership with ACE furthers our objective of creating a leading, global circularity platform for battery metals.

"These recycling parks will not only provide a unique domestic but also regional solution for furthering circularity in batteries – both high and low voltage. The partnership will also support our ambition to become a net zero total emissions (scope 1,2,3) company by 2050."

Glencore expects this strategic alliance to help establish a circular supply chain for recycled battery materials while reducing their impact on the environment.

ACE co-founder and CEO Nishchay Chadha said: "We are delighted to partner with Glencore and together contribute towards making global electrification sustainable.

"To safeguard a greener future, we need to create sustainable and localised circular supply chain solutions to ensure these critical battery materials are available indefinitely."

ACE plans to commission its first commercial lithium-ion batteries (LIB) recycling facility in Ghaziabad, India, this month followed by a second Indian facility in Mundra in Q4 2023.

The firm will also commission a recycling facility in Texas, US, in the final quarter of next year.

Canada announces $20m investment in E3 Lithium

E3 plans to use the funding to support the development of its lithium ion-exchange technology.

he "Canadian Governments Innovation, Science and Economic Developments Strategic Innovation Fund (SIF) has announced a C$27m ($20m) investment in E3 Lithium.

The _funding aims to encourage innovation in the country, which intends to strengthen themining sector and accelerate climate-change goals.

E3 plans to use the SIF investment to support all resource and technology development including drilling, piloting of ion-exchange technology for lithium extraction, process development and engineering, including downstream lithium hydroxide conversion.

The company will also use the funding to support additional development testing during the feasibility phase and the engineering and design of a definitive feasibility study.

E3 Lithium's lithium extraction technology is designed to reduce large volumes of brine into a high-grade lithium concentrate in a single step. This allows for further refining into lithium hydroxide, which is used in making lithium-ion batteries for electric vehicles.

Lithium demand is projected to increase 500% by 2050 due to the growing domestic battery manufacturing and future-oriented transportation ecosystem.

Canada Minister of Innovation, Science and Industry François-Philippe Champagne said: "Canada has everything it needs to build the EVs and batteries that consumers are demanding, and Alberta is key to building that ecosystem and accelerating the low carbon economy.

"E3 Lithium's groundbreaking technology will play an important role in providing large quantities of battery-grade lithium to the auto industry while also creating high-quality jobs for Canadians."

Champagne said the E3 Lithium's technology will strengthen the critical minerals sector in the Calgary region and help position the country as a world leader in batteries.

E3 Lithium president and CEO Chris Doornbos said: "The Canadian Government has committed to supporting the critical minerals supply chain; growing local Canadian supply begins with the raw materials and Alberta has a significant part to play in that future."

Edayar Zinc Ltd to open multi-zone industrial park and logistics hub in Kerala

Edayar Zinc Ltd, formerly known as Binani Zinc Ltd which stopped its zinc smelting activities in 2014, has now announced their revival project, 'Fortune Grownd', a multi-zone industrial park and logistics hub in Kerala.The project worth Rs 800 crore, will be developed on the company's 108 acres of land in the Edayar Industrial Development Area,

Bharat Forge is trying to beat cyclical impacts

Bharat Forge Ltd's (BFL) plan to diversify its portfolio reflect its intent to lower the component of cyclicality in its businesses. The company unveiled BFL 2.0 strategy in an analyst meet held recently. Here, it aims to drive growth via newer businesses such as defence, electric mobility and castings.

The company aims to achieve consolidated revenue compound annual growth rate of 12-15% over FY22-30. By FY30, it expects to clock an Ebitda (earnings before interest, taxes, depreciation and amortization) margin of over 20%. Ebitda margin was around 19% in FY22, but fell to 14.5% in the half-year ended September with Europe business facing headwinds.

In fact, the dull macro environment in the US and Europe remains a key near-term concern. This could weigh heavily on the company's export business, which formed nearly 75% of consolidated revenue in FY22. The export segment is largely margin accretive and a continued weakness here is undesired. However, the new businesses incubated in the last 5-10 years are at their inflection points and could dilute weakness expected in its core business, point out analysts at Motilal Oswal Financial Services.

As such, the company could be a key beneficiary of the government's increasing thrust on indigenization in the defence sector. It expects to receive orders for advanced towed artillery gun system from the government by either March or April. It already has export orders for artillery guns worth $155 million.

“Currently unmanned ground vehicle is being tested by Indian army and the company is also developing unmanned marine vehicles where the average selling price opportunity is 10x," said analysts at JM Financial Institutional Securities in a report on 11 December.

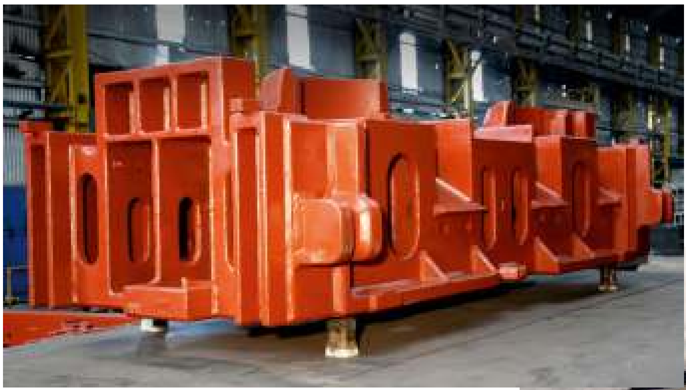
Further, BFL is well poised to capitalize on the shift towards electric vehicles (EVs). EVs have more aluminium content and hence would steer growth in both the domestic and export segments of its aluminium forging business. The company expects this vertical to contribute 40-45% of overseas sales by 2024. Aluminium forgings currently account for about 25% of international revenues.

As things stand, BFL is also supplying components to EVs globally. Here, it plans to focus on four key areas – power electronics, traction/drivetrain, mechanical and energy storage. While its core businesses, passenger vehicles (PV) and commercial vehicles (CV) face risk from an EV disruption, this threat would have a large impact only in the long run.

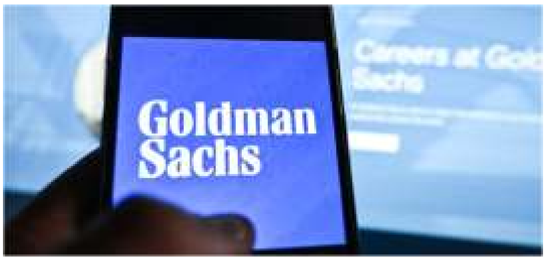
Meanwhile, BFL's recent acquisition, JS Autocast Foundry India Pvt. Ltd, manufacturer of high-grade machined ductile iron castings, is seeing healthy traction in demand. These are used in wind energy, hydraulics, automotive and power generation sectors. Here, BFL can leverage on JS Autocast's strength and make the most of cross-selling opportunities.

BFL's core business is on a solid footing in the domestic market. Demand for PVs is robust while CV segment is seeing a strong upcycle. Hereon, successful and timely execution of the strategies remain vital.

Analysts at Kotak Institutional Equities believe that the BFL stock is adequately pricing in tailwinds from defence and industrial casting segments. However, the challenges which the company may face in ramping-up its business in aerospace, e-mobility and light-weighting segments (which has happened for its new business segments in the past) are being ignored, they added.



Recession or recovery: How could metal commodities perform in 2023?



Indrabati Lahiri
Reporter,
Capitals.com

As 2022 draws to an end, a number of major investment banks have released their outlooks for 2023, which raises a key question: will metals sink or soar in the coming year? 2023 is anticipated to be a pivotal year for metals due to increased recession concerns in the advanced economics as well as expectations for a Chinese economic recovery following Covid lockdowns.

The US Federal Reserve, as well as other major central banks such as the Bank of England and the European Central Bank are also likely to be very much in the focus for the next year, as investors keep a hawk-eye on monetary tightening policies and interest rate hikes to control soaring inflation.

Metal commodities performance in 2022

Key metals performance for the year – Credit: TradingView

Key takeaways from 2023 investment bank outlooks

According to the BlackRock (BLK) outlook for 2023, pricing the economic damage will be one of the key investment themes of the new year. This is due to the fact that the investment management company believes that equity prices are currently not reflecting the economic damage that is inevitably coming, due to prolonged monetary tightening causing recession.

Only when the coming scenario is priced into equity valuations will BlackRock turn positive on equities- but is still warning that markets will not see the same kind of bull run as before. This is also due to the continuing themes of output volatility, rising bond yields and persistent inflation.

Goldman Sachs (GS) highlights, "We expect global growth of just 1.8% in 2023, as US resilience contrasts with a European recession and a bumpy reopening in China." It further outlines that the US may just be able to miss recession, due to estimates of personal consumption expenditures (PCE) inflation slowing down from about 5% now to about 3% in the later half of 2023.

This is likely due to the fact that this inflationary cycle being different from previous one, due to the labour market after the pandemic showing signs of overheating by having many more new job openings than before. Goldman Sachs also emphasizes that long-term inflation expectations are still well-anchored.

Coming to China, the bank says, "We expect weak growth in Q4 and Q1 as the Zero Covid Policy (ZCP) likely stays in place during the winter. In fact, the recent sharp rise in cases led us to have a significantly below-consensus Q4 estimate of 1.2% annualized.

Although the leadership has clearly signaled that it aims to exit ZCP, we do not expect actual reopening to start until April. The basic reason for this is that medical and communication preparations will take time. Less than 70% of the 60+ age group in Mainland China are triple-vaccinated."

According to J.P. Morgan's (JPM) outlook, "Our core scenario sees developed economies falling into a mild recession in 2023. However, both stocks and bonds have pre-empted the macro troubles set to unfold in 2023 and look increasingly attractive, and we are more excited about bonds than we have been in over a decade.

The broad-based sell-off in equity markets has left some stocks with strong earnings potential trading at very low valuations; we think there are opportunities in climate-related stocks and the emerging markets."

However, the bank warns that the housing and construction sectors are still set for a slowdown in the coming year.

Morgan Stanley (MS) points out, "Emerging market bottoms and yields and the US dollar peak as markets first price less uncertainty around the policy path. The S&P 500, cyclicals, metals, and HY trough later as confidence in growth takes more time. Opportunities for income abound, especially in high-quality bonds, where Treasuries, Bunds, IG credit, agency MBS, CLO AAAs, and US municipals all offer high single-digit returns.

Barclays (BARC) supports this notion, "Looking ahead and into 2023, we remain "uncomfortably constructive". Indeed, we expect the next 12 months to be equally challenging for investors. The prospect of slowing economic growth, if not recession, coupled with stubbornly elevated inflation, will require central bankers to find the right balance between too much and not enough monetary policy tightening.

At the same time, governments won't be able to pick up the stimulus baton as easily, with funding becoming increasingly expensive. Both Europe and the UK are more likely than not to enter a recession. In the US, the outlook is slightly more encouraging, but the largest economy in the world may barely grow next year. One big question is whether China will finally move away from its zero-COVID policy to resuscitate the economy."

How are metals likely to be affected?

China's growth and economic expectations are quite weak, according to the majority of these investment banks, mostly due to the still-strong effects of rising COVID-19 cases and the floundering real-estate sector.

Investors also seem to have quite little confidence in Xi Jinping during his current historic third term, despite promises of ending rigid zero-COVID rules soon. If these promises are not fulfilled, China may see more widespread protests in the coming few months, which will further disrupt manufacturing and economic activity.

This is likely to keep significantly impacting precious metals such as silver and gold, which have a strong jewellery and industrial link with the country. China consumed about 675 metric tons of gold jewellery in 2021, as per this report, which accounted for about 56% of global consumption.

China also consumed about 3,400 metric tons of silver in 2021, according to this report, which mainly goes towards the production of solar panels, as well as other industries such as the jewellery, photography and electronics industries.

Due to China's weak economic outlook, gold and silver may be a bit more subdued in the next year. However, even base metals such as copper and iron ore are likely to be pulled down, as the Chinese property sector has still not recovered fully.

There are also speculations of China, as well as other countries such as the US now starting to pull back on the COVID-19 stimulus packages and not offering the economy as much support before. This is likely to propel the global economy further into recession, which will continue to pressurise metals further.

China also depends heavily on Australia for its imports of copper and iron ore, which means that the strength of the Australian dollar (AUD), will also have an important role to play in the demand for these metals in 2023.

However, some encouraging signs are also emerging out of China, with several districts in Shanghai and Guangzhou agreeing to lift zero-COVID restrictions amidst widespread protests. Furthermore, there have also been speculations about the government mulling over ending mass lockdowns altogether. The People's Bank of China (PBoC) has also recently slashed the reserve requirement ratio for banks, in an attempt to infuse the economy with more liquidity. These have gone a long way in giving investors some hope that the Chinese economy may finally be starting ton recover.

Goldman Sachs is also cautiously optimistic about the same, "In contrast, we look for a meaningful reopening growth boost in H2, which will likely extend into 2024. As ZCP is currently still subtracting about 4-5% from the level of GDP, we see substantial room for a cyclical rebound as immunity levels rise and most households learn to live with the virus."

Which are the main factors to look out for in 2023?

According to BlackRock, inflation is likely to slow down somewhat in the coming year, however, still remain persistently above the 2% target set by central banks worldwide. Due to this, all eyes are on the US Federal Reserve, for the size and timing of its further rate hikes throughout 2023, which is likely to have a major impact on metal markets.

Piero Cingari, markets specialist at Capital.com, highlights "The market is now pricing in a peak in Fed interest rates of roughly 4.9% in May 2023, followed by a drop to around 4.45% in December 2023. This indicates that the market is presently factoring in approximately two 25bps of cuts for H2 2023.

In my opinion, this is a little too optimistic. The Fed has signalled the need to maintain restrictive financial conditions for a longer period of time to prevent repeating mistakes done in the past. The inverted Treasury yield curve indicates that bond market is pricing in a weaker economy, if not a recessionary condition for the upcoming year.

However, I believe the Federal Reserve may be more hawkish than the market presently anticipates even in a recession, as inflation pressures persist particularly on wages. If this is the case, then Treasury yields may reprice higher, and the dollar (DXY) may receive support; all of these factors may act as a headwind for metals prices.

In general, the outlook for metals may be marginally more optimistic than it was in 2022, which was a negative year due to a very hawkish Federal Reserve and lockdowns in China, both of which weighed on prices. Rising chances of a Chinese reopening next year might help mitigate the impact of the Fed's unexpectedly hawkish stance."

Automobile November 2022 Sales supported with positive consumer sentiments: SIAM

The total production of Passenger Vehicles*, Three Wheelers, Two Wheelers, and Quadricycles in the month of November 2022 was 20,42,575 units. Total production of Passenger Vehicles**, Three Wheelers, Two Wheelers and Quadricycles in April-November 2022 was 1,74,04,800 units.

While commenting on November sales, Mr Vinod Aggarwal, President, SIAM said, "Positive consumer and business sentiments have reflected in the better sales in the month of November 2022, compared to the previous year. We note a sequential decline over October 2022 attributable to seasonality and softness in key export markets."

Commenting on Industry performance in November 2022, Mr Rajesh Menon, Director General, SIAM said, "Passenger vehicles posted highest ever sales in FY 2022-23 till November, while the Three-Wheelers are still lower than 2010-11 and Two-Wheelers are less than 2016-17. Higher interest rates and increase in long term insurance premium, continues to be a concern for the consumers."

Retail sales of automobiles in India reached a record high in November as customers rushed to buy new vehicles undeterred by rising loan rates and higher fuel prices. Sales hit 2.38 million units during the month, 26% higher than the 1.89 vehicles sold in the same month last year. It was the highest monthly sales, with the exception of March 2020, when sales received a boost a month before the industry shifted to new Bharat Stage VI emission norms, which made new vehicles costlier.

Sales of passenger vehicles and commercial vehicles in November surpassed the pre-covid sales peak of 2019 by 5% and 6%, respectively, while two-wheelers reached within touching distance of the record sales seen in 2019, showed data from the Federation of Automobile Dealers' Association (Fada) which tracks new vehicle registrations.

Retail sales received a fillip from sustained festive season momentum and spillover from October, along with the ongoing wedding season in several parts of India. Retail sales in November 2019 stood at a total of 2.34 million vehicles. "The two-wheeler segment has responded well to the wedding season, and demand has continued after the festive season. Until August, the two-wheeler segment was under stress, but after that, we have seen some signs of recovery and growth on a year-on-year basis. However, we will wait to see sustained demand for a couple of more months to change our stance from cautious to positive," said Manish Raj Singhania, president of Fada.

SIAM

Segment wise Comparative Production, Domestic Sales & Exports data for the month of November 2022

(Number of Vehicles)

Category Segment/Subsegment	Production November 2021	Production November 2022	Domestic Sales November 2021	Domestic Sales November 2022	Exports November 2021	Exports November 2022
Passenger Vehicles (PVs)*						
Passenger Cars	1,34,184	1,72,008	1,00,906	1,30,142	29,914	37,599
Utility Vehicles (UVs)	1,22,339	1,64,154	1,05,091	1,38,780	14,173	16,336
Vans	10,029	7,343	9,829	7,309	178	24
Total Passenger Vehicles (PVs)	**2,66,552**	**3,43,505**	**2,15,826**	**2,76,231**	**44,265**	**53,959**
Three Wheelers						
Passenger Carrier	54,438	66,340	15,023	33,848	41,852	30,652
Goods Carrier	5,830	9,075	6,139	8,985	579	237
E-Rickshaw	1,084	2,930	1,217	2,601	-	-
E-Cart	202	235	172	230	-	-
Total Three Wheelers	**61,554**	**78,580**	**22,551**	**45,664**	**42,431**	**30,889**
Two Wheelers						
Scooter/ Scooterettee	3,37,417	4,92,112	3,18,986	4,12,832	24,481	25,459
Motorcycle/Step-Throughs	10,11,771	10,87,748	6,99,949	7,88,893	3,31,992	2,61,086
Mopeds	29,278	40,479	42,558	34,465	186	492
Total Two Wheelers	**13,78,466**	**16,20,339**	**10,61,493**	**12,36,190**	**3,56,659**	**2,87,037**
Quadricycle	**308**	**151**	**46**	**60**	**294**	**132**
Grand Total	**17,06,880**	**20,42,575**	**12,99,716**	**15,58,145**	**4,43,649**	**3,72,017**

* BMW, Mercedes, Tata Motors and Volvo Auto data is not available

Society of Indian Automobile Manufacturers (13/12/2022)

SIAM

Summary Report: Cumulative Production, Domestic Sales & Exports data for the period of April-November 2022

Report I

(Number of Vehicles)

Category Segment/Subsegment	Production April-November 2021-22	 2022-23	Domestic Sales April-November 2021-22	 2022-23	Exports April-November 2021-22	 2022-23
Passenger Vehicles (PVs)*						
Passenger Cars	11,22,032	14,33,030	8,85,865	11,51,022	2,38,802	2,72,344
Utility Vehicles (UVs)	10,06,577	14,26,905	8,70,894	12,62,490	1,28,392	1,49,513
Vans	74,707	90,960	72,934	90,572	1,371	268
Total Passenger Vehicles (PVs)	**22,03,316**	**29,50,895**	**18,29,693**	**25,04,084**	**3,68,565**	**4,22,125**
Three Wheelers						
Passenger Carrier	4,27,681	4,90,653	96,717	2,16,652	3,37,054	2,74,623
Goods Carrier	54,420	65,255	47,253	62,308	6,085	2,647
E-Rickshaw	5,104	15,714	5,489	15,350	-	-
E-Cart	386	2,167	355	2,120	-	-
Total Three Wheelers	**4,87,591**	**5,73,789**	**1,49,814**	**2,96,430**	**3,43,139**	**2,77,270**
Two Wheelers						
Scooter/ Scooterettee	30,17,872	39,88,575	27,64,494	36,89,720	2,48,674	2,83,234
Motorcycle/Step-Throughs	86,58,617	95,85,679	60,69,307	72,15,905	27,19,671	23,93,693
Mopeds	3,33,258	3,04,579	3,30,473	3,06,723	7,720	2,274
Total Two Wheelers	**1,20,09,747**	**1,38,78,833**	**91,64,274**	**1,12,12,348**	**29,76,065**	**26,79,201**
Quadricycle	**3,594**	**1,283**	**54**	**421**	**3,887**	**960**
Grand Total	**1,47,04,248**	**1,74,04,800**	**1,11,43,835**	**1,40,13,283**	**36,91,656**	**33,79,556**

* BMW, Mercedes, Volvo Auto data is not available and Tata Motors data is available for Apr-Sep only

Society of Indian Automobile Manufacturers (13/12/2022)

SIAM

Category & Company wise Summary Report for the month of November 2022 and Cumulative for April-November 2022

Report II

(Number of Vehicles)

Category Segment/Subsegment Manufacturer	Production November 2021	 2022	 April-November 2021-22	 2022-23	Domestic Sales November 2021	 2022	 April-November 2021-22	 2022-23	Exports November 2021	 2022	 April-November 2021-22	 2022-23
Passenger Vehicles (PVs)												
FCA India Automobiles Pvt Ltd	1,452	1,227	11,821	12,668	1,052	894	7,879	9,394	555	605	4,607	3,434
Force Motors Ltd	99	55	171	476	64	55	122	503	-	3	-	4
Ford India Private Ltd	NA	NA	39,337	NA	NA	NA	15,818	NA	NA	NA	18,022	-
Honda Cars India Ltd	6,602	8,535	64,352	79,325	5,457	7,051	53,433	63,757	1,447	726	11,878	15,730
Hyundai Motor India Ltd	48,000	64,400	3,96,000	4,82,000	37,001	48,002	3,16,516	3,81,008	9,909	16,001	83,438	1,00,078
Isuzu Motors India Pvt Ltd	142	103	1,042	1,872	66	57	451	413	30	2	141	479
Kia India Pvt Ltd	17,251	32,260	1,48,337	2,38,208	14,214	24,025	1,18,928	1,79,310	3,524	6,809	30,738	56,078
Mahindra & Mahindra Ltd	18,401	32,178	1,41,410	2,32,944	19,458	30,392	1,32,943	2,31,413	756	1,226	6,376	5,444
Maruti Suzuki India Ltd	1,42,025	1,51,326	9,91,013	12,68,979	1,09,726	1,32,395	8,11,809	10,67,282	21,198	19,455	1,45,906	1,70,471
MG Motor India Pvt Ltd	2,452	5,708	24,213	35,208	2,481	4,079	24,264	30,609	-	-	-	12
Nissan Motor India Pvt Ltd	5,914	9,997	49,978	66,869	2,651	2,400	24,955	23,344	2,954	4,346	24,581	37,113
PCA Motors Pvt. Ltd	57	1,246	669	5,672	52	825	600	4,983	-	-	-	-
Renault India Pvt Ltd	7,632	9,026	71,609	80,020	5,052	6,325	58,140	57,787	2,683	2,172	15,710	17,584
SkodaAuto India Pvt Ltd	2,026	7,224	18,707	38,248	2,196	4,433	17,608	35,813	-	16	-	275
Tata Motors Ltd*	NA	NA	1,51,353	2,79,965	NA	NA	1,49,525	2,75,785	NA	NA	795	783
Toyota Kirloskar Motor Pvt Ltd	8,437	13,329	49,146	88,868	13,002	11,728	79,724	1,16,225	29	-	91	45
Volkswagen India Pvt Ltd	6,062	6,891	44,158	39,573	3,154	3,570	16,978	26,458	1,180	2,598	26,282	14,595
Total Passenger Vehicles (PVs)	**2,66,552**	**3,43,505**	**22,03,316**	**29,50,895**	**2,15,626**	**2,76,231**	**18,29,693**	**25,04,084**	**44,265**	**53,959**	**3,68,565**	**4,22,125**

* Only cumulative data is available for Apr-Sep   NA= Not Available

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Category & Company wise Summary Report for the month of November 2022 and Cumulative for April-November 2022

Report II

(Number of Vehicles)

Category Segment/Subsegment Manufacturer	Production November 2021	 2022	 April-November 2021-22	 2022-23	Domestic Sales November 2021	 2022	 April-November 2021-22	 2022-23	Exports November 2021	 2022	 April-November 2021-22	 2022-23
Three Wheelers												
Atul Auto Ltd	1,232	2,264	9,846	16,237	1,145	2,002	8,805	14,022	199	251	1,011	1,892
Bajaj Auto Ltd	40,317	44,605	3,01,026	3,12,449	13,756	29,166	92,228	1,77,250	26,707	15,074	2,14,147	1,37,602
Continental Engines Pvt Ltd	479	184	2,328	4,388	467	500	2,325	4,576	-	-	-	-
Force Motors Ltd	302	168	2,467	1,663	-	-	-	-	322	322	2,422	1,694
Mahindra & Mahindra Ltd	1,627	5,688	16,119	36,721	2,564	5,198	16,876	35,859	30	96	282	362
Piaggio Vehicles Pvt Ltd	4,265	10,645	40,806	75,620	3,866	7,539	24,858	54,187	1,096	2,924	15,439	20,610
TVS Motor Company Ltd	13,332	15,026	1,14,999	1,26,711	753	1,259	4,722	10,536	14,077	12,222	1,09,838	1,15,110
Total Three Wheelers	**61,554**	**78,580**	**4,87,591**	**5,73,789**	**22,551**	**45,664**	**1,49,814**	**2,96,430**	**42,431**	**30,889**	**3,43,139**	**2,77,270**
Two Wheelers												
Ather Energy Pvt. Ltd	1,544	9,737	13,100	48,939	1,656	8,036	13,704	46,624	-	-	-	-
Bajaj Auto Ltd	3,19,688	2,42,398	26,14,163	24,67,198	1,44,953	1,23,490	11,74,391	12,65,173	1,93,520	1,38,630	14,84,605	12,05,042
Hero MotoCorp Ltd	3,47,588	4,20,994	33,25,322	36,11,816	3,28,862	3,79,747	31,63,155	35,39,850	20,531	11,093	1,97,337	1,23,930
Honda Motorcycle & Scooter India Pvt Ltd	2,81,975	3,91,890	25,48,912	33,40,009	2,56,174	3,53,553	23,47,741	30,89,595	24,211	19,681	2,37,028	2,55,640
India Kawasaki Motors Pvt Ltd	362	416	2,444	1,879	310	330	2,487	2,319	-	-	-	-
India Yamaha Motor Pvt Ltd	55,393	70,384	4,78,629	6,20,010	39,309	42,802	3,20,192	4,15,731	19,361	23,316	1,77,975	2,05,845
Mahindra Two Wheelers Ltd	-	-	-	72	-	1	3	96	-	-	-	-
Okinawa Autotech Pvt. Ltd	9,221	6,263	40,329	81,754	9,221	4,703	40,717	80,357	-	-	113	78
Piaggio Vehicles Pvt Ltd	3,787	4,365	53,681	45,309	4,464	2,790	35,188	32,828	384	1,196	18,403	12,448
Royal-Enfield (Unit of Eicher Motors)	60,007	77,017	3,38,472	5,61,713	44,830	65,760	2,95,711	4,82,997	6,824	5,006	47,143	64,973
Suzuki Motorcycle India Pvt Ltd	69,386	85,671	4,89,130	6,20,204	55,662	63,156	4,07,319	4,98,122	9,905	16,203	88,684	1,23,166
Triumph Motorcycles India Pvt Ltd	63	63	440	459	112	92	814	742	-	-	-	-
TVS Motor Company Ltd	2,29,452	3,11,141	21,05,125	24,79,471	1,75,940	1,91,730	13,62,852	17,57,914	81,923	71,912	7,24,777	6,88,079
Total Two Wheelers	**13,78,466**	**16,20,339**	**1,20,09,747**	**1,38,78,833**	**10,61,493**	**12,36,190**	**91,64,274**	**1,12,12,348**	**3,56,659**	**2,87,037**	**29,76,065**	**26,79,201**
Quadricycle												
Bajaj Auto Ltd	308	151	3,594	1,283	46	60	54	421	294	132	3,887	960
Total	**308**	**151**	**3,594**	**1,283**	**46**	**60**	**54**	**421**	**294**	**132**	**3,887**	**960**
Grand Total	**17,06,880**	**20,42,575**	**1,47,04,248**	**1,74,04,800**	**12,99,716**	**15,58,145**	**1,11,43,835**	**1,40,13,283**	**4,43,649**	**3,72,017**	**36,91,656**	**33,79,556**

Society of Indian Automobile Manufacturers (13/12/2022)

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