

India Silver Conference 2025 Highlights

India Silver Conference 2025 is India's premier platform dedicated exclusively to unlocking the full potential of silver — bringing together industrial users, refiners, innovators, investors. As global demand for sustainable solutions rises, ISC 2025 showcases cutting-edge silver applications, promotes investment products like ETFs, and fosters industry collaboration to drive growth in industrial usage, silverware, and financial inclusion. This annual gathering aims to position silver not just as a precious metal, but as a catalyst for India's innovation and economic progress.

Inaugural Function



Mr Srivatsava Ganapathy, Eventell Global Advisory Pvt Ltd, **Mr Chirag Thakkar**, Amrapali Gujarat, **Mr Surendra Mehta**, IBJA, **H.E. Mr Javier Paulinich**, Ambassador of the Republic of Peru to India, **Mr Michael DiRienzo**, The Silver Institute, **Mr Rajesh Rokde**, GJC



H.E. Mr Javier Paulinich
Ambassador of the
Republic of Peru to India

H.E. Mr Javier Paulinich, Ambassador of Peru to India

His Excellency Mr Javier Paulinich delivered an inspiring keynote as the Chief Guest, reflecting on Peru's rich mining legacy, which dates back over 3,000 years. He proudly announced that Peru holds approximately 20% of the world's known silver reserves and remains the largest global exporter of silver, having extracted over 3,100 metric tons in 2024. Mr Paulinich emphasized that mining contributes more than 14% to Peru's GDP and is supported by an investment pipeline of over \$54 billion. Highlighting bilateral economic ties, he mentioned that silver exports to India surged from virtually zero in 2020 to \$32 million in 2024. Moreover, gold exports touched \$4.63 billion, making India Peru's largest gold customer. He emphasized Peru's investor-friendly legal framework and transparency. A key takeaway was the announcement of an imminent India-Peru Free Trade Agreement, expected to conclude by the end of 2025. He invited Indian entrepreneurs to invest in Peru's rich mineral ecosystem and take advantage of the trade-friendly environment.

Mr Rajesh Rokde, Chairman, Gem & Jewellery Domestic Council (GJC)

Mr Rajesh Rokde emphasized the increasing role of silver in India's cultural and economic spheres. Representing GJC, he highlighted that silver is not only widely used in religious and traditional events but also offers affordability and accessibility for young investors and small jewellers. He pointed out that India might be holding over 100,000 metric tons of silver, underscoring the need to quantify and organize this national asset. Mr Rokde advocated for silver hallmarking and transparency, noting that only around 200 hallmarking centres exist today, which is insufficient. He urged public-private collaboration to scale up this infrastructure. Drawing attention to the need for branding and marketing, he stated that silver's value as a culturally embedded metal should be used to enhance its image as an investment.



Mr Rajesh Rokde
GJC



Mr Chirag Thakkar
Director, Amrapali Gujarat

Mr Chirag Thakkar, Director, Amrapali Gujarat

Mr Chirag Thakkar brought a dynamic, investor-centric viewpoint. Referring to silver as the "new gold," he highlighted how investors from the previous year's conference doubled their returns. On his digital silver platform, client numbers have surpassed 70,000, growing at a biweekly rate of 80%. He warned about ongoing issues in purity, citing informal estimates that suggest India's silver holdings range from 70,000 to 80,000 metric tons. He called for mandatory hallmarking and self-regulation to protect consumer trust. Mr Thakkar also addressed India's global silver footprint, noting its role in driving long-term demand, particularly through the green economy and pharmaceuticals. He concluded by applauding the conference organizers and urging industry-wide collaboration.

Mr Michael DiRienzo, Executive Director, The Silver Institute

Mr Michael DiRienzo noted the significance of India's role in the silver market and shared insights from the 35th edition of the World Silver Survey. India's growing influence is seen not just in consumption but in production and investment appetite. He acknowledged Hindustan Zinc as the world's fourth-largest silver producer. He highlighted that while global investment in silver dropped in 2024, India acted as a stabilizing force through consistent demand for silver-backed ETFs and physical silver. Mr DiRienzo praised India's resilience and expressed excitement for deeper collaboration between Indian stakeholders and global institutions like the Silver Institute.



Mr Michael DiRienzo
Executive Director, The Silver Institute



Mr Arun Misra
CEO, Hindustan Zinc Ltd

Mr Arun Misra, CEO, Hindustan Zinc Ltd

Mr Arun Misra presented a strategic roadmap for enhancing India's silver production and self-reliance. Predicting a price range of \$36–37 per troy ounce, he positioned silver as critical to India's net-zero ambitions. He shared Hindustan Zinc's plan to double annual silver production from 700 to 1,200–1,400 metric tons. To foster downstream industry, he unveiled a new Zinc Industrial Park in Rajasthan. The park will offer land and infrastructure support for silver-using industries and is backed by government facilitation. Mr Misra noted that India's current consumption is 65% jewellery and 35% industrial, but this is expected to flip as clean energy and electric vehicles (EVs) take centre stage.

Mr Surendra Mehta, National Secretary, IBJA

Mr Surendra Mehta underscored silver's growing importance in high-growth sectors like renewable energy and healthcare. He emphasized the need for a structured approach similar to the gold industry. He introduced the newly formed World Silver Council and outlined plans to host three silver-focused events in major Indian cities. Calling for industry-wide investment in education and responsible sourcing, Mr Mehta stressed self-regulation, standardization of purity levels, and better retail-level promotion. He warned that unchecked impurity levels could lead to loss of consumer confidence.



Mr Surendra Mehta
National Secretary, IBJA



Mr Srivatsava Ganapathy
Director and CEO,
Eventell Global Advisory Pvt Ltd

**Mr Srivatsava Ganapathy,
Director and CEO, Eventell Global Advisory Pvt Ltd**

Mr Srivatsava opened the conference with a thoughtful welcome, emphasizing the theme, “Sustaining Demand during a High Price Regime.” He recognized silver’s dual role in India—cultural and industrial. He outlined the two-day structure: five panel discussions, four keynote addresses, and several special addresses. He launched the MyEventell app to improve delegate engagement and announced the ISC Excellence Awards to honour 22 industry leaders. With 11 exhibitors present, he invited participants to exchange ideas and build a stronger silver ecosystem together.

Keynote Address

Opportunities for Growing Silver Jewellery Market Globally



Dr Gaetano Cavaliere
President, The World Jewellery
Confederation (CIBJO)

Dr Gaetano Cavaliere, speaking virtually from Stockholm, emphasized that silver is no longer a secondary metal. Among younger consumers, silver represents affordable luxury. With fashion jewellery becoming a \$37 billion market poised to reach \$66 billion by 2032, silver is dominating this space—brands like Pandora use it in over 80% of their collections. E-commerce and social media have fueled this trend.

He then shifted focus to sustainability and responsible sourcing. While recycled silver has gained popularity, Cavaliere warned of over-reliance, which could economically destabilize silver-producing countries like Mexico, Peru, Chile, and Bolivia. He cited the unintended negative consequences of Section 1508 of the U.S. Dodd-Frank Act on African gold producers as a cautionary tale.

CIBJO’s initiatives—such as its Responsible Sourcing Blue Book and ESG toolkits—support ethical sourcing. Cavaliere concluded by urging India to align growth with global best practices and take a leading role in shaping the silver industry's future.

World Silver Survey 2025: Launch and Summary



Mr Chirag Sheth
Principal Consultant, Metals Focus

Mr Chirag Sheth launched the World Silver Survey 2025 with notable insights. In 2024, silver prices rose 20%, with over 50% growth from trough to peak, despite being overshadowed by gold. A fourth consecutive global supply deficit—about 4,500 tons or 15% of total supply—points to strong demand. In India, silver is increasingly seen as a strategic asset by retail and family offices.

Global production grew 1% to 819 million ounces, led by Mexico, the U.S., and Australia, while declining in parts of Latin America and Asia. Lead and zinc mines saw a 15–20% rise in silver output. A 2% supply increase is expected in 2025, mainly from North America. Industrial demand remains the dominant driver, especially photovoltaics and EVs. Jewellery demand stayed flat globally but grew in India. However, investment demand declined in the U.S., and silverware demand fell due to price sensitivity. Sheth warned that price volatility may challenge demand in 2025.

Roundtable Discussion

Sustaining Silver Demand During Elevated Prices



Mr Neville Patel, HDFC Bank, **Mr Ian Harris**, ICBC Standard Bank, **Mr Surendra Mehta**, IBJA,
Mr Rajesh Rokde, GJC, **Mr Amar Singh**, Asia Pacific & Middle East, StoneX Group Inc.,
Mr Chirag Thakkar, Amrapali Gujarat, **Mr Gautam Choksi**, Hindustan Platinum, **Mr Vijay Murthy**, Hindustan Zinc Ltd,
Mr Richard Trainer, Silver Star Resources, **Mr Shivanshu Mehta**, MCX - (Online)



Session Overview:

Mr Amar Singh opened the session by highlighting silver's resilience, despite missing bullish targets. Silver's growing relevance in green technologies like 5G, EVs, and solar were discussed. Singh warned of geopolitical factors and market structure changes reshaping bullion flows.

Mr Amar Singh

Asia Pacific & Middle East,
StoneX Group Inc.

- **Q to Mr Ian Harris (ICBC Standard Bank): On market dislocations and COMEX pricing**
- Mr Ian Harris described dislocation due to U.S. tariff fears, causing metal to shift from London to New York. Non-uniform bar standards and delivery logistics caused lease rates to spike. While bullion tariffs were ultimately exempted, the disruption exposed systemic weaknesses that impacted India's supply chain.
- **Q to Mr Neville Patel (HDFC Bank): On demand volatility and financing**
- Mr Neville Patel said silver's price sensitivity meant that by the time shipments cleared customs, demand had often dropped. Banks and importers responded by reducing clip sizes and lease terms. UAE-origin silver imports in smaller volumes helped manage risk.
- **Q to Mr Chirag Thakkar (Amrapali Gujarat): On managing supplier-client tensions**
- Mr Chirag Thakkar referred to the last two quarters as extremely difficult, with traders caught between suppliers, banks, and clients. Volatility disrupted forecasts and deliveries. He called for frameworks to insulate Indian trade from global shocks and emphasized consignment-based models.
- **Q to Mr Rajesh Rokde (GJC): On retail demand at ₹100,000/kg**
- Mr Rajesh Rokde noted that silver still appears affordable next to gold, and retains its role in gifting and rituals. Silver is popular among young consumers and remains a "value buy" despite price rises.
- **Q to Mr Surendra Mehta (IBJA): On low traction of the World Silver Council**
- Mr Surendra Mehta cited lack of funding, weak industry coordination, and poor participation as reasons for its struggles. He warned of low-purity silver jewellery (as low as 20%) eroding trust, urging a self-regulatory framework.
- **Q to Mr Vijay Murthy (Hindustan Zinc Ltd): On demand evolution and industrial use**
- Mr Vijay Murthy emphasized growing industrial demand, particularly from green energy and electronics. Hindustan Zinc aims to expand domestic silver production and promote branded silver products.
- **Q to Mr Shivanshu Mehta (MCX): On silver market reforms**
- Mr Shivanshu Mehta said MCX is addressing GST issues for EGRs and considering a similar silver initiative. Plans are underway to develop a domestic price discovery platform and strengthen silver derivatives.

Moderator's Closing Question:

What must your organization do to support long-term silver demand in India?

Mr Vijay Murthy: Expand production and introduce IGD (India Good Delivery) standards and domestic benchmarks.

Mr Gautam Choksi: Allow silver loans for industrial users and simplify access to silver in local London ounces.

Mr Chirag Thakkar: Increase consumer education to promote long-term holding and awareness.

Mr Rajesh Rokde: Promote SIPs and silver recycling via retail outlets.

Mr Surendra Mehta: Establish purity standards, implement self-hallmarking, and launch Electronic Silver Receipts (ESRs).

Mr Ian Harris: Continue reliable imports; silver's dual role helps India maintain demand.

Mr Neville Patel: Launch silver metal loans and expand hedging tools for consistent supply.

Day - 2

Theme: Sustaining Demand During High Price Regime.



Mr Ankur Goyal
MMTC PAMP India Pvt Ltd

Presentation: Study of Silver Purity Level in Silver Jewellery Across India
Speaker: Mr Ankur Goyal, President – Works, MMTC PAMP India Pvt Ltd
In a thought-provoking and data-rich presentation, Mr Ankur Goyal shared findings from a ground-breaking nationwide purity audit of silver jewellery. The objective of the study was to assess the true purity of silver jewellery items available online across India and to evaluate the presence of harmful contaminants such as cadmium and nickel.

Study Scope and Methodology:

The study tested 50 silver jewellery items sourced online from North, South, East, and West India. Items included chains, earrings, pendants, and locks. Using X-Ray Fluorescence (XRF) and Potentiometric Titration, the team examined both the metal composition and silver purity.

Key Findings:

• **Positive Outcomes:**

- 64% of samples met or exceeded the 92.5% sterling silver standard, with some showing purity up to 93.4%.
- Alloying elements were primarily copper and zinc—no cadmium or nickel detected in this set.
- Temple scrap items (e.g., crowns, idols) generally had high purity (~88%).

• **Areas of Concern:**

- 24% showed inconsistency in purity across different components of a single item.
- 8% contained elevated levels of cadmium or nickel—up to 50% in some samples.
- 12% had no silver content at all—substituted entirely with zinc or cadmium alloys but falsely stamped as 92.5%.
- One piece tested as 97% zinc; another had 19% cadmium.

• **Temple Jewelry & Coin Analysis:**

- Offerings like chakras showed dangerously high cadmium levels (40–50%).
- Historical coin analysis revealed extreme variability, ranging from 56% to 98.8% silver. Cutlery items showed decent purity (~87–89%).

Health & Environmental Implications:

Cadmium and nickel are linked to cancer, skin disorders, and serious environmental degradation. Their continued use in jewellery poses significant health risks for artisans and consumers alike.

Recommendations:

1. Introduce mandatory hallmarking.
2. Strengthen enforcement to eliminate cadmium and nickel.
3. Encourage best practices in sourcing and manufacturing.
4. Invest in low-cost detection tools for consumers and retailers.

The session concluded with a strong call for consumer protection and regulatory reforms. Audience questions centered around practical solutions for buyers and industry-wide responsibilities.

Session 1

Silver Jewellery & Silverware – Growing the Market Sustainably



Mr Sidharth Gupta, ACPL Exports, **Mr Vinod Tejwani** Pranda India,
Mr Nitesh Jain, Purple Jewels, **Mr Rahul Mehta**, Silver Emporium Pvt Ltd,
Mr Chirag Sheth, Metals Focus, **Ms Wilasinee**, Bowins Silver

Moderated by Mr Chirag Sheth, this session brought together leading silver industry players to dissect opportunities and challenges in growing India’s silver jewellery and silverware markets. Mr Sheth opened by spotlighting India’s commanding share in global demand—43% for jewellery and 70% for silverware—yet lamented the sector’s fragmented and underdeveloped structure.



Market Evolution and Consumer Preferences:

Mr Rahul Mehta observed that high gold prices have positioned silver as a preferred alternative for aesthetic, value-conscious consumers. Mr Nitesh Jain added that silver has emerged as a lifestyle metal, popular among youth due to its affordability and fashion compatibility.

Mr Rahul Mehta
Silver Emporium Pvt Ltd



Mr Sidharth Gupta
ACPL Exports



Mr Vinod Tejwani
Pranda India



Mr Nitesh Jain
Purple Jewels

Export Dynamics:

Mr Siddharth Gupta highlighted the untapped potential in exports. Despite India's manufacturing strength, exports are constrained by outdated designs and limited exposure to global aesthetics. He recommended proactive participation in international trade shows and adaptation to global trends.

Manufacturing Gaps:

Mr Vinod Tejwani noted India's absence of large, standardized silver manufacturing facilities, which limits global competitiveness. The panel called for R&D investments, factory upgradation, and creation of a Silver Promotion Council.

Branding and Retail Challenges:

Unlike gold, silver lacks prominent national brands. Mr Nitesh Jain advocated for long-term brand-building through organized retail and D2C models. The panel urged more investment in brand visibility, consumer education, and digital marketing.

Risk Management & Financing:

Panellists acknowledged the need for better hedging tools, including MCX and IIBX platform. They highlighted the untapped opportunity of Silver Metal Loans, which could revolutionize access to capital for manufacturers and exporters.

Purity and Regulation:

Lack of mandatory hallmarking emerged as a key concern.

Mr Mehta revealed that many items labelled 92.5% silver actually contain as little as 40–60%. Panellists emphasized the need for self-regulation until government mandates kick in, urging collective industry accountability.

Future Outlook:

Trends such as gold-plated silver, lightweight contemporary designs, and silver artefacts for gifting and diaspora markets were forecasted to dominate. Blended designs (wood, stones with silver) and customization were also seen as strong demand drivers.

The session closed with a unanimous call for unified industry action. From hallmarking and branding to export reforms and institutional support, the panel laid out a comprehensive roadmap to reposition silver not just as a commodity, but as a cultural and economic asset for India.

Session 2

Recent Trend in Silver Recycling.



Mr Kinjal Shah, Responsible Jewellery Council,
Mr C P Abidh, Ahlatci Metal Refinery FZCO, **Mr Tarek Shakarchi**, MKS PAMP Group - Online

Mr Abidh opened the session by underlining the increasing significance of silver recycling amidst a global shift towards sustainable sourcing. He emphasized the need for the Indian silver ecosystem to adapt to evolving international norms that prioritize ethical and environmentally responsible sourcing.



Mr Kinjal Shah
Responsible Jewellery Council

Driving Factors for Recycling:

Mr Kinjal Shah explained that global brands, especially in Europe, are mandating recycled metals to align with ESG goals and reduce their carbon footprint. This transition also appeals to environmentally conscious consumers, offering commercial and reputational advantages.

Challenges in Implementation:

Mr Kinjal Shah noted that Indian manufacturers are often resistant to adopting sustainable practices due to a lack of awareness and focus on short-term profits. However, more refiners are now pursuing Chain of Custody certification, which promotes ethical recycling practices.











Mr Tarek Shakarchi
MKS PAMP Group

Differences in Global Mindsets:

Mr Tarek Shakarchi observed that in the West, consumer-driven demand for recycled metals has existed for years. By contrast, in Asia—including India—recycling is often market-driven rather than consumer-led, with fewer consumers willing to pay a premium.

Policy and Regulatory Watchpoints:

Tarek urged Indian stakeholders to monitor European regulatory developments. If silver is officially designated as a "critical mineral," it could attract new compliance mandates and support programs. Traceability and ethical sourcing are expected to become core requirements.

Consumer Awareness and RJC Initiatives:

Mr Kinjal Shah explained how RJC is promoting transparency and trust, especially among Gen Z consumers. Certification of recycled silver enhances credibility and builds stronger connections with the new generation of ethical buyers.

Opportunities for the Industry:

Mr Tarek Shakarchi emphasized that refiners should invest in traceable, ethical supply chains to gain a competitive edge. Although refining technology remains consistent, transparency and sustainability will become the key differentiators.

Traceability in Indian Context:

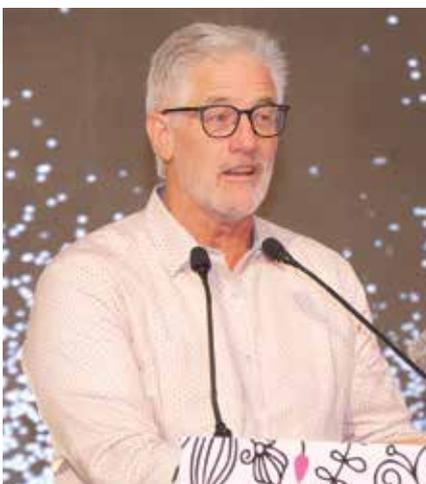
Both speakers agreed that while Indian consumers may not currently demand traceability, it is vital for accessing global markets. Traceability supports circular economy goals and ensures that refiners benefit from value-added exports.

Closing Remarks:

Both panellists called for early industry adaptation and greater collaboration to promote recycled silver. Embracing this shift will not only align India with global trends but also create long-term value and credibility.

Special Address

The Silver Deficit – Why the Gap Can't Be Filled Scale and costs can't be solved



Mr Phillips Baker
San Cristobal Mining

Mr Phillips Baker delivered a compelling special address on the long-term structural deficit in the global silver market. With over 40 years of industry experience, Mr Baker provided a macroeconomic overview of silver demand, production constraints, and future implications.

Key Takeaways:

- **Silver Deficit:** Over the past four years, the market has experienced a deficit of 679 million ounces—nearly half of the annual global demand.
- **Industrial Demand Surge:** Industrial uses, particularly photovoltaics, now account for 60% of silver demand. Investment demand has decreased from 24% to 15%.
- **Limited Production Capacity:** Most silver is mined as a by-product of other metals, making it hard to scale production.
- **Mine Development Lag:** New silver mines face long permitting cycles—up to 29 years in the U.S.—slowing supply expansion.
- **Recycling Limitations:** While 150–200 million ounces come from recycling annually, this hasn't increased meaningfully despite rising prices.
- **Above-Ground Reserves:** The only realistic source to bridge the deficit is privately held silver—5.5 billion ounces globally. Rising prices may incentivize some of this stock to re-enter markets.

Audience Q&A Highlights:

- Mine permitting reforms are slowly improving.
- Deficit may push lightweight jewellery designs and substitution in industry.
- Silver's dual nature (precious + industrial) makes it less reactive to economic shocks compared to gold.
- Additional gold mining may marginally help, but not enough.
- Long-term solutions lie in unlocking above-ground hoards.
- **Conclusion:** Mr Phillips Baker concluded with a cautionary yet strategic note. As industrial demand continues to grow and supply remains constrained, silver prices are poised to rise. Stakeholders must prepare for a tighter market, and better utilize tools like the World Silver Survey for strategic decision-making.

Session 3

Silver Investment Demand



**Mr Chirag Thakkar, Amrapali Gujarat, Mr Amit Vashisht, ICICI Prudential AMC Ltd,
Mr Navneet Damani, Motilal Oswal Financial Services Ltd,
Mr Amit Sajeja, Alpha Alternatives Holdings Pvt Ltd, Mr Johnson Lewis, FinMet Pte Ltd**

Mr Johnson Lewis set the stage by emphasizing the evolving nature of silver as a dual-purpose asset—valued both for its industrial and investment merits. He categorized the discussion across four core themes: demand drivers, product innovation, regulatory ecosystem, and shifting investor demographics.



Mr Amit Sajeja

Alpha Alternatives Holdings Pvt Ltd

Silver as an Investment Asset – Mr Amit Sajeja:

Mr Amit Sajeja presented a comparative overview of silver investment demand between 2015–2019 and 2020–2024. Globally, silver bar and coin demand grew 21%, and ETF holdings jumped from 21 million to 56 million ounces. While global investment demand fell in 2023, India posted a 21% increase. Indian silver ETF AUM grew from ₹3,700 crore in 2023 to ₹15,000 crore in 2024, and investor folios tripled.

Structured Strategies & Arbitrage – Mr Amit Sajeja:

He elaborated on how structured funds use price arbitrage in times of tariff anomalies (e.g., India-UAE CEPA). Strategies include calendar spreads and spot-future arbitrage, delivering 10%+ returns annually within SEBI’s regulatory caps.

Shifting Correlations – Mr Navneet Damani:

Mr Navneet Damani highlighted how silver is increasingly correlated with copper (85%) rather than gold, reflecting its industrial alignment, especially in solar energy. He likened silver ETFs to digital equivalents of traditional household silver hoarding. These holdings tend to re-emerge only at price peaks.

Investor Trends & Forecasts – Mr Navneet Damani:

Retail is engaging more via small bar contracts (1–5 kg), and wealth advisors now recommend 5–10% silver allocation. Institutional players are also entering through structured products. Annual return expectations remain in the 9–10% range.



Mr Navneet Damani

Motilal Oswal Financial Services Ltd



Mr Amit Vashisht

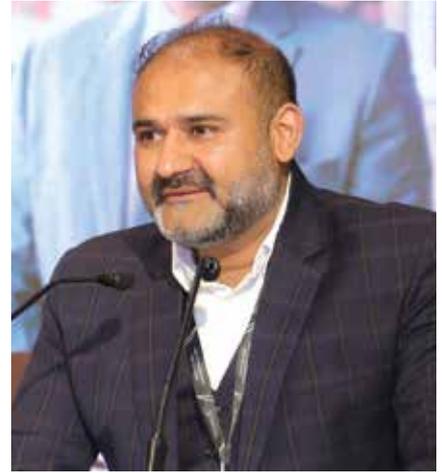
ICICI Prudential AMC Ltd

Rise of Silver ETFs – Mr Amit Vashisht:

Mr Amit Vashisht outlined the rapid growth of silver ETFs since 2022. AUM has crossed ₹16,000 crore, with over half coming via ETF fund-of-funds. SEBI’s mandate for full physical backing with insured inventory has bolstered investor confidence. The ease of digital platforms has further expanded access.

Buyer Behavior & Digital Silver – Mr Chirag Thakkar:

Reflecting on past trends, Mr Chirag Thakkar noted that current price surges haven't triggered panic selling—unlike 2011. Digital silver is gaining traction with younger investors: over 2,700 of his 35,000 clients are under 20. Demand for physical bars and digital silver is growing. Coin demand remains festive and ceremonial, rarely recycled unless prices surge.



Mr Chirag Thakkar
Amrapali Gujarat

Regulatory Landscape – Mr Amit Vashisht & Mr Chirag Thakkar:

While silver ETFs are stringently regulated, digital silver platforms are still self-regulated. Mr Thakkar explained how private platforms maintain client trust through voluntary audits and vault transparency. Both called for a formal regulatory framework.

Long-Term Outlook – Panel Consensus:

Mr Sajeja projected rising demand from solar and defense sectors. During Q&A, Mr Thakkar observed that digital investors are less reactive to volatility. Monetization is still premature due to lack of verification infrastructure. ETFs offer a feasible alternative.

Closing Summary – Mr Johnson Lewis:

- Silver is gaining independent recognition beyond gold.
 - Digital and ETF platforms are unlocking new investor bases.
 - Regulatory progress and ecosystem alignment are key to future growth.
- He concluded, “If gold is tradition, silver is innovation.”

Session 4

Silver in Industrial Applications



Mr Murli Nikam, Modison Ltd, **Dr Shiwani Pareek**, Adani Solar
Dr Trevor Keel, Silver Institute, **Mr Ankur Goyal**, MMTC PAMP India Pvt Ltd

Mr Goyal opened the session by contextualizing India's growing silver imports—7,000 tons annually—mainly for jewellery and investment. However, industrial demand is poised to expand dramatically, driven by solar energy and other advanced technologies.



Dr Trevor Keel
The Silver Institute

Global Industrial Demand – Dr Trevor Keel:

Dr Trevor Keel shared data showing that industrial silver demand reached 680 million ounces in 2024—60% of total demand. He warned that rising prices could trigger substitution or thrift practices in manufacturing. Despite this, silver’s unique conductivity, antimicrobial, and catalytic traits keep it irreplaceable. He highlighted innovations in coatings and electronics as key growth areas.

Silver in Solar Manufacturing – Dr Shiwani Pareek:

Dr Shiwani Pareek presented Adani Solar’s end-to-end facility in Mundra, with 4 GW capacity expanding to 10 GW. She explained how silver paste—90–92% silver—is used in the metallization layer of solar cells. India still uses PERC over TopCon due to infrastructure limitations, but silver usage is expected to multiply tenfold. India lacks silver powder manufacturing capacity and depends on imports from China and Japan.



Dr Shiwani Pareek
Adani Solar



Mr Murli Nikam
Modison Ltd

Electrical Contacts & Conductivity – Mr Murli Nikam:

Mr Murli Nikam spoke on silver’s role in electrical contacts and relays, where Modison Ltd is a leader. He highlighted various alloys (silver-nickel, silver-cadmium oxide) and use in circuit breakers, EVs, and appliances. Although India contributes just 10% to global electrical silver demand, potential remains untapped. Cost pressures are high, but demand from EVs and smart infrastructure is rising.

Panel Interaction:

- Mr Murli Nikam supported the idea of job-work models to make Indian exports competitive.
- All speakers agreed that recycling of silver from end-of-life solar panels is a rising but underdeveloped opportunity.
- Mr Goyal called for a consortium of Indian refiners to invest in silver powder manufacturing to reduce import reliance.

Session 5

Update on Research in Silver at Leading Institutions of India



Prof. Nikhil Dhawan, IIT Roorkee, Dr Amol A Kulkarni, CSIR-NCL, Mr Srivatsava Ganapathy, Eventell Global Advisory Pvt Ltd

The session served as a bridge between academia and industry, showcasing innovations in silver-based technologies and their commercial viability.



CSIR-NCL Highlights – Dr Amol Kulkarni:

- Developed silver nanowires with 98% purity and reduced production cost from \$140/g to \$8.7/g.
- Focus on conducting inks and printable electronics.
- Innovations include silver-coated silica and platinum-carbon catalysts for hydrogen fuel cells.
- Licensing models allow full transfer, pilot demonstrations, and non-exclusive terms

IIT Roorkee Highlights – Prof. Nikhil Dhawan:

- Developed selective recovery methods for silver/gold from e-waste.
- Recovery rate: up to 300g silver per ton of PCBs.
- Uses AI and robotics for precision extraction without smelting.
- End-to-end commercialization support available, including plant scale-up.

Q&A Highlights:

- Both institutes confirmed environmental compliance is built into process design.
- Licensing and consultancy models are flexible, especially for Indian firms
- Collection of e-waste remains a bottleneck; standardization and public buyback programs are needed.

