

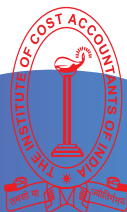
# THE MANAGEMENT ACCOUNTANT

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## Eco-Computing & Carbon - Neutral Infrastructure THE STRATEGIC ROLE OF CMAs

*Journal of*



**ICMAI**

भारतीय लागत लेखाकार संस्थान

**THE INSTITUTE OF  
COST ACCOUNTANTS OF INDIA**

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(Under the jurisdiction of Ministry of Corporate Affairs)

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- On 28 May 1959, the Institute was established by a special Act of Parliament, namely, the Cost and Works Accountants Act 1959 as a statutory professional body for the regulation of the profession of Cost & Management Accountancy.
- It has since been continuously contributing to the growth of the industrial and economic climate of the country.
- The Institute of Cost Accountants of India is the only recognized statutory professional organisation and licensing body in India specialising exclusively in Cost & Management Accountancy.

#### VISION STATEMENT

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

#### MISSION STATEMENT

"The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

#### Institute Motto

असतोमा सद्गमय  
तमसोमा ज्योतिर्गमय  
मृत्योर्मा मृतं गमय  
ॐ शान्ति शान्ति शान्ति

From ignorance, lead me to truth  
From darkness, lead me to light  
From death, lead me to immortality  
Peace, Peace, Peace

#### IDEALS THE INSTITUTE STANDS FOR

- to develop the Cost and Management Accountancy Profession
- to develop the body of members and properly equip them for functions
- to ensure sound professional ethics
- to keep abreast of new developments



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there is always a CMA**

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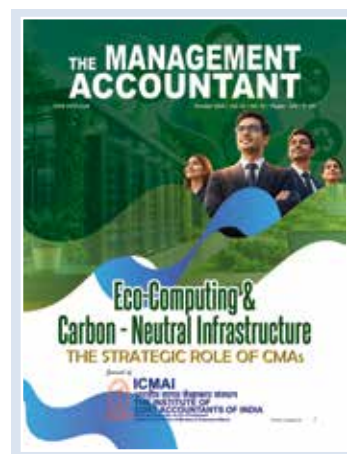
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# From the EDITOR'S DESK

**E**co-Computing and Carbon-Neutral Infrastructure bring together the twin imperatives of digital transformation and environmental responsibility, highlighting how energy-efficient computing, responsible resource utilization, renewable energy integration, and sustainable infrastructure can significantly reduce the environmental footprint of the broader technology ecosystem.

In this context, Cost and Management Accountants (CMAs) have a pivotal strategic role in enabling organizations to align technology investments with core sustainability objectives. By integrating carbon-conscious capital allocation, total cost of ownership (TCO) optimization, governance, standardized measurement, and risk management, CMAs help translate corporate environmental commitments into financially viable, audit-ready business outcomes. The October 2026 issue of *The Management Accountant* explores this evolving role and considers how finance professionals can serve as catalysts for a resilient, efficient, and carbon-neutral digital future.

This edition features seven thematic articles examining critical aspects of this strategic transformation:

*Embodied Carbon Accounting in India's Cement Sector: A Cost and Management Accounting Framework* - This article examines the carbon-emission profile of India's cement sector

and introduces a structured "carbon cost card" with variance analysis, enabling CMAs to track, control, and report carbon costs alongside traditional financial metrics.

*Advancing Project Sustainability in India's Energy Transition through Environmental Cost Accounting and Life-Cycle Management: The Role of CMAs* - Exploring the gap between declining renewable technology costs and the broader systemic expenses of deployment—including environmental impacts, grid reliability, and financing—this study highlights how CMAs can incorporate environmental and lifecycle costs into formal project appraisal frameworks.

*Accounting for Embodied Carbon: Costing Upfront Emissions in Green Infrastructure and the CMA's Strategic Role* - Evaluating current reporting frameworks (IFRS, Ind AS, and Indian regulatory guidance), this piece identifies the lack of standards addressing upfront embodied emissions in infrastructure and demonstrates how CMAs bridge this gap using internal carbon shadow pricing.

*Renewable Energy Transition in India: Strategic Role of CMAs through Big Data Analytics Enabled Management Accounting* - This article establishes the nexus between renewable energy integration, modern management accounting, and Big Data Analytics (BDA), offering a cost-efficient architecture for managing enterprise energy transitions.

*Building ESG-Ready CMAs: Insights from Singapore's Reporting Environment and SEBI's BRSR* - Drawing comparative insights from Singapore's Reporting Standards and SEBI's Business Responsibility and Sustainability Reporting (BRSR) framework, this contribution outlines the professional commitments, skill sets, and strategic capabilities CMAs must develop to lead ESG roles.

*From Green Energy to Green Computing: The Strategic Role of CMAs in Carbon-Neutral Infrastructure* - Warning against "greenwashing by data"—inaccurate environmental reporting resulting from fragmented systems and manual processes—this article illustrates how CMAs enforce data integrity through cost measurement, reconciliation, and internal controls.

*Carbon Accounting - Accounting of Future* - This piece provides a comprehensive breakdown of the technical accounting processes and international best practices involved in measuring, allocating, and reporting embodied carbon across global supply chains.

In addition to our core technical features, this issue brings together a range of contemporary topics of vital professional significance. We are pleased to include an exclusive interview with **CMA R V N Vishweshwar**, Director (Finance) at Hindustan Copper Limited, Kolkata, offering valuable executive perspectives on governance, leadership, and the expanding mandates of finance professionals. This edition also features an insightful communication titled "*MONEY, MARKETS, MINDSET and METHOD*," analyzing key dynamics across the macroeconomy, capital markets, listed enterprises, and personal wealth management.

We welcome your feedback and suggestions at [editor@icmai.in](mailto:editor@icmai.in) as we continue our efforts to enhance the journal's quality, depth, and relevance. We hope you find this edition informative, insightful, and enriching.

As we usher in this vibrant festive season, we extend our warmest wishes to you and your families for a joyful, prosperous, and peaceful time ahead. May this festive period bring renewed energy and brightness to your professional journey. Keep reading, stay inspired during this festive season, and stay connected with us!



# President's Communiqué

**CMA Chittaranjan Chattopadhyay**  
President  
The Institute of Cost Accountants of India

*“The highest education is that which does not merely give us information but makes our life in harmony with all existence”*

**-- Rabindranath Tagore**

My Dear Professional Colleagues,  
Namaskar!

**T**he month of September 2026 has been marked by strategic consolidation and forward-looking policy developments for the Indian economy. As our nation accelerates its journey toward the vision of ‘Viksit Bharat’, recent initiatives by the Ministry of Finance, the Reserve Bank of India (RBI), and market regulators underscore a steadfast commitment to macroeconomic stability, digital innovation, and sustainable growth. The resilience of our external sector, backed by record foreign exchange reserves and a robust private corporate capital expenditure pipeline estimated at ₹3.2 lakh crore for the fiscal year, presents a dynamic landscape for strategic value creation.

Simultaneously, we are witnessing rapid structural enhancements across our financial ecosystem. The recent dialogues hosted by the Ministry of Finance on financing India’s agricultural transformation and energy transition are setting the stage for the next decade of inclusive growth. Concurrently, the push toward a sovereign digital economy—highlighted by discussions on tokenisation and ‘Agentic AI’ at the Global Fintech Fest—alongside SEBI’s tightening of market frameworks and NPCI’s privacy upgrades, signifies a paradigm shift in financial governance and risk management.

For us as Cost and Management Accountants, these macroeconomic and regulatory developments

are a direct call to action. Our profession stands at the very intersection of regulatory compliance and strategic business growth. The surging momentum in private capex amplifies the demand for our core expertise in capital budgeting, project financial modeling, and techno-economic viability (TEV) assessments. Furthermore, as industries and the government prioritize the transition to green energy, our specialized skills in Life Cycle Costing, carbon cost tracking, and Business Responsibility and Sustainability Reporting (BRSR) are becoming indispensable to corporate boards.

Equally critical is our role in the evolving financial and digital markets. In an environment characterized by high bank Credit-Deposit ratios and tighter credit scrutiny, CMAs are uniquely positioned to help enterprises optimize working capital and assist lenders through rigorous stock and concurrent audits. As the digital economy expands into fractional ownership and tokenized real-world assets, the mandate for CMAs as Registered Valuers and architects of internal controls for AI-driven workflows will only grow.

As we navigate this transformative era, I urge all members to continuously upskill in these emerging domains and encourage our students to recognize the vast, strategic opportunities that lie ahead. The future of the Indian economy demands robust financial leadership, and the CMA fraternity is perfectly equipped to deliver it.

## **Meetings with Dignitaries and Key Stakeholders**

During September 2026, I had the opportunity to engage with several senior dignitaries and key stakeholders on matters concerning the CMA

profession and the Institute.

- ⊙ I, along with CMA Manoj Kumar Anand, Vice President, CMA (Dr.) K Ch A V S N Murthy, Council Member, and CMA (Dr.) Debaprosanna Nandy, Secretary (Officiating), ICAI, called on Shri Swapn Dasgupta, Hon'ble Finance Minister, Government of West Bengal, and Shri Amiya Kisku, Hon'ble Minister of State for Food Processing Industries and Horticulture and Agriculture, Government of West Bengal, on 1<sup>st</sup> September 2026 at Kolkata.
- ⊙ On 8<sup>th</sup> September 2026, I met Shri Gyaneshwar Kumar Singh, DG & CEO, Indian Institute of Corporate Affairs (IICA) and Shri Debarun Kalita, OSD, IICA at Manesar.
- ⊙ On 15<sup>th</sup> September 2026, I along with CMA Manoj Kumar Anand, Vice President called on Shri V. Umashankar, IAS, Secretary to the Government of India, Ministry of Road Transport and Highways at New Delhi.
- ⊙ I, along with CMA Manoj Kumar Anand, Vice President, ICAI, and CMA (Dr.) P. Siva Rama Prasad, Former AGM, SBI, called on Shri Sanjay Lohiya, IAS, Secretary to the Government of India, Department of Financial Services, Ministry of Finance, on 15 September 2026 at New Delhi. On the same day, I, along with CMA Manoj Kumar Anand, Vice President; CMA (Dr.) Debaprosanna Nandy, Secretary (Officiating), ICAI; and CMA (Dr.) P. Siva Rama Prasad, Former AGM, SBI, met Ms. Shalini Pandit, Joint Secretary, Department of Financial Services, Ministry of Finance, and presented various publications of the Institute.
- ⊙ On 18<sup>th</sup> September 2026, I met Prof. Debabrata Das, Vice Chancellor, Tripura University, along with senior professors and officers of the University at Agartala, to discuss opportunities for collaborative programmes. CMA Debasish Pal, Finance Officer, Tripura University, and CMA R R Paul, Chairman, Agartala Chapter, were also present.
- ⊙ On 23<sup>rd</sup> September 2026, I along with CMA Manoj Kumar Anand, Vice President, ICAI, met Shri Puneet Agarwal, IAS, AS&FA,

Ministry of Road Transport & Highways (MoRTH) and M/o. Ports, Shipping & Waterways; Shri Vinay Kumar Rajawat, DG (RD) & SS, Ministry of Road Transport & Highways (MoRTH); and CMA Sudhir Kumar Jaiswal, Principal Advisor (Cost), MoRTH at New Delhi and discussed the role of CMAs in Infrastructure projects.

These interactions provided valuable opportunities to discuss matters of professional relevance and explore avenues for strengthening the role and contribution of CMAs across diverse sectors.

### **Rise Bengal - Powering the Journey towards Viksit Bharat@2047**

On 21<sup>st</sup> September 2026, I had the pleasure of participating in and addressing the Seminar on "RISE Bengal: Powering the Journey towards Viksit Bharat@2047" organised by the Board of Advanced Studies & Research and the Career Counselling & Placement Committee of ICAI at Raajkutir, Kolkata.

The seminar brought together distinguished leaders, policymakers, industry stalwarts and eminent personalities from academia, industry and other sectors. The event was graced by Chief Guest, Dr. Swapn Dasgupta, Hon'ble Finance Minister, Government of West Bengal, along with Guests of Honour, Dr. Shankar Ghosh, Minister-in-Charge, Tourism & Parliamentary Affairs, Government of West Bengal and CMA (Dr.) Rajesh Kumar, Hon'ble Member of the Legislative Assembly, West Bengal.

The event was attended by CMA Manoj Kumar Anand, Vice President and other Council Members. The summit provided a valuable platform for meaningful dialogue, knowledge exchange, collaboration, and discussions on opportunities for sustainable growth and development.

The event also featured two insightful technical sessions, enriched by the participation and perspectives of senior corporate leaders, fostering meaningful discussions on contemporary business, economic and professional challenges.

The summit highlighted the strategic role of Cost and Management Accountants in driving sustainable growth, strengthening economic resilience, and contributing to India's journey

towards a developed nation by 2047. ICMAI remains committed to empowering professionals with knowledge, leadership and innovation to drive regional and national development.

### **IRDAI Public Consultation Paper on Insurance Distribution Reforms**

The Insurance Regulatory and Development Authority of India (IRDAI) has issued a Public Consultation Paper on “Reforms for Recalibrating Economics of Insurance Distribution” on 23<sup>rd</sup> September 2026, with the objective of improving policyholder outcomes, affordability, transparency, competition, operational efficiency and sustainable growth of the insurance sector. The proposed reforms cover simplification of the distribution architecture, Expenses of Management (EoM), distribution commissions, transparency in pricing, safeguards against mis-selling and compulsory bundling, digital distribution and Market Infrastructure Institutions. The consultation has significant relevance for the Cost and Management Accounting profession, particularly in relation to cost rationalisation, EoM management, commission structures, cost transparency and cost audit. Costing can help establish the actual cost of insurance distribution across products, lines of business, channels, activities and geographies, while cost audit can provide independent assurance on the completeness, classification, allocation, reconciliation and reasonableness of such costs and remuneration. The CMA profession can therefore contribute meaningfully towards developing a transparent and sustainable cost framework for insurance distribution, ensuring that distribution expenditure is aligned with efficiency, service quality and policyholder value.

Members are encouraged to contribute their views on the proposed reforms, particularly on the role of costing and cost audit in establishing transparent, efficient and sustainable cost frameworks for insurance distribution. Members are requested to submit their suggestions to [bfsi@icmai.in](mailto:bfsi@icmai.in) by 18<sup>th</sup> October 2026, to enable the Institute to consolidate the responses and submit its representation to IRDAI by 25<sup>th</sup> October 2026. The link for the consultation paper is as follows:

[https://dwpivt501gtb6.cloudfront.net/upload/bfsi/Consultation%20paper%20on%20Distribution%20Reforms%20Part%201%20&%202\\_2026.pdf](https://dwpivt501gtb6.cloudfront.net/upload/bfsi/Consultation%20paper%20on%20Distribution%20Reforms%20Part%201%20&%202_2026.pdf)

### **Release of INSCOST – Framework for the Indian Insurance Sector**

On 1<sup>st</sup> October 2026, I had the privilege of releasing, through a Press Meet, the Institute’s comprehensive publication titled “**INSCOST – Cost Management, Cost Governance, Cost Disclosure and Cost Assurance Framework for the Indian Insurance Sector.**”

The publication presents a sector-specific and integrated framework for the Indian Insurance Sector, providing a structured and layered approach to the discipline of cost and its application across the insurance value chain. It encompasses key dimensions including Cost Records, Cost Management, Cost Governance, Cost Disclosure and Cost Assurance, and further extends to Strategic Cost Management and Product Profitability. By bringing these dimensions together, the Framework provides an integrated perspective on the role of cost information in strengthening financial discipline, improving operational efficiency, enhancing governance and supporting informed strategic decision-making. It is intended to serve as a comprehensive reference for professionals and stakeholders associated with the insurance industry.

Furthermore, this Framework will be instrumental in driving the EASE (Enhanced Access and Service Excellence) for Insurance agenda. By aligning internal cost controls with IRDAI’s Expenses of Management (EoM) regulations and digital transformation initiatives, it enhances ease of doing business, eliminates duplicate compliance friction, and ensures that technology investments translate directly into operational excellence, enhanced solvency, and elevated consumer trust.

The INSCOST publication will be made available on the BFSI Portal for the benefit of members. I encourage our members to access the publication and familiarise themselves with its framework, methodology and sector-specific applications. I am confident that it will serve as a valuable reference for Cost Accountants and other professionals engaged with the insurance sector, particularly in navigating its evolving regulatory, financial and strategic requirements.

### **12 Days Advanced Skill Training Programme (ASTP)**

The 12-Day Advanced Skill Training Programme

(ASTP) for CMA qualified candidates of the June 2026 Term was inaugurated through an online session on 1<sup>st</sup> September 2026 by the Career Counselling and Placement Committee of ICAI, following which the offline programme commenced simultaneously across 20 locations in the country, namely Delhi, Noida, Chennai, Mumbai, Kolkata, Vijayawada, Coimbatore, Bengaluru, Thrissur, Kochi, Hyderabad, Jaipur, Lucknow, Pune, Ahmedabad, Surat, Bhilai, Bhubaneswar, Ranchi, and Baroda.

The programme was conducted in 33 batches, covering approximately 3,403 students, providing them with an opportunity to strengthen their practical knowledge, professional skills and industry readiness.

During September 2026, I participated in the ASTPs and interacted with the newly qualified CMAs at various centres, including Delhi; Kolkata; Chennai; Noida; Thrissur; Vijayawada; Bhubaneswar; and Ranchi. I encouraged them to embrace continuous learning, develop emerging skills and make the most of the opportunities available in the profession as they embark on their professional journey.

I appreciate the efforts of the Career Counselling & Placement Directorate, Regional Councils, Chapters, faculty members, coordinators and all stakeholders associated with this important initiative. Such programmes play a vital role in bridging the gap between academic learning and professional requirements.

### **Felicitation Programme for Newly Qualified Students at Howrah Chapter**

On 2<sup>nd</sup> September 2026, I had the privilege of gracing the Felicitation Programme for the Final Pass-out Students, organised by the Howrah Chapter. I congratulated the successful students on their achievement and encouraged them to pursue their professional journey with commitment, integrity and continuous learning. The programme provided an opportunity to interact with the newly qualified professionals and inspire them to contribute meaningfully to the growth and advancement of the CMA profession.

### **Programmes and Professional Engagements at Bhubaneswar**

On 3<sup>rd</sup> September 2026, I had the privilege of participating in three significant programmes at Bhubaneswar. I addressed the participants at the inaugural programme of the 12-Day Advanced Skill Training Programme (ASTP) organised at the Bhubaneswar Chapter, encouraging the newly qualified CMAs to continuously enhance their professional skills and embrace emerging opportunities.

I also participated in the seminar on “MSMEs – Role of CMAs as Catalysts for Viksit Bharat”, organised by the Bhubaneswar Chapter in the presence of Dr. Subhranshu Sekhar Acharya, CMD, NSIC, as Chief Guest, and highlighted the important role of CMAs in strengthening MSMEs and contributing to inclusive economic growth.

On the same day, I attended the Launching Ceremony of the CMA Foundation Course, in accreditation with ICAI, organised by Srusti Academy of Management & Technology, Bhubaneswar, reaffirming the Institute's commitment to expanding quality professional education and creating greater opportunities for aspiring CMAs.

### **International Seminar on Viksit Bharat @2047 by Scottish Church College**

On 12<sup>th</sup> September 2026, I had the privilege of attending the International Seminar on “Viksit Bharat @2047: Multidisciplinary Research for Innovation, Sustainability and Inclusive Development” as the Guest of Honour, organised by Scottish Church College, Kolkata. The seminar provided a meaningful platform for deliberations on multidisciplinary research, innovation, sustainability and inclusive development in the context of India's vision of Viksit Bharat @2047.

### **CPE Programme on Internal Audit by EIRC**

On 12<sup>th</sup> September 2026, I inaugurated and addressed the CPE Programme on “Transform. Communicate. Influence: Empowering CMAs to Lead the Future of Internal Audit”, organised by EIRC at Kolkata. The programme focused on the evolving role of CMAs in internal audit and the importance of transformation, effective

communication and leadership in strengthening professional capabilities. I encouraged the participants to embrace emerging opportunities and enhance their skills to effectively contribute to the changing internal audit landscape.

### **Bhoomi Pujan, ASTP Inauguration and Members' Meet at Ranchi**

On 14<sup>th</sup> September 2026, I participated in the Bhoomi Pujan ceremony of the proposed CMA Bhawan at Pundag, Ranchi, marking an important milestone in the development of the Ranchi Chapter.

I also inaugurated the 12-Day Advanced Skill Training Programme (ASTP) for newly qualified CMAs of the June 2026 Term, organised by the Career Counselling and Placement Directorate of ICAI in association with the Ranchi Chapter. I addressed the newly qualified professionals and encouraged them to continuously enhance their skills, embrace emerging opportunities and contribute meaningfully to the growth of the CMA profession. The programme was followed by an interactive Members' Meet.

### **Silver Jubilee Edition of Cosma Fest 2026**

On 26<sup>th</sup> September 2026, I had the privilege of attending the Silver Jubilee Edition of Cosma Fest 2026, organised by the Coimbatore Chapter of ICAI, along with CMA TCA Srinivasa Prasad, Immediate Former President, ICAI.

The celebration was graced by Dr. Daniel Victor, MD, Vitae International Accounting Services Pvt. Ltd., as Chief Guest, and Dr. Ponnusamy, Principal, Hindusthan College of Arts and Science, as Guest of Honour, along with CMA Praveen Kumar, Chairman, SIRC, CMA Surya Prakash U, Chairman, Coimbatore Chapter, and CMA Dr. P. Prakash, Secretary, Coimbatore Chapter.

The Silver Jubilee celebration marked an important milestone in the Chapter's journey and provided a valuable opportunity to connect with members and students and celebrate their active participation and contribution to the CMA profession.

### **Members' Meet and Convocation of Newly Qualified CMAs at Hyderabad**

On 28–29 September 2026, I was in Hyderabad for

a series of programmes organised by the Hyderabad Chapter of ICAI. On 28<sup>th</sup> September, I interacted with members at the Members' Meet, which also included a felicitation, providing an opportunity to engage with the professional fraternity and discuss matters of importance to the CMA profession.

On 29<sup>th</sup> September, I addressed a Press Conference and interacted with the media on key initiatives and developments of the Institute, followed by the Convocation of Newly Qualified CMAs at the KLN Auditorium, Federation of Telangana Chambers of Commerce, Hyderabad. With around 425 newly qualified CMAs who had participated in the Advanced Skill Training Programme (ASTP), the Convocation marked a significant milestone in their professional journey. I congratulated the newly qualified professionals and encouraged them to uphold the highest standards of professional excellence, integrity and continuous learning as they embark on their careers.

### **Participation in the 2<sup>nd</sup> Edition of the ICC Global Business Summit**

The Directorate of Career Counselling and Placement, ICAI participated as a Gold Partner in the 2<sup>nd</sup> Edition of the ICC Global Business Summit, organised by the Indian Chamber of Commerce (ICC) on 18<sup>th</sup> and 19<sup>th</sup> September 2026 at New Delhi.

The Summit brought together policymakers, business leaders, professionals, industry representatives and other stakeholders, providing a platform for knowledge exchange, networking and discussions on contemporary business and economic issues. The Summit was attended by distinguished dignitaries, including Dr. Himanta Biswa Sarma, Hon'ble Chief Minister, Government of Assam; Dr. Swapan Dasgupta, Hon'ble Finance Minister, Government of West Bengal; and Ms. Shreyasi Singh, Hon'ble Minister of Industries and Sports, Government of Bihar, along with senior representatives from leading Indian and global organisations. ICAI's participation provided an important platform to enhance the visibility of the CMA profession and strengthen engagement with industry and other stakeholders.

### MoU between ICAI and National Council for Co-operative Training (NCCT)

The Institute entered into a Memorandum of Understanding (MoU) with National Council for Co-operative Training (NCCT), an autonomous society promoted by Ministry of Cooperation, Govt. of India, at New Delhi on 15<sup>th</sup> September 2026.

The MoU was signed by CMA (Dr.) Debaprosanna Nandy, Secretary (Officiating), ICAI, and Smt. Minu Shukla Pathak, Secretary, NCCT, in my presence along with CMA Manoj Kumar Anand, Vice President; CMA Navneet Kumar Jain, Chairman, Cooperative and NPO Development Board (CNDB), ICAI; and Shri Santanu Saha, Director (Finance), NCCT.

The MoU marks a further step towards strengthening the collaboration between ICAI and NCCT, with an enhanced focus on greater engagement with the cooperative sector. The collaboration will facilitate joint initiatives in areas such as training programmes, capacity building, research, knowledge sharing and professional development for stakeholders associated with the cooperative sector.

### MoU between ICAI and Indian Chamber of Commerce (ICC)

The Institute signed a Memorandum of Understanding (MoU) with the Indian Chamber of Commerce (ICC) on 18<sup>th</sup> September 2026 at Delhi, marking a significant milestone in strengthening institutional cooperation and fostering meaningful industry-academia collaboration.

The MoU was signed in the presence of Shri Brij Bhushan Agarwal, President, ICC; Shri Parthiv Neotia, Senior Vice President, ICC; CMA Manoj Kumar Anand, Vice President and CMA Vinayaranjan P, Council Member and Chairman, Career Counselling and Placement Committee, ICAI.

### CAT Course in Partnership with Directorate General Resettlement (DGR), Ministry of Defence, Government of India

I am pleased to note the continued progress of the CAT Course being conducted in partnership with the Directorate General Resettlement (DGR), Ministry of Defence, Government of India, for

facilitating the professional resettlement and career transition of Armed Forces personnel.

During September 2026, CAT Course batches were successfully concluded at Visakhapatnam, Salem, Bengaluru, Kolhapur, Kozhikode-Malappuram, Madurai and Prayagraj Chapters. Cdr Rahil Rai, Joint Director, DRZ (West), addressed the participants of five Chapters during the joint Valedictory Programme held on 11<sup>th</sup> September 2026 and also graced the valedictory programme of the Madurai batch on 25<sup>th</sup> September 2026 through virtual mode.

The outreach further expanded with new batches commencing on 14<sup>th</sup> September 2026 at Kota, Jodhpur, Lucknow and Jammu, followed by batches at Chhatrapati Sambhajinagar, Kozhikode-Malappuram, Surat and Gurugram on 28<sup>th</sup> September 2026. The inaugural programmes were graced by senior officers of DGR at various locations.

I appreciate the dedicated efforts of the CAT Directorate, Chapters, faculty members, coordinators and all stakeholders in strengthening this important ICAI-DGR initiative and extend my best wishes to all participants for a successful professional transition.

Before I conclude, I would like to recall the inspiring words of Nelson Mandela:

*"Education is the most powerful weapon which you can use to change the world."*

These words aptly remind us of the transformative power of knowledge and continuous learning. As the CMA profession continues to evolve, let us remain committed to learning, innovation and excellence, and collectively contribute to building a stronger profession and a more resilient and developed India.

I extend my warmest greetings and best wishes to our members, students and their families on the auspicious occasions of Mahatma Gandhi Jayanti, Navaratri and Dusshera. May these festivals bring happiness, prosperity, peace and success to all.

With warm regards,



**CMA Chittaranjan Chattopadhyay**  
1<sup>st</sup> October 2026

# SUMMARY OF THE ACTIVITIES OF VARIOUS DEPARTMENTS/ COMMITTEES/BOARDS/COMPANIES OF THE INSTITUTE DURING THE MONTH OF SEPTEMBER 2026

## ADMINISTRATION DEPARTMENT

In accordance with the guidelines received from the Department of Urban Development, Ministry of Housing and Urban Affairs, the Institute is observing Swachhata Hi Seva 2026 (SHS-2026) from 17<sup>th</sup> September 2026 to 2<sup>nd</sup> October 2026.

The theme of this year's campaign, "Swachhata Mein Sahbhag, Swachh Bharat, Viksit Bharat", underscores the collective role and responsibility of every individual in contributing towards the vision and Sankalp of a Swachh and Viksit Bharat. The campaign seeks to reinforce the spirit of Jan Bhagidari and encourage citizens to actively participate in maintaining clean, healthy and sustainable surroundings.

Various activities have been planned under this initiative towards the theme of the SHS-2026 campaign including cleaning of public places, carry your own bag awareness drive, promoting maintenance of public toilets, reuse and recycling drive.

2<sup>nd</sup> October 2026 shall be observed as Swachh Bharat Diwas, marking the culmination of the SHS-2026 campaign. Let us reaffirm our commitment to the ideals of cleanliness and responsible citizenship and contribute towards the shared vision of a Swachh Bharat and Viksit Bharat.

## AI STRATEGY & INNOVATION BOARD

### ◎ Restructuring of Three-Day Training Programme

The Board has restructured its existing AI Course as "AI Proficiency (AIP)", with the objective of providing Cost and Management Accountants, Final CMA Students and other professionals with practical knowledge and hands-on exposure to Artificial Intelligence and its applications in professional and business environments.

The programme will be conducted over three full days and will cover conceptual understanding, practical demonstrations, hands-on sessions and relevant AI use cases. The programme is designed

to provide participants with practical exposure to Artificial Intelligence and its applications. Participants who successfully complete the programme will be provided with a Certificate of Completion.

The revised course fee for CMA Members is ₹2,000 + GST per participant, for Final CMA Students is ₹1,600 + GST per student, and for Other Professionals is ₹5,000 + GST per participant.

### ◎ Webinars

The Board organised three webinars during September 2026, focusing on Artificial Intelligence, technology and automation and their practical relevance to Management Accountants.

The first webinar, held on 18<sup>th</sup> September 2026 on "HTML apps - the next automation layer for Management Accountants", was conducted by CMA Jagjeet Singh. The session explored how HTML-based applications can serve as an effective automation layer, helping Management Accountants streamline processes, improve productivity and develop practical digital solutions. The session was well received and concluded with an engaging Q&A.

The second webinar, held on 19<sup>th</sup> September 2026 on "AI-powered industry research: a smarter approach to investing", was conducted by Mr. Neel Randeria. He highlighted the role of Artificial Intelligence in industry research and investment analysis, including the use of AI tools for efficient gathering, analysis and interpretation of industry information. The session was well appreciated by the participants.

The third webinar, held on 27<sup>th</sup> September 2026 on "Hands-on excel automation with AI: Build the macros you still need", was conducted by CMA Jagjeet Singh. The session provided practical insights into using AI for Excel automation and developing macros to reduce repetitive work and improve efficiency. The hands-on approach was highly appreciated by the participants.

The three webinars provided valuable exposure to

emerging AI and automation tools and highlighted their potential to enhance productivity and add value to the professional role of Management Accountants.

## **BANKING, FINANCIAL SERVICES AND INSURANCE BOARD (BFSI BOARD)**

### **A. Webinars**

- i. The Board organized a Webinar in two-part series on 19<sup>th</sup> and 20<sup>th</sup> September 2026 on the topic “Corporate Governance Regulations for the Insurance Sector”. CMA Delzad Dinyar Tanaz Jivaasha was the Speaker.
- ii. The Board organized a Webinar on 23<sup>rd</sup> September 2026 on the topic “Bank Account Portability: The Right to Switch and the Future of Customer-Centric Banking”. CMA (Dr.) P Siva Rama Prasad, Former AGM, State Bank of India was the Speaker.
- iii. The Board organized a Webinar on 28<sup>th</sup> September 2026 on the topic “Banking on the CMA”. CMA Kalpesh Mody, Chief Compliance Officer (CCO), STCI Primary Dealer Limited was the Speaker.

### **B. Opportunities for CMAs**

- i. CMAs are eligible to apply for the Manager positions at Cosmos Co-operative Bank.
- ii. CMAs are eligible to apply for the recruitment of Officer Grade ‘A’ (Assistant Manager) 2026 at the Pension Fund Regulatory and Development Authority (PFRDA).
- iii. CMAs are eligible to apply for the recruitment of specialist officers (Manager-Credit & Senior Manager-Credit) in Indian Overseas Bank.
- iv. CMAs are eligible to apply for the recruitment of Senior Associate- Credit Risk Management (On Contract) & Senior Associate- Credit Monitoring & Recovery (On Contract) at IFCI Ltd.
- v. CMA Firms are eligible to apply for the concurrent audit of SIDBI in Government Product Vertical of SIDBI, New Delhi, the

last date for application is 13<sup>th</sup> October 2026.

- vi. CMAs are eligible to apply for the recruitment of Audit Consultant (AC) at SIDBI. The last date for application is 14<sup>th</sup> October 2026.

### **C. Certificate Courses**

The Certificate Course on Project Financing of Banks (2nd Batch) and the Certificate Course on Concurrent Audit of Banks (15th Batch) have started and we request all the professionals to enrol for the session. The link for admission is as follows-

<https://eicmai.in/OCMAC/BFSI/BFSI.aspx/>

## **COOPERATIVE AND NPO DEVELOPMENT BOARD (CNDB)**

The Board organized a Webinar on 10<sup>th</sup> September 2026 on the topic “The Changing Landscape of Taxation for Registered Non-Profit Organisations under the Income-tax Act, 2025”. The session was taken by CMA Ritu Dash Choudhury, reflecting the changes in the Income Tax Act 2025 and more importantly, how these changes will affect their day-to-day compliance and tax-related matters.

The Board also released its 8th Quarterly Journal “CMAs Cooperative Digest” during the Delhi MSME Conclave held on 26<sup>th</sup> September 2026 at Scope Complex, New Delhi. The journal was released in the gracious presence of Smt. Mercy Apao, Joint Secretary, Ministry of MSME, Government of India, the Chief Guest of the event, along with the CMA Manoj Kumar Anand, Vice President, CMA Navneet Kumar Jain, Chairman, CNDB and RCMs of NIRC. The publication highlights contemporary developments, insights and professional perspectives relating to the cooperative and NPO sector and reflects the Institute’s continued efforts towards strengthening knowledge, capacity building and professional engagement in the sector.

## **CORPORATE MITRA SCHEME**

The Government of India announced Corporate Mitra scheme in the Union Budget of 2026-27 designed to create a pool of trained and certified para professionals to support MSMEs in managing business and regulatory compliances. This will facilitate ease of doing business and contribute

towards Viksit Bharat.

Indian national Youth up to 30 years of age who are graduates or are in the final year of Graduation will be eligible for the scheme which envisages Academic online learning of about 150 hours through pre recorded lecture videos and 6 months on-the-job training with professional firms of the Members of the 3 Professional Institutes. Certification as Corporate Mitra will be subject to successful completion of academic modules and on-the-job training.

The Academic module has been jointly developed by ICAI, ICAI and ICSI. The enrolled candidates will be exposed to the theoretical and practical aspects of Accounting, Taxation, Banking, Financial Management, Legal and Secretarial and Cost and Management Accounting.

The Ministry of Corporate Affairs helped and provided guidance to the professional institutes in finalization of scheme guidelines, scheme brochures, Logo etc. The Ministry also played a key role in hosting the course content designed for Corporate Mitra on SWAYAM Plus portal for nationwide rollout of the Scheme.

The Corporate Mitra course was launched on 31<sup>st</sup> August 2026 with 2879 enrolled candidates in a program attended by the President and Vice President ICAI, ICAI and ICSI, MCA Officials and Corporate Mitra Coordination Committee members.

A Task Force has been constituted by ICAI to steer Corporate Mitra Scheme.

### **INTERNAL AUDITING AND ASSURANCE STANDARDS BOARD (IAASB)**

The meeting of the Internal Auditing and Assurance Standards Board (IAASB) was convened in September 2026. The Chairman welcomed the Members and apprised the Board of the various initiatives and activities undertaken by the Board. The Guidance Note on Internal Audit of the Power Sector is presently under progress and has undergone review as part of the development process. The Board is actively working towards bringing out the Guidance Note to provide relevant and practical guidance to professionals engaged in the sector.

As part of its continued endeavour to enhance

professional knowledge and facilitate knowledge sharing among members and stakeholders, the Board also conducted a series of webinars on contemporary and emerging areas of internal audit, namely, Internal Audit of Power Utilities – A GENCO Perspective, Internal Audit of MSMEs – A Cost Auditor’s Perspective and Re-imagining Internal Audit – Past, Present and Future.

### **INTERNATIONAL AFFAIRS DEPARTMENT**

The International Affairs Committee in joint association with the SAFA PAIB Committee organized the second webinar of its quarterly webinar series titled “SAFA Industry Dialogue” on 18<sup>th</sup> September 2026 on the topic “Future of Finance - From an International Lens” by the resource person Shri Nirlep Bhatt, Group Financial Controller – Al Majid Jawad, Qatar. The webinar was inaugurated by President SAFA, Vice President, SAFA; President, ICAI and Chairman, SAFA PAIB.

### **MEMBERSHIP DEPARTMENT**

As of 28<sup>th</sup> September 2026, the month of September witnessed the granting of 963 new Associate memberships, along with the elevation of 43 existing Associate members to Fellowship.

The Membership Department of the Institute has sent communications to all members regarding their outstanding membership fees for the year 2026–27.

As part of the Membership Drive, the Membership Department, with the support of the Regional Councils and Chapters of the Institute, is making dedicated efforts to reach members through phone calls and emails. The initiative aims to assist members with the restoration of their membership, updating their communication details, and making changes to their professional address and Chapter.

Members are requested to visit the official website of ICAI to explore the exciting benefits and facilities available to our esteemed CMAs, as well as detailed information about the Members’ Benevolent Fund (MBF).

### **PROFESSIONAL DEVELOPMENT & CPE COMMITTEE**

#### **🕒 Opportunities for Practising CMAs**

Opportunities for Practising CMAs were hosted

on the PD Portal where the services of Cost Accountants were required by various organizations namely, Steel Authority of India Limited, Engineering Projects (India) Ltd., Employees' State Insurance Corporation (ESIC), Advanced Weapons and Equipment India Limited, Airports Authority of India (Bagdogra Airport and Lucknow Airport), Damodar Valley Corporation, Himachal Pradesh State Industrial Development Corporation Limited, District Health Society, Unnao, and Jammu and Kashmir State Cable Car Corporation Limited.

We are pleased to inform our members that, pursuant to the Institute's representation, the National Backward Classes Finance and Development Corporation has considered Cost Accountant firms for undertaking Internal Audit assignments by issuing a corrigendum.

### ☉ **Mandatory Capacity Building Training (MCBT)**

In partial modification of the decision taken by the Council at its 315<sup>th</sup> Meeting held on 20<sup>th</sup> and 28<sup>th</sup> September 2018, regarding implementation of Mandatory Capacity Building Training (MCBT) for practicing Cost Accountants who obtained their Certificate of Practice on or after 1<sup>st</sup> February, 2019, the Council at its 369<sup>th</sup> Meeting held on 21<sup>st</sup> July 2026, has made the requirement of undergoing the MCBT optional.

### ☉ **Webinars**

During the month, the webinar series for practitioners covered the following topics:

- ▲ Opportunities for CMAs in Social Stock Exchange on 2<sup>nd</sup> September 2026
- ▲ Introducing AI Tool for GST Query and Appeal/Reply Drafting for CMA Members on 16<sup>th</sup> September 2026
- ▲ IBC for a CMA: Relevance and opportunity on 25<sup>th</sup> September 2026

### ☉ **Programmes in association with PHD Chamber of Commerce and Industry**

Professional Development & CPE Committee in association with PHD Chamber of Commerce and Industry conducted National Conference on "GST Litigation in the GSTAT ERA: From Notice to Tribunal" on Tuesday, 8<sup>th</sup> September 2026, Seminars on "Corporate Law Adjudication, Compounding

& Settlement Proceedings Legal Framework, Emerging Trends & Practical Challenges, "on 18<sup>th</sup> September 2026 and "Navigating Income Tax Pitfalls: A Practical Guide to Compliance, Audits, and Assessment Defence" on 25<sup>th</sup> September 2026.

### ☉ **Programmes submitted on CPE Portal during the Month of September**

During the month of September, 41 programmes in Physical mode and 47 programmes in Online mode were organised by the different Committees, Regional Councils and Chapters of the Institute on various topics such as Make in India or Make in India for the World from Customs Perspective, Red Flags, Weak Controls & Corporate Frauds, Re- Imagining Internal Audit - Past, Present and Future, ECB Framework and FEMA Compliances, Prohibitions of Benami Property and Transaction act, 2016, Bank Account Portability: The Right to Switch and the Future of Customer- Centric Banking, Internal Audit of MSMEs - A Cost Auditor's Perspective, BRICS Summit and its impact on Indian Economy, Hands-on Excel Automation with AI: Build the Macros You Still Need, Wealth Creation, Tax-Efficient Investing & Advanced Investment Strategies, Duty Exemption Schemes: Advance Authorisation (AA), DFIA & EPCG, Provisions of International Taxation as per provisions of ITA 2025 and so on.

We are certain that the rich deliberations and valuable insights shared during these sessions would have benefited our members.

## **SUSTAINABILITY STANDARDS BOARD**

### **1. Meeting with Mr. Bastian Buck, Chief of Standards, GRI**

CMA (Dr.) Ashish P. Thatte, Chairman, SSB along with CS A. Sekar, SSB Member and CMA Anuradha Dhavalikar, SSB Member had a meeting with Mr. Bastian Buck, Chief of Standards, GRI along with Dr. Aditi Halder, Director, GRI, South Asia on 2<sup>nd</sup> September 2026 in Mumbai and discussed the collaborative activities in both the Institutes' can work in the sphere of sustainability.

### **2. Webinars**

#### **a. Vasudhaiva Kutumbakam Series**

- i. The Board organized the 65<sup>th</sup> Webinar of the Vasudhaiva Kutumbakam series held

on 11<sup>th</sup> September 2026 on the topic “ESG in India: From Buzzword to Boardroom Discipline”. CMA Sanjoy Ghosh, Senior Finance Executive was the speaker.

- ii. The Board organized the 66<sup>th</sup> Webinar of the Vasudhaiva Kutumbakam series held on 25<sup>th</sup> September 2026 on the topic “Business Sustainability Assurance through Fraud Risk and Forensic Management”. CMA (Dr.) Subhasish Roy Chowdhury, Consultant was the speaker.

### b. Parinayati Webinar Series

The Board organized the 11th Parinayati Webinar series on the topic of ESG and Sustainability Reporting in Philippines on 18<sup>th</sup> September, 2026. CMA (Dr.) Aditi Dasgupta, Joint Director, ICMAI, CMA Arunabha Saha, Practising Cost Accountant and Dr. Ranjith Krishnan, SSB Member were the speakers.

### 3. Monthly Newsletter- Sukhinobhavantu

The Board released Volume XXXVIII which is the September 2026 edition of the monthly newsletter Sukhinobhavantu. The Download link is as follows:

[https://dwpivt501gtb6.cloudfront.net/upload/ssb/Sep\\_SSB\\_2026\\_20260925123101.pdf](https://dwpivt501gtb6.cloudfront.net/upload/ssb/Sep_SSB_2026_20260925123101.pdf)

### 4. Certificate Course on ESG

The admission for the 8th batch of the Certificate Course on ESG has started and we request all members and students to enroll for the course for capacity enhancement and knowledge dissemination. The link for admission is as follows:

<https://eicmai.in/OCMAC/SSB/SSB.aspx>

## TAX RESEARCH DEPARTMENT

During the period, TRD undertook a range of specialised courses, webinars, workshops and professional engagements aimed at facilitating practical and contemporary tax knowledge, strengthening professional competencies and promoting continuous learning among Members, students and other stakeholders. The Department also maintained active engagement with tax authorities, government departments, industry and academic institutions, contributing to professional

dialogue on emerging tax developments, compliance requirements, tax administration and the evolving role of Cost Accountants in the taxation ecosystem.

During September 2026, the Tax Research Department conducted specialised webinars under its Direct and Indirect Taxation initiatives, focusing on practical aspects of income-tax return filing, the transition to the Income Tax Act, 2025, taxation of non-residents, GST jurisdiction, Reverse Charge Mechanism (RCM), Safe Harbour Rules and compliance requirements, thereby supporting the continuous professional development of members and students. TRD is also planning to commence a series of webinars on International Taxation from October 2026.

### ☉ Direct Taxation (DT) Webinars

| Date       | Webinar                                                                          | Faculty / Panelists                        |
|------------|----------------------------------------------------------------------------------|--------------------------------------------|
| 01.09.2026 | ITR-7 (Part 2) – Practical Purview                                               | CMA Ajith Sivasdas                         |
| 08.09.2026 | Income Tax Litigation Crossroads: Mastering the Transition from 1961 to 2025 Act | CMA Niranjan Swain                         |
| 15.09.2026 | Provisions of Taxation of Non-Residents as per Income Tax Act 2025               | Shri Nilay Baran Som                       |
| 26.09.2026 | Panel Discussion on Safe Harbour Rules under the Income-tax Rules, 2026          | CMA Suchint Majumdar & Shri Deepesh Mistry |
| 29.09.2026 | The Mid-Year Checkpoint: Evaluating Compliances & Navigating H2 Deadlines        | CMA Gopal Krishna Raju                     |

### ☉ Indirect Taxation (IDT) Webinars under Kar Kanti Series

| Date       | Webinar                                        | Faculty                 |
|------------|------------------------------------------------|-------------------------|
| 09.09.2026 | Jurisdiction Under GST                         | CMA Bikash Gupta        |
| 23.09.2026 | Mastering RCM: From Liability to Audit Defense | Advocate Tapas Majumder |

## ☉ Representations on Direct Taxation

As part of its professional advocacy initiatives, representations seeking appropriate recognition of Cost Accountants (CMAs) under the Income-tax Act, 2025 were submitted to Shri Prasenjit Singh, Member (Legislation), Central Board of Direct Taxes (CBDT). The representation under the signature of the President, ICAI, was forwarded by email on 16<sup>th</sup> September 2026, while on 17<sup>th</sup> September 2026, CMA Rajendra Singh Bhati, Chairman, Direct Taxation, ICAI, along with CMA Kushal Sengupta, Director, TRD, personally submitted the representation to Shri Prasenjit Singh at Aaykar Bhavan, Kolkata.

The representations specifically sought the inclusion of CMAs under Section 172 of the Income-tax Act, 2025 and Rule 85 of the Income-tax Rules, 2026 for certification of Form 48 – (Statement of International & Specified Domestic Transactions) and Safe Harbour Verification in Form 49, along with appropriate recognition of Cost Accountants under the Act to strengthen their professional role in the field of direct taxation.

## ☉ Meeting with Tax Authorities

The Institute also continued its engagement with senior officers of the Income Tax Department. CMA representatives met Smt. Surbhi Varma Garg, IRS, Principal Chief Commissioner of Income Tax, West Bengal & Sikkim, and Shri Jasdeep Singh, IRS, Chief Commissioner of Income Tax, West Bengal & Sikkim, in connection with professional matters. Discussions also explored the possibility of organising specialised workshops for departmental officials on relevant taxation and professional subjects, facilitating greater knowledge exchange between tax professionals and the Department on 14<sup>th</sup> September 2026 at Aaykar Bhavan, Kolkata.

## ☉ Representation on Indirect Taxation

In the area of indirect taxation, a Proposal and Blueprint on “One Nation, One Registration (One PAN, One GST)” – an Optional Common GST Registration Framework for Nationwide Tax Reform and Compliance Simplification was submitted to Smt. Nirmala Sitharaman, Hon’ble Union Finance Minister and Chairperson, GST Council under the signature of the President,

ICMAI on 12<sup>th</sup> September 2026. The proposal was also marked to Shri Arvind Shrivastava, IAS, Revenue Secretary, Ministry of Finance; Shri Vivek Chaturvedi, IRS, Chairman, CBIC; Shri Pankaj Kumar Singh, Additional Secretary, GST Council Secretariat; and Shri Vinayak Chandra Gupta, IRS, Chief Commissioner, for consideration.

## ☉ Meeting with Tax Authorities

TRD further engaged with senior officials of the Government of West Bengal on professional matters and capacity-building initiatives. CMA Kushal Sengupta, Director, TRD met Shri Narayan Chandra Guriya, Sr. Joint Commissioner, Revenue, GST Policy Planning Unit & Large Taxpayer Unit, Government of West Bengal, and Shri Surendra Kumar Meena, IAS, Commissioner, Commercial Taxes, West Bengal, to discuss matters relating to the professional contribution of Cost Accountants and the possibility of organising specialised workshops for departmental officials on 21<sup>st</sup> September 2026 at the Office of Commercial Taxes, Kolkata.

Through these initiatives, TRD continued to facilitate structured dialogue with tax authorities and policymakers, while advancing the professional interests of Cost Accountants and contributing to tax administration, compliance simplification, capacity building and policy-oriented reform.

## ☉ Invitation to Outreach Programme on FAST-DS & Tax Law Simplification

TRD participated in the Outreach Programme on Foreign Assets of Small Taxpayers – Disclosure Scheme (FAST-DS) and Tax Law Simplification, organised by the Income Tax Department, West Bengal & Sikkim, on 17<sup>th</sup> September 2026 at Aaykar Bhavan, Kolkata, as part of the initiatives of the Central Board of Direct Taxes (CBDT). CMA Rajendra Singh Bhati, Chairman, Direct Taxation, ICAI, along with officials of TRD, attended the programme.

The programme provided valuable insights into FAST-DS and Tax Law Simplification, including an introduction to the book “*The Syntax of Tax*”, followed by an Open House and interactive Question & Answer session, facilitating meaningful engagement with tax officials and professionals. The Institute expresses its gratitude to the Income Tax

Department for the invitation and appreciates its efforts towards simplifying tax laws and facilitating greater ease of compliance.

### ☉ TRD Courses

The Department continued to offer specialised certificate and advanced courses in taxation, open to both Members and non-Members, providing participants with opportunities to acquire contemporary knowledge and practical insights in areas such as direct taxation, GST, international trade and other emerging areas of tax practice. These programmes are designed to strengthen technical knowledge, practical competence and professional skills, enabling participants to effectively understand and address evolving tax laws, regulatory requirements and compliance challenges. Successful completion of these courses enables participants to enhance their professional expertise, broaden their areas of practice, strengthen career prospects and add greater value in their professional assignments and advisory roles.

The classes for the following batches, which commenced from 16<sup>th</sup> August 2026, continued during September 2026:

- ▲ Certificate Course on GST (CCGST-21)
- ▲ Advanced Certificate Course on GST (ACCGST-17)
- ▲ Certificate Course on TDS (CCTDS-17)
- ▲ Certificate Course on Filing and Filling of Return (CCFR-17)
- ▲ Certificate Course on International Trade (CCIT-11)
- ▲ Advanced Course on Income Tax Assessment and Appeal (ACITAA-14)
- ▲ Advanced Course on GST Audit and Assessment Procedure (ACGAAP-14)
- ▲ Advance certificate course on GST Litigation Management (ACCGLM – 2)
- ▲ Certificate course on Income Tax Act 2025 (CCITA – 2)

Further, the Re-Examination for previous batches was conducted during 13th September 2026, providing candidates with an additional opportunity to complete their examination requirements and successfully progress towards completion of their respective courses. This initiative reflects

the Institute's commitment to supporting learners, facilitating academic continuity and promoting continuous professional development.

### ☉ Outreach Initiative for specialized Courses for University & College Students

TRD has approached several colleges for the introduction of its GST Course and Income Tax courses designed for the Universities and colleges at the respective institutions. These courses are designed to supplement students' academic learning with practical and industry-oriented knowledge of taxation, covering the fundamentals of GST and Income Tax, compliance requirements and relevant developments in the tax environment. The courses will also help students develop an additional area of professional competence, enhance their career readiness and employability, and provide greater awareness of career opportunities in taxation and related fields.

### ☉ Corporate Engagement Initiatives

As part of its continued corporate engagement initiatives, representations were made to leading organisations, including BGCL, WBSEDCL, WEBSETCL, GAIL, SAIL and MCL, to explore opportunities for organising specialised corporate workshops tailored to their specific professional requirements. These workshops are aimed at providing corporate professionals with focused, practical and industry-relevant insights into taxation, regulatory developments and emerging compliance requirements, thereby supporting the enhancement of technical capabilities and enabling organisations to effectively respond to the evolving tax and regulatory environment.

### INSOLVENCY PROFESSIONAL AGENCY OF INSTITUTE OF COST ACCOUNTANTS OF INDIA

Insolvency Professional Agency of Institute of Cost Accountants of India, in its endeavour to promote professional development and sharpen the skills of the professionals, has constantly been conducting various professional & orientation programs across the country and publishing various publications and books for the benefit of stakeholders at large. Towards that, IPA-ICMAI has undertaken several initiatives, as enumerated

below, during the month of September 2026.

- ⦿ An Advanced Workshop on “Navigating the CIRP Lifecycle: Initiation to CoC Evaluation” was held on 6<sup>th</sup> September 2026, in online mode. The workshop covered CIRP commencement and financial assessment, understanding the Corporate Debtor and its value drivers, preparation of the Information Memorandum, evaluation and selection of Resolution Plans, and professional decision-making in managing challenges throughout the resolution process.
- ⦿ An Advanced Workshop on “Use of Artificial Intelligence (AI) in IBC” was held on 13<sup>th</sup> September 2026 in online mode, covering AI and Generative AI fundamentals for IPs and RVs, applications of AI in Pre-CIRP, CIRP and Liquidation, AI tools for IPs and RVs, AI in valuation and financial analysis, and governance and professional responsibility, along with the future of AI in the IBC ecosystem.
- ⦿ An Executive Development Program on “The Evolving Landscape of Insolvency & Restructuring” was held from 18-20 September 2026 in online mode. The programme covered CIRP timelines, challenges and amendments, the Liquidation Process, Personal Guarantors to Corporate Debtors, Pre-Packaged Insolvency Resolution Process, Cross-Border and Group Insolvency, and landmark judgments and case laws.
- ⦿ An Interactive Session on “Recent Amendments in IBC and Guidelines for Valuation” was held on 19<sup>th</sup> September 2026, at Ahmedabad, organised by IPA-ICMAI in association with the ICMAI Registered Valuers Organisation (ICMAI RVO) and Ahmedabad Chapter of ICMAI. The session focused on recent amendments in the IBC and key guidelines relating to valuation.
- ⦿ A Knowledge Enhancement Program for Professionals (RVs, IPs and CMAs) was held on 28<sup>th</sup> September 2026, at Kolkata, organised by IPA-ICMAI in association with ICMAI EIRC-Kolkata. The session focused on Startup Valuation: Methods and Practices,

Decoding Intangible Asset Valuation, and Best Practices & Recent Amendments in IBC.

- ⦿ A Learning Session on “Navigating the NCLT & NCLAT Landscape under IBC” was held on 26-27 September 2026 in online mode, covering the NCLT/NCLAT framework, jurisdiction and powers, key IBC provisions, representation, procedural challenges, and recent developments and landmark judgments.

In its endeavour to promote the profession, encourage knowledge sharing, and enhance sensitisation of the insolvency ecosystem, IPA-ICMAI published Au-Courant (Daily Newsletter), Weekly IBC Dossier, Monthly e-Journal, Quarterly Digest, Case Book and an Annual Publication, all of which are hosted on IPA-ICMAI website.

### **ICMAI REGISTERED VALUERS ORGANISATION (RVO)**

ICMAI RVO has successfully organised two (2) “50-Hour Training Programs” for securities or financial asset class and land and Building asset class, also organised four (4) online “Professional Development Programs” and six (6) physical programs (Valuation Knowledge Camp) in Delhi, Ahmedabad, Hyderabad, Mumbai, and Kolkata. In its efforts to bring out relevant publications for the development of the valuation profession, ICMAI RVO also released its monthly journal, The Valuation Professional.

### **ICMAI SOCIAL AUDITORS ORGANISATION (SAO)**

ICMAI SAO has successfully organised the 28<sup>th</sup> Online Batch of the Preparatory Course for Social Impact Assessments Examination on 26<sup>th</sup> - 27<sup>th</sup> September 2026. ICMAI SAO also released its monthly journal, The Social Impact Assessor.



# Chairman's Communiqué

**CMA Harshad Shamkant Deshpande**

**Chairman**

Banking, Financial Services & Insurance Board,

Journal & Publications Committee and

AI Strategy & Innovation Board, ICMAI

IRDAI's proposed mandatory cost audit for insurers: a call to responsibility and an opportunity for the CMA profession

Dear Professional Colleagues,

India is the tenth largest insurance market in the world by premium, yet insurance reaches too few of its people. The aim of "Insurance for All by 2047" will not be met by only capital alone. It needs disciplined spending and figures that regulators, policyholders and investors can rely on. On both counts, our profession has something to offer.

Two recent developments deserve the attention of every member. The Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Act, 2025, which received Presidential assent in December 2025 and largely took effect on 5 February 2026, raised the permissible foreign investment in insurers from 74 to 100 percent. It also lowered the net owned fund required of foreign reinsurers from ₹5,000 crore to ₹1,000 crore. New capital and new entrants will follow, and each entrant will need sound costing and reporting from its first year.

The second development is more recent. On 23 September 2026, IRDAI released its consultation paper, "Recalibrating Economics of Insurance Distribution". One proposal in it speaks directly to our profession. Every insurer would undergo an annual cost audit covering all expenses, including payouts and non-monetary incentives to intermediaries, and so would every distribution entity with insurance income above ₹100 crore, with the report going to its Board and to the regulator. Comments are invited till 25 October 2026.

The consultation paper itself makes the case for this audit. The Authority observes that the expenses of insurers, after years of decline, have started rising again, and that payments to distributors have grown much faster than the business on which they are earned. Rewards and incentives now add substantially to base commission, and operating expenses other than commission differ sharply from one insurer to another. In such conditions, an expense ceiling is only as dependable as the verification behind it. Unless an independent professional confirms what is being counted under the ceiling, the ceiling cannot be relied upon. Cost audit provides that assurance.

For insurers, the audit will show what each product, channel and region actually costs. That may be uncomfortable at first, but a cost that is recorded, classified and justified

is a cost that can be controlled. The paper's stated aim in lowering expense limits is to reduce the cost of doing business and improve value for policyholders. I would add a word of caution: an audit does not lower premiums by itself. It makes the limits enforceable and the savings traceable. Once avoidable cost and leakage are taken out, every rupee saved can reach the family as a lower premium, a better benefit or a claim paid.

This is familiar ground for the Cost and Management Accountant. Cost records, cost audit and reporting to the Board have long been our work, and Section 148 of the Companies Act, 2013 already entrusts cost audit to the practising Cost Accountant. We look to the Authority to carry the same principle into insurance, for we are, in the truest sense, custodians of cost truth. The opportunity reaches well beyond the audit report: costing and profitability systems by product, channel and region; support to Boards and Audit Committees, which the paper expects to certify distribution costs; scrutiny of related-party and outsourced payments; preparation of the cost disclosures proposed for the public domain; and claims cost management, especially in health insurance. For our members and students, these are new avenues of practice, employment and public standing.

To help the sector prepare, the Banking, Financial Services and Insurance Board (BFSIB) of the Institute has launched a special publication, INSCOST: Cost Management, Cost Governance, Cost Disclosure and Cost Assurance Framework for the Indian Insurance Sector. Its four themes correspond closely to what the consultation paper asks of insurers and distributors, and it is offered as a helping hand to the industry and to our members alike.

Insurance is a promise made today and kept many years later. A family that pays its premium trusts that the money will be spent wisely and the claim honoured when the day comes. Our profession can help earn that trust, in the city and in the village alike, on the road to "Insurance for All by 2047".

With warm professional regards,

**CMA Harshad Shamkant Deshpande**

1<sup>st</sup> October 2026

25<sup>th</sup> Edition

Cost Congress 2026



Confederation of Indian Industry

25<sup>th</sup> Edition

# COST CONGRESS

## International Conference

### Silver Anniversary Edition

BOOK  
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26 - 27 OCTOBER, 2026

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### Theme

India's Decade:

## Building Global Competitiveness in an Era of Disruption

India is the emerging global business hub – a shift from cost arbitrage to competitive power. Maze of narratives are shaping up the definition of India's business landscape. Innovation hub through the startup eco-system, physical & digital infrastructure, policy framework and technology evolution.

However, emerging new India's thrust and power needs a throttle on several dimensions and directions – new focal lens of business resilience, accelerate decarbonization journey, technology as key lever of transformation, heightened export competitiveness, redefined intellectual skill & excellence, strategic business shifts in the inflection points.

CII with its wide reach in the industry has created a think tank to set a new direction and pace for the emerging economic scenario of India's businesses. With able guidance and support, Crème de la crème of speakers and experts are being pooled for speakers in the conference.

CII TCM Division invites transformation agents and ambassadors of change to the conference to calibrate on their own directional steps in the new emerging corporate India.

### Registration

SCAN here to complete  
your Registration

Mr. Girish Wagh

Chairman - CII National  
Committee for TCM &  
MD & CEO - Tata Motors CV



Mr. Manoj Kolhatkar

Chairman - Cost Congress 2026,  
MD & CEO - TATA AutoComp  
Systems Ltd.



Mr. Rajendran Arunachalam

Co-Chairman - Cost Congress 2026,  
Group CFO, Thermax Ltd.



CMA Chittaranjan Chattopadhyay

President, ICMAI



CMA Manoj Kumar Anand

Vice President, ICMAI

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- Technology - A Key Lever to Corporate Competitiveness
- Export Competitiveness – Improving Global Footprint
- Human Capital Excellence - Intellectual Property & AI Impact
- Strategic Inflection points shifts - Business Transition
- TCM 3.0

**Contact:** Athul Kuriakose | [athul.kuriakose@cii.in](mailto:athul.kuriakose@cii.in) | 9400797334 | <https://costcongress.in/>



# ICMAI

भारतीय लागत लेखाकार संस्थान

THE INSTITUTE OF  
COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament  
(Under the jurisdiction of Ministry of Corporate Affairs)

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# Global

## Cost and Management Accountants' Convention (GCMAC) 2027



CMA Chittaranjan Chattopadhyay  
President, ICMAI



CMA Manoj Kumar Anand  
Vice President, ICMAI

### SAVE THE DATES



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**LONDON**

**NOVEMBER  
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**2026**

2026 ANNUAL

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CORPORATE GOVERNANCE & SUSTAINABILITY



Presentation of  
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AWARDS**



**Global Business  
Meet**  
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**Boards at the  
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the AI Era:  
Shaping the future  
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**An Exclusive Global Forum for Board Leaders & Governance Professionals**

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**N. Chandrababu Naidu**  
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**H. E. Vikram Doraiswami, IFS**  
the then High Commissioner of  
India to UK



**M. Nagaraju, IAS (Retd.)**  
former Secretary  
Dept. of Financial Services  
Ministry of Finance, India



**Ajay Piramal**  
Chairman  
Piramal Group  
India



**Raghupati Singhania**  
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**Prof. Sergei Guriev**  
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# 2026 London Global Convention on Corporate Governance & Sustainability

+

## ‘Global Business Meet’ & Welcome Luncheon at ‘House of Lords’

November 18 - 21, 2026 | at Hotel Montcalm Marble Arch, London (UK)

Dear Members,

**W**e are pleased to inform you that **The Institute of Cost Accountants of India (ICMAI)** is a ‘Supporting Partner’ with the Institute of Directors, India (IOD) in organising the annual ‘**London Global Convention 2026**’ on Nov 18 - 21, 2026 in London.

The outline schedule of convention is as under:

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| November 18, 2026 | <ul style="list-style-type: none"><li>• Top technical speakers and renowned board experts loaded with professional experience from across industries and geographies.</li><li>• Technical Sessions and Discussion Topics on the Board’s strategy for Resilience, Agility and navigating Corporate Governance in the Multipolar World, Mitigating Climate Risk, ESG &amp; the Sustainability Imperative and Board’s Preparedness &amp; Strategy on AI, Digital Disruption &amp; Cyber Governance in the Digital Era</li><li>• Meet &amp; greet the winners of the Golden Peacock Awards in ‘<b>Corporate Governance</b>’, ‘<b>Sustainability</b>’, ‘<b>ESG</b>’ &amp; ‘<b>Risk Management</b>’ 2026 – Felicitation Ceremony and Sit-Down Banquet</li></ul> |
| November 19, 2026 | <ul style="list-style-type: none"><li>• Best Practices from top companies- Business case study presentations</li><li>• Session on Future-Proofing Risk Management, Boardroom Innovation &amp; Corporate Transformation</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| November 20, 2026 | <ul style="list-style-type: none"><li>• Special High-Level Sit-Down Luncheon and ‘Global Business Meet’ at the ‘House of Lords, UK’</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| November 21, 2026 | <ul style="list-style-type: none"><li>• Special Session</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

A detailed convention brochure is enclosed or available on our website at [www.iodglobal.com](http://www.iodglobal.com) for your information.

Members of **The Institute of Cost Accountants of India (ICMAI)** are entitled to a *discounted delegate registration fee INR 41225* (incl. of taxes) (*non-residential*) for the Convention.

To participate in the event, please visit:

|                                               |                                                                                                                                                      |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Registration Link                             | <a href="https://www.iodglobal.com/upcoming-events/events/64961605135">https://www.iodglobal.com/upcoming-events/events/64961605135</a>              |
| Contact Person                                | <b>Ms. Mukulika Mukherjee</b> @ Institute of Directors, India at <a href="mailto:sm@iodglobal.com">sm@iodglobal.com</a> / Contact No: +91-9773892135 |
| For any Visa/ Travel/ Stay related assistance | Please reach out to the above-mentioned correspondence for assistance.                                                                               |

# "Rise Bengal: Powering the Journey towards Viksit Bharat@2047"

held on September 21, 2026 at Raajkutir, Kolkata

The Board of Advanced Studies & Research and the Career Counselling & Placement Committee of ICAI organised "Rise Bengal: Powering the Journey towards Viksit Bharat@2047" on September 21, 2026, at Raajkutir, Kolkata. The summit brought together distinguished leaders, policymakers, industry stalwarts, and eminent personalities from academia, industry, and diverse sectors, providing a dynamic platform for dialogue, knowledge exchange, collaboration, and meaningful deliberations on opportunities for sustainable growth and development.

The event was graced by Chief Guest Dr. Swapan Dasgupta, Hon'ble Finance Minister, Government of West Bengal, along with Guest of Honour Dr. Shankar Ghosh, Minister-in-Charge, Tourism & Parliamentary Affairs, Government of West Bengal, and CMA (Dr.) Rajesh Kumar, Hon'ble Member of the Legislative Assembly, West Bengal.

CMA Chittaranjan Chattopadhyay, President, ICAI delivered the welcome address and CMA Manoj Kumar Anand, Vice President, ICAI delivered the special address. The inaugural session of the programme was also graced by CMA Vinayaranjan P, Council Member & Chairman, Career Counselling & Placement, Training & Educational Facilities and Board of Advanced Studies & Research ICAI, Shri Inder Deep Singh Dhariwal, Government Nominee ICAI, Shri Jyoti Prakash Gadia, Government Nominee ICAI and CMA Avijit Goswami, Council Member ICAI and CMA (Dr.) Debaprosanna Nandy, Secretary, ICAI.

Dr. Swapan Dasgupta, Hon'ble Finance Minister, Government of West Bengal highlighted that Business growth should come first, as it drives investment, employment, opportunities, and revenue. Cost Accountants can play a vital role in managing costs,

improving efficiency, and enhancing competitiveness. He also expressed his hope that Cost Accountants should be included in the broader definition of "Accountant," recognising their contribution to strengthening businesses and fostering sustainable economic growth.

CMA (Dr.) Rajesh Kumar, Hon'ble Member of the Legislative Assembly, West Bengal, highlighted the vital role of Cost and Management Accountants (CMAs) in ensuring financial efficiency, accountability, and optimal utilisation of public funds. Extending the Institute's message, "Behind every successful business decision, there is always a CMA," he emphasised that CMAs also play a crucial role in ensuring that every public rupee is spent efficiently and responsibly.

Dr. Shankar Ghosh, Hon'ble Minister-in-Charge of Tourism and Parliamentary Affairs, Government of West Bengal, highlighted the state's immense tourism potential, with emphasis on strategic investment, infrastructure development, sustainable tourism, enhanced connectivity, and positioning Bengal's diverse destinations—from the Himalayas to the Sundarbans—as premier national and international tourist attractions.



The 1<sup>st</sup> Technical Session was graced by the presence of several eminent dignitaries and distinguished professionals, including CMA Ashwini G. Dalwadi, Former President and Council Member ICAI, CMA Suresh R. Gunjalli, Council Member ICAI, CMA (Dr.) Debaprosanna Nandy, Secretary (Officiating) ICAI, CMA Vinayaranjan P., Chairman, Board of Advanced Studies and Research ICAI, CMA Arati Ganguly, Former Chairperson, ICAI-EIRC; Dr. P. K. Hazra, Director – Cardiology, Manipal Hospital, Kolkata; Mr. Chanchal Chandra Deb, Managing Director, Homoeo Research Laboratory Pvt. Ltd.; Mr. Krishna Kumar Gupta, Chairman, Jagannath Gupta Institute of Medical

Sciences and Hospital and Dr. Sombrata Roy, Zonal Head, C. K. Birla Hospital, Kolkata.

The 2<sup>nd</sup> Technical Season was graced by the presence of several eminent dignitaries and distinguished professionals, including CMA (Dr.) V. Murali, Council Member, ICAI; CMA Navneet Kumar Jain, Council Member, ICAI; Dr. Arnab Basu, Co-Founder and CEO of Yancha; Mr. Sushil Poddar, President, Confederation of West Bengal Trade Associations; Mr. Manab Paul, Founder, Sree Balaji; Mr. Rajeev Paul, Managing Director, Bhooter Raja Dilo Bor; CMA Subhasish Chakraborty, Former Chairman, ICAI-EIRC; CMA Abhijit Dutta, Vice-Chairman, ICAI-EIRC; Shri Pranay Roy, Spokesperson, BJP; and Shri R. Veerabahu, Director (Finance), Braithwaite & Co. Limited.

A key highlight of the summit was the discussion on the strategic role of Cost and Management Accountants in driving sustainable growth, strengthening economic resilience, promoting responsible business practices, and contributing to India's journey towards becoming a developed nation by 2047.

The Vote of Thanks was delivered by CMA Vinayaranjan P, Chairman, Career Counselling & Placement, Training, Educational Facilities, and Board

of Advanced Studies & Research, ICAI.

The participation of delegates from diverse organisations further enriched the event. Representatives attended from Nakamichi Packaging Pvt. Ltd., Limelight Hotels Pvt. Ltd., 10X Fin Solutions, Simplex Infrastructures Ltd., Cemindia Projects Limited, TCN Global, CMRI Hospital | CK Birla Hospitals, Infinity Infotech Parks Ltd., University of Calcutta, HSBC, Haldia Petrochemicals Ltd, Sushila Birla Girls' School, Jagannath Gupta Institute of Medical Sciences & Hospital, The Statesman, Strategic Consultancy Business Aidiyas, IIT-IIM, Softthink Intelligent Solutions Pvt. Ltd., Calcutta Club, East Bengal Club, Coal India Ltd., Braithwaite & Co. Ltd., WBSEDCL, Sarna Infocom Pvt. Ltd., Deloitte India, Birla High School, TCS, GAIL, and several other esteemed organisations.

The diverse participation reflected the importance of collaboration among academia, industry, government, and professional institutions in shaping a stronger and more resilient economic ecosystem.

ICMAI remains committed to empowering professionals through knowledge, leadership, innovation, and continuous learning, enabling them to contribute meaningfully to regional and national development.

## GLIMPSES





CMA Mahendra Bhombe, Chairman, ICMAI-WIRC, and CMA Vivek Bhalerao, Vice Chairman, ICMAI-WIRC, felicitating Shri Piyush Goyal ji, Hon'ble Union Minister of Commerce & Industry, Government of India, during the BMC-NSDC MoU Signing Ceremony



CMA Chittaranjan Chattopadhyay, President along with CMA Manoj Kumar Anand, Vice President, CMA (Dr.) K Ch A V S N Murthy, Council Member and CMA (Dr.) D.P. Nandy, Secretary (Officiating), ICMAI, called on Shri Amiya Kisku, Hon'ble Minister of State for Food Processing Industries and Horticulture and Agriculture, Government of West Bengal, on 1st September 2026 at Kolkata



CMA Chittaranjan Chattopadhyay, President, ICMAI felicitating Prof. Debabrata Das, Vice Chancellor of Tripura University a Central University in Agartala, along with CMA R R Paul Chairman, Agartala Chapter, ICMAI



CMA Chittaranjan Chattopadhyay, President along with CMA Manoj Kumar Anand, Vice President, CMA (Dr.) K Ch A V S N Murthy, Council Member and CMA (Dr.) D.P. Nandy, Secretary (Officiating), ICMAI, called on Shri Swapan Dasgupta, Hon'ble Finance Minister, Government of West Bengal, on 1<sup>st</sup> September 2026 at Kolkata



CMA Chittaranjan Chattopadhyay, President; and CMA Manoj Kumar Anand, Vice President, ICMAI, met Shri Vinay Kumar Rajawat, DG(RD) & SS, Ministry of Road Transport & Highways (MoRTH) and CMA Sudhir Kumar Jaiswal, Principal Advisor (Cost), MoRTH on 23 September 2026 at New Delhi and discussed the role of CMAs in Infrastructure projects



CMA Chittaranjan Chattopadhyay, President, ICMAI at the office of CMA Debasish Pal, Finance Officer of Tripura University along with CMA R R Paul Chairman, Agartala Chapter, ICMAI



CMA Chittaranjan Chattopadhyay, President, ICMAI being felicitated by Prof. Debabrata Das, Vice Chancellor of Tripura University a Central University in Agartala, along with CMA Debasish Pal Finance Officer of Tripura University and CMA R R Paul Chairman, Agartala Chapter, ICMAI



CMA Chittaranjan Chattopadhyay, President and CMA Manoj Kumar Anand, Vice President, ICMAI called on Shri V. Umashankar, IAS, Secretary to the Government of India, Ministry of Road Transport and Highways on 15<sup>th</sup> September 2026 at New Delhi



CMA Chittaranjan Chattopadhyay, President; CMA Manoj Kumar Anand, Vice President; CMA (Dr.) D. P. Nandy, Secretary (Officiating), ICMAI; and CMA (Dr.) P. Siva Rama Prasad, Former AGM, SBI, met Ms. Shalini Pandit, Joint Secretary, Department of Financial Services, Ministry of Finance, on 15 September 2026 at New Delhi and presented various publications of the Institute



CMA Chittaranjan Chattopadhyay, President, ICMAI and Prof. Debabrata Das, Vice Chancellor, in a meeting to discuss various collaborative programs of ICMAI and Tripura University along with other professors and officers



CMA (Dr.) Debaprosanna Nandy, Secretary (Officiating), ICMAI and Smt. Minu Shukla Pathak, Secretary, NCCT, signed the MoU in the presence of CMA Chittaranjan Chattopadhyay, President, ICMAI, CMA M. K. Anand, Vice President, ICMAI; CMA Navneet Kumar Jain, Chairman, Cooperative and NPO Development Board (CNDB), ICMAI; Shri Santanu Saha, Director (Finance), NCCT on 15.09.2026



CMA Chittaranjan Chattopadhyay, President; CMA Manoj Kumar Anand, Vice President, ICMAI; and CMA (Dr.) P. Siva Rama Prasad, Former AGM, SBI, called on Shri Sanjay Lohiya, IAS, Secretary to the Government of India, Department of Financial Services, Ministry of Finance, on 15 September 2026 at New Delhi



CMA Chittaranjan Chattopadhyay, President, ICMAI, graced the International Seminar on “Viksit Bharat @2047: Multidisciplinary Research for Innovation, Sustainability and Inclusive Development” as the Guest of Honour, organised by Scottish Church College, Kolkata, on 12<sup>th</sup> September 2026 at Kolkata



CMA Chittaranjan Chattopadhyay, President, ICMAI called on Shri Gyaneshwar Kumar Singh, DG & CEO, Indian Institute of Corporate Affairs (IICA), MCA on 8<sup>th</sup> September 2026 at Manesar, Haryana. Shri Debarun Kalita, OSD, IICA, was also present



Seminar on “MSMEs – Role of CMAs as Catalysts for Viksit Bharat” organised by the Bhubaneswar Chapter, on 3 September 2026, in the gracious presence of CMA Chittaranjan Chattopadhyay, President, ICMAI and Dr. Subhranshu Sekhar Acharya, CMD, The National Small Industries Corporation Ltd. (NSIC), as the Chief Guest. CMA Damodara Mishra, Chairman, EIRC, CMA Avinash Kotni, Chairman, Bhubaneswar Chapter and CMA Soumya Ranjan Jena, Treasurer, Bhubaneswar Chapter were also present



CMA Chittaranjan Chattopadhyay, President, ICMAI, CMA Manoj Kumar Anand, Vice President and CMA Avijit Goswami, Council Member, ICMAI, addressed recently qualified CMAs at the inaugural programme of the 12-Day Advanced Skill Training Programme (ASTP) at CMA Bhawan, Noida, on 9 September 2026. CMA Manish Kandpal, Chairman, NIRC and other members of NIRC also graced the occasion. #ASTP #Empowering the Next Generation of CMAs!



CMA Chittaranjan Chattopadhyay, President, ICMAI, along with CMA TCA Srinivasa Prasad, Immediate Former President, ICMAI, attended the Silver Jubilee Edition of Cosma Fest 2026, organised by the Coimbatore Chapter of ICMAI on 26 September 2026



CMA Chittaranjan Chattopadhyay, President; and CMA Manoj Kumar Anand, Vice President, ICMAI, met Shri Puneet Agarwal, IAS, AS&FA, Ministry of Road Transport & Highways (MoRTH) and M/o. Ports, Shipping & Waterways; and CMA Sudhir Kumar Jaiswal, Principal Advisor (Cost), MoRTH on 23 September 2026 at New Delhi and discussed the role of CMAs in Infrastructure projects



CMA Chittaranjan Chattopadhyay, President, ICAI, attended the Launching Ceremony of the CMA Foundation Course, in accreditation with ICAI, organised by Srusti Academy of Management & Technology, Bhubaneswar, on 3 September 2026. CMA Avinash Kotni, Chairman, Bhubaneswar Chapter and CMA Sarat Kumar Behera, Immediate Former Chairman, Bhubaneswar Chapter were also present



ICMAI Agartala chapter has recently relocated to a new accommodation with better facilities in a very good location. The new accommodation was inaugurated by the President of ICAI, CMA Chittaranjan Chattopadhyay and Chairman of Agartala Chapter, CMA Rabindra Rudra Paul in the presence of other members & students on 17.09.2026.



CMA Rajendra Singh Bhati, Chairman, Direct Taxation Committee, ICAI, presenting a memento on behalf of ICAI to Madam Surabhi Varma Garg, IRS (Principal CCIT - West Bengal & Sikkim Region) at Aayakar Bhawan, Kolkata on 17.09.2026



Release of the publication of BFSIB by CMA Chittaranjan Chattopadhyay, President, ICAI, along with CMA Manoj Kumar Anand, Vice-President and other eminent bankers at the Press Conference held in New Delhi on 1st October, 2026. From Left to Right: 1. CMA (Dr.) P. Siva Rama Prasad, Former AGM, SBI 2. CMA Rajendra Singh Bhati, Council Member, ICAI 3. CMA Manoj Kumar Anand, Vice President, ICAI 4. CMA Chittaranjan Chattopadhyay, President, ICAI 5. CMA (Dr.) Ashok Jain, BFSI Board Member, ICAI 6. CMA Lalit Wadhwa, Advisor (Cost), Ministry of Health & Family Welfare 7. CMA Shambhu Nath Roy, Author & Professional Trainer



CMA Rajendra Singh Bhati, Chairman, Direct Taxation Committee, ICAI, presenting a bouquet of Publication on Direct Taxes by TRD, ICAI to Shri Prasenjit Singh, IRS (Member - Legislation, CBDT) at Aayakar Bhawan, Kolkata on 17.09.2026



ICMAI, represented by CMA Rajendra Singh Bhati in discussion with Shri Prasenjit Singh, IRS, Member (Legislation), CBDT at Aayakar Bhawan, Kolkata on 17.09.2026. The Institute submitted a representation on Direct Tax to the Authorities on the said occasion

# EMBODIED CARBON ACCOUNTING IN INDIA'S CEMENT SECTOR: A COST AND MANAGEMENT ACCOUNTING FRAMEWORK

## Abstract

Cement is responsible for 47% of embodied emissions of the five key building materials assessed by NITI Aayog in India. The October 2025 GEI target notification covers 186 cement plants. In this article, we examine the carbon-emission profile of India's cement sector and propose a “carbon cost card” with variance analysis, which will enable Cost and Management Accountants to track, control and report carbon costs alongside traditional costs.

## Introduction

**B**uildings and construction are increasingly material- and energy-intensive with Cement and steel being major contributors to embodied emissions, estimated by NITI Aayog, in Scenarios Towards Viksit Bharat and Net Zero (2026) to be 214 MtCO<sub>2e</sub> from cement and 143 MtCO<sub>2e</sub> from steel. Between 70-85% of the embodied emissions over the lifecycle of conventional buildings are attributed to five materials: cement, steel, bricks, aluminum and glass.

For CMAs, carbon accounting will integrate emissions into standard costing, variance analysis and project-level costing using cement emission-intensity data and CCTS targets.

The objective of this article is to examine how carbon-emission measurement and embodied-carbon concepts can be integrated into cost and management accounting practices in India's cement sector, with particular reference to carbon costing, compliance, variance analysis and decision support.



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### Approach and Basis of Analysis

This article is conceptual and practice-oriented and is based on government and regulatory documents, sectoral studies and professional-accounting literature. Illustrative management-accounting calculations illustrate carbon costing, variance analysis and functional-unit allocation. The article distinguishes between facts that are already known, accounting practices that are being proposed and hypothetical numerical assumptions.

### Embodied Carbon: Concept and Accounting Boundary

EN 15978 classifies building carbon by life-cycle stage. A1-A3 are raw materials, transport and manufacturing (cradle-to-gate); A4-A5 are transport and construction; B is use; C is end-of-life. A1–A5 generally represent embodied carbon upfront, and B6 operational energy.

For cement, it is A1–A3 that matter as manufacturing dominates the emissions. As per NITI Aayog, in Roadmap for Cement Sector Decarbonization (2026), 57-60% is from calcination, 27-31% from process heating, 10-13% from electricity and 1-2% from limestone mining. Calcination produces process emissions that cannot be avoided through efficiency alone. So decarbonization needs energy efficiency, less clinker, alternative fuels, cleaner electricity and possibly carbon capture. Such measures can justify treating clinker-related emissions as a separate carbon-cost item.

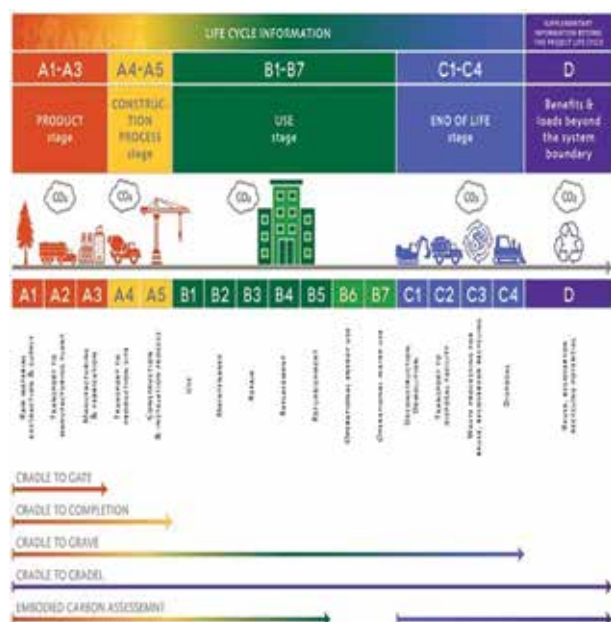


Figure-1: Life-cycle boundary for embodied

carbon assessment, highlighting the A1–A3 product stage relevant to cement manufacturing. (Source: NITI Aayog (2026), Scenarios Towards Viksit Bharat and Net Zero – Sectoral Insights: Buildings)

### Quantitative Profile of India's Cement Sector

According to the GCCA India & TERI's (2025), Decarbonization Roadmap for the Indian Cement Industry: Net Zero CO<sub>2</sub> Emissions by 2070, India is the second largest cement producer in the world, accounting for about 8% of the world's installed cement capacity and about 7% of the country's CO<sub>2</sub> emissions. Per capita consumption is around 300 kg compared to 540 kg globally, meaning potential demand growth. As per GCCA India & TERI, the emission intensity was 680 kg CO<sub>2</sub>/tonne in 2020, which is set to reduce to 560 kg by 2030 and further to 510 kg by 2047, a reduction of about 18% and 25%, respectively. This emission-intensity pathway is shown in Table 1.

| Parameter                                                            | 2020<br>(Base) | 2030<br>(Target) | 2047<br>(Target) |
|----------------------------------------------------------------------|----------------|------------------|------------------|
| Average sector emission intensity (kg CO <sub>2</sub> /tonne cement) | 680            | 560              | 510              |
| Approx. reduction over base year                                     | —              | ~18%             | ~25%             |

Table 1: India cement sector – average emission intensity trajectory (Source: GCCA India & TERI)

Through energy efficiency, renewable electricity, alternative fuels and lower clinker factor, CEEW's pathway reduces cement intensity from 0.66 to 0.44 tCO<sub>2</sub>e/tonne. There are a number of measures with negative mitigation costs, which is consistent with capital appraisal.

CareEdge ESG's 2026 report on BRSR disclosures of 20 listed cement companies at the company level reports Scope 1 emissions rose from 184 MtCO<sub>2</sub>e in FY22 to 215 MtCO<sub>2</sub>e in FY24, while combined Scope 1 and Scope 2 emission intensity declined by about 9%. The 2020 intensity benchmark of 680 kg CO<sub>2</sub>e/tonne, GCCA India-TERI targets and CCTS intensity requirements can support standards and variance analysis.

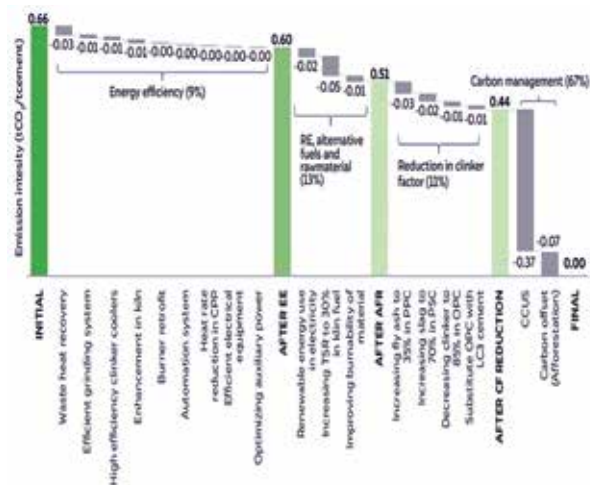


Figure-2:Carbon-management pathway for reducing emission intensity of the Indian cement industry.

Source: CEEW, Evaluating Net-zero for the Indian Cement Industry.

## Regulatory Architecture: From PAT to the Carbon Credit Trading Scheme

For designated entities in covered sectors, the PAT framework is being gradually transitioned to the CCTS compliance mechanism, under which entities are subject to GHG emission-intensity targets. MoEFCC notified binding GEI targets in October 2025 for the first four sectors including cement. CCTS requirements are important for cost accountants and internal MIS.

| Feature              | Detail                                                                                                                                                                                 |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Governing framework  | Carbon Credit Trading Scheme (CCTS), 2023, administered by BEE/MoEFCC, gradually replacing the PAT scheme for specified sectors and obligated entities                                 |
| Phase 1 notification | Greenhouse Gas Emission Intensity (GEI) targets were notified in October 2025 for four sectors, covering 282 obligated industrial units, of which 186 were cement units at that stage. |
| Phase 2 notification | Petroleum refining, petrochemicals, textiles and secondary aluminium added in January 2026, covering 208 further industrial units.                                                     |

|                                 |                                                                                                                                                                                                                                |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Baseline and target years       | FY 2023-24 baseline; binding GEI targets apply for FY 2025-26 and FY 2026-27                                                                                                                                                   |
| Cement-specific reduction range | Approximately 4.7% to 7.6% reduction in emission intensity over the two-year target period, varying by cement sub-sector and plant                                                                                             |
| Non-compliance consequence      | Deficit entities must purchase Carbon Credit Certificates (CCCs) to cover the shortfall; failing this, CPCB levies an Environmental Compensation equal to twice the average CCC price for that compliance year's trading cycle |
| Market launch                   | The institutional framework for the Indian Carbon Market is operational, with Grid Controller of India as registry operator and CERC as regulator. As of March 2026, no CCCs had yet been issued to obligated entities.        |

Table 2: Key design features of the Carbon Credit Trading Scheme as applicable to cement (Source: BEE/MoEFCC notifications; ICAP; industry compliance guides, 2025–26)

For plant controllers, emission intensity has become a KPI along with cost and energy per tonne, with direct P&L implications. By comparing standard and actual emissions, carbon-credit market price and GEI targets will enable systematic efficiency and compliance variance analysis.

## A Cost and Management Accounting Framework for Embodied Carbon

Within this framework, plant-level CCTS emission intensity is used as a management-accounting proxy for the carbon intensity of cement production and does not reflect full lifecycle embodied carbon.

## 1. Carbon as a Costed Element of the Product

Within management accounting, carbon emissions can be incorporated into internal product costing using a compliance price, shadow price or other internally determined carbon valuation, and managed through budgeting, control and variance analysis



Figure 3: Cement composition directly influences carbon emissions, (Source Global Cement and Concrete Association (GCCA), Blended Cement – Green, Durable and Sustainable, 2022.)

## 2. Standard Costing Extended to Carbon: The Carbon Cost Card

A carbon cost card is an extension of the standard costing which compares the standard GHG emission intensity and carbon price with actual intensity and carbon cost. A hypothetical 40 lakh tonne cement plant is used as an example.

| Element of Carbon Cost Card                                 | Standard      | Actual        |
|-------------------------------------------------------------|---------------|---------------|
| Cement output (tonnes)                                      | 40,00,000     | 40,00,000     |
| Emission intensity (tCO <sub>2</sub> e / tonne cement)      | 0.66          | 0.60          |
| Total carbon emissions (tCO <sub>2</sub> e)                 | 26,40,000     | 24,00,000     |
| Illustrative internal Carbon price (₹ / tCO <sub>2</sub> e) | 900           | 900           |
| <b>Total carbon cost (₹ crore)</b>                          | <b>237.60</b> | <b>216.00</b> |

Table 3: Illustrative Carbon Cost Card, XYZ Cement Ltd, a hypothetical entity constructed for exposition. The 0.66/0.60 intensity figures are scenario values from CEEW's sector abatement pathway analysis; plant size and carbon prices ₹900 are illustrative planning assumptions only and are not presented as actual CCC market prices.

## 3. Carbon Intensity, Compliance and Efficiency Variance Analysis

The following proposed management-accounting variances extend the logic of traditional usage variance analysis to carbon emission performance:

1. Carbon Efficiency Variance = (Standard

Emission Intensity – Actual Emission Intensity)  
× Actual Production

2. Carbon Compliance Variance = (CCTS Target Emission Intensity – Actual Emission Intensity)  
× Actual Production

Applying these formulae gives results in Table 4.

| Variance                   | tCO <sub>2</sub> e  | Amount (₹ crore)       |
|----------------------------|---------------------|------------------------|
| Carbon Efficiency Variance | <b>2,40,000 (F)</b> | <b>₹21.6 crore (F)</b> |
| Carbon Compliance Variance | <b>80,000 (F)</b>   | <b>₹7.20 crore (F)</b> |

Table 4: Carbon variances, XYZ Cement Ltd (F = Favorable); Hypothetical ref. CCTS target assumed as 0.62 tCO<sub>2</sub>e/t cement for illustration. The total improvement from the standard intensity to actual intensity is 2,40,000 tCO<sub>2</sub>e is ₹21.60 crore. Of this, 80,000 tCO<sub>2</sub>e (₹7.20 crore) represents emissions below the assumed CCTS target, monetary amount is calculated by multiplying the emission variance by the illustrative ₹900 price.

The Favorable compliance variance is 80,000 tCO<sub>2</sub>e, reflecting that emissions are below the assumed 0.62 tCO<sub>2</sub>e/tonne reference target used solely for this illustration. This value is a hypothetical assumption for demonstrating the variance calculation. An unfavorable variance will indicate excess emissions which may require corrective action. So, variance analysis is the link between traditional cost control, operational efficiency and carbon compliance performance.

## 4. Allocating Cement-Related Embodied Carbon to a Functional Unit

The bill of materials gives traceability of plant-level cement emission intensity to cement-related embodied carbon at functional units used in construction and green-building assessments. The example assumes M25 concrete with 320 kg cement/m<sup>3</sup> and 0.40 m<sup>3</sup> concrete/m<sup>2</sup> built-up area, actual values depend on mix design and structural requirements.

| Functional Unit                                             | Standard | Actual |
|-------------------------------------------------------------|----------|--------|
| Cement intensity (tCO <sub>2</sub> e / tonne cement)        | 0.660    | 0.600  |
| Cement content assumed in M25 concrete (kg/m <sup>3</sup> ) | 320      | 320    |

|                                                                                                            |             |             |
|------------------------------------------------------------------------------------------------------------|-------------|-------------|
| Embodied carbon per m <sup>3</sup> concrete, cement fraction (tCO <sub>2</sub> e/m <sup>3</sup> )          | 0.211       | 0.192       |
| Concrete consumption assumed (m <sup>3</sup> /m <sup>2</sup> built-up area, RCC frame)                     | 0.40        | 0.40        |
| <b>Embodied carbon per m<sup>2</sup> built-up area, cement fraction (kg CO<sub>2</sub>e/m<sup>2</sup>)</b> | <b>84.5</b> | <b>76.8</b> |

Table 5: Illustrative allocation of cement-linked embodied carbon to concrete and built-up area (mix and consumption ratios are indicative planning assumptions and will vary by grade, mix design and structural system)

The calculation connects plant level carbon intensity with project level reporting. Reducing intensity cuts cement-related carbon from 84.5 to 76.8 kgCO<sub>2</sub>e/m<sup>2</sup>. This is not the total embodied carbon for the building, as other materials, transportation, construction and life-cycle stages also contribute. The framework also helps CMAs measure carbon performance, identify potential efficiency improvements, assess exposure to CCC and link plant data with project reporting.

### Strategic and Disclosure Implications for Cost and Management Accountants

The BRSR and assured sustainability disclosures can be strengthened by considering embodied carbon as a costed item. CEEW recommends internal carbon pricing for NPV, IRR and Payback period appraisal. EU CBAM covers cement under its definitive regime from 1 January 2026, making it reliable embedded-emissions data relevant for Indian cement exports to the EU.. CMAs should develop consistent policies regarding the measurement, recognition and disclosure of CCC.

### Recommendations

- Develop a carbon cost card for each notified CCTS-sector plant and update it each compliance cycle against the applicable GEI target.
- Extend existing variance-reporting MIS to include carbon efficiency and compliance variances.
- Implement an internal shadow carbon price for capital appraisal based on entity's realized or forecast carbon-credit exposure.

- Establish policies for recognition, measurement and disclosure of Carbon Credit Certificates.
- Track CBAM-related embedded-carbon figures separately for export volumes and reconcile them with domestic CCTS data.

### Conclusion

Embodied carbon is fast becoming a cost and compliance issue in India's cement industry. CCTS framework creates opportunity for management-accounting tools such as standard costing, carbon cost cards, variance analysis and project level reporting. Compliance monitoring, BRSR reporting, capital appraisal and CBAM exposure are underpinned by the separation of emission performance from monetary valuation. Carbon measurement and disclosure can improve decision-making, cost control and performance management. MA

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# ADVANCING PROJECT SUSTAINABILITY IN INDIA'S ENERGY TRANSITION THROUGH ENVIRONMENTAL COST ACCOUNTING AND LIFE-CYCLE MANAGEMENT: THE ROLE OF CMAs

## Abstract

India's energy transition is rapidly moving toward green power, but the financial and environmental costs of this shift are still not fully recognized. This article explores the gap between the falling cost of renewable technologies and the wider costs of deploying them, covering environmental impacts, system reliability and financing. Drawing on Indian regulatory frameworks, intergovernmental evidence and peer-reviewed research, it asks whether these dimensions are adequately accounted for in current approaches to project appraisal, and highlights the role of Cost and Management Accountants (CMAs) in bringing environmental and system costs into financial evaluation. Three observations emerge: technology costs have fallen mainly through manufacturing gains and stronger supply chains rather than through environmental cost internalisation; the availability of affordable capital is shaped increasingly by the financial position of distribution utilities and the investment needed for storage; grid integration and reliable supply remain insufficiently reflected in project costs.

## Introduction

India's energy transition has reached a critical point. The country has committed to 500 GW



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of non-fossil electricity capacity by 2030 and to net-zero emissions by 2070, and the pace of delivery has picked up sharply. Non-fossil capacity stood at 300.50 GW by 31 July 2026, taking India past 60 per cent of its 2030 target and past 54 per cent of a total installed base of roughly 552 GW. Solar leads at 164.59 GW, ahead of wind, hydro, bio-power and nuclear<sup>1</sup>. On capacity, India is delivering. However,

the harder question is whether environmental costs are adequately being accounted for in project appraisal.

Traditionally, environmental damage in the form of emissions, waste and resource depletion was treated as an externality. The costs were borne by the ecosystems and communities rather than those causing them. This tilted investment towards whichever option looked cheapest once environmental impacts had been excluded. Coal-fired plants historically offered low upfront costs however this cost came with hidden costs in air pollution, public health and ecological damage.

Life-cycle costing, environmental cost accounting, and energy justice frameworks are changing this picture. However, as the Indian case shows, integration into project planning remains partial and reactive, and is frequently overshadowed by financing constraints.

### Life-cycle costing and environmental accounting in India

Life-cycle assessment quantifies a project's environmental burden across its full trajectory, following ISO 14040, covering mining, manufacture, installation, operation, and decommissioning<sup>2</sup>. Life-cycle costing tallies the cost of that journey rather than the price at purchase, with ISO 15686-5 supplying the procedure for constructed assets<sup>3</sup>. Material flow cost accounting, under ISO 14051, traces money lost to waste within a production system<sup>4</sup>. Applied to India's renewable sector it would expose inefficiencies in module manufacturing, blade disposal, and transmission losses, though it is rarely used.

Two limitations recur. The first is methodological: a review of ninety integrated studies found monetising environmental impacts difficult, and the underlying datasets inconsistent in volatility and assumptions<sup>5</sup>. The second is organisational, and more consequential. A review of 274 papers on building design found life-cycle assessment is generally conducted late, when it can no longer substantially influence the design<sup>6</sup>. Indian public procurement shows the same pattern, emphasising capital expenditure over total life-cycle cost and understating long-term impacts.

### Pricing environmental damage: from PAT to a compliance carbon market

India has changed the way it prices environmental harm, and the shift is more than cosmetic. The Perform, Achieve and Trade (PAT) scheme, introduced in 2012, set energy-efficiency targets for over a thousand units across thirteen energy-intensive sectors. It is now giving way to the Carbon Credit Trading Scheme, which asks a different question: not how much energy a plant consumes, but how much it emits per unit of output. Seven sectors, roughly 490 units, moved across in FY2026 and now carry legally binding intensity obligations for FY2026 and FY2027 against a FY2024 baseline<sup>7</sup>. For now, power generation remains outside the scope of the scheme.

### Disclosure has advanced in parallel with the transition

Disclosure has advanced alongside it. Business Responsibility and Sustainability Reporting, which applies to the top thousand listed companies by market capitalisation, is the main instrument through which Indian firms report environmental performance<sup>8</sup>. Between them these give the country verified emissions data at scale for the first time. What they do not provide is a way for that data to reach a project appraisal. Eco-cost accounting would close the gap by attaching a shadow price to the water a thermal plant uses, the particulates it releases or the biodiversity a reservoir displaces. Without such prices, a project can pass every financial test and still be environmentally unsustainable.

Carbon pricing is widely assumed to fall hardest on the poor, yet evidence from 87 mostly low- and middle-income countries points the other way: below roughly USD 15,000 per capita, moderate increases proved on average progressive<sup>9</sup>. Recycled into decentralised solar for rural households, those revenues could narrow inequality rather than widen it.

### What made renewable electricity cheap

It may be tempting to read about the falling renewable costs as evidence that environmental accounting has succeeded. Between 2010 and 2024 the global weighted-average levelised cost

of utility-scale solar fell by 90 per cent, from USD 0.417 to USD 0.043 per kilowatt-hour, and onshore wind by 70 per cent, from USD 0.113 to USD 0.034. IRENA attributes this to technology improvement, competitive supply chains and economies of scale.<sup>10</sup> Carbon pricing and eco-cost accounting do not appear in that decomposition. Where financing conditions have been studied empirically in Germany they accounted for 5 per cent of the drop in photovoltaic costs and 24 per cent of the drop in wind costs<sup>11</sup>. In India the cost reached USD 0.038 per kilowatt-hour in 2024, which's below the global average<sup>10</sup>.

The fall has been uneven, as Figure 1 shows. Over the same period the cost of hydropower rose by 30 per cent and geothermal by 9 per cent, mainly on higher installed costs<sup>10</sup>. That matters in India, where large hydro brings displacement, biodiversity and seismic risks rarely given a price. Appraisal assuming every low-carbon technology followed the same path will misprice them.

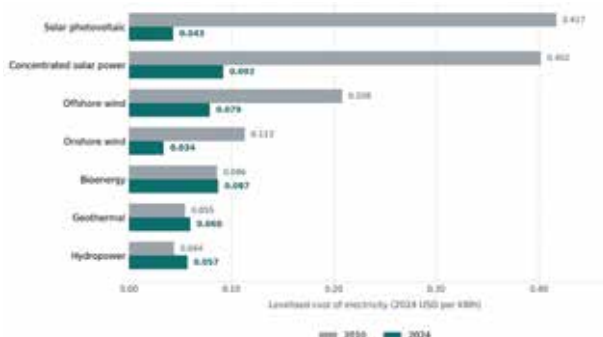


Figure 1. Global weighted-average levelised cost of electricity from newly commissioned utility-scale renewable projects, 2010 and 2024, in 2024 USD per kilowatt-hour. Data from IRENA, Table S1 (ref. 10).

### The rate that decides who builds

A low levelised cost does not establish that a project can be built. Levelised cost is a discounted quantity, and the rate applied is the cost of capital. Renewable assets are unusually sensitive to it, because almost all their cost falls at the outset and is recovered over decades. The IEA estimates that financing was around half the levelised cost of solar plants reaching final investment decision in emerging economies in 2021<sup>12</sup>.

Two independent estimates indicate where India

stands, though they rest on different methods and should not be combined arithmetically. IRENA, using regional assumptions, applied a weighted average cost of capital of 3.8 per cent in Europe and 12 per cent in Africa for 2024, and a review of 46 countries found wide variation within country groups as well as between them<sup>10,13</sup>. The IEA, drawing on developer and financier surveys, puts advanced-economy solar cost of capital at 5.0 to 6.5 per cent and India's at roughly 80 per cent higher<sup>12,14</sup>. Together these show a substantial Indian financing penalty, though well below the highest-risk markets.

Investors in India cite regulatory, currency, and off-taker risk as their main concerns<sup>14</sup>. Off-taker risk is not unique to India, but its scale and its origin in distribution utility balance sheets are distinctive, and it is fundamentally an accounting problem. As at March 2022, distribution companies held accumulated losses of about USD 70 billion and paid generators 163 days late on average. Late Payment Surcharge rules and payment security through the Solar Energy Corporation of India have helped, and dues fell from USD 18 billion in June 2022 to USD 9 billion in January 2024<sup>14</sup>. In short, the financial health of the buyer sets the discount rate for the seller.

The consequences are measurable. When region-specific capital costs enter energy-system models rather than being assumed away, projected green output in developing regions falls sharply. The authors call this a climate investment trap: perceived risk raises premia, deterring investment, which sustains the conditions generating the risk<sup>15</sup>. Across five models, Calcaterra and colleagues found that convergence of premia improves climate and equity outcomes together<sup>16</sup>. Where financing is half of levelised cost, a percentage point on the cost of capital is among the largest determinants of what gets built.

### The cost of reliability

Solar and wind energy have variable generations. Solar output falls at night and the monsoon season, while dust and heat reduce efficiency whereas wind resources are concentrated in a few states with inadequate evacuation infrastructure. The solutions are storage, hybrid projects and grid modernisation.

These solutions require substantial capital investment, yet such costs are rarely captured in project-level appraisal. The Central Electricity Authority estimates that India will need about 411 GWh of storage by 2031–32<sup>17</sup>, through batteries and pumped hydro. Independent estimates put the 2030 requirement at 132 GWh of batteries and 100 GWh of pumped hydro, compared with only about 360 MWh operational in January 2025<sup>18</sup>. The gap is substantial and costly to close, yet these costs are not reflected in the levelised cost of solar power. A tariff excluding the storage and network investment needed to make generation dependable is incomplete, and system-level life-cycle costing is the correction.

### Equity, disclosure and accountability

India's energy transition must balance two imperatives: an ecological ceiling she cannot exceed and a social foundation she cannot fall below. Access is no longer the primary constraint, with average rural electricity supply increasing from 12.5 hours a day in 2014 to 22.6 hours, while the national energy shortage fell to just 0.03 per cent in FY2025–26.<sup>19</sup> Reliability, however, remains uneven across states, while coal-dependent districts continue to face significant livelihood risks as the energy system undergoes structural change. Hall and colleagues set out six principles for just energy finance: affordability, good governance, due process, intra-generational equity, spatial equity and financial resilience<sup>20</sup>. These sit alongside distributional concerns in the just transition literature<sup>21</sup>.

### Role of CMAs in Environmental Cost Accounting and Project Sustainability

Cost and Management Accountants can help ensure that India's energy transition is financially as well as environmentally sustainable, integrating environmental costs into appraisal rather than

Energy transition has yet to account fully for its environmental and life-cycle costs, a gap CMAs can bridge by integrating them into project appraisal

relying on capital expenditure analysis alone.

- 1. Life-cycle costing and appraisal.** CMAs can apply life-cycle costing so that long-term environmental and social impacts are monetised, correcting the procurement bias towards upfront cost.
- 2. Environmental cost accounting.** Using eco-cost and material flow cost accounting, CMAs can assign shadow prices to emissions, water use, waste and biodiversity loss, making hidden costs visible in financial terms.
- 3. Carbon market and compliance.** Under the Carbon Credit Trading Scheme, CMAs can help organisations measure and manage emissions intensity, ensuring compliance while identifying ways to recycle carbon revenues into equitable access.
- 4. Financing and risk management.** CMAs can analyse the cost of capital, off-taker risk, and distribution utility health, quantifying exposures that shape project design and policy advocacy.
- 5. Reliability and system costs.** CMAs can bring storage, grid balancing and backup costs into project economics, preventing the under-pricing of solar and wind against dispatchable plant.
- 6. Energy justice and accountability.** CMAs can embed affordability, equity and resilience into financial models, strengthening disclosure under SEBI's reporting framework.
- 7. CMA as an Independent Sustainability Assurance Practitioner:** Under the proposed Standard on Sustainability Assurance (ISAS 1), CMAs can undertake assurance engagements on the disclosure of sustainability-related information, including sustainability-related risks and opportunities and their impact that is useful to stakeholders<sup>22</sup>.

## Conclusion

India's energy transition is both an opportunity and a challenge. Environmental costs are becoming visible through life-cycle assessment, the carbon market, and sustainability reporting, but their integration into project planning remains incomplete, and financing conditions continue to determine where deployment happens.

Four measures follow. Environmental cost accounting should be institutionalised within appraisal rather than appended to it. Financing costs should be treated as a policy variable, addressed through off-taker reform and payment security. The system costs of reliability should be counted within project economics. And energy justice criteria should be written into policy rather than assumed. Delivering these depends on professionals able to translate environmental impact into financial terms, which is where CMAs have a distinctive part to play.

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# ACCOUNTING FOR EMBODIED CARBON

## Costing Upfront Emissions in Green Infrastructure and the CMA's Strategic Role

### Abstract

An asset carries a carbon history before it carries an operating history. Materials are produced and assembled long before a plant or building starts operating. This embodied carbon is separate from operational carbon released once running. This article explains embodied carbon, how it is measured, and what IFRS, Ind AS and Indian guidance say about carbon, identifying the gap that no financial reporting standard addresses embodied carbon. The article concludes by outlining what is missing and how CMAs can bridge the gap through carbon shadow pricing.

### Introduction

Imagine a utility receives 1,000 emission allowances free from its regulator, buys 500 more from market at ₹60 each, emits 1,400 tonnes of CO<sub>2</sub> and surrenders 1,400 allowances. One carbon event is treated in four ways: free allowances as a grant under IAS 20, purchased allowances as an intangible asset under IAS 38, the surrender obligation as a provision under IAS 37, and, if held for trade, as inventory under IAS 2. Every one of these treatments is borrowed from a standard written for something else, applied by analogy because nothing more specific exists. If even traded carbon allowances need this much borrowing, then embodied carbon, the emissions locked into a new data centre or cooling plant before it ever switched on, sits in a total regulatory vacuum.

### What Embodied Carbon Is

An asset enters a company's financial records after it has been purchased, built or commissioned, but its



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carbon footprint begins much earlier. Every physical asset has two separate carbon stories. Embodied Carbon is the greenhouse gas released in mining and processing the raw material, manufacturing its components, transporting and assembling them. Operational Carbon is released while the asset runs and depends on how efficiently it is used afterwards. A new data centre or transformer illustrates the difference clearly. The emissions from making its steel, copper and insulation are embodied carbon. The emissions associated with powering and cooling it once its live are operational carbon. The same applies to a building: emissions from producing construction materials are embodied carbon, while emissions associated with energy use

during occupation are operational carbon.

This distinction matters because the two are controlled by different people at different points in time. Operational carbon depends on how efficiently an asset is run once it exists, and it has been the main focus of energy efficiency and climate policy for two decades. Embodied carbon is decided much earlier, at the point a material, a supplier or a design is chosen, often years before the asset is built.

### Why It Matters, and Why It Has Been Overlooked

Operational carbon shows up every month on an electricity bill and a meter reading. Embodied carbon shows up nowhere. It is scattered across a purchase order, a bill of materials and a supplier's own production records, and nobody's job has traditionally been to add it up. That gap, not a lack of importance, is why the topic has arrived later than operational carbon did.

The building and construction sector is estimated to account for about 39% of global energy-related carbon emissions split between 28% from operational and 11% embodied (World Green Building Council, 2019).. As operational carbon is steadily reduced through better insulation, efficient equipment and cleaner electricity, embodied carbon does not shrink at the same pace, because it is fixed the moment construction finishes. Its share of an asset's lifetime carbon footprint rises simply because the other half is falling.

Table 1 sets out who has a live reason to act today, without overstating where the legal obligation actually falls. The cost-pass-through mechanism it describes for CBAM is the same one this author's earlier article in this journal covered in detail for the steel and aluminium trade.

**Table -1 : Legal and Compliance Pressures**

| Situation                                    | Pressure today          | Where the obligation actually sits                                           |
|----------------------------------------------|-------------------------|------------------------------------------------------------------------------|
| Exporting steel, aluminium, cement to the EU | Indirect, but immediate | EU importer surrenders CBAM certificates. Cost may flow back through pricing |

|                                                      |                                      |                                                                        |
|------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------|
| Supplying materials or EPC into EU building projects | Indirect, building from 2028 to 2030 | Developer bears disclosure/limits. Pressure flows to suppliers         |
| Seeking green building certification in India        | Direct, already in use               | IGBC, GRIHA and similar rating criteria reward EPD disclosure directly |
| Everyone else, domestic focused, no certification    | Voluntary                            | ESG score and its emerging link to the cost of capital                 |

For companies with none of these pressures, the honest driver is capital rather than compliance. Larsen and Toubro closed a US\$ 700 Million sustainability-linked trade facility with Standard Chartered in 2025 priced against emission intensity targets, and other Indian companies have raised financing on similar terms. Global peers are already moving ahead under frameworks like the EU Corporate Sustainability Reporting Directive (CSRD) and ISSB IFRS S2. For example, Microsoft now integrates embodied carbon requirements into its data centre projects by tracking embedded emissions in steel and concrete, while BMW Group evaluates cradle-to-gate emissions when selecting manufacturing equipment. Sustainability reporting maturity is becoming a financial variable, and embodied carbon capability is a plausible, not yet proven, contributor to that maturity.

### Step 1 : Measure (How Embodied Carbon Is Actually Measured?)

The measurement methodology rests on ISO 14040 and 14044 - the principles and detailed rules for life-cycle assessment (LCA), the practice of tracking a product's environmental impact from raw material to disposal - applied specifically to carbon by ISO 14067, with EN 15978 covering buildings. Table 2 summarises what each one actually does.

The GHG Protocol, the framework most widely used for corporate emissions accounting generally, places embodied carbon within Scope 3 of a company's emissions inventory, under Category 1 for purchased goods and services and Category

2 for capital goods. This is a useful way to classify the emissions for reporting purposes, but it is worth being precise that embodied carbon, a property of a physical product or asset, and Scope 3, a category in a company's own emissions reporting, are not identical ideas. A company can measure embodied carbon for internal decision making, such as comparing two suppliers, without that measurement ever needing to become part of a formal Scope 3 disclosure.

In practice, we need not calculate these life-cycle emissions from scratch by relying on Environmental Product Declarations (EPDs), which act as standardized 'nutrition labels' for materials and industry LCA databases to bring precise, verifiable physical emission factors into their cost sheets.

This is measurement work, not accounting work. It tells an organisation how much carbon is embedded in a wall or a slab. It does not tell finance how that number should sit in accounts.

### Step 2 : Classify by Analogy (What IFRS, Ind AS and Other Guidelines Actually Say)

Before going further, it is important to distinguish what is already established from what this article proposes for internal management use. The life-cycle measurement methods discussed in Step 1, including ISO 14040, ISO 14044 and ISO 14067, are established standards for measuring environmental and carbon impacts, while the GHG Protocol provides an established framework for classifying emissions within corporate inventories. India also has the ICAI's 2012 Guidance Note on Accounting for Self Generated Certified Emission Reductions, although its scope is limited to a specific type of tradeable carbon credit. None of these frameworks requires companies to recognise embodied carbon in their financial statements as a separate accounting item. The classify-by-analogy approach discussed here, and the internal carbon pricing proposed in Step 3, are therefore management practices proposed for internal decision-making, not accounting requirements prescribed by IFRS, Ind AS or ICAI. They should operate alongside statutory financial reporting and should not be presented as a substitute for it.

No IFRS Accounting Standard, and no equivalent Ind AS, has ever been written specifically for

carbon, embodied or otherwise. The International Accounting Standards Board has said this plainly in its own educational material, acknowledging that its standards do not explicitly refer to climate related matters at all. Several attempts to draft a dedicated standard for emissions trading schemes have been opened and then quietly shelved.

In the absence of a specific standard, IAS 8, and its Ind AS equivalent, falls back on a general rule : apply judgement, guided by whichever existing standard deals with something similar. In practice, this has produced a patchwork behind the opening example rather than a single answer. A carbon credit or emission allowance a company intends to sell is generally treated as inventory under IAS 2 ; One it intends to use against its own future emissions is generally treated as an intangible asset under IAS 38; when government allowances are issued below fair value, the shortfall is treated as a grant under Ind AS 20. The obligation that builds up as the company emits is treated as a provision under Ind AS 37.

None of these allowances are amortised in the way a normal intangible asset would be, since they are not used up gradually. Over time, they are simply surrendered in full when the obligation falls due. Every part of this treatment is borrowed from a standard written for something other than carbon, applied by analogy because nothing more specific exists. The decision a CMA has to make, for embodied carbon exactly as for the allowance above, is which existing standards logic the item most resembles, and to apply it consistently.

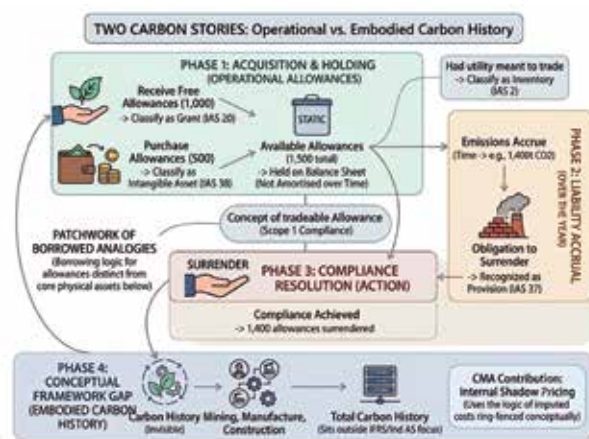


Figure 1: The Two Carbon Stories. Operational carbon compliance relies on a patchwork of

borrowed financial accounting standards (Phases 1–3), leaving a conceptual gap for embodied carbon (Phase 4) that is bridged by the CMA's internal shadow pricing.

India has one genuine exception. In 2012, the ICAI issued a Guidance Note on Accounting for Self Generated Certified Emission Reductions (CERs), addressing carbon credits earned under the Kyoto Protocol's Clean Development Mechanism. A credit becomes an asset only after UN confirmation. It is then valued as inventory under the Indian equivalent of IAS 2, at the lower of cost or net realisable value, with revenue recognised only when the credit is actually sold. But, its scope was deliberately focused. It covers one kind of tradeable carbon credit under one particular international mechanism. It says nothing about embodied carbon or internal carbon price. The gap remains outside its scope.

Table 2 sets out the wider set of guidelines a reader is likely to encounter, and what each one actually does, since the number of overlapping frameworks is itself part of why this area is confusing.

**Table 2 : Guidance References**

| Guideline             | Issued by                           | What it actually covers                                                          |
|-----------------------|-------------------------------------|----------------------------------------------------------------------------------|
| ISO 14040 and 14044   | ISO                                 | The principles and detailed rules for life cycle assessment in general           |
| ISO 14067             | ISO                                 | Applies life cycle assessment specifically to a product's carbon footprint       |
| EN 15978              | European standards body             | Defines the life cycle stages of a building, from raw material to end of life    |
| GHG Protocol, Scope 3 | World Resources Institute and WBCSD | Classifies embodied carbon within a company's wider emissions inventory          |
| IFRS S1 and S2        | ISSB                                | Sustainability disclosure to investors, not financial accounting recognition     |
| BRSR Core             | SEBI                                | Assured disclosure of a defined set of ESG indicators for large listed companies |

|                       |            |                                                                                                |
|-----------------------|------------|------------------------------------------------------------------------------------------------|
| Guidance Note on CERs | ICAI, 2012 | The one place Indian standard setters have actually written accounting rules for a carbon item |
|-----------------------|------------|------------------------------------------------------------------------------------------------|

### Step 3 The CMA Solution (Internal Carbon Costing)

Classify-by-analogy answers the financial-accounting question as far as it can currently be answered. It does not stop a CMA from making an embodied-carbon figure useful for internal decisions today, without waiting for IFRS, Ind AS or ICAI to write a rule for it. Once measured through the life-cycle methods in Step 1, that figure can sit beside the ordinary cost sheet, a capital appraisal, a comparison between two suppliers as a second, separate number, clearly labelled as a management estimate rather than a financial-accounting entry. Cost Accounting Standard 4 already keeps imputed costs ring-fenced from the statutory cost of production in exactly this way; the same discipline extends cleanly to an embodied-carbon estimate. Ring-fencing it now, rather than waiting for a rule that may take years to arrive, leaves an organisation better placed for whichever accounting or disclosure standard eventually shows up.

For example, when evaluating tenders for an infrastructure project-such as a data center facility or substation civil works. Option A represents baseline Portland cement and structural steel, while Option B specifies low-clinker green concrete and recycled steel.

**Table 3: Internal Shadow Carbon Appraisal for Infrastructure Capex**

| Parameter           | Option A: Standard Build | Option B: Low-Carbon Build | Variance Analysis                                |
|---------------------|--------------------------|----------------------------|--------------------------------------------------|
| Direct Capital Cost | ₹ 1,200 Lakh             | ₹ 1,350 Lakh               | + ₹ 150 Lakh (+12.5% Capex premium)              |
| Embodied Carbon     | 1,800 tCO <sub>2</sub> e | 1,100 tCO <sub>2</sub> e   | - 700 tCO <sub>2</sub> e (-38.8% upfront carbon) |

|                              |                             |                             |                                        |
|------------------------------|-----------------------------|-----------------------------|----------------------------------------|
| <b>Internal Carbon Price</b> | ₹ 2,500 / tCO <sub>2e</sub> | ₹ 2,500 / tCO <sub>2e</sub> | Illustrative Internal Management Price |
| <b>Imputed Carbon Cost</b>   | ₹ 45.0 Lakh                 | ₹ 27.5 Lakh                 | - ₹ 17.5 Lakh avoided carbon risk      |
| <b>Total Evaluated Cost</b>  | <b>₹ 1,245.0 Lakh</b>       | <b>₹ 1,377.5 Lakh</b>       | Carbon-adjusted number for decisions   |

The ₹2,500/tCO<sub>2e</sub> used in this analysis is illustrative rather than a prescribed or market-determined carbon price. It broadly reflects the range of disclosed internal carbon prices by Indian companies, including Mahindra & Mahindra (US\$10/tCO<sub>2e</sub>), Essar Oil (US\$15/tCO<sub>2e</sub>), and UltraTech Cement (US\$30/tCO<sub>2e</sub> in its latest disclosure). The figure is therefore used only to demonstrate the mechanics of internal carbon costing and should not be interpreted as a universally appropriate carbon price.

Where carbon creates a current or anticipated economic or strategic exposure such as compliance costs, carbon-linked financing, customer requirements or a company's own transition targets, the measured embodied-carbon cost can be incorporated into capital appraisal and procurement. In a tender, it can be added to the quoted price as an internal decision metric, or included as one factor in a supplier scorecard alongside price, quality and delivery. Where no such exposure or management objective exists, the carbon-adjusted figure remains an informational rather than a financially determinative measure.

The academic accounting literature confirms this is a genuine, not imagined, gap. A systematic review of 117 papers published in accounting journals between 2005 and 2018 found the field of carbon accounting organising itself around disclosure, management, performance and assurance, with embodied carbon specifically remaining an underdeveloped corner even within that literature (He, Luo, Shamsuddin and Tang, 2022). Accounting research has, in other words, been asking largely the same questions as the standard setters and has not yet caught up to embodied carbon either.

## Conclusion

Embodied carbon is a real and growing share of an asset's lifetime footprint, measurable today using established life cycle methods, and it sits almost entirely outside the reach of IFRS, Ind AS and India's own accounting guidance. That gap is not a reason to wait. It is the reason a management accounting response, built now on measurement and internal decision use rather than on a financial accounting rule that does not yet exist, is worth having and it is the CMA's craft to build it.

## Limitations

The internal carbon price is a management assumption rather than a market-observed or universally comparable value. A price set too low may have little influence on decisions, while a price set too high may distort them. The imputed carbon cost is not itself a cash outflow or financial-accounting entry and carries no external assurance. Results also depend on reliable embodied-carbon data and consistent system boundaries; incomplete supplier data may lead to estimation errors or double counting. The example is illustrative, and actual treatment depends on the entity, transaction and jurisdiction. MA

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# RENEWABLE ENERGY TRANSITION IN INDIA: STRATEGIC ROLE OF CMAs THROUGH BIG DATA ANALYTICS ENABLED MANAGEMENT ACCOUNTING

## Abstract

Indian energy sector is transitioning towards a renewable-energy-intensive ecosystem. The fundamental shift from conventional fossil fuel-based generation towards renewable sources involves a much more complex model, attributed by intermittency, storage, flexible generation-demand response, dynamic electricity pricing and data-oriented grid management. This demands a complete relooking of financial evaluation of integrated renewable energy (RE) projects based on levelized cost of electricity (LCOE). With the introduction of time-of-day (ToD) pricing system, it has become essential to leverage big data analytics (BDA) capabilities in system driven cost approach. The financial evaluation of renewable energy projects is now much beyond the LCOE, it has to integrate cost associated with storage, transmission, dynamic ToD tariffs, environmental and regulatory risks. This transition positioned CMAs to play a strategic role in renewable energy integration through energy project lifecycle costing, capital budgeting, environmental management accounting, sustainability and regulatory decision-making. This article establishes the nexus between renewable energy transition, management accounting practices, BDA and strategic role of CMAs for offering a cost-efficient architecture of renewable energy integration.



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## Introduction

The global energy supply chain is facing frequent disruption due to geopolitical conflicts, trade wars, disruptive technologies

and climate related changes. Being a globally connected economy, Indian energy sector is highly sensitive to these geopolitical developments. The impact of uncertainties is not limited to oil and natural

gas supplies, but also exert adverse pressure on entire value chain and impede the development of country. As per IEA report, India recorded the second-largest increase in energy demand globally, which is more than the combined increase in energy demand of all the advanced economies (IEA, 2025). A substantial part of Indian energy comes from imports, and uncertain global market conditions presents challenges and opportunities for world's third-largest oil importer.

In last two decades, installed power capacity in India has more than doubled with a mix of 49% from non-fossil fuel sources amounting to 235.7 GW, including 226.9 GW renewable and 8.8 GW nuclear. (Press Information Bureau, 2026). This renewable transition has fundamentally altered the economics of electricity generation. The economics of conventional thermal and renewable wind and solar is significantly different. While former account for fuel expenditure as an important marginal cost determinant, the latter is mainly characterised by heavy initial capital expenditure and low marginal generation cost. The thermal installation typically requires a much longer period as compared to PV solar and wind projects. The coal based thermal utilities provide stable power supply, while variable solar and wind generation creates critical implication for matching the demand-supply patterns. Integration of renewable and non-renewable require advanced technologies like big data analytics and artificial intelligence (AI) for grid stability, efficient market operation, project financing and management accounting strategies. These aspects become critical due to integration of renewable power in system mainly characterised by long-term power-purchase agreements, regulated electricity tariffs, public and private sector distribution companies, cost-based dispatches and emerging electricity markets.

Therefore, traditional LCOE approach for evaluation of integrated renewable projects may not be appropriate and gives a hazy financial outlook. Jain and Shrimali (2022) through simulation-based study demonstrated the limitation of LCOE in evaluation of renewable and thermal power utilities. Researchers used a real-time 15-minute data for a merit-based-dispatch model and found that moderate level of renewable penetration can generate significant financial savings. The moderate renewable integration can reduce up to 11% of power-purchase costs under selected demand-growth and renewable penetration scenarios. Since, Indian utilities marginally procure electricity through spot-market,

the long-term purchase agreements and two-part tariffs (fixed and variable charges) significantly influence the renewable procurement decisions. As per CERC report published in June-2025, electricity traded through power exchanges accounted for 7.54% of electricity generation in its short-term market analysis. This includes exchange-based markets, the day-ahead market and real-time market. CERC explicitly differentiate power-exchange transactions from bilateral transactions and the broader short-term market. In June 2025, bilateral transactions accounted for 6.49%, while short-term transactions and deviation settlement mechanism (DSM) together represented 16.39% of electricity generation (CERC, 2025).

The economic question about renewable energy is now no longer simple. It is not just how much renewable is cheaper than conventional electricity, rather question is whether particular renewable energy portfolio can deliver a reliable solution at minimum total system cost. Shifting from generation to total system cost has a major implication for strategic thinkers like cost and management accountants. Increased penetration of solar and wind makes daytime pricing more volatile and require price cannibalisation, which eventually create financial risks for renewable generators (Saraswat and Sharma, 2026). Appropriate energy storage and revenue stacking can reduce the volatility and improve the financial viability of renewable projects through diversifying revenue streams. Therefore, Indian renewable energy transition and investment decisions increasingly require a comprehensive framework through integration of engineering, costing and energy marketing information. This is precisely area where big data analytics, management accounting and the professional expertise of CMAs can be strategically utilised.

**Research gap:** Although renewable energy transition in India was studied by previous researchers from theoretical and applied perspective, however the literature is largely fragmented and marginally explained how advanced technologies like BDA can be integrated to translate technical, operational and regulatory information into strategic financial and management decisions using a professional framework.

**Objective statement:** This article examines how renewable energy integration, big data analytics and data driven management accounting can strengthen

the financial evaluation and cost optimisation of India's evolving electricity system. The work further identifies the emerging strategic roles and competencies required for CMAs and proposes a professional framework for managerial analysis. The proposed professional framework can be utilised by the management accountants to connect the engineering data, electricity market data and operational data for converting the energy information into economic values.

### Renewable energy integration, financial evaluation and cost optimisation

Besides technical complexities involved in renewable power integration, the economic value of renewables is determined through comprehensive framework considering the pure production cost and cost associated with integration of electricity system. For example, solar influx is available during daytime and fluctuates due to weather conditions, while electricity demand can remain high during evening periods. Likewise, wind generation depends on wind current, which again weather dependent. Such temporal differences may create imbalances between generation and consumption patterns and affects the pricing of available electricity. Due to merit-order dispatch effect, the renewable power generators with low marginal costs get priority over expensive conventional generators. With increased renewable share, corresponding expensive thermal utility may get displaced on the basis of variable purchase cost. Moderate renewable penetration contributes to economic and environmental goals. Jain and Shrimali (2022) demonstrated that wind generated mixing yields highest potential savings, followed by solar and hydro. However, marginal financial benefit depends on which conventional utilities are displaced. For example, a relatively low-variable-cost thermal generation replacement with additional renewable becomes less attractive and may yield smaller or adverse marginal financial benefit.

Therefore, investment in renewable projects cannot be evaluated in isolation. Incremental effect of renewable addition on the entire generation mix should be considered. A solar project with low LCOE may provide a smaller incremental benefit due to generation period clashes with low cost conventional generator. A higher LCOE renewable-storage project may yield greater benefits due to availability during peak-price periods. Saraswat and Sharma (2026) argued that price cannibalisation could be a

potential risk to renewable project viability. Increased penetration of renewable itself suppresses the pricing during higher renewable availability periods, resulting pressure on revenues. Renewable-storage projects even with higher LCOE can mitigate adverse price impact by storing renewable at low price time and supplying at higher demand and price. The appropriate financial profiles must incorporate risk-adjusted total system value and costs.

LCOE is calculated on the basis of discounted lifetime cost of power generation. However, relatively newer components of costs such as balancing, storage, curtailment and deviation must be incorporated in broader system-cost framework for financial evaluation of renewable projects. Theoretically, total cost of renewable integration can be represented by following equation:

$$TCRE = LCOE + CT + CB + CS + CD + CC$$

where Levelized cost of energy = LCOE,

CT = transmission cost (costs of connecting the project to the electricity grid and transmitting its output.)

CB = balancing cost (Costs of managing fluctuations in electricity supply and demand)

CS = storage cost (costs associated with batteries or other storage needed to integrate variable renewable energy)

CD = deviation cost (Cost incurred due to actual electricity generation or consumption differs from the schedule)

and CC = curtailment cost (Economic cost of electricity that could have been generated but is reduced or stopped due to grid or system constraints or cheaper alternative.)

*Note # 1: The above conceptual representation proposed for managerial analysis only and not an established universally accepted accounting formula.*

Likewise, the economic value should include energy revenue, capacity value and other potential revenue streams; theoretically

$$NEV = RE + RC + RA + RS - TCRE$$

Where RE = energy revenue (Revenue from electricity sales and energy-arbitrage activities, after deducting associated energy and operating costs),

RC = capacity related value (Economic value of storage contribution, distinct from actual capacity-market payments),

RA = ancillary revenue (Revenue generated through frequency regulation, reserves, balancing, and other ancillary grid-support services),

RS = storage revenue (Revenue from additional storage applications not already included in energy, capacity, or ancillary-service revenues),

TCRE = transient climate response to cumulative carbon emissions (associated cost).

*Note # 2: Appropriate discounted may be applied on future revenues and costs to determine present economic value.*

*Note # 3: the above is only a suggestive Net Economic Value Framework.*

The above distinction plays a crucial role in renewable investment appraisal, and management accountants should consider a comprehensive costing model including expenditure related to capital, operating, financing, replacement, asset degradation, transmission, forecasting, balancing, storage, carbon emission and regulatory compliances. Sensitivity and scenario analysis can further test the impact of changes in the variables like interest rates, generation yield, electricity prices, renewable penetration, storage costs and regulatory conditions. Thus, lifecycle costing provides a more appropriate picture than annual expenditure analysis. An initial capital incentive renewable asset but predictable operating expenditure may produce superior lifecycle economics compared to an apparently cheaper alternative that exposes the utility to higher fuel-price, carbon emission or balancing risks.

### **Renewable-energy optimisation through big data analytics, smart-grid, ToD tariff**

Proliferation of intelligent sensing and digital measuring devices have created the new opportunities for data-driven smart-grid management (Tu et al., 2017). Big data analytics and artificial intelligence are increasingly becoming important technologies for predicting and forecasting electricity demand-generation patterns. Concurrent data acquisition and processing through BDA enable optimising storage, improving pricing decisions and enabling economic load dispatches. The digital electricity networks, smart meters, supervisory control and data acquisition systems, digital weather stations, satellite inputs, IoT sensors, electricity-marketing exchanges and digital distribution systems generate enormous data, which can be translated into exquisite business decision

through BDA application.

A well-placed BDA solution can effectively support grid stability, distributed-energy integration and optimum scheduling. In renewable-energy management, improved solar and wind forecasting can substantially reduce scheduling errors, while precise load forecasting optimises purchasing and load dispatch decisions. Efficient pricing forecast can assist wider market participation, while updated forecast on battery status can optimise the charging-discharging decisions. Therefore, BDA enabled energy management system creates a live connection between operational informatics and financial outcomes. Distribution companies (DISCOMs) can integrate historical load data, weather station information, grid connected rooftop-PV output, ToD tariffs and power-exchange prices for developing economic procurement and distribution decisions.

The Electricity (Rights of Consumers) Rules -2023 was amended in June-2023 introducing the ToD framework with prescribed timelines, consumer categories, smart metering and state regulatory arrangements. ToD provides an economic bridge between renewable generation and electricity demand. ToD pricing framework offers differentiated price of electricity for different time periods. It encourages consumers to optimise and reschedule consumption requirements from high-demand periods to relatively cheaper tariff periods. Tomar and Tiwari (2017) examined the economic relevance of ToD pricing for grid connected rooftop PV systems under net-metering and ToD arrangements in New Delhi. The finding of their work suggests that dynamic pricing structure materially influences techno-economic feasibility of renewable system and improve day time utilisation.

### **Regulatory framework and financial decision-making**

The Electricity Act, 2003 provides a comprehensive regulatory framework for electricity generation, transmission and distribution. Electricity regulatory commissions in India work autonomously and determine many necessary economic conditions including tariff regulations, licensing, and inter and intra state transmission. Financial performance of renewable projects and its integration are inseparable from these regulations. Financial performance of renewable-projects depends on many factors such as renewable purchase obligations, renewable-energy certificates, tariff, grid codes and deviation-settlement. Grid Code - 2023 also recognise importance of system

flexibility and provides as conducive environment for renewable integration including provisions relevant to hybrid and energy storage. Deviation settlement creates a direct link between forecasting accuracy and financial performance. Deviation from loading schedule attracts additional adverse financial exposure for renewable generator. Therefore, investment in better forecasting technology alter the nature of IT expenditure from just IT expenditure to a strategic cost-control investment (CERC, 2026).

While appropriate regulatory commission determined tariffs in accordance with provision of section 62 of the Electricity Act, 2003, tariffs are discovered through a transparent competitive bidding process outlined in section 63 of the act and in accordance with the Central Government guidelines. (CERC, 2026; Government of India, 2003). Besides adhering regulatory mandates, the financial evaluation of renewable project must include the environmental dimension. The principle of sustainability accounting intended to connect environmental performance with financial performance and organisational strategies. An electricity-procurement having higher financial costs but lower carbon intensity, lower regulatory risk and greater renewable mix may generate superior long-term values.

### Role of CMAs in renewable energy cost optimisation

The renewable penetration and integration with electricity system presents a structural transformation in energy economics and management accounting. Literature highlights that renewable generation can potentially reduce the electricity purchase costs, however corresponding financial value largely depend on penetration levels, generation mix, growth pattern, and timing of generation. The flexible system must consider engineering, marketing, regulatory and accounting information for addressing the price cannibalisation, intermittency, balancing, storage and demand problems. Advanced technology like BDA provides a technological foundation for cost optimisation and financial performance evaluation.

Big Data systems continuously collect structured, semi-structured and unstructured data related to electricity demand, renewable mix, weather conditions, energy exchange prices, storage and grid conditions. The forecasting models translate this data into predictions, connecting the operational dynamics with financial parameters. ToD tariffs encourage demand rescheduling to move towards economic

and environment friendly time periods. Optimised predictive models select the least-cost combination of power procurement, renewable mix, storage and demand response.

The BDA-enabled energy optimisation flow can be presented as: Data acquisition → Big data analytics → Forecasting → Optimisation → Dynamic operational decisions → Cost/revenue outcomes.

### Approach and basis of analysis

On the basis of review of selected academic literature, professional analysis, Indian electricity-sector regulatory documents, renewable energy costing concepts, and management accounting principles, this work propose a logical flow which can be utilised by the CMAs' to convert operational results into financials. The responsibilities of CMAs go much beyond traditional cost determination, budgeting, variance analysis and investment appraisal. The role increasingly extends towards data analytics, sustainability, environmental management, statutory compliance and strategic decision-making. This can be represented as: Big data analytics → Predictive modelling → Forecasting → Optimisation → Cost management → Financial evaluation → Strategic decision making. In this flow, the management accountants are not just recipient of engineering information but also connect technical parameters of renewable performance with lifecycle costing, environmental costs, investment appraisal, regulatory risk, and sustainability performance. The management accountants stand as active participant in determining the optimum operational strategy to create higher economic value. CMAs' expertise in environmental costing, sustainability accounting and BDA enabled management accounting lays a strong foundation for technology driven professional transition.

Renewable energy management is not a simply technological transition from coal to solar, wind and battery storage, rather than it is a complete transformation from traditional cost accounting to data-driven predictive management accounting, which keeps the sustainability in centre. A successful renewable integration ultimately depends upon how swiftly organisations combine the engineering efficiency, regulatory prudence, big data analytics and comprehensive financial evaluation. In this journey, the CMAs are uniquely positioned to provide seamless interface between technical energy performance and financial management. While engineers determine the renewable capacity factor, degradation rate

and generation profiles, CMAs can translate these variables into financials such as LCOE, NPV, IRR, DSCR, lifecycle costing and risk-adjusted return. CMAs can further extend their expertise by utilising BDA capabilities coupled with smart metering and supervisory control and data acquisition (SCADA) into management accounting systems for predicting relationships between energy consumption and production cost. Industrial CMAs can optimise production schedule to take the advantage of favourable ToD periods. This may sometimes require business process reengineering. Likewise, a DISCOM CMA may think about BDA integration with energy procurement prices, demand forecasts, renewable generation, deviation costs and environmental risk in a predictive power-purchase-cost model.

From management accounting perspective, transition from historical cost accounting to predictive energy management accounting triggers an immediate need to combine historical financial information with BDA driven predictive and prescriptive analytics. ToD tariffs create an opportunity to calculate time

specific electricity cost. CMAs can determine if production schedule can be shifted between different time blocks for marginal electricity-cost saving. This equally applies on battery storage decisions. Batteries can be charged at relatively lower prices and discharge when prices are high. The economic values therefore should be evaluated on the basis of time dependent cost drivers. Deviation cost, renewable purchase obligation, carbon indicators and sustainability parameters should be incorporated into measurable financial KPIs, rather than treating them as purely legal matters. The renewable energy financial evaluation framework must consider system reliability and flexibility. CMAs can build a management dashboard to report electricity cost per unit, renewable mix, carbon intensity, peak demand cost, deviation exposure, adjusted risk, storage utilisation and avoided emissions at one place.

Conceptually central proposition and conceptual framework proposed by this this work can be presented as follows.



(Conceptual framework)

### ICMAI's framework

ICMAI provides many important documents like 'Guidance Note on Environmental Costing', Sustainability Standards (SS-1 and SS-2), and Cost Accounting Standard, CAS-14 on pollution control cost (ICMAI, 2015a; ICAI, 2015b; ICAI, 2015c). For renewable energy integration, these guiding documents on environmental costing are particularly relevant as renewable energy decisions involve environmental costs and corresponding benefits cannot be appropriately captured through conventional financial accounting. Environmental management accounting allows managers to incorporate variables related to environmental expenditure, waste management costs and compliance costs in energy procurement and investment decisions. Such inclusion is necessary because stakeholders demand a more transparent disclosure on climate related risks and sustainable performance. The guidance notes and standards provide a professional framework through which CMAs can support renewable energy integration on total system cost concept, incorporating sustainability indicators as decision variables within the BDA enabled management accounting practices.

### Practical implications

Besides improving theoretical understanding on renewable energy integration in Indian landscape, this work offers important practical implications. Now focus is to be shifted from just renewable energy capacity addition towards renewable energy integration. For management accountants, renewable transition creates a new field of energy cost management. Energy storage, flexible demand-supply mechanism, transmission, dispatch forecasting and IT infrastructure cost should be treated as complementary investments in integrated project appraisal. ToD tariffs creates a new window of consulting opportunity where management accountants can offer their expertise in business process reengineering and rescheduling production towards cheaper renewable availability. CMAs should utilise capabilities of big data analytics to acquire necessary data and information for coordinating these strategic decisions. CMAs should develop expertise in electricity markets, energy storage economics, renewable forecasting, ToD tariff analysis, environmental accounting, sustainability reporting and BDA-enabled financial analytics. ICAI can continue institutional support in this

professional journey through strengthening education, professional development and capacity building in energy economics, big data analytics, AI, ESG and electricity regulations. The future CMAs must be in a position to answer the management accounting questions such as:

Marginal utility of adding another renewable megawatt?

Optimal battery charging-discharging and storage duration?

Cost of renewable curtailment?

Demand response that can be saved under ToD pricing mechanism?

How demand forecasting can be improved?

Financial value of improving such forecast accuracy?

**Limitations of the study:** While proposed professional framework with LCOE remains useful for comparing the average lifetime cost of projects, it cannot be treated as a comprehensive measure of whole system value. Complementary system-cost assessments are inherently context specific and largely depends on geographical location, network constraints, resource availability, demand patterns, regulatory conditions, and market structure. These context specific attributes can materially affect the overall project economics. Likewise, application of BDA in renewable energy integration require data quality, data governance, interoperability, cybersecurity, and the investment in digital infrastructure. Analytical capabilities of human resource within the organisation are another important consideration. Energy storage economics is again context specific and dependent on market design, revenue-stacking opportunities, operating conditions, and asset utilisation. Finally, the benefits associated with ToD tariffs are practically not available equally to all, rather than critically depends on consumers' ability and willingness to manage the load demand with best tariff structure. Accordingly, all these approaches are complementary and not universally applicable metrics. The effectiveness of each metrics should be evaluated within the specific technical, economic, institutional, geographical, and organisational context. MA

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# BUILDING ESG-READY CMAs

## Insights from Singapore's Reporting Environment and SEBI's BRSR

### Abstract

Over the years, ESG reporting has evolved from a story about how organizations are meeting their corporate social responsibilities to one steeped in data and strategic risk management. ESG reporting is serious business for organizations not only due to increased regulation but also as the non-financial risks of ESG are found to have direct impacts on the financial performance of organizations. This article discusses the ESG reporting landscape in Singapore as a model as they have been ahead of global averages and pioneered several innovative mechanisms for transparent and meaningful ESG reporting. With this forward-looking view as the backdrop, the article discusses the professional commitments and capabilities of CMAs that provide the right opportunities for them to move into ESG roles. Skills and capabilities that CMAs should develop are also highlighted. The future will be led by those who act today, and CMAs are well poised to do so.



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### Introduction: The evolving phases of ESG reporting

**E**nvironmental Social Governance or ESG is understood as a set of standards developed to measure an organisation's impact on the environment and society (Krantz & Jonker, 2024). ESG was often used in close connection with other terms such as CSR i.e. Corporate Social Responsibility, but over the years, a clear distinction of these terms and a massive shift of the conversation towards ESG has resulted in a more robust framework where social and environmental

strategies of organizations have been embedded into their corporate strategies. This change has meant that stories of community engagement and philanthropy that dominated what CSR for organizations looked like are replaced by specific, measurable objectives that identify value-based initiatives that augment financial and strategic business decisions (4ocean Team, n.d.). With increased governance and regulation guiding ESG reporting, corporations are able to prove their sustainability initiatives, contributions and the resultant impacts. Transparency for stakeholders has greatly increased as they are able to judge organizations on how their non-financial risks are managed since non-financial risks have a direct impact on financial performance. This is because strong ESG metrics when done right, are often a measure of quality leadership that prioritizes organizational resilience, acute management of risks and long-term value adding plans for the organization (Marques Alves Aguiar, 2026). With regulatory and governance frameworks worldwide, moving towards mandatory reporting of sustainability goals and measures, related guidelines are already being vastly adopted and such reporting has become part of business as usual for most of the large countries around the world (McCalla-Leacy & Gnändiger, n.d.).

## ESG Landscape in Singapore for Reporting, Regulation and Frameworks - A Useful Reference Model

Using Singapore as a useful reference model stems not only from the author's proximity and awareness of the environment in the city-state but also from published reports of studies and surveys by consultants that time and again identify Singapore as a mature environment and a pioneering force in the field of ESG regulation, governance and reporting. KPMG's 2024 survey of sustainable reporting observed how Singapore has often outdone global averages thereby setting new benchmarks globally and in the region. For instance, in Singapore all top 100 companies report on sustainability and they are among the 7 such countries in the world. The global average for such reporting is only 79 percent. In several of the key sustainability reporting indicators, such as accountability at board-level, ESG integration and climate risk recognition, Singapore's top 100 companies outdid global standards. Recognizing climate change as a financial risk is adopted only by 55 percent of the companies worldwide but in Singapore 76% of the companies do so. Very importantly a high 84% of the companies in Singapore are including information relating to Sustainability and ESG in their annual reports while the world average is only 62% (McCalla-Leacy & Gnändiger, n.d.)

## Divergent ESG Journeys: India and Singapore Shaping Their Own Reporting Models

As major powers in their own sense in pushing the importance of ESG reporting in the region, both Singapore and India are charting out their own journeys based on the position of their capital markets and the traditions defining corporate governance in their spaces. The common language creating a foundation for guiding reporting in both countries is the IFRS Foundation's International Sustainability Standards Board (ISSB) – IFRS S1 and S2 for general sustainability as well as climate reporting are important. These international references for ESG reporting are based on Task Force on Climate-related Financial Disclosures (TCFD) for disclosing climate-related risks and opportunities (Global Excellence Digest Editorial Team, 2026).

ESG regulations in Singapore are driven primarily by the mandates and guidelines provided by the Monetary Authority of Singapore (MAS) and

Singapore Exchange (SGX). While listed companies have to mandatorily publish annual ESG reports, these authorities established strategic journey maps for all relevant organizations to enable them smoothly transition to adopting mandatory climate reporting by 2025. Specifically, they prioritized disclosure for high impact sectors such as energy and finance and customised reporting on specific ESG risks for the finance sector, consequently building transparency and value. Building a suite of resources for Micro, Small and Medium Enterprises (MSMEs) to develop ESG strategies and benefit from them is a distinctive contribution by MAS. Besides, simplification of reporting by SGX on their ESG portal, positioning corporate disclosures to match the twenty-seven core global ESG metrics, makes for universal understanding and tracking of progress (SMU Academy, 2025). The use of internationally recognised frameworks and standards of ESG reporting add to Singapore's relevance as a regional/global leader in this space. Some prominent ones guiding ESG reporting include the Global Reporting Initiative (GRI) developed by Global Sustainability Standards Board (GSSB) that focuses on the most relevant ESG impacts providing meaningful comparison and transparency. The Sustainability Accounting Standards Board (SASB) framework is great for aligning information reported with stakeholders for financial significance. The Adoption of Task Force on Climate-related Financial Disclosures (TCFD) for disclosing climate-related risks and opportunities is especially useful for both management and investor decision making (SMU Academy, 2025). Singapore has directly aligned with the ISSB IFRS S1 and S2 reporting standards and has sped ahead in determining ESG reporting requirements in the region. Since 2022, companies listed on the Singapore Exchange have had to provide climaterelated information based on international TCFD guidelines. Starting in financial year 2025, every SGXlisted company must also report their direct greenhouse gas emissions (Scope 1) and the emissions from the electricity they use (Scope 2). Companies in the Straits Times Index will be the first in Singapore to follow the full set of new global sustainability reporting rules. Starting from financial year 2026, they will also be reporting their indirect emissions, known as Scope 3 (Global Excellence Digest Editorial Team, 2026). Besides, Singapore is also looking at recommendations from the Sustainability Reporting Advisory Committee

(SRAC) to extend ESG reporting aligned with ISSB to even large non-listed companies thereby focusing on truly positioning Singapore as a green-finance hub over mere compliance (Global Excellence Digest Editorial Team, 2026).

The Business Responsibility and Sustainability Report (BRSR) issued by the Securities and Exchange Board of India (SEBI) is driving ESG reporting in India. India has been distinctive in not adopting the ISSB standards as it is but rather using it as a basis and building a domestic framework for ESG reporting. SEBI's BRSR has been mandatory for the top 1000 listed companies since the financial year 2022-23. (Global Excellence Digest Editorial Team, 2026). In keeping with demonstrating India's implementation of the United Nations Guiding Principles on Business and Human Rights, the Ministry of Corporate Affairs issued the National Guidelines on Responsible Business Conduct and the ESG reporting is centred around these 9 principles. These 9 principles include guidelines for ethical operational conduct and governance, sustainable goods and services, employee wellbeing, stakeholder interests and concerns, human rights across operations, environmental protection and preservation, transparent policy administration, social inclusion and equitable development and delivering fair value to consumers. The coverage of the reporting thus, is comprehensive. The inclusion of social metrics over and above environmental ones is significant under BRSR. SEBI is also expanding the scope of reporting asking top 250 listed companies to share ESG information about their important suppliers and customers starting FY202425, and from FY202627 extending it to the top 1,000 companies (Global Excellence Digest Editorial Team, 2026).

### Contribution of CMAs to the future of ESG reporting

As more countries and companies mature in their understanding, adoption and strengthening of ESG information reporting, it is evident that establishment of specialized roles and responsibilities is a vital need. New roles and responsibilities relating to reporting as well as independent assurance are likely to arise. Reporting involves accountability of the organization to share its ESG story truthfully through collection of data, interpretation and presentation, and creates

transparency in conduct and governance. At the same time, independent assurance builds credibility to the ESG story published by the organization as it can involve verification and validation of the data sources, controls, interpretations and disclosures. In both these kinds of roles, CMAs, through their education and code of conduct, are a natural fit. The ABCDs of how CMAs seem poised to take charge of roles in this space is described below:

- ⦿ **Accountability:** The need for marked accountability for providing a holistic view of the sustainability contributions of organizations in the fields of environmental protection, social relationships with stakeholders and the community and effective internal controls and practices, promises an ideal setting for CMAs to lead and use their prowess. Through the strict professional code of conduct that CMAs adhere to in taking ownership among others, this role is one that CMAs can easily slip into.
- ⦿ **Business Goals:** Assessing business goals and priorities to guide the correctness and the reporting of critical and relevant ESG aspects is essential for producing meaningful disclosures that highlight valueadding insights for decisionmaking by both management and investors. CMAs working at the C-suite level or in close proximity to top management are well positioned to be able to understand and work with strategic goals and objectives.
- ⦿ **Compliance:** Besides, as organizations are reporting, the need for obtaining assurance of these disclosures and compliance to regulation is crucial. As CMAs are well versed in sound audit principles and processes, they can, through participation in the reporting or through independent verification, establish the reliability of ESG reports and their alignment with international standards, ensuring regulatory compliance as well.
- ⦿ **Data collection and analysis:** Data consistency, correctness, timeliness and accuracy are the foundations of dependable reporting as important financial and business decisions by investors and management are based on ESG reports. With a CMA's mastery in financial planning, performance analysis, variance reporting, and corporate risk management collecting and presenting

reliable data is built into their professional DNA making them appropriate candidates for this role.

### Skills, capabilities and competencies for CMAs to focus on

Upskilling or cross skilling and continuous learning are essential in the fast paced, volatile business environments we are working in. It is no different for CMAs. While a host of new opportunities present themselves, contenders with the right mindset as well as the best combinations of skills and competencies often stand out. These skills can include technical skills, leadership skills, interpersonal skills as well as mental abilities. A quick look at the ABCDs of skills and competencies is produced below:

- ◉ **Adaptability:** With the ever evolving and changing landscape of ESG governance, adaptability and agility to transition quickly to the current frameworks and latest compliance requirements is essential. This includes resilience even in the face of frequent changes. The ability to identify positive opportunities for betterment and growth with each challenging shift will stand CMAs in good stead as leaders of the future.
- ◉ **Building the growth mindset:** Mental abilities such as developing the right mindset are essential competencies for future proofing. CMAs must be open to moving from traditional costing and accounting roles to strategic, advisory roles that ESG reporting or verification requires. This will involve innovating with insights beyond mere compliance in strategic areas such as risk mitigation and waste reduction to lead the organization in delivering sustainable value.
- ◉ **Continuous learning:** Growing technical knowledge and obtaining deep understanding of new frameworks and regulations are essential for supporting growth and reducing redundancy. Being open to feedback for improvement goes hand in hand with continuous learning.
- ◉ **Driven:** Being proactive and driven, in collaborating with cross functional stakeholders (both internal and external to the organization), to discover and share new information and metrics are essential

qualities for CMAs in the future. Developing interpersonal skills such as managing conflicts, communicating effectively, influencing to bring positive change, and taking initiatives to drive transformations will distinguish successful future CMAs.

### Conclusion

The Asia Pacific region and the world are increasingly setting higher standards for conformance to ESG promises. Sustainability is now a core business essential. In the light of being a trade and financial centre, Singapore is representing inspirational thought leadership in the region, building collaboration, establishing pioneering green agreements as well as cross border mechanisms for building sustainability (MTI, 2025). India and Japan are also mapping their paths to more responsible ESG reporting and assurance. This futuristic outlook on the increasing importance of sustainability of businesses, gives CMAs the chance to shape early pathways for their future in ESG reporting as well as independent assurance, building the skills and capabilities needed to contribute meaningful value to this evolving area of work. **MA**

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# FROM GREEN ENERGY TO GREEN COMPUTING: THE STRATEGIC ROLE OF CMAs IN CARBON-NEUTRAL INFRASTRUCTURE

## Abstract

The transition to eco-computing and carbon-neutral infrastructure is no longer only a technology challenge. It is increasingly a business, cost, risk and governance challenge. Organisations are investing in renewable energy, energy-efficient data centres, advanced cooling, green buildings and low-carbon supply chains. Yet the credibility of these investments ultimately depends on the quality of the data used to measure their environmental impact.

Business Responsibility and Sustainability Reporting (BRSR) has moved sustainability information closer to the discipline traditionally associated with financial reporting. With BRSR Core assurance extending to the top listed entities from FY 2026-27, the reliability, traceability and control of ESG data have become increasingly important.

This article argues that the next generation of ESG risk may not be “greenwashing by intent” but “greenwashing by data” — inaccurate or unsupported environmental information created through fragmented systems, manual interventions and weak validation. CMAs are well positioned to address this risk through cost measurement, reconciliation and internal controls.

“The value of green investment is only as strong as the credibility of the data used to demonstrate its impact — and the CMA can be the professional who ensures that credibility.”



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## From Green Investment to Green Accountability

Companies are increasingly sourcing renewable power through rooftop solar, open-access

arrangements, power purchase agreements and other green electricity instruments. At the same time, investments are being made in energy-efficient computing infrastructure, modern data centres, efficient cooling systems and low-carbon facilities.

The business question, however, is changing. It is no longer sufficient to ask: “How much renewable energy have we purchased?” The more important questions are: Where did it originate? Has it been counted correctly? What is its lifecycle cost? What evidence supports the claim? Does the disclosed number reconcile with operational records?

These questions sit naturally within the CMA’s traditional discipline of measurement and verification.

## Eco-Computing: Where Technology Meets Cost Management

Computing infrastructure consumes energy not

only through servers and storage but also through cooling, power conditioning, backup systems and supporting facilities. Therefore, eco-computing cannot be reduced to buying more energy-efficient hardware.

A mature eco-computing strategy should examine lifecycle cost across energy consumption, cooling efficiency, server utilisation, hardware life, embodied carbon, e-waste, software efficiency and renewable-energy sourcing.

This creates an important role for the CMA. A decision between grid power bidding, rooftop solar, open-access renewable energy or a power purchase arrangement should not be evaluated only on tariff per kWh. Lifecycle cost, capital commitment, reliability, carbon impact and disclosure implications matter. Similarly, an efficient cooling system should be evaluated as a business case: incremental investment versus carbon reduction, energy savings, maintenance, useful life and payback.

This is where eco-computing becomes a management-accounting issue and priority is changing to look at carbon reductions as a primary imperative today.

### The Hidden Risk: Greenwashing by Data

Greenwashing is normally associated with deliberate exaggeration of environmental performance. There is another, less visible risk. Greenwashing can also arise because the underlying data is weak. Consider a large organisation in multiple geography's where ESG information moves through the following chain:

*Plant / Data Centre → Engineering / IT → Finance → Sustainability → Corporate ESG → Annual Report.*

Each hand-shake creates risk and silos makes the challenge more complicated. There is still a tendency in many organisations to treat sustainability and ESG reporting as a relatively casual, part-time activity. This approach is becoming increasingly risky as the volume, complexity and scrutiny of ESG information grow. More importantly, very few organisations are viewing this as an organisational-structure and accountability issue.

In many cases, ESG responsibility is assigned as

one additional responsibility to an individual who already has several other priorities. Sustainability reporting then becomes a “shared” or part-time activity rather than a clearly owned organisational function. This creates a structural vulnerability: when responsibility is shared, accountability can become diffused. The individual may coordinate the information, but may not have the authority, resources, systems or organisational influence required to ensure its completeness, accuracy and timely validation.

The issue, therefore, is not simply whether an organisation has an ESG policy or reporting process. The more fundamental question is whether ESG has a clearly defined place in the organisation structure, with dedicated ownership, defined accountability, appropriate authority and independent challenge. Without this, ESG can remain a reporting exercise rather than becoming an embedded management discipline.

A meter reading may be incomplete. A renewable-energy certificate may be mapped to the wrong facility. A spreadsheet formula may be incorrect. A datapoint maybe not have a proper audit trail. A conversion from kWh to GJ or tCO<sub>2</sub>e may be applied inconsistently across different locations. The same environmental benefit may be counted twice. The black energy maybe reported as green due to incorrect interpretation of the purchase agreement

None of these errors necessarily involves an intention to mislead, on many occasions it is a change management concern. Yet once the resulting number enters an Annual Report, it becomes a corporate representation to investors and other stakeholders.

This is what I would describe as “greenwashing by data”.

The governance response therefore cannot be limited to sustainability teams. It requires finance discipline, control ownership and independent challenge.

### BRSR: Moving ESG Towards Financial-Grade Discipline

SEBI's BRSR framework has progressively brought quantifiable sustainability information into mainstream corporate reporting. BRSR Core

introduced assurance requirements through a glide path that reaches the top listed entities in FY 2026-27. This development has an important implication: ESG information is no longer simply a communication exercise. It is becoming controlled corporate information.

The CMA's traditional questions — Is it complete? Is it accurate? Is it supported? Has it been reconciled? Has the variance been explained? Who reviewed it? — become equally relevant to sustainability information.

The challenge is to build a robust ESG control environment before assurance begins.

### CMA as ESG Controller

CMA can bring a familiar financial-control mindset to sustainability information. A practical ESG control framework can be built around six questions:

- ⊙ Source — Where did the number originate?
- ⊙ Evidence — What document, meter, contract or system record supports it?
- ⊙ Calculation — What methodology and conversion factors were used?
- ⊙ Validation — Has the data been independently checked or reconciled?
- ⊙ Ownership — Who is accountable for the number?
- ⊙ Disclosure — Does the final reported number reconcile with the underlying records?

This approach converts ESG reporting from a periodic data-collection exercise into a controlled management process. CMA's can also apply variance analysis to sustainability metrics. A sudden improvement in energy intensity or emissions may deserve the same analytical attention that Finance gives to an unusual cost movement.

### Learning from Manufacturing: The Value of Reconciliation

The manufacturing environment provides a useful illustration.

A multi-plant organisation may consume grid electricity, generate renewable power, use backup diesel generation and procure renewable energy through contractual instruments. For sustainability

reporting, these sources must be correctly classified, measured and reconciled.

The CMA can ask:

- ⊙ Do meter readings reconcile with energy invoices?
- ⊙ Does renewable generation reconcile with the plant's operating records?
- ⊙ Are certificates correctly mapped and not duplicated?
- ⊙ Are reporting-period cut-offs consistent?
- ⊙ Are conversion factors applied consistently?
- ⊙ Can every material number be traced back to source evidence?

The same discipline applies to carbon data across the supply chain. For an automobile manufacturer, the environmental footprint does not end at the factory gate. Steel, aluminium, rubber, plastics, logistics and purchased components can materially influence the value-chain footprint. The CMA can link operational quantities, procurement data, cost information and sustainability metrics.

Spending few decades in the Automobile Industry, let me explain with a multi-plant automobile manufacturer potential risks & complexity, where each plant independently procures renewable energy through different solar power agreements. While all plants report renewable-energy consumption for ESG disclosures, contract terms, energy shortfalls, evidence requirements and settlement mechanisms differ significantly (lack of standardization).

During review, CMA identify that one plant reports the entire contracted quantity as renewable energy despite incomplete supporting evidence, while another plant faces recurring supplier shortfalls resulting in financial penalties. A third plant may classify similar energy differently because of varying interpretations of contractual terms.

Rather than merely checking the final ESG disclosure, the CMA needs to establish an end-to-end reconciliation:

*Contracted Renewable Energy → Actual Supply → Plant Consumption → Supporting Evidence → Financial Settlement → ESG Disclosure*

This enables identification of three key risks:

- ⊙ **Data Risk:** renewable-energy claims not fully

supported by evidence.

- ⊙ **Contractual Risk:** contracted renewable-energy benefits not actually received.
- ⊙ **Commercial Risk:** inconsistent treatment of supplier shortfalls across plants.

The CMA can create value by:

- ⊙ Reconciling meter data, invoices, contractual commitments and reported ESG figures;
- ⊙ Investigating unexplained variances and recurring shortfalls;
- ⊙ Establishing common definitions;
- ⊙ Analyse penalties and contract performance across plants; and
- ⊙ Recommend standardised contract clauses during renewal cycles.

The same approach can be applied to other ESG metrics. Examples include reconciling energy consumption with invoices and production volumes, verifying emission-conversion factors used across plants, validating supplier-provided ESG data, identifying duplicate environmental benefits, investigating abnormal improvements in energy intensity, and verifying e-waste disposal through recycler certificates and asset records.

By joining the dots ESG data, contracts, operations, cost and risk, the CMA moves beyond compliance and reporting. The role evolves from validating sustainability data to improving business decisions, strengthening disclosure credibility and identifying commercial opportunities. This is where the CMA becomes a true Value Architect rather than merely a reporter.

### Embodied Carbon: From Environmental Metric to Cost Decision

One of the important developments in carbon-neutral infrastructure is the move from operational emissions towards lifecycle thinking.

A piece of IT equipment may consume less electricity during operation but have significant embodied carbon associated with manufacturing, transportation and disposal. The CMA therefore needs to look beyond purchase price. A lifecycle evaluation can consider:

Purchase cost + energy cost + maintenance cost + utilisation + expected life + disposal/recovery value + environmental impact.

The lowest purchase price is not necessarily the lowest lifecycle cost, and the newest technology is not automatically the most sustainable option. The CMA's role is to make this trade-off visible.

### Circular Computing and E-Waste

Eco-computing also creates an important circular-economy question: What happens when technology reaches the end of its useful life? Servers, storage devices, networking equipment, batteries and other electronic assets contain materials that have economic as well as environmental value.

A robust control framework should track asset ownership, physical movement and disposal, data sanitisation, authorised recyclers, recovery certificates, sale/scrap proceeds, environmental compliance and reconciliation between asset records and disposed equipment. This is a natural extension of asset accounting and internal-control disciplines.

The CMA can help ensure that the organisation does not recognise the environmental benefit of “recycling” without adequate evidence of what actually happened to the asset.

### Technology: From Annual Reporting to Continuous ESG Monitoring

The future of ESG control should not depend on spreadsheets assembled at year-end.

Organisations should progressively move towards:

- ⊙ Automated meter feeds
- ⊙ ERP and sustainability-platform integration
- ⊙ Digital evidence repositories
- ⊙ Automated reconciliations
- ⊙ Exception-based dashboards
- ⊙ Controlled master data
- ⊙ AI-assisted anomaly detection

Technology should not eliminate human judgement; it should direct professional attention towards exceptions. If energy consumption falls sharply while production remains unchanged, the system should trigger an investigation rather than

simply celebrate the improvement. Process mining tools can identify exceptions, but the CMA's role is to analyse, coursecorrect, and challenge unusual numbers.

### The Strategic CMA: From Cost Accountant to Sustainability Value Architect

The CMA of the future will need to connect four dimensions:

- ⊙ Cost — What does the sustainability initiative cost?
- ⊙ Carbon — What impact does it create or avoid?
- ⊙ Control — Can the organisation prove the outcome?
- ⊙ Commercial value — Does the investment improve resilience, efficiency or competitiveness?

For automakers, decisions involve renewable electricity, lowcarbon materials, EVs & supplychain decarbonisation. For technology firms, they involve

cooling, server utilisation, renewable power & software efficiency

In either case, the CMA can become the bridge between Finance, Operations, Technology, Sustainability and Audit.

### A Five-Level Maturity Model for ESG Data may be deployed

Organisations can assess their ESG data maturity through five levels:

Level 1 — Manual: Data collected through spreadsheets and emails.

Level 2 — Controlled: Defined data owners, documentation and review.

Level 3 — Reconciled: ESG information reconciled with operational and financial records.

Level 4 — Integrated: ERP, meters, sustainability systems and evidence repositories are connected.

Level 5 — Predictive: Analytics and AI identify anomalies and support management decisions before reporting deadlines.

| Level         | Observable Criteria                                                                                                  | Evidence                                                                                    | Typical Conclusion                                                            |
|---------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1. Manual     | Spreadsheet-based collection, no clear ownership, inconsistent definitions, manual consolidation, year-end reporting | Multiple spreadsheet versions, emails, missing documentation, limited audit trail           | ESG data exists but the process is largely uncontrolled and person-dependent. |
| 2. Controlled | Defined owners, standard templates, documented methodology, maker-checker reviews, evidence retention                | Ownership matrix, SOPs, approvals, review logs, supporting documents                        | Basic governance and controls exist, but reporting remains highly manual.     |
| 3. Reconciled | ESG metrics reconciled with operational and financial records; variance analysis performed                           | Meter readings, invoices, production records, asset registers, reconciliation files         | ESG information is traceable, reconciled and subject to management review.    |
| 4. Integrated | ERP integration, automated feeds, common master data, automated validations and dashboards                           | System interfaces, automated reconciliations, exception reports, data lineage documentation | ESG controls are increasingly automated and managed through exceptions.       |
| 5. Predictive | AI/analytics identify anomalies, risks and future reporting issues before period-end                                 | Predictive dashboards, anomaly alerts, management action logs, trend analytics              | ESG data supports proactive decision-making and risk management.              |

Evaluate each plant against ownership, traceability, controls, reconciliation, automation, and analytics. Consolidate plant scores (weighted by ESG impact/revenue) to determine enterprise maturity.

| Average Score | Enterprise Rating |
|---------------|-------------------|
| 1.0 - 1.9     | Manual            |
| 2.0 - 2.9     | Controlled        |
| 3.0 - 3.9     | Reconciled        |
| 4.0 - 4.4     | Integrated        |
| 4.5 - 5.0     | Predictive        |

The strategic objective should be to move from Level 1 to Level 5 progressively. The CMA can play a central role in defining the controls and metrics required at each stage.

### Conclusion

Carbon neutrality will not be achieved merely by purchasing renewable energy or installing efficient technology. It requires organisations to understand the full economic and environmental lifecycle of their decisions — and to demonstrate that the

resulting claims are credible.

The greatest ESG risk of the future may not always be deliberate greenwashing. It may be uncontrolled green data: fragmented, manually assembled, poorly reconciled and difficult to defend.

This creates a significant opportunity for CMAs.

The CMA can extend traditional expertise in costing, budgeting, variance analysis, reconciliation and internal controls into the sustainability domain. The role can evolve from measuring the cost of sustainability to measuring its economic value, controlling its information quality and challenging the credibility of its outcomes.

The CMA of tomorrow will not merely measure the cost of sustainability. The CMA will help measure the credibility of sustainability itself.

The umami of sustainability lies in the numbers: discover how CMAs can connect carbon, cost, controls and contracts to create smarter business decisions

In a world where every unit of energy, every tonne of carbon and every ESG metric increasingly carries financial, regulatory and reputational consequences, that credibility may become one of the organisation's most valuable assets. **MA**

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# CARBON ACCOUNTING - ACCOUNTING OF FUTURE

## Abstract

Embodied carbon accounting measures the total greenhouse gas emissions generated during the entire life cycle of a material or product or organisation — from raw material extraction and manufacturing to transport, construction, maintenance, and eventual disposal or recycling. Unlike operational carbon, which changes over time based on energy use, embodied carbon is locked in before a project or product is even used. It reveals hidden supply chain hotspots, drives immediate upfront emission cuts before a project begins, ensures regulatory compliance, and prevents greenwashing. It also helps organisation to face ESG issues effectively.

Nowadays a lot of international activities have also taken place in this field. This article talks about accounting process of embodied carbon as well as international practices to give a fair idea about the nitty-gritty of embodied carbon accounting.



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## Introduction

Accounting world is changing very fast and accounting for embodied carbon is an emerging accounting modality. It measures the greenhouse gas emissions arising from the entire life cycle of a product or building or organisation, like emissions from raw material extraction, processing, manufacturing, transportation, construction, maintenance, utilisation and lastly demolition. It involves collecting relevant data and converting that information into an estimate of greenhouse gas emissions.

So far estimating greenhouse gas emissions is concerned, it involves multiplying activity data (such as fuel or electricity used) by an emission

factor (such as CO<sub>2</sub> released per kilowatt-hour). Total emissions are measured in carbon dioxide equivalents (CO<sub>2</sub>e) across three scopes: (i) direct operational emissions, (ii) indirect energy purchases, and (iii) supply chain impacts for taking further important decisions.

The accounting process may be summarised in following steps –

- i. Identification of relevant activities.
- ii. Collection of quantitative data.
- iii. Application of appropriate emission factors.
- iv. Calculation of emissions.
- v. Classification and documentation.
- vi. Reporting and interpretation.
- vii. Use of information for decision-making.

However, instead of measuring only monetary values, carbon accounting measures environmental impact in terms of CO<sub>2</sub>e. A simple calculation can be represented as:

Embodied Carbon = Quantity of Material × Embodied Carbon Emission Factor

For example, if a project uses 100 tonnes of a material with an emission factor of 1.8 tonnes CO<sub>2</sub>e per tonne of material, then Embodied Carbon = 100 × 1.8 = 180 tonnes CO<sub>2</sub>e

Let us see the process of Accounting in detail -

#### Step 1: Defining the Scope:

The first step is to determine what is being measured - a product, a building, a process, a project or the whole organisation. The boundaries should specify which stages of the life cycle are included. ISO 14040 may be helpful here in identifying goal and scope definition as a fundamental part of life-cycle assessment.

#### Step 2: Identifying Materials and Activities:

The organisation should identify all significant materials and activities & operations which are contributing to embodied carbon. These may include raw material, other important materials like cement / concrete / steel / aluminium / glass / bricks / timber/ paint / mineral etc, transportation, machinery, repairs and replacements, processing, demolition, waste disposal etc.

#### Step 3: Collecting Activity Data:

The next step is to collect information such as quantities purchased, distances transported, energy used and expected replacement cycles. Bills of quantities, purchase records, invoices, material specifications and supplier information can provide useful data in this regard.

#### Step 4: Applying Emission Factors:

Emission factors convert physical quantities into estimated greenhouse gas emissions. For example, the quantity of material or mineral like coal used can be multiplied by an appropriate emission factor to estimate its associated CO<sub>2</sub>e.

#### Step 5: Calculating Total Embodied Carbon:

The emissions associated with different materials and activities are then calculated and added together as follows -

Total Embodied Carbon =  $\Sigma$  (Activity Data  $\times$  Relevant Emission Factor)

The result can be expressed as total tonnes or tonne per unit of production of CO<sub>2</sub>e.

#### Step 6: Analysing the Results:

The final step is to present the results clearly.

Organisations can identify which materials or activities contribute the largest share of embodied carbon which can allow management to compare alternatives and identify opportunities for carbon reduction.

### GRI and Embodied Carbon

The Global Reporting Initiative (GRI) does not have a standalone topic standard explicitly named “Embodied Carbon”. Instead, embodied carbon is accounted for and disclosed as part of Value Chain (Scope 3) greenhouse gas (GHG) emissions under the overarching GRI Climate Change standards. Historically reported under GRI 305: Emissions 2016, these disclosures transition to the newly released GRI 102: Climate Change 2025 standard, which officially becomes effective on January 1, 2027. Within the GRI framework, these “cradle-to-gate” or lifecycle impacts are integrated through specific disclosures:

- A. Disclosure 102-7 recommends that organizations must report gross upstream and downstream Scope 3 emissions across 15 distinct categories. Embodied carbon typically sits in Category 1 (Purchased Goods and Services) and Category 2 (Capital Goods).
- B. Disclosure 102-8 allows companies to normalize embodied carbon data (e.g., kg-CO<sub>2</sub>e per square meter of building area or per metric ton of product produced).
- C. Disclosure 102- 1 and 4 demand disclosure of organization-wide or project-level emissions reduction targets and transition plans, specifying how the entity intends to lower value chain carbon to align with a 1.5°C pathway.

Basically, GRI serves as a disclosure framework rather than a structural accounting methodology. To quantify embodied carbon for a GRI Standards disclosure, reporting organizations must use recognized external carbon accounting standards:

- ▲ The GHG Protocol: Specifically, the GHG Protocol Corporate Value Chain (Scope 3) Standard.
- ▲ Lifecycle Assessments (LCAs): Project

or product-level footprints evaluated via Environmental Product Declarations (EPDs) or Whole Building LCAs (WBLCA) to supply the raw data required for the Scope 3 filings.

It may also be mentioned here that the updated GRI 102 Climate Change standard has been explicitly aligned with global financial and regulatory mandates to prevent duplicate reporting. Meeting the GHG emissions disclosures under IFRS S2 (International Sustainability Standards Board) or the EU's ESRS / CSRD requirements automatically satisfies the parallel emission components within GRI. This is highly relevant as jurisdictions like the EU and select US states move toward mandating embodied carbon reporting for construction materials.

### Role of Life Cycle Assessment in Carbon Accounting

Life Cycle Assessment (LCA) is one of the most important approaches used to measure environmental impacts associated with products and processes. It considers the life cycle of a product or organisation rather than focusing on a single stage. ISO 14040 provides a framework covering goal and scope definition, life-cycle inventory analysis, life-cycle impact assessment and interpretation.

Generally LCA has four major stages:

- A. Scope Definition – In this stage the purpose of the assessment and its boundaries are established.
- B. Life-Cycle inputs – Then actual data relating to materials, energy, transportation and other inputs and outputs are collected.
- C. Life-Cycle Impact Assessment – In the third stage the environmental impacts associated with the collected data are evaluated.
- D. Interpretation – Lastly the results are analysed to identify significant environmental impacts and opportunities for improvement.

### Importance of Accounting for Embodied Carbon

1. Supports Climate Change Mitigation – Whole world is now a days talking about reducing

emissions and measuring emissions is the first step towards it. As CMAs we all know that the any cost cannot be effectively managed if it cannot be correctly measured.

2. Improves Decision-Making - Carbon information empowers decision-makers to compare alternative materials and processes. For example, two materials may have similar financial costs but significantly different carbon footprints. Carbon accounting makes this difference visible to enable the management in taking right and just decision.
3. Encourages Sustainable Construction - In construction industry, embodied carbon accounting can encourage the use of recycled materials, low-carbon concrete, responsibly sourced timber, efficient transportation and material reuse.
4. Helps Investors – Modern and aware investors increasingly consider environmental, social and governance (ESG ) factors when evaluating organisations for investment.
5. Assist Stakeholders- Reliable carbon information can help stakeholders understand environmental risks and sustainability performance.
6. Supports Net-Zero Objectives – Government of India is emphasising on Net-Zero and this accounting can help in this direction.

### Bottlenecks in accounting for embodied carbon

- a. Lack of Reliable Data - Accurate calculation requires detailed and correct data about input materials and production processes which is the basic bottleneck.
- b. Different Calculation Methods - Different standards, databases and assessment methodologies may produce different results. Consistency is therefore important for meaningful comparison. I expect an account standard (CAS) from our ICAI on this topic soon.
- c. Complex processes - Modern products often involve raw materials and complex manufacturing processes and therefore tracking emissions throughout the supply

chain can be difficult.

- d. Cost involved - Detailed carbon assessments require specialised knowledge, software and data, which may result in increase in cost. Many organisations may find it difficult to allocate sufficient resources.

### Future of Embodied Carbon Accounting

The importance of embodied carbon accounting is expected to increase as governments, businesses, investors and consumers demand greater environmental transparency. ESG reporting has become an important part of integrated reporting. In the future, organisations may increasingly integrate carbon information into budgeting, procurement, project appraisal, risk management and sustainability reporting. The Institute of Cost Accountants of India may issue accounting standard (CAS) to help industries in the accounting.

The process of embodied carbon accounting can help organisations identify high-emission materials and activities, compare alternatives, improve procurement decisions and develop strategies for reducing emissions.

### International Practice

- EU European Performance of Buildings Directive (EPBD) mandates reporting of whole-life carbon (WLC) for large buildings from 2028 and eventually expanding to all buildings from 2030.
- EU Carbon Border Adjustment Mechanism (CBAM) charges tariffs on embedded emissions of imported carbon-intensive goods (steel, cement, aluminum, etc.) to prevent carbon leakage. Reporting of same started from 2023.
- The UNFCCC tracked emissions on a production basis (emissions released within physical national borders). However, because international trade accounts for roughly 22% to 25% of global CO<sub>2</sub> emissions via embodied carbon in traded goods, modern practice is steering towards consumption-based accounting. This shift holds importing nations accountable for their “carbon loophole” and encourages greener global procurement strategies. **MA**

## NOTES FOR AUTHORS

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# Interview



## CMA R V N Vishweshwar

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*CMA R V N Vishweshwar is holding the position of Director (Finance), Hindustan Copper Limited, Schedule 'A' PSU and a Category 1 Mini Ratna, since July'25. Previously, he was with IndianOil and holding the post of Executive Director (Corporate Finance & Treasury).*

*During the career span exceeding 32 years of service with IndianOil he has handled various key positions at different levels. His service tenure covered various locations and offices. His career with Indian Oil started in Digboi Refinery, Assam and*

*thereafter he was at Corporate Office, Refinery Headquarters, Marketing Division and handled the Team lead role for SAP FICO/MM/HR.*

*During his tenure with IndianOil he was also the nominee Director on the Board of 5 diverse JV/Subsidiary companies.*

*Apart from the above, he was also the member of the IFSCA-constituted Expert Committee on positioning GIFT IFSC as Global Commodity Trading Hub.*

*In addition, he was the convenor of the Asset Monetization Industry Group (AMIG) constituted under MoPNG.*

*In his present capacity as Director (Finance) he is associated in the growth trajectory of the company which aims to achieve its targeted goal of production of 12.2 million tonnes of copper ore by 2030-31.*

***Q1. Transitioning from IOCL to HCL, how are you adapting your financial playbook to the capital-intensive and cyclical mining sector?***

**Ans:** To rephrase, I would not say adapting but broadening the horizon and exploring new pastures may be a better contextual reference. At the outset I must admit that moving from a Maha-Ratna to a Mini-Ratna was itself a major transition and that too from Indian Oil's downstream oil and gas sector to Hindustan Copper's non-ferrous metal mining operations. While sector-specific dynamics do differ but the core tenets of capital allocation, liquidity management and risk mitigation remain universal. It is not easy to switch seamlessly from SAP environment to Oracle Business Suite.

At IOCL financial management primarily focussed on processing high-volume turnover, upholding downstream margin stability, managing cash flows, monitoring customer receivables, mitigating multi-billion-dollar treasury risks and also guiding the JV's/subsidiaries. In contrast, at Hindustan Copper Limited, our strategy revolves around navigating LME price volatility, managing heavy fixed-cost structures and monitoring project timelines for the ongoing expansion plans. Because primary copper producers operate as price takers in a globally linked market, our financials revolve around strict unit cost leadership across our mining and beneficiation operations to defend operational margins even during LME market troughs.

The key is to bring finance closer to operations. Cost leadership in mining depends on understanding ore grade, recovery, energy consumption, productivity and equipment utilisation. We therefore combine scenario-based project evaluation with disciplined working-capital and capital management to ensure that HCL remains financially resilient across commodity cycles.

***Q2. How does the ICAI curriculum distinctively prepare professionals for Board-level leadership like Director (Finance)?***

**Ans:** The ICAI curriculum provides a strategic advantage by equipping finance professionals with a dual capability that directly links shop-floor operational realities with top-line corporate

strategy. As against traditional financial accounting where primarily historical performance and statutory compliance assumed significance, the Cost and Management Accounting discipline delivers a forward-looking operational control framework. Deep grounding in marginal costing, activity-based costing, process costing, and variance analysis enables CMAs to look beyond traditional profit and loss statements and examine physical operational drivers, such as specific energy consumption, Copper ore grade recovery rates, and equipment utilization. This analytical orientation is extremely valuable at the Board level, where decisions involve competing priorities, capital allocation and long-term value creation.

***Q3. How can CMAs in public sector leadership elevate their role from cost accounting to strategic cost optimization and national value creation?***

**Ans:** The CMA's role in a PSU should move from simply reporting costs to creating cost intelligence for strategic decision-making. Public Sector Enterprises serves as key engines of National Economic Development, infrastructure expansion, and resource security. For CMAs holding strategic leadership positions, elevating the finance function requires moving beyond post-facto cost allocation into designing proactive, structural cost optimization frameworks. Given the stringent public procurement environments under which CPSEs operate, CMAs drive value engineering by structuring robust Total Cost of Ownership models that optimize pricing without compromising quality or compliance. In strategic industries like critical minerals, national self-reliance hinges on optimal asset utilization, disciplined working capital management, and timely capital deployment into capacity expansion, allowing finance leaders to directly contribute to building a resilient domestic manufacturing base.

***Q4. What was the toughest professional hurdle in your career (e.g., SAP-FICO implementation at IOCL), and what is the key lesson for young CMAs?***

**Ans:** There have been numerous challenges which have been encountered during my professional

career. Whether it was migration to FMS in INGRES RDBMS or from FMS to Oracle 5i or finally integrating to SAP environment, managing cash flows during Sub-prime crisis, GST implementation and many others. Challenges are not hurdles but opportunities meant to be grabbed. There is no problem which does not have a solution. It may be delayed but not denied.

The most important lesson for young CMAs is simple to understand the business before you analyse the numbers. A finance professional must know how materials move, how production takes place, how maintenance works and how transactions ultimately flow into the financial system. Technology can automate processes, but sound judgement comes from understanding the business behind the data. The future CMA must therefore combine finance expertise with operational knowledge, digital capability and strong data discipline.

***Q5. What curriculum enhancements should ICAI consider to keep CMA students ahead of digital and ESG trends?***

**Ans:** The Institute has consistently updated its curriculum to reflect evolving industry requirements, but the rapid acceleration of corporate digitalization and sustainability mandates calls for further targeted enhancements. ICAI should deeply integrate advanced business intelligence and data analytics tools such as SQL, Python, Power-BI directly into core management accounting modules, enabling future CMAs to perform predictive cost modelling and automated variance analysis within large dataset environments.

Additionally, with non-financial metrics increasingly driving enterprise valuations and access to capital, the syllabus should incorporate hands-on training in ESG accounting, carbon credit tracking, life-cycle emissions mapping, and assurance frameworks under GRI, BRSR, and ISSB standards. There should be special focus on application of AI in analytics. Finally, providing practical exposure to modern cloud ERP workflows and automated audit analytics will ensure that young management accountants remain ready to lead modern finance organizations. The CMA of tomorrow should therefore be comfortable with

both the balance sheet and the data dashboard, while understanding how sustainability influences long-term enterprise value.

***Q6. How is HCL integrating ESG into its operational and financial frameworks, and what is the role of CMAs here?***

**Ans:** At Hindustan Copper Limited, sustainability is deeply integrated into our long-term business strategy, as responsible mining requires ongoing stewardship of land, water, and energy resources. We evaluate environmental impacts, tailings management practices, underground mine safety and energy efficiency alongside traditional financial metrics in every capital investment proposal. Furthermore, HCL maintains transparent disclosures aligned with SEBI's Business Responsibility and Sustainability Reporting guidelines, tracking specific energy consumption, water recycling, and community development investments. Management Accountants play a crucial role in this framework by serving as the bridge between physical operational metrics and financial disclosures. CMAs establish internal control mechanisms to measure and validate key performance indicators, evaluate the financial feasibility and lifecycle returns of clean technology investments, and ensure that sustainability reporting remains accurate, verifiable, and fully compliant with statutory standards.

***Q7. What core competencies, ethics, and habits should young finance professionals cultivate to reach apex executive roles?***

**Ans:** Reaching apex executive leadership in corporate and Public Sector Undertakings (PSUs) demands a combination of operational exposure, regulatory mastery, positive outlook and unyielding professional integrity. Young finance professionals should actively seek field exposure early in their careers by working at operating units, processing plants, and project sites, as ground-level operational context builds sound financial judgment. In addition, mastering statutory frameworks, corporate governance norms, public procurement guidelines, Ind AS, and tax laws enables finance leaders to drive business efficiency while maintaining total regulatory compliance. Continuous learning

across digital tools, global commodity trends, and emerging ESG norms is equally essential to adapt to shifting business landscapes. Above all, absolute professional integrity and objectivity remain the non-negotiable foundations of effective finance leadership, ensuring that financial decisions always protect the long-term health and reputation of the enterprise.

**Q8. With India's focus on clean energy and infrastructure, what is your financial vision for HCL and the CMA fraternity's role in this mission?**

**Ans:** Copper is a vital strategic mineral and indispensable to India's infrastructure and energy transition, with applications across power transmission, renewable energy, electric mobility and electrical equipment. HCL's long-term financial vision is therefore centred on responsibly expanding domestic copper production, supporting

underground mine development, improving productivity and ensuring disciplined capital deployment while maintaining financial resilience. To be specific, my focus is on creating a base for the next growth trajectory by way of expansion, infrastructure development, diversification, process re-engineering and aligning with technology so as to be stay resilient for the next 30-40 years.

The CMA fraternity can make a significant contribution to this national mission by driving cost competitiveness, project-cost discipline, capital-allocation efficiency and data-driven decision-making. As India builds its clean-energy and critical-mineral ecosystem, CMAs can help ensure that growth is not only faster, but economically sustainable. The opportunity before the profession is to move from measuring value to helping create and protect value. **MA**

# Congratulations!!!

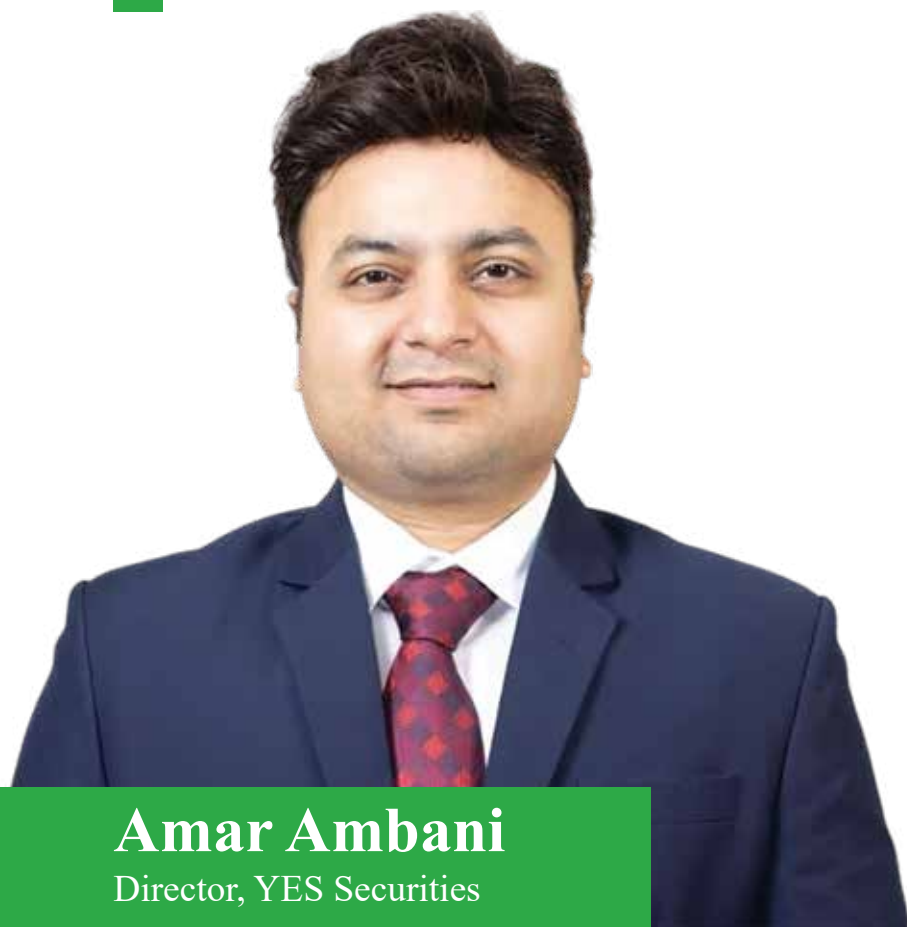


**H**earliest congratulations to CMA Proteek K. Chakraborty, Director (Finance), Electronics Corporation of India Limited (ECIL), on being conferred the prestigious “Most Influential CFO” Award at the Asia Leadership Summit & Awards 2026, organised by Times Aspire in Bengaluru on 9 September 2026.

With over 32 years of diverse experience in corporate finance, accounting and power sector regulations, CMA Chakraborty is an accomplished senior finance executive and a member of the Institute. The recognition honours his contribution to financial leadership, corporate governance, strategic growth and long-term value creation at ECIL.

We extend our best wishes to CMA Chakraborty for continued success and excellence in his future endeavours.

# MONEY, MARKETS, MINDSET and METHOD



**Amar Ambani**  
Director, YES Securities

**A**mar Ambani is Executive Director at YES Securities, the broking and institutional equities arm of YES Bank, a position to which he was elevated in November 2023. He joined the firm in November 2018 as President and Head of Research, after fifteen years at IIFL, where as Partner and Head of Research he helped shape the research strategy and the investment products built on it. An MBA in Finance by qualification, he is revered for his actionable insights on market investments, which put a premium on patience and prudence and leave no room whatsoever for hype rooted in noise.

His public commentary covers the whole range of an investor's concerns. His recent media columns have examined the debt-funded AI capex cycle among the largest technology companies, the launch of Electronic Gold Receipts on the NSE, the RBI's FCNR(B) swap window, and the cultural roots of India's low retail credit penetration. His guide to decoding financial statements, built on the maxim that profit is an opinion while cash is a fact, hands retail investors a ready to deploy checklist.

Two towering convictions are evident in his market approach and action. The first is that structural trends and cyclical risks must be weighed together. The second is that asset allocation and discipline matter more than timing. He calls the AI megatrend a multi-decade super-cycle, yet urges investors to prepare for the inherent volatility.

In this conversation with CMA Sudhir Raikar, he touches upon key issues pertaining to the economy, markets, listed companies, and the management of personal wealth.

### **Investors love a strong structural story. Does that protect them from a bad year in the market?**

No. Markets do not move in straight lines; they move in cycles within broader trends. The bigger and more legitimate the structural uptrend, the sharper and more painful the cyclical drawdowns within it. The internet transformed civilisation, yet the Nasdaq fell 80 percent from peak to trough between 2000 and 2002. Renewable energy is humanity's energy future, yet clean energy stocks have suffered multiple brutal corrections during the transition. The structural story can be authentic but the price action can still prove devastating for those positioned without adequate risk management. The long term almost always proves rewarding provided your conviction in the future value proposition is unflinching.

### **Every year, retail investors watch a dream stock collapse. Satyam, DHFL, IL&FS, Zee...the list goes on. Could they have seen it coming?**

The warning signs sat inside the financial statements long before the price cracked. Satyam looked like a blue-chip IT bellwether until its chairman admitted to inflating cash balances by over ₹7,000 crore. DHFL and IL&FS carried investment-grade ratings almost until the day they defaulted. The Zee debacle is a caution on promoter leverage. Selling shares or leaving the board doesn't cancel a personal guarantee. So promoters shouldn't mortgage future ownership to fund present ambition, and investors should check the publicly disclosed share pledges before buying a company's growth story.

First and foremost, one should study the cash flow. Compare operating cash flow with net income over three to five years. A ratio comfortably above 1.0 suggests earnings are backed by real cash; one that repeatedly falls below 0.8 while profit rises deserves a hard look at how revenue is being recognised. Then check receivables and inventory against sales growth, read the auditor's report before the price chart, and



**CMA Sudhir Y Raikar**

Writer, Management Consultant &  
Thought Leadership Content Architect

watch promoter pledges in the shareholding pattern. A company that dismisses its auditor is far less alarming than one whose auditor walks away first.

### **Is there one red flag that settles it?**

No, and that is the trap. Not even the Beneish M-Score that forensic accountants use is meant to work alone. These ratios are built as a system of cross-checks. When three or more turn unfavourable in the same reporting period, treat it as a cluster of risk, not a coincidence. Do not skip the notes to accounts; contingent

liabilities, related party dealings and the breakup of exceptional items live there. Do not let a credit rating replace your own homework. And never dismiss late filings or postponed board meetings as technicalities. They are usually the visible tip of a larger problem.

### **Should a falling share price be the cue to check fundamentals?**

The habit that protects capital is reading the quarterly results and the annual report as they are published, not reacting after the price has already told you something is wrong. But if stock price is falling and isn't a result of overall market fall or sector sentiment, then it does warrant a deeper probe.

### **A company reports rising profits, and yet the business can be far from healthy. That's possible, right?**

Absolutely. A rising profit number printed in isolation tells you very little. Ask what is driving it: operating performance, or a one-off gain from selling an asset, a tax credit or a change in an accounting estimate? Recurring "other income" that climbs as a share of revenue is a common way to dress up a weak core business. Be wary of a company that changes its depreciation, revenue recognition or inventory valuation method more than once every few years without a clear reason. Each change looks minor, but the cumulative effect flatters the numbers. In banks and NBFCs, look past headline profit to the trend in

gross and net NPAs, provision coverage and capital adequacy, because asset quality problems surface in the books only after they have built up.

### **You are bullish on equities, but you caution retail investors against going all in...**

Some savvy experts leverage and even put 110 percent into equities, but asset allocation is the best approach for most investors. Historically, about 90 percent of the money made in stock markets has been a function of asset allocation. The other 10 percent is timing, entry and exit, and the odd multibagger. So assess your goal, your risk appetite and your financial capacity, and decide whether you are conservative, balanced or aggressive. A balanced investor at 50 percent equity may tactically go to 55 or 60 when the outlook is strong. An aggressive one at 70 may go to 85. Never 100.

### **How long should the money stay put?**

Think in years and decades, not months. I am always in favour of investing rather than trading, on a horizon of at least 4 years and never less than six months. If a correction hits, or the market consolidates, a short horizon leaves you with no gains. And if you need the money next year, you are forced to sell prematurely. Also work out what you can hold within equity. Do you lose sleep over your smallcaps, or relish the ride? If it is the former, a diversified fund, an MF scheme or a PMS is a better route than putting all eggs in one basket.

### **Why do you find NSE's Electronic Gold Receipts a prudent move?**

Consider the pile: Indian households sit on 34,600 tonnes of gold, which is 88.8 percent of GDP and 3.1 times the value of all the equities we own. Think of an EGR as a share representing real gold in a SEBI-accredited vault. You buy it in your demat account, sell it like a stock, and can take physical delivery

if you wish. It fills real gaps. Physical gold came with locker dues, making charges and purity doubts. ETFs never convert into actual gold. Sovereign Gold Bonds have quietly stopped. EGRs bring exchange-grade pricing, transparent settlement, no GST until physical delivery and one nation, one price. It could bring roughly \$3.8 trillion of household gold closer to the formal financial system, and it rhymes with the PM's recent appeal to defer gold purchases for a year. Liquidity will not appear overnight and vaulting charges deserve a close check, but the direction is spot on.

### **India's retail credit-to-GDP ratio is 18 percent. Germany is at 49, China 58, Japan 61, the UK 74. Is that not a giant runway for lenders?**

On paper, yes. In practice, credit is as much a cultural variable as an economic one. For generations we have saved first and spent later. "Don't borrow unless you have to" is a cardinal family principle. Our parents taught us to buy a house with savings and steer clear of EMIs, and that mindset will not vanish overnight. Indians are certainly getting more comfortable with responsible borrowing, as home loans, vehicle loans, education loans and credit cards show. But DNA-wise we are a less leveraged society,

so the catch-up will take decades, not years. And that is not a bad thing, is it?

### **The RBI's special swap window pulled in enormous NRI money this year. What does that tell you?**

That trust is India's trump card. In 2013, amid taper

tantrums and a weak rupee, the RBI opened a special FCNR(B) swap window and around \$26 billion came in. This June it introduced another special USD-INR swap facility, and the response was extraordinary. By August 31, total foreign-currency mobilisation had reached \$136.4 billion, of which \$127.2 billion came through FCNR(B) deposits. The last 10 days alone



brought in more than \$63 billion, and the RBI closed the window a month ahead of schedule. The diaspora is a global reservoir of capital, wealth and confidence in India, not merely a source of remittance. NRIs got reduced currency risk, banks got foreign-currency funding, and the RBI strengthened external liquidity. At times the world may lose confidence in emerging market currencies. Indians around the world back India across seasons, for the right reasons.

### **Every investor gets tips on social media and SMS. What should a retail investor do with them?**

Never let a tip substitute for reading the company's own quarterly results and annual report. A significant share of retail losses comes not from company fraud but from tips circulated through social media, SMS or unregistered advisors promising guaranteed returns. Verify SEBI registration. And diversify even when a company looks clean. No checklist catches every fraud, and concentrating a large share of your portfolio in one stock, however well it screens, magnifies the damage if something was missed. Spreading exposure across sectors and market caps is the most reliable insurance against the red flag you did not see.

### **Alphabet raised \$20 billion in its largest-ever dollar bond sale and is eyeing century bonds. Why should an AI believer care?**

Simply because Big Tech has changed its habits. After decades as cash-rich net savers, these companies are now leveraging their balance sheets. The four largest US tech companies are projected to spend about \$650 billion on capex in 2026 alone, and more of it is being financed through credit markets than through operating cash flow. That looks more like an arms race than a measured build-out. Sample the late 1990s internet boom and the mid-2000s housing boom: credit markets reflected the stress long before equity markets acknowledged the risks. Excitement creates compelling narratives. Credit creates cycles that amplify both the upside and the downside.

### **But surely, investors should not steer clear of AI. Should they?**

Not at all. Being watchful is not being bearish on AI. This radical tech will reshape productivity, profit

margins and business models for decades, and its fundamental promise is intact and compelling. But innovation and speculation often travel together and do not always arrive at the same destination at the same time. This does not feel like a late-cycle blow-off top where everyone is all in. It feels early, which is precisely why it deserves scrutiny. Prepare mentally and strategically for volatility inside what is likely a multi-decade AI super-cycle, resist extrapolating recent price action, and ask whether valuations reflect the execution risks, capital intensity and time horizons of monetising AI infrastructure. The seemingly sweet spot is a vulnerable spot.

### **As an aside, there's a lot of anxiety about AI, jobs and Gen Z. How does one keep calm amid the chaos?**

I attended a bhajan clubbing evening at my wife's insistence, expecting little, and it was as much fun as it was spiritually enriching. Gen Z, millennials, parents and families were under one roof, singing and dancing, and a whole ecosystem of musicians, event managers and flower suppliers thrived around it. If the generation built on smartphones and AI is rediscovering community, culture, music and family, perhaps the future is not as stomach-churning as we imagine. The antidote can be different for different people: whether meditation at home, bhajan at a gathering, an escapade in the mountains, or a vacation by the beach. The fact is the same: a little bit of introspection and reflection in quiet moments helps one recharge batteries and reimagine life to reclaim the passion and purpose that define it for you.

### **If a retail investor were to internalise one mantra from this Q&A, what should it be?**

That none of this needs a finance degree. It needs consistency and patience. Markets reward patience and discipline far more reliably than they reward speed and swag. But do not let discipline crush imagination. I often go back to a line from John Harris of Ruane, Cunniff and Goldfarb: we do a better job at guessing what could go wrong than what could go right. Imagining the possibilities beats being gripped by fear. 

*Happy investing!*

# Ganesh Utsav

## Clay, Costs and Capacity



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### Abstract

This case examines product costing, profitability analysis, and capacity allocation decisions at Ganesh Kala Kendra, a manufacturer of eco-friendly Ganesh idols. Faced with strong market demand but constrained by the limited availability of premium sculpting clay, the proprietor must determine how scarce resources should be allocated between two product categories: the Grand Ganesh Idol and the Family Ganesh Idol. Product-wise cost sheets and ICMAI-style cost statements form an integral part of the analysis. However, the case extends beyond traditional costing to incorporate marginal costing and limiting-factor analysis. By comparing profitability measures with contribution generated per kilogram of clay, a managerial dilemma emerges in which product rankings differ depending on the decision criterion employed. The case highlights the distinction between full-cost profitability and resource-constrained decision making, encouraging participants to evaluate alternative perspectives before recommending an appropriate production strategy. The case is suitable for courses in Cost and Management Accounting, Management Accounting for Decision Making (MADM), Cost Analysis, and Strategic Cost Management at undergraduate, postgraduate, executive, and management development programme levels.

On 15 July 2026, Vinayak Joshi, proprietor of Ganesh Kala Kendra, was sitting in his modest office. Ganesh Kala Kendra specialized in manufacturing two categories of eco-friendly Ganesh idols. The first product was the Grand Ganesh Idol, a premium six-foot idol primarily purchased by public social groups, housing societies, educational institutions, and corporate organizations. The second product was the Family Ganesh Idol, a compact two-foot idol designed for household worship.

He was analysing the demand as hardly two months were left before Ganesh Utsav. As preparations for the upcoming Ganesh Utsav season entered their final phase, customer enquiries and advance bookings were increasing rapidly. Yet, despite strong market demand, the firm was uncertain whether it would be able to satisfy all customers. Demand existed for both product categories, yet a shortage of premium sculpting clay threatened to restrict production for the upcoming season and Vinayak would have to decide which product line deserved priority. After consultations with suppliers, the company estimated that only 24,000 kg of premium sculpting clay would be available for the upcoming season. At the same time, based on discussions with distributors and advance booking patterns, management was confident that market demand would be sufficient to absorb the entire production output of either product line. Management recognised that clay, the principal raw material used in both products, could emerge as a significant constraint on future production decisions.

For years, Vinayak had believed that the Grand Ganesh Idol was the company's most profitable product. According to him, "A single Grand Idol sells for more than five Family Idols. Naturally, it must be our most profitable offering." His son Shubh, who supervised production and operations, disagreed, "Selling price is not the same as profitability. Larger idols consume much more clay, labour, workshop space and support resources. We have never calculated the true product-wise cost." The disagreement soon developed into a strategic issue. Management had funds to expand production capacity, but the key question was which product line should receive the additional capacity. Before committing additional resources, management wanted to determine product-wise profitability.

Accordingly, Labh, a CMA trainee, was assigned the responsibility of preparing product-wise Cost Sheets and ICMAI-style Cost Statements and was provided necessary information including operating results for the previous period financials. During discussions with the production team, Labh gathered additional operational information regarding availability of resources and their utilisation. Owing to the substantially larger number of Family Ganesh Idols being produced, packed, stored and dispatched throughout the season, a larger portion of the workshop floor area was dedicated to the Family Idol product line. Accordingly, Family Ganesh Idols occupied approximately 3,000 square feet of floor space, whereas Grand Ganesh Idols occupied approximately 1,500 square feet. The production manager further indicated that moulds used for Grand Ganesh Idols were employed 60 times, whereas moulds used for Family Ganesh Idols were employed 220 times.

The cost sheets would enable management to determine the cost and profitability of each product category based on past operations. However, the forthcoming season presented a different challenge. With premium clay emerging as a scarce resource and demand exceeding available supply, Vinayak needed to determine how Ganesh Kala Kendra should allocate its limited clay and capacity among competing products.

### Exhibit 1

#### Production and Sales Information

| Particulars            | Grand Idol | Family Idol |
|------------------------|------------|-------------|
| Units Produced         | 120        | 900         |
| Units Sold             | 120        | 900         |
| Selling Price per Unit | ₹60,000    | ₹11,500     |

### Exhibit 2

#### Product Specifications & Physical Characteristics

| Particulars                       | Grand Idol | Family Idol |
|-----------------------------------|------------|-------------|
| Height                            | 6 Feet     | 2 Feet      |
| Weight per Idol                   | 150 kg     | 25 kg       |
| Premium Clay Consumption per Idol | 80 kg      | 12 kg       |

**Exhibit 3**
**Labour Standards**

| Activity           | Grand Idol    | Family Idol   |
|--------------------|---------------|---------------|
| Master Sculptors   | 30 hrs        | 5 hrs         |
| Junior Sculptors   | 35 hrs        | 6 hrs         |
| Painting Crew      | 15 hrs        | 3 hrs         |
| Finishing Crew     | 10 hrs        | 1 hr          |
| Total Labour Hours | <b>90 hrs</b> | <b>15 hrs</b> |

**Exhibit 4:**
**Extract from Financial Records for the Year Ended 31 August 2027**

| Particulars                                                                      | Amount (₹) |
|----------------------------------------------------------------------------------|------------|
| Premium sculpting clay purchased during the year                                 | 18,00,000  |
| Bamboo framework, eco-friendly compound and other structural materials           | 7,20,000   |
| Colours, decorative accessories and embellishments                               | 12,50,000  |
| Inbound transportation cost incurred on procurement of production materials      | 1,30,000   |
| Process chemicals, mould release compounds and protective coatings               | 3,50,000   |
| Electricity, water and generator fuel consumed in production operations          | 5,50,000   |
| Wages paid to master sculptors                                                   | 14,00,000  |
| Wages paid to junior sculptors                                                   | 8,00,000   |
| Wages paid to painting and finishing teams                                       | 7,00,000   |
| Product-specific mould preparation expenditure for seasonal designs              | 1,50,000   |
| Specialised decorative finishing services outsourced during festival season      | 1,00,000   |
| Stores, tools, brushes, spray consumables and polishing materials consumed       | 2,00,000   |
| Repairs to workshop                                                              | 3,00,000   |
| Repairs to moulds                                                                | 90,000     |
| Repairs to production equipment                                                  | 60,000     |
| Structural and finish quality inspection costs                                   | 1,50,000   |
| Expenditure on eco-friendly material development and new idol designs            | 2,00,000   |
| Royalty paid for use of celebrity designer concepts                              | 1,50,000   |
| Depreciation on moulds, drying chambers and painting equipment                   | 5,00,000   |
| Supervisor salary                                                                | 5,00,000   |
| Rent paid for manufacturing workshop                                             | 15,00,000  |
| Insurance premium relating to workshop assets and production facilities          | 5,00,000   |
| Security services and indirect factory consumables                               | 5,00,000   |
| Certification and statutory compliance fees relating to manufacturing activities | 1,80,000   |
| Office salaries and administrative staff costs                                   | 18,00,000  |
| Office rent, electricity, insurance and audit fees                               | 6,00,000   |
| Depreciation on office building, computers and office equipment                  | 6,00,000   |
| Primary packing materials consumed                                               | 1,20,000   |
| Secondary protective packaging materials consumed                                | 80,000     |
| Advertising and social media promotion expenditure                               | 6,50,000   |

| Particulars                                                      | Amount (₹) |
|------------------------------------------------------------------|------------|
| Delivery, exhibition and distribution expenses                   | 7,50,000   |
| Dealer commission and sales staff salaries                       | 6,50,000   |
| Interest on working capital borrowings                           | 2,50,000   |
| Sale of scrap and reusable materials generated during production | 2,00,000   |
| Insurance claim received against damaged inventory               | 75,000     |

### Exhibit 5

#### Inventory Information

| Particulars                | Amount (₹) |
|----------------------------|------------|
| Opening Raw Material Stock | 5,00,000   |
| Closing Raw Material Stock | 6,50,000   |
| Opening WIP                | 3,00,000   |
| Closing WIP                | 4,00,000   |

### Exhibit 6

#### Cost Allocation Framework

| Cost Items                                                                                                                                               | Allocation Basis    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Raw Materials, Process Materials, Stores & Spares and Indirect Consumables                                                                               | Production Weight   |
| Direct Employees, Direct Expenses, Electricity, Water Charges, Generator Fuel, Supervisor Salary, Quality Control Costs and Research & Development Costs | Direct Labour Hours |
| Workshop Rent, Workshop Insurance, Factory Security and Workshop Repairs                                                                                 | Floor Area Occupied |
| Equipment Repairs, Mould Repairs and Production Depreciation                                                                                             | Mould Usage         |
| Royalty, Administrative Overheads, Selling & Distribution Overheads and Finance Charges                                                                  | Sales Revenue       |

After reviewing the available information, Labh realised that the decision facing Ganesh Kala Kendra was more complex than it initially appeared. Should capacity expansion focus on Grand Ganesh Idols, Family Ganesh Idols, or a balanced combination of both? More importantly, should management rely on product profitability or contribution from the scarce resource when making its decision? Vinayak knew that the answer could influence not only the upcoming season's results but also the long-term direction of Ganesh Kala Kendra. **MA**

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# A VISION FOR THE FUTURE OF THE COST ACCOUNTING PROFESSION

## STRATEGIC COST ASSURANCE

### Abstract

Cost audit has played a key role in establishing confidence in cost records and strengthening the quality of cost information available to business and other stakeholders. However, the economics of enterprise performance is changing rapidly. Global competition, volatile input costs, complex supply chains, digitalisation, artificial intelligence and increasing emphasis on productivity and sustainable value creation require organisations to understand not only what costs are, but why they arise and how they can be managed better. This article proposes Strategic Cost Assurance as a possible future direction for the Cost Accounting profession. The proposition is not to duplicate financial audit or enter domains belonging to other professions, but to build upon the Cost Accountant's distinctive understanding of cost, resources, productivity, and operational economics. Strategic Cost Assurance could provide independent confidence in cost intelligence, cost governance, resource utilisation, productivity, and sustainable value creation.

### Introduction

Every profession periodically needs to ask a fundamental question:

Is its future relevance determined by what it does today, or by the value it can create for society and business tomorrow?

The Cost Accounting profession in India has a strong foundation in cost ascertainment, cost control, cost management, productivity, and



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managerial decision-making. Cost audit has further established an important mechanism for independent examination of specified cost records.

That foundation remains valuable. However, the business environment has changed profoundly. Global competition, volatile input prices, complex supply chains, technological disruption, artificial intelligence and increasing pressure for productivity and sustainable performance have made cost a strategic determinant of competitiveness.

The question, therefore, is not whether cost audit remains relevant. The larger question is:

How can the knowledge, discipline and independence develop through cost accounting and cost audit evolve to create greater professional value in the future?

This article proposes one possible direction: the evolution from Cost Audit towards Strategic Cost Assurance.

This is not a proposal to replace statutory cost audit, nor an attempt to replicate the role of another profession. It is a vision for deepening the distinctive contribution of the Cost Accountant.

### From Cost Records to Cost Intelligence

The traditional foundation of cost audit is the reliability of cost accounting records. Reliable cost

records remain essential for informed management, pricing, regulatory oversight, and economic decision-making.

But reliable records are the foundation, not necessarily the destination.

Modern enterprises need to understand not merely what a product, service, or process costs, but why it costs what it costs, what drives the cost, how those drivers behave and what management can do about them.

Strategic cost management has long emphasised the importance of understanding cost drivers, value chains, and strategic positioning rather than viewing cost simply as an accounting outcome (Shank & Govindarajan, 1993).

The challenge is therefore moving from:

“Do we have cost information?”

to:

“Do we have reliable cost intelligence?”

and ultimately:

“Can management rely on that intelligence for important economic decisions?”

This creates a natural opportunity for the Cost Accountant.

The first generation of cost audit established confidence in cost records. The next generation can aspire to establish confidence in the quality of cost management.

### From Verification to Strategic Cost Assurance

Verification establishes whether specified records or information conform to defined requirements. Assurance has a broader purpose: creating confidence regarding the reliability or quality of information, systems, processes, or performance.

Strategic Cost Assurance is therefore not

an attempt to overturn the existing profession or displace statutory cost audit. Rather, as an evolutionary vision built upon an existing professional architecture, an attempt to redefine the profession by assertion—extending its distinctive foundation in cost information and analysis towards cost intelligence, resource efficiency, productivity, operational performance, and sustainable value creation.

*Cost Audit → Assurance → Strategic Cost Assurance → Four Dimensions*

Strategic Cost Assurance can build upon this broader concept.

It could encompass independent professional evaluation of:

- ⊙ the reliability and relevance of cost information
- ⊙ transparency of cost drivers
- ⊙ effectiveness of cost-management systems
- ⊙ resource and capacity utilisation
- ⊙ productivity and operational efficiency
- ⊙ cost governance
- ⊙ cost-optimisation initiatives; and
- ⊙ the quality of cost information supporting strategic decisions.

The progression can therefore be expressed as:

*Verification → Assurance → Insight → Improvement*

This does not mean that the Cost Accountant assumes management responsibility. Management remains responsible for strategy and decisions. The professional contribution is to provide independent confidence in the quality of the cost information, systems, and processes upon which those decisions depend.

### The Four Dimensions of Future Cost Assurance

The proposed framework can be viewed through four interconnected dimensions:

| Dimension                   | Traditional emphasis         | Strategic Cost Assurance emphasis                                         | Key assurance question                               |
|-----------------------------|------------------------------|---------------------------------------------------------------------------|------------------------------------------------------|
| <b>1. Cost Intelligence</b> | Cost records and measurement | Cost drivers, cost behaviour, analytics, and decision-useful intelligence | <b>Can management rely on its cost intelligence?</b> |

|                                                  |                                         |                                                                                          |                                                                 |
|--------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>2. Cost Governance</b>                        | Compliance with prescribed requirements | Accountability, ownership, controls, processes, and cost-management discipline           | <b>Are costs being governed systematically?</b>                 |
| <b>3. Productivity &amp; Resource Efficiency</b> | Cost control and variance analysis      | Capacity utilisation, productivity, waste, process efficiency, and resource optimisation | <b>Are resources producing the expected economic output?</b>    |
| <b>4. Sustainable Value Creation</b>             | Historical cost and reported results    | Sustainability of savings, quality, capability, competitiveness, and long-term value     | <b>Is cost improvement creating sustainable economic value?</b> |

These dimensions represent an evolution rather than a replacement of the existing foundation.

### 1. Cost Intelligence

Cost intelligence goes beyond cost measurement to understand cost drivers, cost behaviour, and economic consequences. It connects financial information with operational realities.

### 2. Cost Governance

Cost is created throughout the enterprise—in product design, procurement, manufacturing, logistics, technology, quality, and commercial decisions. Cost management is therefore not merely an accounting function; it is a governance issue involving ownership, accountability, measurement, and corrective action.

### 3. Productivity and Resource Efficiency

Cost and productivity are inseparable. Cost reduction alone does not necessarily improve performance. The more meaningful relationship is:

*Resources → Processes → Productivity → Cost → Performance → Value*

Strategic Cost Assurance could examine whether resources are being utilised efficiently and whether claimed productivity improvements are real and sustainable.

### 4. Sustainable Value Creation

A reduction in expenditure that damages quality, innovation, capability, or future capacity may create short-term savings but destroy long-term value.

The professional question should therefore evolve from:

“How much cost has been reduced?”

to:

“What sustainable economic value has been created through better management of resources and cost?”

### A Practical Illustration: From Cost Audit to Strategic Cost Assurance

Consider as an illustrative example, a manufacturing company whose statutory cost audit identifies a significant increase in manufacturing overhead per unit.

A conventional cost audit may verify the classification, allocation and reporting of the overhead and identify the relevant variance.

A Strategic Cost Assurance engagement could take the analysis further:

*Cost records → Variance identified → Cost-driver analysis → Operational investigation → Management action → Independent validation → Value impact.*

For example, the practitioner may establish that the increase is not primarily caused by higher rates, but by lower capacity utilisation and increased machine downtime.

The assurance deliverable could then report:

**Finding:** Unit conversion cost increased by 8%.

**Cause:** Capacity utilisation declined from 82% to 70%, increasing fixed overhead per unit.

**Operational implication:** Lower throughput and higher conversion cost are reducing product competitiveness.

**Management response:** Planned maintenance, bottleneck removal, and improved production scheduling.

**Assurance follow-up:** Validate whether the actions deliver the projected productivity improvement and whether the cost reduction is sustainable without compromising quality.

Thus, the output moves from merely reporting “what happened” to providing independent confidence about “why it happened, what is being done and whether the improvement is creating sustainable value.”

### From Looking Back to Understanding Tomorrow

Traditional audit is necessarily concerned with what has happened. Strategic Cost Assurance can retain this discipline while introducing a stronger forward-looking dimension.

It can ask:

- ⊙ What caused the cost?
- ⊙ Are the underlying cost drivers understood?
- ⊙ Are they stable or changing?
- ⊙ What risks could alter future costs?
- ⊙ Are productivity improvements sustainable?
- ⊙ Are cost initiatives aligned with strategy?
- ⊙ Does management have reliable cost intelligence for future decisions?

This does not imply predicting the future with certainty. It means improving the quality of information, assumptions, systems, and processes through which management prepares for it.

The purpose of cost assurance should not end with explaining yesterday’s cost; it should increasingly help management understand the economics of tomorrow.

### Strategic Cost Assurance in the Age of AI

Artificial intelligence is likely to transform cost management substantially. AI can support predictive costing, cost-driver analysis, procurement analytics, anomaly detection, capacity forecasting, productivity analysis, scenario modelling, and continuous cost monitoring.

But greater automation also creates a greater need for professional assurance.

Who assures the quality of the underlying data? Who challenges the assumptions? Who evaluates

whether an apparent saving is sustainable? Who determines whether an AI-generated recommendation has considered relevant economic trade-offs?

These are not merely technology questions. They are questions of professional judgment.

The future Cost Accountant need not compete with artificial intelligence. The profession can potentially provide **independent assurance over AI-enabled cost and performance intelligence.**

### Complementary to Other Professions

The future of Cost Accountancy should not be built by claiming territory belonging to other professions. Financial audit, internal audit, taxation, consulting, engineering, and other disciplines have their own distinctive contributions.

The proposition is therefore not that Cost Accountants should become another type of auditor.

It is that they can deepen their distinctive domain:

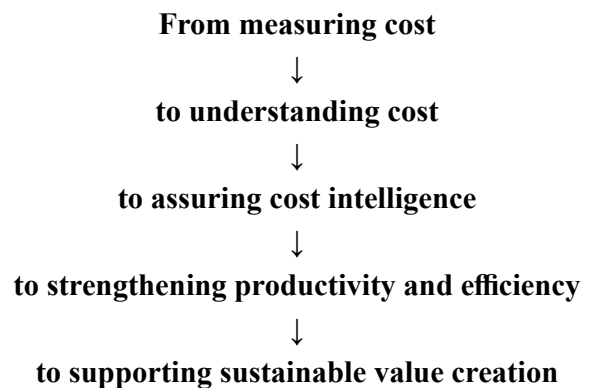
*Cost + Resources + Productivity + Efficiency + Performance + Value*

Financial audit can provide confidence in financial reporting. Strategic Cost Assurance could provide confidence in the **economics underlying enterprise performance.**

This is complementary, not competitive.

### A New Professional Value Proposition

The evolution can be expressed simply:



This does not require an immediate change in statutory responsibilities. It requires a professional vision supported over time by appropriate standards, competencies, methodologies, technology capabilities, ethical safeguards and continuing

professional development.

The Cost Accountant of the future may increasingly need to combine traditional cost expertise with data analytics, technology, operations, strategy, risk, and business economics.

The objective is not to make the profession broader merely for the sake of being broader.

It is to make the profession more valuable because of what it uniquely understands.

### A Call for Professional Dialogue

The proposition of Strategic Cost Assurance should be regarded as a subject for professional discussion and development rather than a finished institutional model.

The profession may wish to consider:

- ⊙ What should Strategic Cost Assurance mean in practice?
- ⊙ Which elements could evolve from existing cost-audit knowledge and experience?
- ⊙ What standards and competencies would be required?
- ⊙ How should professional independence be protected?
- ⊙ How should artificial intelligence and advanced analytics be incorporated?
- ⊙ How can the profession demonstrate measurable value to industry?

These questions deserve broad dialogue among Cost Accountants, industry, regulators, academics, and other stakeholders.

### Conclusion

The history of Cost Accountancy has been strongly associated with a fundamental question:

*What does it cost?*

The modern enterprise increasingly needs answers to larger questions:

*Why does it cost what it costs?*

From verifying yesterday's costs to assuring tomorrow's competitiveness: Strategic Cost Assurance offers a new professional vision for the Cost Accountant

*How efficiently are resources being used?*

*What drives productivity?*

*Are cost improvements sustainable?*

*What value is being created from the resources consumed?*

These questions provide an opportunity for the profession to evolve without competing with other professions.

The purpose of cost audit should therefore not end with certifying yesterday's costs. It should increasingly contribute

to improving tomorrow's competitiveness.

The opportunity before the profession is consequently not merely to change the scope or terminology of an existing audit. It is to rethink the professional value of independent cost expertise.

The future relevance of the CMA profession will not be determined only by what it audits, but by the value it creates through its assurance.

**The central message of this paper can be expressed simply:**

*Cost Audit → Cost Assurance → Strategic Cost Assurance → Cost Intelligence → Productivity & Resource Efficiency → Sustainable Value Creation → Enterprise Competitiveness* MA

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# FROM PRICE DISCOVERY TO PRICE MANAGEMENT: THE EXPANDING MANDATE OF INDIA'S POWER EXCHANGES

## Abstract

India's organized electricity markets have moved from a residual balancing avenue to a mainstream procurement channel for electricity distribution companies (DISCOMs). This study contends that the sector is converging toward a three-tier architecture: a commoditized physical spot layer undergoing market coupling, a financial hedging layer led by the Multi Commodity Exchange (MCX), and a demand-side flexibility layer. In the year ahead, MCX's principal contribution will be to complement the spot exchanges, allowing DISCOMs to convert unpredictable peak-season price spikes into hedged costs.



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### Introduction

The Indian Energy Exchange (IEX), incorporated in 2008, clears the overwhelming majority of short-term electricity traded outside long-term power purchase agreements (PPAs) (Business Standard, 2025). Two developments have changed this story in the past 18 months. First, national peak electricity demand has repeatedly hit new records, from a December high of about 241 GW in 2025 to an all-time peak of 256 GW on April 25, 2026, during a severe heatwave (IBEF, 2026; Down To Earth, 2026). Second, the regulatory architecture

underpinning organized trading began to change with the launch of cash-settled electricity futures on the Multi Commodity Exchange (MCX) in July 2025 and a contested move toward “market coupling” of the physical exchanges (ICICI Direct, 2025; Informist Media, 2026).

Electricity Distribution Companies (DISCOMs) face two problems that frequently work against each other. The first is adequacy: procuring sufficient power in real time to meet a demand curve that is steeper and less predictable owing to heat and growing renewable energy intermittency. The second is affordability: procuring power without widening the gap between the Average Cost of Supply (ACS) and Average Revenue Realized (ARR), a metric that regulators closely watch (News on Air, 2024). This article contends that physical exchanges have so far mainly solved adequacy, while the emerging financial derivatives layer, anchored by MCX, is the best instrument to address affordability. It draws on IEX's public disclosures, Central Electricity Regulatory Commission (CERC) and Securities and Exchange Board of India (SEBI) orders, and recent judicial developments to offer a forward-looking view of physical and financial power markets in the coming years.

## The Institutional Architecture of Organized Power Trading

India's short-term power market operates through two regulatory channels. Physical, delivery-based contracts are traded on exchanges regulated by the CERC: IEX, Power Exchange India Limited (PXIL), and the newly licensed Hindustan Power Exchange (HPX). These platforms host the Day-Ahead Market (DAM), Real-Time Market (RTM), Term-Ahead Market (TAM), Green Markets, and Renewable Energy Certificates (RECs) (Regulatory Despatch, 2025). Cash-settled financial derivatives, introduced only in 2025, are traded separately on SEBI-regulated exchanges, principally the MCX (ICICI Direct, 2025).

The IEX has historically commanded an overwhelming share of the physical market, variously cited as between 85% and 98% of the traded volume depending on the segment (ICICI Direct, n.d.; Enrich Money, 2025). Table 1 presents the segment-wise traded volumes on the IEX.

**Table 1: Electricity Segment-Wise Traded Volume on IEX (FY24-FY26)**

| Segment                                    | FY24 (MU) | FY25 (MU) | FY26 (MU)                              |
|--------------------------------------------|-----------|-----------|----------------------------------------|
| Day-Ahead Market (DAM)                     | 53,353    | 61,311    | Growing; record 5,547 MU in March 2025 |
| Real-Time Market (RTM)                     | 30,125    | 38,898    | Fastest-growing; up 39-47% y-o-y       |
| Total electricity traded                   | ~106,000  | 121,000   | 141,000 (highest ever)                 |
| Renewable Energy Certificates (lakh units) | 89        | 178       | Volatile; down ~30-40% y-o-y           |

*Source: Business Standard (2025), Stockanalysis (2026), ScanX (2025). Note: MU = million units.*

Table 1 shows that growth has extended beyond the oldest product, the DAM. The RTM, introduced

only in 2020, has grown faster than the DAM in every recent period and, by FY26, had become the single largest driver of incremental volume (Stockanalysis, 2026; Business Today, 2025).

## Meeting Peak Demand: The Real-Time Market as the Marginal Balancing Tool

The RTM allows transactions for delivery within the same operating day, with contracts as granular as 15 minutes. For a DISCOM confronting a forecast error, whether because a heatwave arrived early or solar generation fell away faster than expected at dusk, the RTM is now the fastest mechanism for closing that gap without resorting to costly emergency diesel or unscheduled interchange penalties. During the record April 2026 peak, solar and hydro met roughly 30% of the instantaneous demand, but the evening ramp-down of solar compelled gas-based generation to rise from 4.9 GW to 9.1 GW within the peak window, even though gas remained a more costly marginal fuel (Down To Earth, 2026). The RTM is a shared marketplace through which such marginal, short-notice capacity is priced and allocated across DISCOMs, rather than being confined to the state that owns the peaking plant.

State policies reinforce reliance on spot markets for adequacy. One example is Maharashtra's introduction of a demand flexibility portfolio obligation, which mandates DISCOMs to configure a portfolio of flexible and controllable loads to the extent of 1.5% of the previous year's peak demand by FY26, increasing to 3.5% by FY30 (Norton Rose Fulbright, 2026). The market structure and regulation are leading DISCOMs to adopt a portfolio approach: long-term PPAs for base load, RTM purchases for marginal balancing, and demand flexibility for peak-load shaving.

## Cost Discipline

Liquidity improved in physical exchanges as the wholesale prices declined. The average DAM price on IEX declined by 12.5% year-on-year to Rs 3.93 per unit in Q2 FY26, while the RTM price decreased by 16.1% to Rs 3.51 per unit in the same quarter. Indeed, the ample supply from hydro, wind, and coal brought prices down to record lows, as one 15-minute block was sold at Rs 0.01/kWh in

August 2025 (Business Today, 2025). In October 2025, the average DAM price fell further to Rs 2.67 per unit and the RTM price to Rs 2.73 per unit (ScanX, 2025).

The IEA's Electricity 2026 report corroborates this nationally, estimating that India's average wholesale price declined by 16% year-on-year in 2025 to approximately USD 46 per MWh, partly attributable to India's limited exposure to gas price shocks (Norton Rose Fulbright, 2026).

**Table 2: Average Market Clearing Prices on IEX (DAM and RTM)**

| Period                 | DAM (Rs/unit) | RTM (Rs/unit) | Y-o-Y Change    |
|------------------------|---------------|---------------|-----------------|
| Q2 FY25 (derived)      | 4.49          | 4.18          | Base period     |
| Q2 FY26 (Jul-Sep 2025) | 3.93          | 3.51          | -12.5% / -16.1% |
| September 2025         | 3.58          | 3.31          | -14.5% / -16.8% |
| October 2025           | 2.67          | 2.73          | -32.0% / -27.8% |

*Source: Business Today (2025) and ScanX (2025).*

The gap between the ACS and ARR of DISCOMs narrowed from 45 paise per unit in FY23 to 21 paise per unit in FY24 (News on Air, 2024). Attributing the entire reduction to exchange trading would be an exaggeration, as other factors, such as the rationalization of tariffs and subsidy reform, were also involved. Nevertheless, these exchanges have plausibly contributed in two ways. First, lower prices could reflect better and more transparent pricing of the marginal unit, as more participation provides deeper liquidity and reduces spreads. Second, the exchanges have aided price discovery, giving DISCOMs a sense of what power should cost at a given time.

However, price discovery alone does not manage price risk. A DISCOM that notices a price increase during a heatwave gains information but is not insulated from paying a higher price. The derivatives segment was introduced precisely to address this exposure.

## Enter MCX: From Physical Spot Trading to Financial Risk Management

On June 6, 2025, SEBI approved the first electricity derivative contracts, and on July 10, 2025, MCX launched cash-settled electricity futures following a jurisdictional dispute between SEBI and the CERC, which had been ongoing since 2005 (Business Upturn, 2025; Angel One, 2025). The contract trades under the symbol "ELECTR" and is cash-settled based on the volume-weighted average of the unconstrained market-clearing price, discovered from the DAM in IEX, and has a lot size of 50 MWh and daily price limits of 6 per cent (ICICI Direct, 2025). Purely financial, cash-settled instruments fall under SEBI's jurisdiction and trade on securities exchanges, primarily MCX and the National Stock Exchange (NSE), whereas physical, delivery-based contracts fall under the CERC's jurisdiction and trade on IEX, PXIL, and HPX (Zerodha Varsity, 2026; Regulatory Despatch, 2025).

**Table 3: Physical Spot Exchanges vs. Financial Derivatives Exchanges**

| Feature              | Physical (IEX, PXIL, HPX)          | Financial (MCX, NSE)                        |
|----------------------|------------------------------------|---------------------------------------------|
| Regulator            | CERC                               | SEBI                                        |
| Settlement           | Physical delivery                  | Cash-settled                                |
| Core products        | DAM, RTM, TAM, Green Markets, RECs | Electricity futures (options prospective)   |
| Underlying reference | Actual bids/offers                 | IEX DAM Unconstrained Market Clearing Price |
| Primary user need    | Physical demand adequacy           | Price/cost risk management                  |
| Operational since    | 2008 (IEX)                         | 10 July 2025 (MCX)                          |

*Source: ICICI Direct (2025), Zerodha Varsity (2026), Regulatory Despatch (2025).*

This separation allows each exchange to specialize in a specific field. CERC-regulated exchanges are custodians of physical delivery

and grid security, and every trade must be supported by a real injection or withdrawal. In contrast, exchanges regulated by SEBI may provide standardized, liquid financial contracts that any DISCOM treasury can use to hedge prices for a contract month well in advance, without the DISCOM needing to act as a physical counterparty. A DISCOM will look to the RTM to answer “Will the power arrive?” and to an MCX futures contract to answer “Will it be affordable?”



A DISCOM will look to the RTM to answer 'Will the power arrive?' and to an MCX futures contract to answer 'Will it be affordable?'

power-purchase cost for tariff filings in advance, converting an unknown exposure into a known one. Once introduced, options would allow DISCOMs to cap their cost exposure while retaining the benefit of falling prices.

Third, the MCX and physical exchanges must complement each other in the field of renewable energy variability. With solar and wind capacity climbing rapidly towards the

government's target of 500 GW of non-fossil capacity by 2030 and peak load demand projected to increase from around 289 GW in FY27 to 459 GW by FY36, the volatility DISCOMs face will increasingly be weather-driven rather than load-driven (Mercom India, 2026; IBEF, 2026). Physical exchanges, particularly the Green Day-Ahead and Green Term-Ahead Markets, are best suited to provide flexibility in matching renewable generation and demand, whereas MCX-style contracts can be best used for hedging the cost or revenue risk caused by price variability.

A coupled, single-price physical market and a liquid derivatives market are not substitutes. They are, respectively, a clock and an insurance policy. DISCOMs need an accurate clock to buy the marginal unit at the right moment (increasingly the role of IEX, PXIL, HPX, and RTM growth) and an insurance policy to keep the bill for that clock's readings from swinging consumer tariffs out of control (the role now opening for MCX and, prospectively, the NSE). Regulatory energy would be better spent ensuring that insurance policies are well designed. This means lot sizes and tenors suited to DISCOM treasuries, which are not sophisticated derivative users; disclosure norms that allow regulators to see hedging positions when approving tariffs; and coordination between the CERC and SEBI, so that both layers reference a genuinely representative and tamper-resistant price.

### Conclusion

India's organized power markets are already more effective in answering the adequacy question

### Role of MCX and Its Peers in the Year Ahead

Three developments are likely to define the next twelve months. First, the physical layer will be reorganized through market coupling. The CERC's order of July 23, 2025, proposed aggregating bids from IEX, PXIL, and HPX into a single national clearing price for the DAM, operated by Grid-India on a phased basis (Power Peak Digest, 2026). IEX contested the move before the Appellate Tribunal for Electricity and the Supreme Court, contending that coupling would erase liquidity advantages without a clear efficiency benefit. The Court has so far declined to grant an interim stay (Informist Media, 2026; Sahi, 2026). Whatever the outcome, the direction is toward a single national spot price rather than three competing venues, which strengthens the case for a separate hedging layer. Once the spot price becomes an administered price, the question shifts from “which exchange gives the best price” to “how to hedge against that price,” which is precisely the offering of the MCX and NSE.

Second, MCX is likely to extend its product suite from single-month futures to a longer curve and eventually to options trading. A DISCOM's planning problem is not a single day's price but a seasonal exposure. The gap between the projected 270 GW peak and the 256 GW instantaneous peak in April 2026 demonstrates that this can run into tens of gigawatts (Down To Earth, 2026). A strip of futures purchased ahead of the April-June peak would allow a DISCOM to budget its

of physical capacity than most observers thought a decade ago, with the RTM proving to be the fastest-growing segment of the market to address DISCOMs' peak-hour shortages. However, cost predictability has not yet been fully addressed. Even as physical exchanges move through a contested transition to market coupling, the launch of cash-settled electricity futures on the MCX in July 2025 has added a second layer of market infrastructure. The more interesting question is not which exchange will 'win' but how regulators should govern the volatility that electricity spot markets so effectively expose. Given the maturing three-tier architecture — physical spot, financial hedging, and demand-side flexibility — this governance should be designed to enable DISCOMs to plan their costs. Ultimately, when it comes to protecting the consumer's tariff, what matters most is not the outcome of the exchange rivalry but getting the design of this new hedging layer correct. **MA**

**A coupled, single-price physical market and a liquid derivatives market are not substitutes. They are, respectively, a clock and an insurance policy**

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# BONANZA OF ACTUAL COSTING FOR THE SAP ERP RUN BUSINESSES WHO HAVE MIGRATED TO S/4 HANA

## Abstract

SAP AG, a global market leader in ERP segment, had launched SAP S/4 HANA, a more advanced new generation ERP software in the year 2015 and consequently, SAP wants all its customers to move to this new advanced ERP suite from the older version of SAP ECC 6.0 through migration. By 2027, SAP AG will no longer extend maintenance to SAP ECC so that all SAP run businesses have to migrate to this new ERP suite. Through this major and long-pending upgrade, SAP AG launched SAP S/4 HANA, which not only streamlined its features and complex processes but also enabled the use of emerging technologies like AI, Machine learning, cloud databases, etc., in its products. This brings in long awaited necessary automation for the SAP run businesses to improve business efficiency and speed of the business.

## Introduction

In this article, we take up one of the features and processes which was streamlined, that is the functionality of Material Ledger (ML) which was optional in earlier version of SAP ECC and now it has been made mandatory in S/4 HANA. Material Ledger is a sub-ledger like AP, AR, Fixed Assets, and a tool that fulfills two basic objectives: firstly, the ability to manage material prices in multiple currencies and valuation, and secondly, in running the Actual costing functionality.

Earlier, most of the businesses and SAP implementation partners were very much scared to activate this ML, since it brings in many aggregate and index tables which will complicate many of the processes and the system had to face lots of challenges. Its deactivation at a later date is not at all possible and earlier some businesses had aborted their go-live plan and, in some cases, they scraped the whole system which had gone live, in some cases after some period of running the system, they scraped the system with huge loss of money and efforts. Now, in S/4 HANA, ML is a part of huge table ACDOCA and the scariness towards the ML is a thing of the past. But this ML is a prerequisite to activate Actual Costing functionality which is an important costing strategy in the realm of Product Costing, Management Accounting and particularly in inventory valuation of in-house produced materials. Hence, those SAP



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run businesses who have migrated to S/4 HANA, can retroactively activate Actual Costing and Actual Cost component structure since ML is activated by default during the migration to S/4 HANA.

During the migration, almost all organizations are opting to activate only the Material Ledger Functionality for material valuation which is mandatory, and deferring the activation of Actual Costing functionality. In this article, we will try to enlighten the readers about the practical steps and tips how to go about subsequent activating the Actual Costing once ML is active with the existing Cost Component Structure or with the new cost component structure. To explain about what is meant by Cost Component Structure, it groups the costs for each material according to cost component (such as

material costs, internal activities, external activities, and overhead). In some organisations, they go for a change to new Cost Component Structure with different split due to changing ecosystem of the organisations from the new period onwards. Let us understand what and how this Actual Costing functionality brings a huge change in the costing environment and strategies of the SAP run businesses.

### Actual Costing and Inventory Valuation

Actual Costing is a process in SAP ERP that identifies the differences between the standard price and the real procurement prices of the goods from third parties and actual manufacturing cost of the in-house manufactured products. These procurement price differences are recorded in the ML when the materials are procured and issued to production. In the period end, all these records in the ML are consolidated to calculate the periodic unit price (PUP). The incremental and decremental between the standard price and PUP is passed on to the Production orders as per the consumption in terms of quantities as multi-level differences. Initially, the customer will not be comfortable with having procured materials at the standard price (Price Control 'S') since they are used to having the Weighted Moving average (Price control 'V'). Here, we need to convince the customer that this change will bring in Periodic Unit price which is nothing but a periodic moving price instead of transaction based moving average prices. In my experience, I found that the said changes have helped a lot in the case of Metal industries, where the raw materials are procured based on London Metal Exchange (LME) prices, and the price will be known only at the end of the month through the monthly invoice. At the time of Invoice verification (MIRO), we can update the invoice price for all the multiple consignments received (MIGO) in a month in one go so as to capture all the variances.

In the case of in-house produced materials, the production variances are calculated and settled to the materials at the time of settlement of production orders. These Production variances along with the purchase price differences of raw materials are consolidated to arrive at the PUP of the in-house produced materials. These PUP of both raw materials and in-house produced products will be taken up for the inventory valuation in the month end. The best part is that we get the actual cost at Cost Component wise in the case of SFG and FG. During the closing step of the Actual Costing Cockpit execution, the closing postings to finance happens and the postings

are reversed in the 1<sup>st</sup> day of the following month simultaneously so that the materials are valued again at Standard price. These postings help in getting accurate and realistic profitability when we apply the PUP of the in-house produced materials as actual COGS of the product sales income.

### Configuration

There is a simple configuration of activation of Actual costing for the Plants and activating the Actual cost component structure which are the mandatory configuration to be done any time and tested by replicating procurement, production, sales and financial postings, period end closing activities and lastly executing Actual Costing Cockpit in Development servers before moving to Production client. We need to execute the program FCML4H\_STARTUP which activates the Actual Costing functionality in S/4 HANA by generating new data structures.

When there is a change in Cost Component structure, we need to take lots of precautions so that it will not leave any scope for any kind of data inconsistency in the system. We need to take up the period end closing activities for the previous month (Period 1) immediately and then do the changes in the Price determination to 3-Single/Multi Level in all BOM relevant Material Masters from 2-transaction based. Then we can move to the new period and do the costing run to release the estimated standard cost for all the SFG and FG in one go in new cost component structure. After that we need to run another program FCML4H\_CCS\_CHANGE in the new period (Period 2). Then only we can allow all goods movements and other transactions in the system. In the period end, the customer has to undertake an additional activity of the execution Actual Costing Cockpit (CKMLCP) after the settlement of production orders in the new period (Period 2).

In this connection, we need to go through the OSS notes 3136485 and 3012656 in detail and adopt the procedure as explained above accordingly.

### Conclusion

Thus, SAP-run businesses, which have migrated to S/4 HANA, could benefit from its flexibility in swiftly activating not only the Actual Costing functionality but also reaping the full potential of SAP S/4 HANA investment. They can now upgrade its Cost and Management Accounting strategies in response to global competition and evolving business dynamics. MA

# ARTIFICIAL INTELLIGENCE IN EDUCATION: A REVIEW OF APPLICATIONS, BENEFITS, CHALLENGES, AND EQUITABLE INTEGRATION

## Abstract

The adoption of artificial Intelligence (AI) in teaching, learning, assessment and educational administration is on the rise. This paper provides for a systematic literature review on the field of AI in Education to identify uses, promises and limitations to its implementation in education and conditions for equitable integration. The literature reviewed are from the years 2022 to 2025 and focus on recent systematic reviews and empirical studies in the area of Artificial Intelligence in Education (AIED), and important review studies that address the overall development of the AIED domain. The results indicate that AI can support aspects like personalized/adaptive learning, intelligent assessment, profiling/feedback and administration. While the literature has shown that there are several critical points about data privacy, algorithmic bias, academic honesty, digital dependence, teacher preparedness, infrastructure and inequitable access. Evidence is not always strong and varies at different levels of education, primary and secondary, across different subject areas, in various settings and with varying technology designs and implementation. The paper thus calls attention to the need for a humane and context-specific approach in which AI is associated with assistantship to teachers, the need for proper governance and teacher capacity building, as well as the focus on digital and socioeconomic inequalities, particularly in developing countries contexts.



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## Introduction

Artificial Intelligence (AI) is now more evident in today's educational landscape

and is impacting teaching, learning, evaluation, student support and educational management. There has been a significant increase in research

on Artificial Intelligence in Education (AIED) literature, especially following the development of generative Artificial Intelligence (AI) systems that are readily available. In a bibliometric analysis of 2,223 research articles, subsequent content analysis of 125 papers, Wang et al. (2024) categorize key application areas as adaptive learning and personalized tutoring, intelligent assessment and management, profiling and prediction, and emerging AI-powered educational products. With the advent of generative AI, the applications have expanded to encompass content creation, conversational support, feedback, and aid with learning activities. Garzón et al. (2025), in a systematic review of the peer-reviewed empirical literature, also find significant research trends in AI-in-education since 2022 and common themes of learning outcomes, personalization, motivation, and ethical and implementation issues. But the

proliferation of AI shouldn't be seen as a direct path to educational improvement. The evidence is influenced by variations in level of education, discipline, country, infrastructure, teacher readiness, pedagogical design, and the AI system being evaluated. For instance, a 2023 Best Colleges survey of 1,000 undergraduate and graduate students across the United States found that 43% of them had used ChatGPT or another AI tool; this represents one survey population and does not imply that all college students or educational systems are represented. In this context, the present paper summarizes the key areas of application and reported benefits of AI, analyzes contradictory and implementation related evidence and proposes a conceptual pathway towards equitable and sustainable integration, including a focus on the developing country's context.

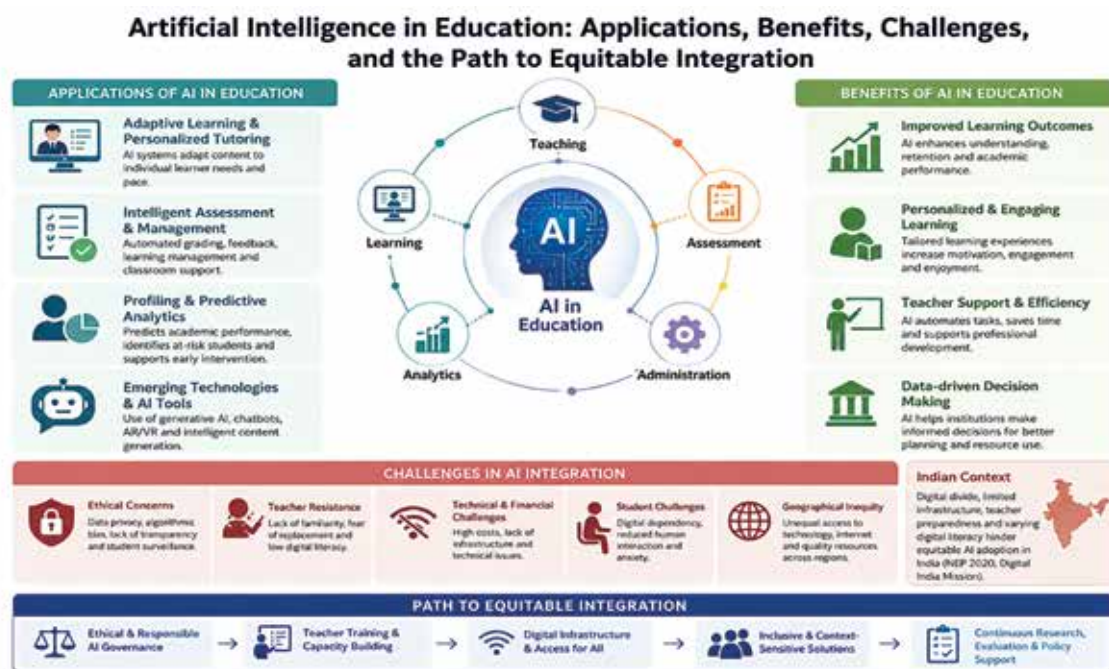


Figure 1: Artificial Intelligence in Education

**Source:** Author's conceptual synthesis based on Wang et al. (2024), Garzón et al. (2025), UNESCO (2023), Government of India (2020), and the reviewed literature.

### Research Methodology

This paper is a structured narrative review, and does not purport to be fully systematic. The literature will mostly be limited to publications dealing with AI interventions in educational systems after 2022 and until 2025, including systematic reviews, empirical research, policy reports, and selected conceptual papers relevant to the AI use, educational outcomes, implementation issues, and equity. The keywords were:

“Artificial Intelligence in Education,” “Generative AI,” “AIED,” “Personalized Learning,” “Intelligent Tutoring Systems,” “Educational Technology” and “AI Applications in Education.” To provide transparency, information used for journal submission should include the number of records retrieved, the number of duplicate records removed, the number of records screened, the number of records assessed for full text, the reasons for exclusion, the final number of the studies that were included, but it also should include the number of databases used, the dates on which journals were searched, complete search strings, and where applicable.

### AI Application In Education

Wang et al. (2024) performed a bibliometric analysis of 2223 research articles and a content analysis on the selected 125 articles. They classify AIED applications into four categories: Adaptive learning and personalized tutoring, intelligent assessment and management, profiling and prediction, and emerging products. With the help of adaptive learning and intelligent tutoring systems, learners can receive personalized feedback and learning materials according to their learning progress. Automated grading, automated writing evaluation, learning management support and classroom-management functions are examples of intelligent assessment and management applications. Education data is applied in profiling and prediction applications to find trends in academic achievement or possible dropout trends to target intervention. Recent uses include augmenting education with chatbots and other immersive technologies like augmented and virtual reality (Wang et al., 2024). These categories should not be read as mutually exclusive, nor equally effective. They gain their educational value on the basis of system design, data quality, pedagogical integration, teacher supervision, and learner and institutional characteristics.

Garzón et al. (2025) conducted a systematic review of 155 peer-reviewed empirical studies that were published from 2015 to 2025. The most frequently investigated type of AI was generative AI (30.3%), followed by conversational/natural language processing agents (19.4%) and machine learning models (14.2%). Language education (LE), information and communication technologies (ICT) and science education (SE) were some of the most

represented fields of study, with higher education (HE) being the most often studied educational level. Overall, the evidence suggests that there is a high level of research interest in the field of generative and conversational AI, with a focus on specific areas and educational contexts. This concentration imposes restrictions on the generalizability of the results to areas of research that have not been studied, areas of research, age group, and financial constraints of institutions.

### The Benefits of Using AI In Education

The reviewed literature outlines a number of potential benefits of AI, and to the extent that benefits exist, their size and consistency are different across studies and contexts. Garzón et al. (2025) reported that learning gains occurred in 65.8% of empirical studies reviewed and personalized learning occurred in 26.5% of the articles reviewed. The numbers indicate the percentage of the studies reviewed that find a certain benefit; they do not imply a fixed percentage improvement in learning due to AI nor effect sizes. The previous manuscript reported a 62% increase in average test scores with adaptive learning, a 30% increase with AI overall and a 20% decrease in anxiety. We need to clarify that while this is a secondary statement from Wang et al. (2024), the figures are not from a meta-analytic estimate from Wang et al. themselves, but from a statement within the paper. Due to the lack of underlying evidence and context of effect sizes in the current manuscript, claims have been omitted instead of being shown as percentages to be generalized. A more reasonable conclusion is that there have been some positive learning outcomes with both adaptive and personalized AI systems in some contexts, and the level of evidence is dependent on study design, intervention, content, student population, and implementation.

At the personal level, Garzón et al. (2025) find motivation, autonomy, enjoyment, positive attitudes and engagement as the most frequent variables reported in the studies reviewed. The benefits for teachers include optimizing tasks, support in professional development and saving time with the automation of specific administrative tasks. But it is important to view these findings as trends in the literature reviewed and not as effects that can be found in all cases. The personalization

and suggestions from AI may prevent or reduce the involvement of a human or may be useful for engagement; however, the reliance on the AI or the lack of quality of human interaction may also have the opposite effect.

So the evidence suggests it's conditional rather than a point of view about AI inspired improvements in education. AI should be viewed as a pedagogical augment and not as a tool to replace teachers. Teacher judgement, feedback, dialogue, collaboration and understanding their context is important, particularly for complex learning and social and emotional development. There is also literature that shows that technology comes out in various results in accordance with their different applications. Hence, these are the factors to consider when institutions review AI to make an informed decision.

### Limitations and Challenges

Ethical and governance issues are reported in literature as one of the key challenges in the adoption of responsible AI. Garzón et al. (2025) analyzed a variety of studies and reported that 14.8% of these studies raised an issue of ethics, including topics like data privacy, algorithmic bias, transparency and student surveillance. 12.3% of studies reported teacher resistance and other common issues were technical challenges, low digital literacy and implementation costs. These findings point to the fact that adoption does not necessarily fall in the category of technology-acquisition issues. Guidance within the institution must be provided around data governance, academic integrity, transparency and accountability and human oversight. Algorithmic systems may exhibit similar biases as the data on which they are trained and even as to their very design; automated decisions may be difficult for student and teacher to understand and contest. These risks are particularly relevant with respect to the use of AI for the purposes of evaluation, profiling, prediction or decision-making affecting educational opportunities.

The student-centred risks are that there is dependence on technology, reduced opportunities for self-led problem solving, anxiety with technology, lower levels of learning that occur from the technology being badly designed or used and less overall human interaction. Besides these technical challenges, elsewhere, Mukhamediev et al. (2022)

cite the following problems: non-interpretable or “black-box” decisions, lack of data, and lack of stability in the real world. Hence, it is not about good or bad AI but how, who, what, and how protected it is in education. Human supervision and transparency of institutional rules will be necessary to reduce the risk of the convenience of replacing the learning processes which students need to develop themselves.

Another key constraint of the evidence base is geographic concentration. Garzón et al. (2025) identified 155 studies, of which 44 were within mainland China (with Taiwan, USA, and Turkey also well represented). The comparatively small amount of evidence emanating from Latin America, Africa, and South Asia makes it difficult to extrapolate results in other linguistic, cultural, infrastructural, and socioeconomic contexts. This is especially true when it comes to assertions of equitable incorporation. A technology that is developed and evaluated in a high-income or highly digitized context may not yield similar results in contexts with limited internet, access to devices, teacher training, local language resources, and/or institutional capacity.

Equity needs to be seen as a precondition of implementation in the context of developing countries, such as India. While the National Education Policy (Government of India, 2020) is supportive of technology mediated learning, disparities in digital infrastructure, connectivity, teacher readiness, digital literacy and institutional readiness can affect access and use of AI. Linguistic differences, rural/urban disparities, cost, local institutional practices, and teacher readiness for assessing AI generated work need to be taken into account in the Indian context. Therefore, fair integration of AI in education requires a holistic approach that encompasses access to AI technologies, teacher training, governance transparency, inclusive design, and support for marginalized students.

Four interrelated needs illustrate the Indian situation: having a strong digital infrastructure, relevant teacher training, data and AI that are held accountable and needs-based supports for learners and institutions in socio-economically and geographically challenged settings. These requirements correspond with those raised in the international literature on the issue of equity in education at large, and with UNESCO's recommendations for human-centric,

safe, equitable and context-sensitive applications of generative AI in education. The analysis thus assumes the same infrastructure and training issues the same pathway since it does not have to be repeated along the equitable-integration pathway.

One of the most recurring themes in the literature is the great potential AI has in terms of efficiency, feedback and personalisation; evidence is of variable quality with a bias towards specific countries and contexts. This tension is provided as the relationship between the promise of technology and its transferability between context. This means the review distinguishes reported benefits and actual causal effects and it considers equity, teacher capacity, and governance and infrastructure as moderating rather than secondary conditions.

### Conclusion

The findings presented in this paper suggest that AI can play a role in personalized learning, feedback, learning outcomes, motivation, assessment, and chosen administration. But across the board claims of the benefits of AI in education are not substantiated by the literature. The impact depends on the nature of the AI, the design of the education, the level of education, the subject area, the characteristics of the learner, the preparedness of the teacher and the institutional context. A conditional pathway for synthesis based on the review is therefore created, where learning value is more likely to be realised when AI capability is coupled with pedagogical purpose, with teacher oversight, teacher capacity, responsible governance and equitable access. On the other hand, differences in infrastructure and basic digital skills, as well as opaque algorithms, faulty implementation, and excessive reliance, could exacerbate or create new gaps in education. Figure 1 outlines this pathway by connecting applications of AI, in particular to potential benefits, risks that may thwart such gains, and enabling conditions in governance, teachers, accessibility, and contextual adaptations. The framework is not designed to be an empirically tested causal model, but rather the author's synthesis of the literature reviewed.

### Future Research Directions

Future studies will need to transcend brief demonstrations of AI performance and evaluate continuous educational outcomes, using longitudinal

and comparative studies. Key areas of focus are critical thinking, creativity, academic integrity, student well-being, teacher workload, learning equity, and distributional impacts of AI between rural and urban schools. There should also be greater representation from South Asia, Africa, Latin America, and other under-researched contexts, and an analysis of the role of language, culture, socioeconomic status, disability, and infrastructure on AI outcomes. Comparative research at cross-disciplinary and cross-level levels can help to understand when AI can make a genuine contribution to pedagogy and when more traditional or human-centered methods are still better. Lastly, interdisciplinary efforts by teachers, computer scientists, psychologists, policy researchers and institutional leaders can assist in the development of evidence-based governance frameworks that can balance innovation with transparency, accountability, privacy, academic integrity and equity in education.

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# ANCHORING VALUE: THE COST ACCOUNTANT AS NAVIGATOR OF INDIA'S SHIPBUILDING RENAISSANCE

## Abstract

“Every Vessel Has a Cost. Every Cost Needs a CMA”

India's shipbuilding industry is witnessing a revival, driven by the Maritime India Vision, Atmanirbhar Bharat, and a new Shipbuilding Financial Assistance Policy. Behind every shipyard's hull lies a complex set of financial considerations, many tied to long-dated construction contracts. This article highlights the role of the Cost and Management Accountant as interpreter of Ind AS 115, 23, 37 and related standards for long-gestation contracts, and custodian of the cost discipline needed to make a shipyard commercially viable. It explains the mechanics of the SBFAP, the SBFAS and the Interest Incentivization Fund with flowcharts.



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### Introduction: Riding the Tide

When a keel originates at a shipyard, there is a distinctive noise heard - a dull and rhythmic thud of steel hitting steel and echoing throughout a yard that would be transformed over the next two to three years from being just a flat plate to a floating factory of valves, pipes, wires and compartments. It is not hard to miss the technological side of the shipbuilding from observing events happening at the edges of the dry dock to see shipbuilding purely as an engineering

marvel. Still, it is much harder to recognize that each welded plate, installed engine, and sea trials being performed represents a financial event that should also be measured, recorded, and accounted for, in its own way. Thus, somewhere between the moment when drawings are produced by a designer and the moment when a shipowner hoists the flag, the Cost and Management Accountant work, ensuring that everything is performed without mistakes and the numbers tell the same honest story as the steel.

In September 2025, the government announced a series of measures aimed at accelerating growth in India's shipbuilding sector. These initiatives focus on expanding domestic capacity, improving access to long-term financing, and cultivating a globally competitive maritime ecosystem. Together, they are intended to drive large-scale employment, attract sustained investment, and enhance India's strategic and economic resilience through modern infrastructure and targeted policy reforms. This measure forms part of a broader four-pillar strategy to strengthen India's maritime capabilities and enable shipyards and maritime companies to access capital at more competitive rates.



| Pillar   | Component                                | Description                                                                        | Outlay (₹ crore) |
|----------|------------------------------------------|------------------------------------------------------------------------------------|------------------|
| Pillar 1 | Shipbuilding Financial Assistance Scheme | Integrates targeted incentives, strategic missions and lifecycle support           | 24,736           |
|          | Financial Assistance                     | Financial support to Indian shipyards to bridge cost disadvantages                 | 20,554           |
|          | Ship-breaking Credit Note                | Credit note of vessel's scrap value when scrapped at an Indian shipyard            | 4,001            |
|          | National Shipbuilding Mission            | Drives and oversees national shipbuilding initiatives across sectors               | —                |
| Pillar 2 | Maritime Development Fund                | Strengthens the backbone of EXIM trade (95% of trade by volume, 65% by value)      | 25,000           |
|          | Maritime Investment Fund                 | Equity-based financing with additional investor contributions (initial allocation) | 20,000           |
|          | Interest Incentivization Fund            | Supports maritime sector entities by reducing effective borrowing cost             | 5,000            |
| Pillar 3 | Shipbuilding Development Scheme          | Long-term support: better infrastructure, safety measures and risk management      | 19,989           |
| Pillar 4 | Legal, Policy and Process Reforms        | Infrastructure status for large ships, demand aggregation and legislative updates  | —                |
| Total    |                                          |                                                                                    | 69,725           |

The Union Cabinet approved a comprehensive maritime and shipbuilding package of ₹69,725 crore in September 2025. The package includes ₹24,736 crore for the Shipbuilding Financial Assistance Scheme (SBFAS), ₹25,000 crore for the Maritime Development Fund and ₹19,989 crore for the Shipbuilding Development Scheme, aimed at strengthening domestic shipbuilding capacity, maritime financing and competitiveness. (Source: Press Information Bureau, Cabinet decision of 24 September 2025.)

## The Engineering Complexity Behind Every Hull

A ship is not manufactured; it is grown. Unlike mass produced items that come off a conveyor belt, shipbuilding involves a special design of the vessel. Parts of the hull may be produced by different suppliers, but the actual fittings, engines, etc., are usually tailor-made and expensive. Above all, there are many kinds of vessels with different design specifications and approaches to construction. In general, building a ship is a more complicated process than any other type of manufacturing.

Naval architects may come up with various designs for the different vessels they create, yet the whole process of constructing the vessel requires many different components of construction including outfitting and painting works. The concept of traditional job costing is altered to suit shipbuilding whereby costs are tracked on hull number basis over various cost centres like electrical work, outfitting, fabrication and painting in a manner that follows the order of the physical sequence of shipbuilding. CMAs take into consideration the apportioning of overhead costs in different processes of shipbuilding. Furthermore, the price of steel may lead to a disparity in the contract, in terms of profit between the time of winning the contract and the moment of delivering the vessel to the client in such a way that allows one to use the developed skills of estimation and tracking of costs in the process.

## The Shipbuilding Financial Assistance Policy and Scheme: Where Policy Meets Cost Accountancy

*“From ₹24,736 crore of assistance to Ind AS accounting, the CMA quietly steers India’s shipbuilding revival, one costed hull at a time.”*

### 1. From SBFAP to SBFAS

Indian yards compete against yards in China, South

Korea and Japan that benefit from scale, mature supply chains and, historically, aggressive state support. To narrow this gap, the Ministry of Ports, Shipping and Waterways introduced the Shipbuilding Financial Assistance Policy (SBFAP), under which eligible yards receive assistance calculated as a percentage of vessel price, released at keel-laying, launching and delivery. The assistance is the applicable rate multiplied by the lowest of Contract Price, Fair Price and (at final release) Actual Payment, converted at the SBI TT buying rate on the Date of Contract. Although on the face of it, the last Financial Assistance Policy sounded simple enough, it wasn’t of much help since it resulted in limited compensation. Very few of the existing Indian registered shipyards were able to take advantage of this scheme. The SBFAS, approved in September 2025 as its extension, has an outlay of ₹24,736 crore. Assistance ranges from 15% to 25% of the eligible price, depending on vessel category and price slab, with higher assistance for green, hybrid and specialised vessels, subject to minimum domestic value addition. The below Table summarises the differences. The SBFAP guidelines were amended on 14 May 2026 to add definitions of Security Instrument, Institutional Mechanism and Ship Owner, stage payments and other clauses like a force majeure clause. The SBFAS guidelines were issued on 26 December 2025 and modified on 7 January 2026.

**Table: SBFAP versus SBFAS**

| Feature                  | SBFAP<br>(amended<br>14.05.2026)                                            | SBFAS (modified<br>07.01.2026)                                   |
|--------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------|
| Rate                     | 20% / 17% / 14% by year of contract; 30% green fuel; 20% electric or hybrid | 15% up to ₹100 crore; 20% above (large); 25% above (specialised) |
| Domestic content         | Major hull portion built in India                                           | Below 30%: nil; 30-40%: pro rata; 40%+: full;                    |
| Eligible Contract Window | Signed between April 1, 2016 and March 31, 2026.                            | Signed between September 24, 2025 and March 31, 2036.            |
| Release                  | 30% keel laying, 40% launching, 30% delivery                                | Same; plus Shipbreaking Credit Note                              |

| Feature                  | SBFAP<br>(amended<br>14.05.2026)                                                       | SBFAS (modified<br>07.01.2026)                                                                                                                          |
|--------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecosystem<br>Integration | Operated<br>standalone to<br>grant monetary<br>incentives<br>directly to<br>shipyards. | Interlinked with the<br>newly established<br>₹25,000 crore<br>Maritime<br>Development<br>Fund (MDF) for<br>comprehensive<br>equity and debt<br>support. |

Source: SBFAP and SBFAS Guidelines

For a Cost Accountant, this has a direct bearing on the financial viability of a contract and its accounting treatment. When assessing viability, one must consider the contract or Fair Price that will be reimbursed and the eligibility terms, examining whether the vessel and its buyer meet the criteria.

## 2. Ind AS 115 measures the transfer of performance - the CMA measures the cost of delivering that performance

The role of CMA is exercising significant judgment in measuring progress of performance obligations satisfied over time for recognition of revenue from contracts with customers. Revenue is recognized over time by measuring the work carried out or survey of performance completed to date under output method under Ind AS 115. Under this method, works completed to date in each contract are the basis to measure and recognize revenue. The quantum is calculated by each project team based on the technical progress up to the reporting date. The revenue recognized reflects the value of works completed/measured to date in line with the consideration as determined in the respective contracts. Provision for estimated losses if any, on the uncompleted part of the contracts are provided in the period in which such losses become probable based on the expected contract estimates at the reporting date.

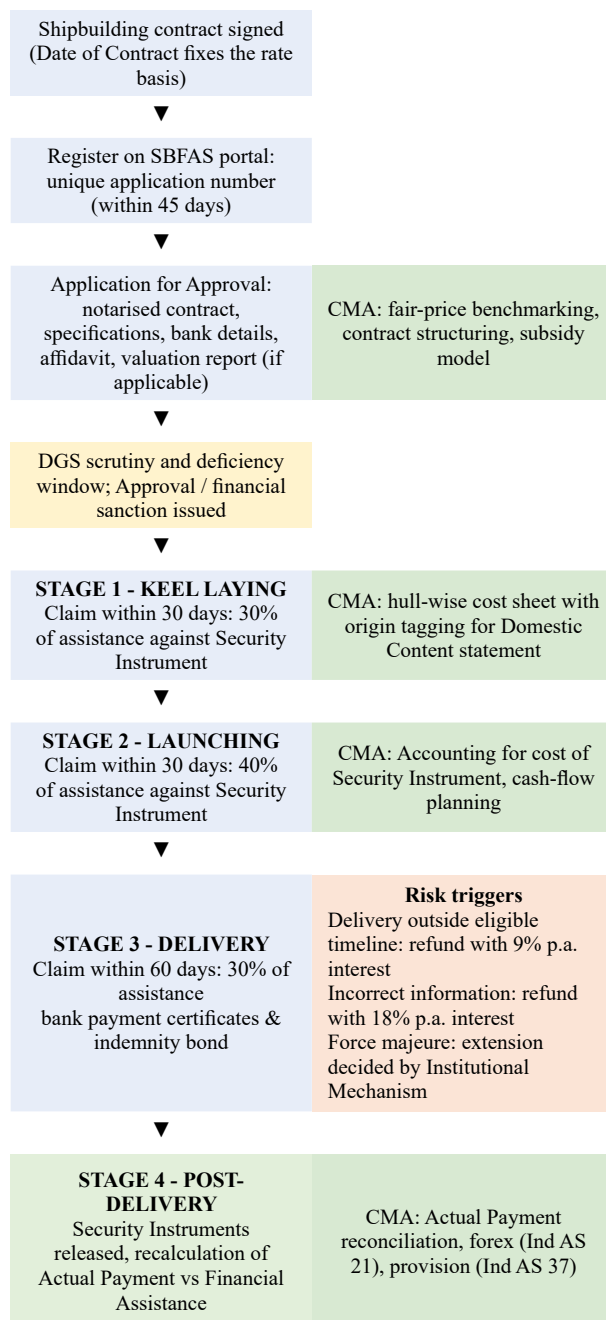
In the case of ship repair contracts involving continuous maintenance support /recurring and routine services, the role of CMA is exercising the time elapsed output method i.e. measuring the progress based on time elapsed to reporting date, which is representative of the satisfaction of performance obligation subject to entitlement of consideration in exchange of goods and/or services. The measurement of progress towards complete satisfaction of a performance obligation is based on technical assessment and is revised/updated

on an ongoing basis.

*Ind AS 115 determines when revenue is earned; the Cost Accountant determines whether the numbers truly reflect the performance behind it.*

## 3. Claim lifecycle

Figure shows the claim lifecycle from contract to final post-delivery claim, released 30% at keel laying, 40% at launching and 30% at delivery, and where the CMA's work feeds it.

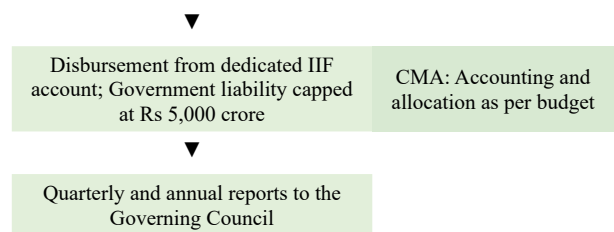
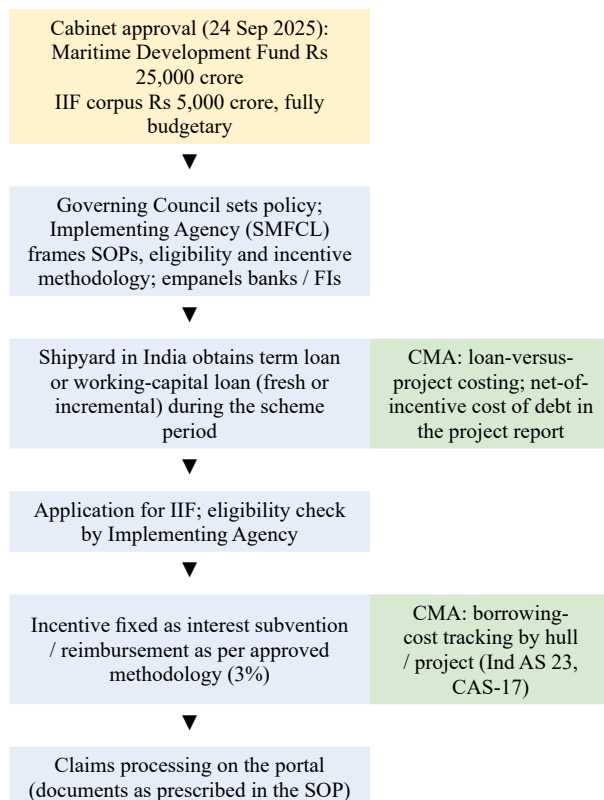


**Figure1: SBFAP / SBFAS claim lifecycle and CMA touchpoints**

## The Interest Incentivization Fund: Cheaper Money for a Capital-Hungry Industry

In contrast to the SBFAS, which narrows the price gap on completed ships, the Interest Incentivization Fund (IIF) addresses the equally critical problem of high borrowing costs. Shipbuilding needs large working capital given the long period between order and delivery, and Indian capital has been relatively expensive.

The IIF, established under the Maritime Development Fund (MDF), is designed to support shipyards located in India by reducing their effective cost of borrowing. By lowering the cost of debt, the scheme aims to enhance the financial viability of shipbuilding and related maritime projects. This initiative forms a key component of the government's strategy to strengthen India's maritime and shipbuilding capabilities. Through this interest-based incentive, Indian shipyards and maritime companies gain access to capital at more competitive effective rates. All term loans, CAPEX loans and working capital loans availed by shipyards located in India would be eligible for availing coverage under IIF. IIF shall provide interest incentive of 3% per annum on term loans and working capital loans of shipyards located in India.



**Figure 2: Interest Incentivization Fund process flow**

As far as the Cost Accountant's role is concerned, the implications are far reaching. In assessing project feasibility, the lower interest rate under the IIF must be considered, and project reports should use this preferential rate in total expenses, not the yard's overall rate. Loan documents must also be prepared to accounting and auditing requirements so that no later objection arises about treatment as a subsidy. The incentive should be recorded only when there is reasonable assurance that the loan conditions will be met, disclose it, and keep loan-wise workings so that the net borrowing cost per hull is visible in costing under CAS-17.

*Build the Ship, Control the Cost, Create the Value.*

## The Cost Accountant's Tool-kit Across the Yard

The contribution of the Cost Accountant is best appreciated as a thread running through every stage of construction, as illustrated below.

| Value Chain Stage             | Role of the Cost Accountant                                                                                                                                                                |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design & Estimation           | Building the cost model for tender bidding; costing alternative material and machinery options; setting standard costs for steel, outfitting and labour hours per hull.                    |
| Contracting & SBFA Compliance | Structuring contract price to align with eligibility norms; preparing and certifying milestone-linked claims; liaising with the Directorate General of Shipping., Benchmarking Fair Price. |
| Procurement & Sub-contracting | Make-versus-buy analysis; variance analysis on imported machinery against budgeted exchange rates; vendor cost audits.                                                                     |

| Value Chain Stage          | Role of the Cost Accountant                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Production                 | Job and process costing by hull; tracking overruns against the work breakdown structure; idle-time analysis across shops.  |
| Testing, Trials & Delivery | Costing rework from sea-trial deficiencies; final contract profitability; reconciling actual cost to Ind AS 115 estimates. |
| After-Sales & Warranty     | Warranty provisions under Ind AS 37; life-cycle costing for maintenance contracts.                                         |

**Table: Role of the Cost Accountant Across the Shipbuilding Value Chain**

This encompasses processes from the design phase, where alternative analysis gives preliminary cost estimates, to the post-sales phase, when life-cycle costing measures come into play.

## Beyond the Balance Sheet: Economic, Social and Strategic Stakes

The significant role of the Cost Accountant extends beyond financial statements. A shipyard is the last point of a long chain of suppliers of fabricated components, castings, fittings and cables, so the efficiency of smaller firms is tied to the yard's cost discipline. Shipbuilding is also manpower-intensive, creating jobs in towns such as Kolkata, Kochi, Visakhapatnam and Mumbai. Building warships, dredgers and research ships locally reduces dependence on foreign technology and saves foreign exchange, an objective to which CMAs indirectly contributes.

## Challenges on the Horizon

The road is never without friction. Despite its potential benefits, cost overruns are prevalent in the industry, where changes to the designs occur frequently and where anticipated costs can change due to unexpected engineering challenges. Among these is the idea that the shipbuilding industry will always face the problem of cost overruns. In addition to that, the knowledge of the technological aspects of shipbuilding adds to the difficulties that a CMA has to overcome when dealing with the problem of cost overruns. Finally, although a wide range of processes are being digitalised, it is, nevertheless, far from being an all-prevailing method of variance analyses in the industry.

It is necessary to promote the development of a

standard costing approach specific to the shipping sector, which might take the form of a Cost Accounting Standard specifically addressing the intricacies of the sector's various costing issues, including the treatment of design and pre-production expenses, allocation of dry dock and infrastructure costs across various hulls under construction and the cost of rework required after trials and other purposes.

## Conclusion: The Quiet Navigator

When the finished vessel finally leaves its moorings and leaves the yard, the achievement belongs to the architects, the welders, and the engineers who created metal from a drawing. However, every single accomplishment that made this day financially viable and every subsidy claim validated through the SBFA, every cost-to-complete projection that ensured that Ind AS 115 complied with accounting legislation, every variance report that managed to catch an overspending before it got out of control - has been marked with a touch of Cost Accountant's hand. As India is pursuing the goal of achieving greater maritime independence, the role of the profession is to stay, as it has been at its very best: invisible on the deck, but absolutely necessary in the engine room, keeping the numbers as safe as is the case with the vessels. As they say, it is easy to navigate the seas when one is on land.

**From Steel to Sailing: The Cost Accountant Behind Every Vessel!** 

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## Webinar on “MSME ACT 2.0 AND CMAs” by The Journal & Publications Committee, ICAI on September 17, 2026

The Journal & Publications Committee of the Institute organised an insightful webinar on the topic “MSME Act 2.0 and CMAs” on 17 September 2026. The programme commenced with the welcome address by CMA Harshad S. Deshpande, Chairman, Journal & Publications Committee, ICAI, who highlighted the vital contribution of Micro, Small and Medium Enterprises (MSMEs) to the Indian economy and emphasised the significant role of CMAs in supporting MSMEs in financial structuring, compliance, cost management and sustainable growth. The distinguished Resource Person, Dr. Ranjith Krishnan, Associate Professor, Christ University, Delhi NCR, provided an engaging and comprehensive overview of the evolution of the MSME legislative framework from the 2006 Act to the modernised 2026 framework. He highlighted that the new framework represents a significant structural transformation, driven by digitalisation, technological integration and the changing needs of the MSME ecosystem. Key developments discussed included paperless

registration through Udyam, digital processes, supply-chain financing through TReDS, enhanced dispute-resolution mechanisms and a greater emphasis on formalisation, financial readiness and enterprise growth. Dr. Krishnan further emphasised the expanding professional opportunities for CMAs in areas such as project appraisal, product costing, working capital management, cash-flow analysis,

cost-benefit assessment, SME exchange listings and sustainability reporting. He noted that CMAs can play a pivotal role in translating regulatory requirements into practical financial strategies and helping MSMEs address challenges relating to profitability, liquidity, pricing and financial decision-making. The webinar featured an engaging Q&A session, moderated by Ms Somalika Chakraborty, Journal & Publications and concluded with a vote of thanks by CMA Sucharita Chakraborty, HoD, Journal & Publications Department, ICAI who expressed her appreciation to the resource person and participants and extended her warm greetings and best wishes.



## Congratulations!!!



**CMA (Dr.) Prasanna Kumar Acharya**

Heartiest congratulations to CMA (Dr.) Prasanna Kumar Acharya on assuming charge as the Chairman and Managing Director (CMD) of NLC India Limited on 17 September 2026 at the Company's Corporate Office, Neyveli.

A seasoned professional with nearly three decades of experience across the Power, Mining and Infrastructure sectors, Dr. Acharya has held key positions in organisations including GRIDCO, NTPC and Tata Power. Prior to his appointment as CMD, he served as Director (Finance), NLC India Limited.

We extend our heartfelt congratulations and best wishes to CMA (Dr.) Prasanna Kumar Acharya on this significant achievement and wish him continued success, excellence and many more accomplishments in all his future endeavours.

# *Down The Memory Lane*

**October, 2016**



CMA Amit Apte, Council Member addressing the audience at the '16<sup>th</sup> London Global Convention', 17 - 20 October, 2016, in London.

**October, 2006**



Industry Meet on Cost Audit (16 October, 2006, Kolkata). Dhananjay V. Joshi, President felicitating P.S. Bhattacharyya, Chairman-Coal India. Also seen, Chandra Wadhwa, Vice President & B. Majumder, CCM.



P.S. Bhattacharyya, Chairman-Coal India Limited, addressing the Industry Meet at Kolkata (16 October, 2006). Also seen from left: Moloy Sengupta (Chairman-MSTC Ltd.), B Mazumder (CCM) and D.V. Joshi, President.

**October, 1996**



Dr. Peter B.B. Turney, President and Chief Executive Officer, Cost Technology Inc., USA, receiving a memento from S. Ananthanarayanan, Chairman, CII (SR), during Cost Congress '96 on 3 & 4 October '96.

# *Down The Memory Lane*

**October, 1996**



K.V. Shetty, Jr. Chairman, Cost Congress' 96, addressing the audience of Cost Congress on 3 & 4 October' 96.

**October, 1986**



Dr Farooq Abdullah addressing the programme as Chief Guest at the Seminar on Internal Audit organized by Northern India Regional Council of the Institute of Cost and Works Accountants of India, hosted by Srinagar Chapter of Cost Accountants on 9<sup>th</sup> October 1986.



Shri A.V.S. Rao, President, ICWAI, inaugurating the seminar on MODVAT organized by SIRC of ICWAI on 7<sup>th</sup> October 1986 at Connemara Hotel, Madras.

**October, 1976**



Shri Mohd. Fazal, Chairman, Engineering Projects (India Ltd) delivering his talk on "Export on Turn-Key Projects" on 8<sup>th</sup> October, 1976.



Smt. Varalakshmi Rajamanickam, I.R.S., Dy Director (Training), Directorate of Customs and Central Excise, delivering the introductory speech at the Valedictory Function of the 'six day course' on Cost Accounting in their Regional Training Institute of Dy Director (Training), Directorate of Customs and Central Excise at Madras organized by the Southern India Regional Council from October 25 to 30, 1976. In the chair is Shri D.S. Somayajulu, Chairman, SIRC and Shri V. Kalyanaraman, past President, ICWAI and Central Council Member.

*Source:*

*Extracted from the various issues of The Management Accountant Journal*

[www.icmai.in](http://www.icmai.in)

### CMA Career Awareness Initiatives

EIRC successfully conducted a series of impactful Career Awareness Programmes across multiple schools and colleges in West Bengal throughout August and September 2026. Reaching institutions such as Sri Ramkrishna Sikshalaya, Bybartarhat Adarsha High School, Geonkhali High School, Mahadevananda Mahavidyalaya, and Kalyani Mahavidyalaya, these sessions engaged close to 600 commerce students and faculty members. Led by esteemed speakers like CMA Prabal Kr Bose, Shri Hemanta Kumar Biswal, CMA Subhendu Datta, CMA Anup Chatterjee, and CMA Dr. Subrata Mukherjee, the interactive programs provided valuable insights into the CMA course structure, examination details, and diverse career prospects.

### Teachers Day Celebration

EIRC celebrated Teacher's Day grandly on 5th September 2026 at its premises. The memorable event was graced by esteemed dignitaries including Council Member CMA Avijit Goswami, Chairman CMA Damodara Mishra, Vice-Chairman CMA Abhijit Dutta, Secretary & Treasurer CMA Bidyadhar Prasad, Immediate Former Chairperson & RCM CMA Arati Ganguly, and Former Chairman & RCM CMA Subhasish Chakraborty, alongside enthusiastic participation from guest faculties, students, and staff.

### Inaugural Session of Advanced Skill Training Programme (ASTP)

The inaugural session of the Advanced Skill Training Programme (ASTP) Batch-1 commenced with the National Song on 5th September 2026 at the J.N. Bose Auditorium. The event was officially inaugurated by CMA Chittaranjan Chattopadhyay, President of ICAI, and featured addresses from esteemed dignitaries including Council Member CMA Avijit Goswami, EIRC Chairman CMA Damodara Mishra, Vice-Chairman CMA Abhijit Dutta, Secretary & Treasurer CMA Bidyadhar Prasad, Immediate Former Chairperson & RCM CMA Arati Ganguly, Former Chairman & RCM CMA Subhasish Chakraborty, and Officiating Secretary CMA (Dr.) Debaprosanna Nandy. A total

of 182 newly qualified CMAs from the June 2026 term actively participated in this opening session.

### CPE Programme on Internal Audit

EIRC successfully conducted a Continuing Professional Education (CPE) Programme titled "Transform. Communicate. Influence: Empowering CMAs to Lead the Future of Internal Audit" on 12th September 2026 at its Kolkata auditorium. Inaugurated by ICAI President CMA Chittaranjan Chattopadhyay in the presence of key regional leaders—including Chairman CMA Damodara Mishra, Vice-Chairman and PD Committee Chairman CMA Abhijit Dutta, Secretary & Treasurer CMA Bidyadhar Prasad, Immediate Former Chairperson & RCM CMA Arati Ganguly, and Former Chairman & RCM CMA Subhasish Chakraborty—the session featured expert insights from resource persons CMA Kallol Mitra and CMA Aditya Sen. Over 100 CMA members actively participated to explore the evolving role of professionals in internal audit, governance, risk management, and strategic decision-making.

### Ganesh Puja Celebration

EIRC celebrated Ganesh Puja on 14th September 2026, marking the auspicious occasion with vibrant devotion. The special event was attended by over 100 participants, featuring esteemed leaders including Former Chairmen CMA Subhasish Chakraborty and CMA Uttam Kr. Nayak, Additional Director of Journal & Publication CMA Sucharita Chakraborty, alongside active participation from CMA members, students, faculties, and staff.

### Viswakarma Puja Celebration

EIRC celebrated Viswakarma Puja with great devotion and enthusiasm on 18th September 2026 at its premises. The auspicious occasion was graced by Former Chairman of ICAI-EIRC, CMA Subhasish Chakraborty, alongside enthusiastic participation from CMA members, students, faculty, and staff.

### Inaugural Session of Advanced Skill Training Programme (ASTP) Batch-2

The inaugural session of the Advanced Skill Training Programme (ASTP) Batch-2 commenced with the National Song on 20th September 2026 at

the J.N. Bose Auditorium. The event was officially inaugurated and graced by ICAI President CMA Chittaranjan Chattopadhyay, alongside distinguished leaders including Council Member CMA Avijit Goswami, ICAI-EIRC Chairman CMA Damodara Mishra, Vice-Chairman CMA Abhijit Dutta, Secretary & Treasurer CMA Bidyadhar Prasad, Immediate Former Chairperson & RCM CMA Arati Ganguly, Former Chairman & RCM CMA Subhasish Chakraborty, and Officiating Secretary CMA (Dr.) Debaprosanna Nandy, who all shared encouraging words for the candidates' professional futures. A total of 205 newly qualified cost accountants from the June 2026 term attended the session, gaining valuable insights into career opportunities, future professional growth, and upcoming campus placement prospects.

### ASANSOL CHAPTER

#### Student Training and CPE Programmes

The Chapter successfully conducted a series of vital educational and professional development programmes throughout September 2026. This included a Skill Training Programme for Intermediate students from 4th to 13th September 2026, a Continuing Education Programme (CEP) focusing on the "BRICS Summit and its Impact on Indian Economy" on 19th September 2026, and an Industrial Orientation Training Programme (IOTP) for Final students appearing in the December 2026 term examinations from 20th to 29th September 2026.

### BHUBANESWAR CHAPTER

#### Career Awareness Programmes

The Chapter successfully conducted a series of CMA Career Awareness Programmes across various educational institutions between late August and early September 2026. Reaching S.P. Commerce Hub in Bhubaneswar, Kharasrota Mahavidyalaya and U.N.S. College in Jajpur, and Buxi Jagabandhu English Medium School in Bhubaneswar, these sessions engaged over 300 commerce students and faculty members. Led by distinguished chapter representatives including CMA Saroj Kumar Mishra, CMA Niranjana Sahoo, CMA Santanu Kumar Rout, and Chapter Chairman CMA Avinash Kotni, the

interactive programmes provided detailed insights into the CMA course curriculum and its promising career opportunities, enabling participants to actively clear their queries.

#### Webinar on Ind AS Masterclass Series (Episode 2)

The Chapter successfully hosted the second episode of its Ind AS Masterclass Series webinar on "Impairment of Assets (Ind AS 36) and Intangible Assets (Ind AS 38) – Concepts, Case Studies & Compliance" on 30th August 2026. Following a welcoming address by Vice Chairman CMA Satya Sundar Mahasuar, the technical session was led by expert resource person CMA Ramsankar Mishra, Chief Manager – Finance at MRPL Ltd. He provided comprehensive insights into core concepts, compliance requirements, and practical case studies, significantly enhancing participants' real-world financial reporting skills before concluding with a vote of thanks.

#### Advanced Skill Training Programme (ASTP)

The Advanced Skill Training Programme (ASTP) for the June 2026 term examination was inaugurated on 3rd September 2026 at the Chapter. The event was graced by esteemed dignitaries including ICAI President CMA Chittaranjan Chattopadhyay and ICAI-EIRC Chairman CMA Damodara Mishra, with a warm welcome extended by Chapter Chairman CMA Avinash Kotni and Vice-Chairman CMA Satya Sundar Mahasuar, who emphasized the value of skill enhancement and practical learning. The successful inaugural session concluded with a formal vote of thanks proposed by Immediate Past Chairman CMA Sarat Kumar Behera.

#### Members' Meet on MSMEs and Viksit Bharat

The Chapter successfully organized a Members' Meet on the theme "MSMEs – Role of CMAs as Catalysts for Viksit Bharat" at CMA Bhawan on 3rd September 2026, drawing over 200 participants, professionals, and stakeholders. Initiated by a welcome address from Chapter Chairman CMA Avinash Kotni, the inaugural session was graced by NSIC Chairman-cum-Managing Director Dr. Subhransu Sekhar Acharya as Chief Guest, ICAI President CMA Chittaranjan Chattopadhyay as Chief Patron, and ICAI-EIRC Chairman CMA Damodara

Mishra as Guest of Honour, with proceedings managed alongside Immediate Former Chairman CMA Sarat Kumar Behera. The subsequent technical session—anchored by Treasurer CMA Soumya Ranjan Jena—featured expert insights from NSIC officials Shri Manoj Mohan Sinha and CMA Kamal Lochan Nayak on the MSME ecosystem and professional opportunities, concluding with valuable discussions on how CMAs can empower micro and small enterprises to drive economic growth.

### Teachers' Day Celebration

The Chapter celebrated Teachers' Day with great joy and reverence on 5th September 2026 at CMA Bhawan, where students offered heartfelt tributes and expressions of gratitude to their mentors. The auspicious occasion featured inspiring thoughts, blessings, and professional career wishes shared by Immediate Former Chairman CMA Sarat Kumar Behera, Vice Chairman CMA Satya Sundar Mahasuar, along with teaching members, faculties, and managing committee members, highlighting the enduring bond between mentors and students.

### Ganesh Puja Celebration

The Chapter celebrated Lord Ganesh Puja with great devotion on 14th September 2026 at CMA Bhawan. Around 500 students, members, faculties, staff, and their family members actively participated in the prayers and partook in the Prasad Sevan, with Immediate Former Chapter Chairman CMA Sarat Kumar Behera serving as the "Karta" for the auspicious occasion.

### Valedictory-cum-Certificate Conferral Ceremony of ASTP

The Chapter successfully hosted the Valedictory-cum-Certificate Conferral Ceremony for the Advanced Skill Training Programme (ASTP) on 16th September 2026. The event was graced by distinguished dignitaries including Former Chapter Chairman CMA Nilamani Mohapatra and GRIDCO Ltd. Director (Finance) CMA Kshirod Chandra Nanda, with Chapter Chairman CMA Avinash Kotni delivering the welcome address, felicitation, and formal vote of thanks. The inspiring ceremony featured the awarding of certificates and medals to participants, motivating young CMAs to embrace ethics, continuous learning, and professional

excellence in alignment with the Institute's mission of nation-building.

## PATNA CHAPTER

### Corporate Mitra Orientation Programme

In association with the Corporate Mitra Committee of ICAI, the Chapter successfully organized the Corporate Mitra Orientation Programme on 11th August 2026 at Red Velvet Hotel, Patna. Aimed at strengthening the Corporate Mitra initiative, the well-attended event brought together members, students, and industry professionals on a common platform, where senior dignitaries and eminent speakers shared valuable insights on expanding institutional outreach and fostering stronger industry-institute collaboration.

### Campus Placement Success at COMFED

The Chapter achieved a proud milestone through a successful campus placement drive at the Bihar State Milk Co-Operative Federation Ltd. (COMFED), resulting in the placement of four CMA qualified and four CMA intermediate qualified candidates. This accomplishment highlights the growing recognition of CMA professionals within Bihar's cooperative and public sectors, reflecting the Chapter's dedication to strengthening industry connections and creating meaningful career opportunities.

## SAMBALPUR CHAPTER

### Student Felicitation Programme cum Members Meet

The Chapter successfully organized its Student Felicitation Programme cum Members Meet 2026 on 19th September 2026 at Harjit Residency, Odisha, drawing around 300 delegates. The event featured the felicitation of meritorious students from the past two examination sessions by Chief Guest CA Rohit Kumar Singhania, whose extensive professional experience inspired attendees. Additionally, the programme included enriching Continuing Professional Education (CPE) sessions on contemporary topics such as the role of CMAs in the banking industry, the Income Tax Act 2025 and Income Tax Rules 2026, motivation, and leadership, fostering valuable knowledge-sharing and networking among members and students.

## SERAMPORE-HOOGHLY CHAPTER

### Career Awareness Programmes

The Chapter successfully conducted impactful CMA Career Awareness Programmes at educational institutions across the Hooghly district in early September 2026. On 2nd September 2026, a comprehensive session was hosted at Chandernagore College (Govt.) under the leadership of Chapter Chairman CMA Santanu Mukhopadhyay, alongside Kolkata Office Deputy Director CMA Ria Chowdhury, Secretary CMA Prabir Kumar Datta, and Treasurer CMA Bibhas Saha, drawing 86 commerce students and faculty members. This was followed on 3rd September 2026 by an engaging programme at Sheoraphuli Surendranath Vidyaniketan for 30 class 11 commerce students, guided by CMA Santanu Mukhopadhyay, CMA Samarkanti Ghosh, and CMA Sanjay Ghosh. Both events featured detailed presentations on the CMA course curriculum, examination pathways, and diverse professional opportunities, encouraging students to pursue early registration and career excellence.

## SOUTH ODISHA CHAPTER

### Two Days CMA Practitioners Meet

The Chapter successfully organized the 2 Days CMA Practitioners Meet – 2026 on 22nd and 23rd August 2026 at Tampara Resorts, Ganjam, Odisha, focusing on the theme "Challenges and Opportunities of CMAs." Initiated by a welcome address from Chapter Chairman CMA Lipu Panda and coordinated by Professional Development Committee Chairman CMA Prasanta Kumar Pani, the event was inaugurated by Chief Guest CA Deepak Jain, Financial Controller of TPSODL, Brahmapur. Over 100 practicing members, industry professionals, and stakeholders engaged in four dynamic technical sessions covering Amazing AI Tools for CMAs, Cost/Internal/Stock Audits, Banking/Valuation/Certifications, and Income Tax & Litigations, led by distinguished resource persons including CMA Satya Sundar Mahasuar, CMA Niranjan Mishra, CMA Ashutosh Debata, and CMA Niranjan Swain. Day 2 featured a secretarial report presented by Chapter Secretary CMA Dharmendra Kumar Padhy, and the enriching meet concluded with the National Anthem and a formal vote of thanks delivered by CMA Narasinga Chanda Kar.

## Glimpses of Eastern India Regional Council



*Eastern India Regional Council*



*Eastern India Regional Council*



*Asansol Chapter*



*Asansol Chapter*



*Bhubaneswar Chapter*



*Bhubaneswar Chapter*



*Patna Chapter*



*Patna Chapter*



*Sambalpur Chapter*



*Sambalpur Chapter*



*Serampore-Hooghly Chapter*



*Serampore-Hooghly Chapter*



*South Odisha Chapter*



*South Odisha Chapter*

## NORTHERN INDIA REGIONAL COUNCIL

### JAIPUR CHAPTER

#### DGR Director General's Review Visit to Jaipur Chapter

Major General S.B.K. Singh, SM, Director General of the Directorate General Resettlement (DGR), accompanied by DGR and DRZ (West) representatives, visited the Chapter on September 3, 2026, to review the ongoing DGR-sponsored CAT Course for Armed Forces personnel. Welcomed by Chapter Chairman CMA Deeptanshu Pareek and coordinated by Joint Director CMA R.K. Jain, the dignitaries inspected training facilities, reviewed academic records, and interacted directly with participants and faculty members, while chapter leadership emphasized their ongoing dedication to high-quality professional development and skill-building for service members.

#### Teachers' Day Faculty Felicitation

During the celebrations, the Chapter felicitated its faculty members with mementoes in recognition of their dedication to student education, skill development, and personality building. Dignitaries and office bearers praised the teachers for guiding students toward professional and personal growth, while the faculty expressed deep gratitude to the Management Committee for this encouraging gesture of appreciation.

#### ASTP Inauguration

The Chapter inaugurated the Advanced Skill Training Programme (ASTP) on September 5, 2026, in a ceremony graced by Chief Guest CMA

Dr. Ashok Kumar Jain, former NIRC chairmen, and chapter leadership. Featuring the highest-ever student participation, the batch focuses on professional ethics, communication, etiquette, and leadership, with speakers encouraging attendees to leverage the training to excel in the competitive corporate world.

#### Grand ASTP Valedictory Ceremony

The Chapter successfully hosted its landmark Grand ASTP Valedictory and Certificate Distribution Ceremony on September 16, 2026, at the AICTE–Innovation Centre—marking the first time the programme was held outside the chapter campus. Coordinated by Secretary CMA Purnima Goyal and welcomed by Chapter Chairman CMA Deeptanshu Pareek, the event was graced by eminent guests including CMA Amit Jhalani (CFO, GAIL Gas Limited) and Mr. Vinay Patni (MD, Rajasthan State Gas Limited), featuring certificate distributions for newly qualified CMAs and an inspiring career guidance session by keynote speaker Mr. Anil Sharma.

#### MSME Conclave on MSME Growth

The Chapter–NIRC of ICMAI successfully hosted an MSME Conclave on September 20, 2026, at Hotel Clarks Bella Casa, uniting industry, banking, and professional leaders to discuss financing, market competitiveness, and sustainable growth. Featuring a keynote address by Ministry of MSME Executive Board Member Ms. Anju Singh, alongside technical sessions and panel discussions moderated by domain experts and bankers, the event provided a vital collaborative platform to address ground-level business challenges and policy support.

## Glimpses of Northern India Regional Council



*Jaipur Chapter*



*Jaipur Chapter*

### SOUTHERN INDIA REGIONAL COUNCIL

#### Members Meet ICMAI Leadership

The Regional Council hosted a members' meet on August 28, 2026, at Grand Chennai by GRT Hotels, featuring welcome remarks by Chairman CMA Praveen Kumar and addresses by prominent council members. Following the formal introduction and presidential address by ICMAI President CMA Chittaranjan Chattopadhyay, an interactive open house allowed members to discuss professional matters, with the event concluding with a vote of thanks, networking dinner, and the awarding of two CPE credit hours.

#### Launching of Advanced Skill Training Programme

The Career Counselling and Placement Committee of ICMAI, in association with SIRC, recently inaugurated a 12-day Advanced Skill Training Programme for qualified Cost Accountants from the June 2026 term. Featuring a welcome address by SIRC Chairman CMA Praveen Kumar and remarks from esteemed council dignitaries, the initiative is designed to equip newly qualified professionals with essential practical expertise to enhance their career growth and placement prospects.

#### Taxation Conclave 2026

The Regional Council successfully hosted a Taxation Conclave on September 12, 2026, at Vestin Park, Chennai, featuring expert technical sessions on GST litigation and GSTAT e-filing appeals led by distinguished speakers Shri R. Srivatsan, IRS,

and Shri Ritesh Kumar. Attended by over 100 members and coordinated by prominent council leaders, the event concluded with an interactive Q&A, networking hi-tea, and the awarding of four CPE credit hours.

### COCHIN CHAPTER

#### All Kerala Chapters Meet

The Chapter hosted the All Kerala Chapters Meet on August 8, 2026, at Sanskreti by Kallanchery Retreat, Kumbalangi. The gathering brought together SIRC Chairman CMA Praveen Kumar alongside managing committee members from chapters across Kerala to collaborate and discuss regional professional objectives.

#### 80<sup>th</sup> Independence Day Celebration

The Chapter proudly commemorated India's 80th Independence Day on August 15, 2026, at the chapter premises. The event featured the ceremonial hoisting of the National Flag by Chapter Chairperson CMA George P. Mathew, followed by patriotic renditions and an inspiring address emphasizing national unity, integrity, and collective responsibility.

#### Students' Onam Celebration 2026

The Chapter celebrated Onam on August 18, 2026, at SNDP Hall, Mamangalam, with a vibrant gathering inaugurated by Vice Chairperson CMA Arun Kumar S and presided over by Chapter Chairperson CMA George P. Mathew. The festive event featured lively cultural programmes, interactive games, and a traditional Onasadya, offering students a joyful celebration of unity and cultural heritage.

## 9<sup>th</sup> Kerala State Cost Convention 2026

The Chapter successfully hosted the 9th Kerala State Cost Convention on August 21, 2026, at Taj Vivanta, Ernakulam, centered on the theme "India in Command: Navigating a Volatile World." Inaugurated by former Union Finance Secretary CMA Subhash Chandra Garg alongside ICAI President CMA Chittaranjan Chattopadhyay, the convention featured insightful technical sessions and a dynamic panel discussion exploring market volatility, smart manufacturing, AI-driven governance, and the evolving role of Cost and Management Accountants in shaping India's economic future.

## Members' Onam Celebration 2026

The Chapter celebrated Onam on September 6, 2026, at Vinayaka Auditorium, Kadavanthra, Kochi, bringing together members, staff, and families for a festive gathering. Highlighted by a welcoming address from Chapter Chairperson CMA George P. Mathew, felicitations from past leaders, an enchanting magic show by Shri Mayan Vaidur Sha, traditional cultural activities, and a grand Ona Sadya, the event successfully fostered warmth and camaraderie across the community.

## Advanced Skill Training Programme (ASTP)

The Career Counselling & Placement Committee of ICAI conducted the Advanced Skill Training Programme (ASTP) from September 7 to 19, 2026, following an online inauguration on September 1. Designed to bridge the gap between academia and corporate expectations, the curriculum covered financial modeling, taxation updates, AI, ESG reporting, and professional development. The comprehensive training featured expert-led sessions, an interactive interaction with ICAI President CMA Chittaranjan Chattopadhyay, case study presentations, and industrial visits to KAMCO and CIAL to provide participants with valuable practical exposure.

## Chapter Convocation 2026

The Chapter hosted its Convocation Ceremony for newly qualified CMAs of the June 2026 term on September 19, 2026, at the Fine Arts Hall, Ernakulam. The event featured a welcome address by Chapter Chairperson CMA George P. Mathew,

insightful addresses by distinguished council leaders, and an inspiring keynote by Chief Guest CMA Jose V. J., Director (Finance) & CMD (Additional Charge) of Cochin Shipyard Ltd. The ceremony proudly honored the newly qualified professionals, marking a significant milestone in their careers and welcoming them into the wider fraternity of Cost and Management Accountants.

## PMIS Industry Interaction Workshop

The Chapter participated in an exclusive Industry Interaction Workshop on the Prime Minister's Internship Scheme (PMIS) on September 11, 2026, at Nihara Resort & Spa, Kochi. Organized by the Office of the Registrar of Companies, Kerala and Lakshadweep, Ministry of Corporate Affairs, the workshop was chaired by the Union Ministry's Secretary to engage stakeholders and promote structured internship opportunities for India's youth. The chapter was proudly represented by Chairperson CMA George P. Mathew, Vice Chairperson CMA Arun Kumar S, and Immediate Past Chairperson CMA Renjini R.

## CII Kochi Zonal Council Members & Family Get-Together 2026

CMA George P. Mathew, Chairperson, and CMA Renjini R., Vice Chairperson of the ICAI Cochin Chapter, attended the CII Kochi Zonal Council Members & Family Get-Together on September 18, 2026, at the Cochin Yacht Club, Kochi. Held under the theme "Connect • Unwind • Celebrate," the event offered members and their families an engaging evening of fellowship and networking to strengthen professional relationships beyond the boardroom.

## THRISSUR CHAPTER

## Training Programme for Newly Qualified CMAs

The Chapter organized an online training programme titled "Placement Essentials for CMAs" on August 14, 2026, aimed at newly qualified Cost Accountants preparing for campus placement. Inaugurated by SIRC Chairman CMA Praveen Kumar and led by Thrissur Chapter Chairman CMA Vinod T. V. as the resource person, the session drew active participation from around 300 newly

qualified CMAs from the June 2026 term.

### Independence Day Celebration

The Chapter proudly celebrated India's 80th Independence Day with the ceremonial hoisting of the national flag by Chapter Chairman CMA Vinod T. V. The patriotic event featured inspiring addresses by chapter leaders, heartfelt student-led patriotic songs, the collective administration of the national pledge, and the distribution of sweets following the National Anthem.

### Onam Celebration 2026

The Chapter organized its Onam Celebration on August 24, 2026, at the chapter's seminar hall in Kottappuram, Thrissur, beginning with a vibrant Pookkalam competition. Inaugurated by SIRC Chairman CMA Praveen Kumar alongside Chapter Chairman CMA Vinod T. V. and managing committee members, the festive event featured engaging cultural programs, interactive games for members and students, and concluded with a traditional grand Onasadya.

## Glimpses of Southern India Regional Council



*Southern India Regional Council*



*Southern India Regional Council*



*Cochin Chapter*



*Cochin Chapter*



*Thrissur Chapter*



*Thrissur Chapter*

### Advanced Skill Training Program

The Chapter successfully hosted an 11-day Advanced Skill Training Program for June 2026 final students from September 8 to September 18, 2026. The inaugural session featured esteemed chapter leaders—including Chairman CMA Mitesh Prajapati, Treasurer CMA Bhavesh Ramchandani, and MCM Member CMA Ashish Bhavsar—along with chief guest CMA Ghanshyam Trivedi, Director of Xphere Group, who delivered an inspiring address on the vital role of CMAs in the corporate world. Throughout the program, eminent faculty members conducted comprehensive sessions on diverse professional topics to equip participants for their future careers.

### CPE AI Mastery Workshop for CMAs

The Chapter hosted its 5th batch (Level 1) of the two-day CPE workshop, "Prompt to Possibilities – AI Mastery Workshop for CMAs," from September 12 to September 13, 2026. The program opened with a welcome address by Chairman CMA Mitesh Prajapati, followed by expert-led sessions by CA Fenil Shah on AI landscapes and prompt engineering basics. The second day featured specialized modules by CA Bhavesh Sharma on AI in cost audit and compliance and CA Harshid Patel on AI in tax consultancy and litigation. The successful workshop concluded with a formal vote of thanks delivered by Secretary CMA Sunil Tejwani, alongside chapter leaders CMA Mitesh Prajapati, Treasurer CMA Bhavesh Ramchandani, and PD Committee Coordinator CMA Ashish Bhavsar.

### New Members Welcome Meet

The Chapter hosted a New Members Welcome Meet on September 13, 2026, to formally welcome newly qualified Cost and Management Accountants into the profession. Chapter leaders—including Chairman CMA Mitesh Prajapati, Secretary CMA Sunil Tejwani, Treasurer CMA Bhavesh Ramchandani, and PD Committee Coordinator CMA Ashish Bhavsar—addressed the attendees, sharing valuable insights on professional growth,

continuous learning opportunities, and the expansive career benefits offered by ICAI. Specially curated welcome kits were distributed to celebrate the milestone and help members engage with chapter resources, with the event concluding with a formal vote of thanks delivered by Secretary CMA Sunil Tejwani.

### Celebration of Hindi Diwas

The Chapter celebrated Hindi Diwas on September 14, 2026, by organizing an engaging Sher-O-Shayari, Hindi Kavita, and Ghazal competition that drew enthusiastic student participation. Attendees were treated to expressive literary performances delivered strictly in Hindi within a five-minute time limit, which included a special recitation by Chairman CMA Mitesh Prajapati. Seven standout participants—Agrima Soni, Ajay Zinzala, Haider Ali Momin, Hemangi Davda, Kishan Solanki, Lina Jhamnani, and Chirag Lohar—were awarded for their exceptional performances, and the cultural event successfully concluded with a formal vote of thanks delivered by Chairman CMA Mitesh Prajapati.

### Heritage Walk

The Chapter organized an enriching guided heritage walk on September 18, 2026, offering members and students a unique opportunity to explore the history, architecture, and culture of Ahmedabad's walled city, a UNESCO World Heritage Site. Starting from the Shree Swaminarayan Mandir in Kalupur, the trail wound through iconic landmarks including the traditional pols, Kavi Dalpatram Chowk, Kala Ramji Mandir, Harkunvar Shethani ni Haveli, Manek Chowk, and royal mausoleums, before concluding at the 15th-century Jama Masjid. Participants thoroughly enjoyed discovering the city's traditional wooden architecture, intricate community spaces, and spiritual heritage, making the outing a wonderful blend of cultural appreciation and professional networking.

### Felicitation Program for Foundation, Intermediate & Final Pass-out Students

The Chapter hosted a grand felicitation function at the J B Auditorium, AMA, Ahmedabad, on September 18, 2026, to honor students who passed

the June 2026 Foundation, Intermediate, and Final examinations. The event was inaugurated by chapter leaders—including Chairman CMA Mitesh Prajapati, Secretary CMA Sunil Tejawani, and Treasurer CMA Bhavesh Ramchandani—alongside Chief Guest CMA Manish Khandelwal, Business Head at Adani Group, who delivered an inspiring address on industry and government opportunities for CMAs. Special honors were awarded to top achievers, including Mr. Raj Dineshbhai Dhameliya (H C Shah Gold Medal for CMA Final), Mr. Aditya Sachinbhai Khairnar (Hiranand Savlani Gold Medal for CMA Intermediate), and Mr. Aasim Umarbhai Pinjara (Hiranand Savlani Gold Medal for Strategic Cost Management), alongside winners of cash prizes and Yuvotsav cultural program awards, with the memorable evening concluding with a vote of thanks by Secretary CMA Sunil Tejawani and the National Anthem.

## Valedictory Session of 11 Days Advanced Skill Training Program

The Chapter hosted the valedictory session of its 11-day Advanced Skill Training Program on September 18, 2026, at the JB Auditorium, AMA, Ahmedabad. Chapter Chairman CMA Mitesh Prajapati welcomed and felicitated the chief guest, CMA Manish Khandelwal, Business Head at Adani Group, who delivered an inspiring address highlighting diverse career opportunities for CMAs across industry and government sectors. The program concluded with dignitaries presenting Certificates of Participation to the trainees, followed by a formal vote of thanks delivered by Secretary CMA Sunil Tejawani.

## Interactive Session on Recent Amendments in Guidelines for Conducting Valuation under IBC, 2016

The ICAI Registered Valuers Organisation (IRVO), in association with the Chapter, jointly organized an interactive seminar on September 19, 2026, focusing on recent amendments to valuation guidelines under the Insolvency and Bankruptcy Code (IBC), 2016. The session opened with a welcome address by ICAI RVO Senior Officer CMA Sandeep Joshi and virtual opening remarks by Managing Director CMA Dr. S. K. Gupta, alongside

chapter leaders Secretary CMA Sunil Tejawani and PD Committee Coordinator CMA Ashish Bhavsar. Expert speakers RV Yogesh Chatwani and RV Pinakin Shah delivered comprehensive lectures on the updated valuation guidelines, providing valuable insights to the large gathering of attending professionals, and the successful event concluded with a vote of thanks by CMA Sandeep Joshi followed by lunch.

## Career Counselling Activity under CMA Sankalp Yatra

As part of the outreach initiative "CMA Sankalp Yatra" in September 2026, the Chapter organized targeted career counselling sessions at various schools to raise awareness about the Cost and Management Accountancy (CMA) profession and guide students toward strategic careers in finance. Led by Chapter Secretary CMA Sunil Tejawani, the interactive sessions provided students with a comprehensive roadmap of the CMA profession, covering entry pathways, curriculum flexibility, examination structures, and practical training requirements.

## Campus Placement Initiative in Siemens Energy

The Chapter launched an off-campus placement initiative with Siemens Energy on September 3, 2026, specifically for recently qualified CMA final students from the chapter. Over 22 candidates registered through the Google form, and shortlisted participants underwent an online selection test, with the final recruitment process currently underway. This collaboration opens exciting new career avenues for CMAs within the energy technology, machinery manufacturing, and industrial turbomachinery sectors.

## BARODA CHAPTER

## Advanced Skill Training Programme (ASTP) 2026

The Chapter successfully organized an intensive 12-day Advanced Skill Training Programme (ASTP) from September 4 to September 15, 2026, under the leadership of Chairperson CMA Amruta Vyas. Designed for June 2026 term finance students and inaugurated by Chief Guest CMA Anindya Paul, the curriculum featured expert sessions by numerous

eminent faculty members covering Ind AS, IFRS, taxation, audits, AI and Business Intelligence in finance, Excel modeling, ERP, FinTech, and ESG. Despite weather disruptions from heavy rainfall, the program successfully accommodated rescheduled sessions for its 25 registered participants, concluding with a valedictory ceremony on September 15, 2026, where attendees received official ICAI headquarters certificates and laptop bags.

### Scholarship Awarded to Deserving CMA Final Student

The Chapter proudly recognized and supported CMA Final student Ms. Krishnapriya Jayan, who successfully cleared her CMA Intermediate examination in a single attempt despite facing severe personal and financial hardship following her father's demise. To assist with her continued education and alleviate financial burdens, tuition and monetary assistance were provided through the generous contributions of donors CMA Priyank Zala and CMA Hirav Shah.

### Placement & Training Activities

The Chapter successfully conducted a series of dedicated placement and skill training initiatives designed for students and professional members. These programs provided comprehensive career development guidance, professional readiness training, and valuable employment opportunities, helping a large number of participants advance their career paths in the finance and corporate sectors.

## NASHIK CHAPTER

### Chapter Felicitates Successful Students

On 13th August 2026, the Chapter hosted a felicitation programme to honour students who cleared the June 2026 Foundation, Intermediate, and Final examinations. Led by Chapter Chairman CMA Mayur Nikam, the event featured inspiring addresses from distinguished WIRC leaders, including Chairman CMA Mahendra Bhombe, Vice Chairman CMA Vivek Bhalerao, and Secretary & Treasurer CMA Manisha Agrawal. The celebration concluded with a vote of thanks by Managing Committee member CMA Amit Jadhav, as the chapter extended its best wishes to all achievers for a bright professional journey ahead.

### Chapter Conducts Career Awareness Programmes

In August 2026, the Chapter successfully conducted a series of career awareness programmes across multiple local institutions—including J.D.C. Bytco College, Sandip University, K.K. Wagh College of Commerce, and V.N. Naik College of Commerce—to promote the Cost and Management Accountancy (CMA) profession. Led by chapter representatives CMA Rajendra Shirsat, CMA Arifkhan Mansuri, CMA Sunetra Ganesan, and CMA Amit Jadhav, the sessions provided students with comprehensive insights into the CMA course structure, career prospects, and professional opportunities in the field.

### Chapter Conducts “CMA Success Reset 2026” Session

On 21st August 2026, the Chapter successfully hosted the “CMA Success Reset 2026” motivation and study strategy session for Foundation, Intermediate, and Final students. Led by chapter speakers CMA Santosh Brahmkar and CMA Arifkhan Mansuri, the event offered actionable guidance on smart study techniques, time and habit management, and exam preparation. Highlighting the empowering message, “One Decision Today – A Better Result Tomorrow,” the interactive session inspired students to stay focused, confident, and consistent throughout their professional journey.

### Chapter Members Appointed to National and Regional Committees

Several esteemed members of the Chapter have been proudly appointed to various ICAI Central Council and WIRC Committees and Task Forces for the 2026–27 term. Highlighting the chapter's growing professional impact, notable appointments include CMA Pradnya Chandorkar (AI Strategy & Innovation Board), CMA Arpita Amol Fegde (Sustainability Standards Board), CMA Shilpa Kokate (Women Empowerment), CMA Bhushan Pagere (Public Relation & Social Media), CMA Prasanna Tillu (ESG), and others serving across specialized task forces like Cost Audit, RERA, and Co-operative sectors. The Managing Committee has extended its heartiest congratulations, noting that this widespread representation significantly strengthens the chapter's national footprint and contribution to

the Cost and Management Accountancy profession.

### Chapter Organises Independence Day Trek to Shivneri Fort

To celebrate Independence Day, the Chapter organised an adventurous trek to Shivneri Fort—the historic birthplace of Chhatrapati Shivaji Maharaj—under the guidance of Chairman CMA Mayur Nikam and Vice Chairman CMA Navnath Gangurde. Around 90 enthusiastic students participated in the expedition, blending physical adventure with a deep connection to India's rich heritage. The successful outing reflected the chapter's continued dedication to holistic student development, engagement, and fostering a strong spirit of unity and patriotism.

### PIMPRI CHINCHWAD CHAPTER

#### Student Felicitation Program CultFest 2K26

On 30th August 2026, the Chapter organised the Student Felicitation Program CultFest 2K26 at G. D. Madgulkar Auditorium, Pimpri-Chinchwad, to felicitate the students who successfully cleared the CMA Foundation, CMA Intermediate and CMA Final examinations.

The function was graced by several distinguished dignitaries, including Shri D. Anil, Principal Commissioner of Customs, Pune; CMA Chittaranjan Chattopadhyay, President, ICAI; CMA Brij Mohan Sharma, Past President, ICAI; CMA Harshad Deshpande, Council Member, ICAI; Shri Nilesh Sutar, Superintendent, Commissionerate of Customs, Pune; CMA Mahendra Bhombe, Chairman, WIRC of ICAI; CMA Vivek Bhalerao, Vice Chairman, WIRC of ICAI; CMA Manisha Agrawal, Secretary and Treasurer, WIRC of ICAI; CMA Lalit

Pimpalgaonkar, General Manager, Tata Motors; and CMA Mukesh Gupta.

CMA Balkrishna Hajare delivered the welcome address and extended a warm welcome to all the dignitaries, students, parents and guests.

The program commenced with the ceremonial lighting of the lamp, followed by the felicitation of the dignitaries.

The distinguished dignitaries addressed the gathering and congratulated all the successful students on their achievements. They appreciated the students' dedication and encouraged them to pursue excellence in their professional careers and future endeavours.

26 CMA Final passed students from the Chapter were felicitated for successfully clearing their examinations. All successful students of CMA Foundation, CMA Intermediate were felicitated by the dignitaries for their outstanding achievement and successful completion of the respective examinations. A special moment of the ceremony was the felicitation of CMA Tanvi Patil, AIR 18, one of the Chapter's rank-holder students, who was felicitated by Shri D. Anil, Principal Commissioner of Customs, Pune and CMA Chittaranjan Chattopadhyay, President of ICAI.

The event was further enriched by cultural performances presented by the students, which added enthusiasm and vibrancy to the celebration.

The program concluded with a vote of thanks, expressing gratitude to all the dignitaries, students, parents, faculty members, Chapter officials and everyone who contributed to making the felicitation ceremony a grand and memorable success.

### Glimpses of Western India Regional Council



*Ahmedabad Chapter*



*Ahmedabad Chapter*



*Baroda Chapter*



*Baroda Chapter*



*Nashik Chapter*



*Nashik Chapter*



*Pimpri Chinchwad Chapter*



*Pimpri Chinchwad Chapter*

## Congratulations!!!



**CMA Vinod Kumar Agarwal**

**H**earliest Congratulations to CMA Vinod Kumar Agarwal on being conferred with the prestigious “Builder of Institutions Award for Transformational Leadership in Infrastructure” at the Roads & Highways Forum 2026 – Engineering India’s Mobility Backbone, held on 18<sup>th</sup> September 2026 at Le Meridien, New Delhi. The recognition celebrates his outstanding contributions and transformational leadership in the infrastructure sector.

We extend our best wishes to CMA Vinod Kumar Agarwal for continued success and excellence in all his future endeavours.

**TIME TABLE & PROGRAMME- DECEMBER 2026**

**FOUNDATION COURSE EXAMINATION**

(Multiple Choice Questions through offline OMR based from Centre)

| Day & Date                                 | Foundation Course Examination Syllabus-2022                                                                                                                                                                                           |                                                                                                                                                                                                                                      |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            | Time 10.00 A.M. to 12.00 Noon. - IST<br>Paper – 1 & 2 (200 Marks)                                                                                                                                                                     | Time 02.00 P.M. to 04.00 P.M. - IST<br>Paper – 3 & 4 (200 Marks)                                                                                                                                                                     |
| Sunday,<br>13 <sup>th</sup> December, 2026 | <b>Paper – 1 :</b> Fundamentals of Business Laws and Business Communication (100 Marks 50 Multiple Choice Questions)<br><br><b>Paper – 2 :</b> Fundamentals of Financial and Cost Accounting (100 Marks 50 Multiple Choice Questions) | <b>Paper – 3 :</b> Fundamentals of Business Mathematics and Statistics (100 Marks 50 Multiple Choice Questions)<br><br><b>Paper – 4 :</b> Fundamentals of Business Economics and Management (100 Marks 50 Multiple Choice Questions) |

The Institute has decided to conduct December 2026 Foundation Examination through offline OMR centre based.

**Examination Fees**

| Foundation Course Examination | Inland Candidate   | ₹1500/-   |
|-------------------------------|--------------------|-----------|
|                               | Overseas Candidate | US \$ 100 |

- Application Forms for Foundation Examination both Domestic & Overseas centers must be filled up and payment through online only. No Offline form and DD payment will be accepted. Please apply through <https://icmai.in/> -> Students -> Examination -> Online Application for Examination
- Last date for receipt of Examination Application Forms is 14<sup>th</sup> October 2026 without late fee, and from 15<sup>th</sup> October 2026 to 21<sup>st</sup> October 2026 with late fee of ₹500/- (Rupees Five hundred only) for December 2026 examination.
- The Foundation Examination will be conducted in M.C.Q Mode through offline OMR based from Centre.
  - Each paper will carry 100 marks 50 Multiple Choice Questions (Each Question will carry 2 Marks). Each session will have a total of 100 Multiple Choice Questions of 200 marks.
  - All Candidates/students are to appear in the Foundation examination through offline OMR centre based.
- A candidate/student who is completing all conditions for appearing in the examination as per Regulations will only be allowed to appear for the examination.
- There is no negative marking.
- Detailed instructions will be provided along with Admit Card.
- Examination Centres: Adipur-Kachchh (Gujarat), Agartala, Agra, Ahilyanagar (Ahmednagar-Maharashtra), Ahmedabad, Akurdi, Angul Talcher, Asansol, Anandpur Sahib (Punjab), Balasore (Odisha), Ballari (Karnataka), Bankura, Bathinda (Punjab), Bengaluru, Bharuch Ankleshwar, Bhilai, Bhiwandi (Maharashtra), Bhiwani (Haryana), Bhopal, Bewar City (Rajasthan), Bhubaneswar, Bilaspur, Bikaner (Rajasthan), Bokaro, Brahmapur – Ganjam (Odisha), Chandigarh, Chennai, Chhatrapati Sambhajnagar (Aurangabad), Coimbatore, Cuttack, Dimapur-Nagaland, Dindigul, Dehradun, Delhi, Dhanbad, Duliajan (Assam), Durgapur, Ernakulam, Erode, Faridabad, Gangtok-Sikkim, Gaya, Ghaziabad, Gorakhpur (Uttar Pradesh), Guntur, Gurugram, Guwahati, Haridwar, Hazaribagh, Hosur, Howrah, Hubballi (Karnataka), Hyderabad, Indore, Imphal-Manipur, Itanagar-Arunachal Pradesh, Jaipur, Jabalpur, Jalandhar, Jalgaon-Dhule (Maharashtra), Jammu, Jamshedpur, Jeypore (Odisha), Jhunjhunu (Rajasthan), Jodhpur, Kalyan, Kannur, Kanpur, Karnal (Haryana), Karur (Tamil Nadu), Kanchipuram, Kharagpur (West Bengal), Kolhapur, Kolkata, Kollam, Kota, Kottakkal (Malappuram), Kottayam, Kozhikode, Kurnool (Andhra Pradesh), Lucknow, Ludhiana, Lunglei-Mizoram, Madurai, Mangaluru, Meerut, Mumbai, Muzaffarpur (Bihar), Mysuru, Nagpur, Naihati, Nanded (Maharashtra), Nashik, Nellore, Neyveli, Noida, Palakkad, Palghar, Panaji (Goa), Patiala, Patna, Pollachi (Tamil Nadu), Sri Vijaya Puram (Port Blair), Prayagraj (Allahabad), Puducherry, Pune, Raipur, Rajamahendravaram, Ranchi, Ratnagiri (Maharashtra), Rewari (Haryana), Rourkela, Rudrapur (Uttarakhand), Salem, Sambalpur, Sangrur (Punjab), Satara (Maharashtra), Serampore, Shillong, Shimla, Siliguri, Singrauli (Vindhyanagar), Sivaganga (Tamil Nadu), Solapur, Srinagar, Surat, Thanjavur (Tamil Nadu), Thiruvananthapuram, Thoothukudi (Tamil Nadu), Thrissur, Tiruchirappalli, Tirunelveli, Tirupati, Udaipur, Vadodara, Vapi, Varanasi (Uttar Pradesh), Vashi, Vellore, Vijayawada, Visakhapatnam and Overseas Centres at Bahrain, Dubai and Muscat.
- Date of publication of result: Foundation examination latest by 7<sup>th</sup> January 2027.

\* The Candidates/students are advised to keep regularly in touch with the website of the Institute for further notifications and announcements relating to Foundation Examination of December 2026 and in case of any query or clarification can e-mail us at- [exam.helpdesk@icmai.in](mailto:exam.helpdesk@icmai.in)

## INTERMEDIATE AND FINAL EXAMINATION TIME TABLE & PROGRAMME – DECEMBER 2026

| ATTENTION: INTERMEDIATE & FINAL EXAMINATION (DECEMBER – 2026 TERM) WILL BE HELD ON ALTERNATE DATES FOR EACH GROUP. |                                                                                                                                                                                                                      |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Day & Date                                                                                                         | FINAL<br>(Time: 10.00 A.M. to 01.00 P.M. - IST)<br>PROGRAMME FOR SYLLABUS 2022                                                                                                                                       | INTERMEDIATE<br>(Time: 2.00 P.M. to 5.00 P.M. - IST)<br>PROGRAMME FOR SYLLABUS 2022 |
| Thursday,<br>10th December, 2026                                                                                   | Corporate and Economic Laws (P-13)                                                                                                                                                                                   | Business Laws and Ethics (P-05)                                                     |
| Friday,<br>11th December, 2026                                                                                     | Cost and Management Audit (P-17)                                                                                                                                                                                     | Operations Management and Strategic Management (P-09)                               |
| Saturday,<br>12th December, 2026                                                                                   | Strategic Financial Management (P-14)                                                                                                                                                                                | Financial Accounting (P-06)                                                         |
| Sunday,<br>13th December, 2026                                                                                     | Corporate Financial Reporting (P-18)                                                                                                                                                                                 | Corporate Accounting and Auditing (P-10)                                            |
| Monday,<br>14th December, 2026                                                                                     | Direct Tax Laws and International Taxation (P-15)                                                                                                                                                                    | Direct and Indirect Taxation (P-07)                                                 |
| Tuesday,<br>15th December, 2026                                                                                    | Indirect Tax Laws and Practice (P-19)                                                                                                                                                                                | Financial Management and Business Data Analytics (P-11)                             |
| Wednesday,<br>16th December, 2026                                                                                  | Strategic Cost Management (P-16)                                                                                                                                                                                     | Cost Accounting (P-08)                                                              |
| Thursday,<br>17th December, 2026                                                                                   | Electives (Any one of three Papers) :<br>(i) Strategic Performance Management and Business Valuation (P-20A)<br>(ii) Risk Management in Banking and Insurance (P-20B)<br>(iii) Entrepreneurship and Start up (P-20C) | Management Accounting (P-12)                                                        |

| Group (s)                                            | Final Examination    | Intermediate Examination |
|------------------------------------------------------|----------------------|--------------------------|
| One Group<br>(Inland Centres)<br>(Overseas Centres)  | ₹1800/-<br>US \$ 100 | ₹1500/-<br>US \$ 100     |
| Two Groups<br>(Inland Centres)<br>(Overseas Centres) | ₹3200/-<br>US \$ 150 | ₹2800/-<br>US \$ 150     |

- Application Forms for Intermediate and Final Examination both Domestic & Overseas centers must be filled up and payment through online only. No Offline form and DD payment will be accepted. Please apply through <https://icmai.in> -> Students -> Examination -> Online Application for Examination
- Last date for receipt of Examination Application Forms is 10<sup>th</sup> October, 2026 without late fee, and from 11<sup>th</sup> October, 2026 to 17<sup>th</sup> October, 2026 with late fee of ₹500/- (Rupees Five hundred only) for December 2026 examination.
- The mode of examination will be offline-centre based.
- Candidates are required to follow clarifications of DOS related to December 2026 term of examination and the same will be issued by DOS in due course.
- Examination Centres: Adipur-Kachchh (Gujarat), Agartala, Agra, Ahilyanagar (Ahmednagar-Maharashtra), Ahmedabad, Akurdi, Angul Talcher, Asansol, Anandpur Sahib (Punjab), Balasore (Odisha), Ballari (Karnataka), Bankura, Bengaluru, Bharuch Ankleshwar, Bhilai, Bhiwara, Bhiwandi (Maharashtra), Bhiwani (Haryana), Bhopal, Bewar City (Rajasthan), Bhubaneswar, Bilaspur, Bikaner (Rajasthan), Bokaro, Brahmapur – Ganjam (Odisha), Chandigarh, Chennai, Chhatrapati Sambhajinagar (Aurangabad), Coimbatore, Cuttack, Dimapur-Nagaland, Dindigul, Dehradun, Delhi, Dhanbad, Duliajan (Assam), Durgapur, Ernakulam, Erode, Faridabad, Gangtok -Sikkim, Gaya, Ghaziabad, Gorakhpur (Uttar Pradesh), Guntur, Gurugram, Guwahati, Haridwar, Hazaribagh, Hosur, Howrah, Hubballi (Karnataka), Hyderabad, Indore, Imphal-Manipur, Itanagar-Arunachal Pradesh, Jaipur, Jabalpur, Jalandhar, Jalgaon-Dhule (Maharashtra), Jammu, Jamshedpur, Jeypore (Odisha), Jhunjhunu (Rajasthan), Jodhpur, Kalyan, Kannur, Kanpur, Karnal (Haryana), Karur (Tamil Nadu), Kanchipuram, Kharagpur (West Bengal), Kolhapur, Kolkata, Kollam, Kota, Kottakkal (Malappuram), Kottayam, Kozhikode, Kurnool (Andhra Pradesh), Lucknow, Ludhiana, Lunglei-Mizoram, Madurai, Mangaluru, Meerut, Mumbai, Muzaffarpur (Bihar), Mysuru, Nagpur, Naihati, Nanded (Maharashtra), Nashik, Nellore, Neyveli, Noida, Palakkad, Palghar, Panaji (Goa), Patiala, Patna, Pollachi (Tamil Nadu), Sri Vijaya Puram (Port Blair), Prayagraj (Allahabad), Puducherry, Pune, Raipur, Rajamahendravaram, Ranchi, Ratnagiri (Maharashtra), Rewari (Haryana), Rourkela, Rudrapur (Uttarakhand), Salem, Sambalpur, Satara (Maharashtra), Serampore, Shillong, Shimla, Siliguri, Singrauli (Vindhyanagar), Sivaganga (Tamil Nadu), Solapur, Srinagar, Surat, Thanjavur (Tamil Nadu), Thiruvananthapuram, Thoothukudi (Tamil Nadu), Thrissur, Tiruchirappalli, Tirunelveli, Tirupati, Udaipur, Vadodra, Vapi, Varanasi (Uttar Pradesh), Vashi, Vellore, Vijayawada, Visakhapatnam and Overseas Centres at Bahrain, Dubai and Muscat.
- A candidate who is fulfilling all conditions specified for appearing in examination will only be allowed to appear for examination.
- Date of publication of result: Inter & Final examination latest by 5<sup>th</sup> February 2027.

\* The candidates/students are advised to keep regularly in touch with the website of the Institute for further notifications and announcements relating to Examination of December 2026 and in case of any query or clarification can e-mail us only at [exam.helpdesk@icmai.in](mailto:exam.helpdesk@icmai.in)

# THE MANAGEMENT ACCOUNTANT

## PAPERS INVITED

Cover Stories on the topics given below are invited for 'The Management Accountant' for the four forthcoming months

|               |       |                                                                                         |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|-------|-----------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| November 2026 | Theme | Treasury Management: The Strategic Role of CMAs in Creating Enterprise Value            | Subtopics | <ul style="list-style-type: none"> <li>○ Strategic Cash Flow and Liquidity Management</li> <li>○ Treasury risk management</li> <li>○ Digital Treasury and Emerging Technologies</li> <li>○ Treasury Governance, Compliance, and Internal Controls</li> <li>○ Sustainable Finance and ESG in Treasury</li> <li>○ Treasury Analytics and Performance Measurement</li> <li>○ The Evolving Role of CMAs as Strategic Treasury Partners</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                          |
| December 2026 | Theme | Cost Audit: Driving Operational Excellence Through Cost Intelligence                    | Subtopics | <ul style="list-style-type: none"> <li>○ Reimagining Cost Audit as a Strategic Management Tool</li> <li>○ Leveraging Cost Intelligence for Operational Excellence</li> <li>○ Cost Intelligence for Strategic Decision-Making and Value Creation</li> <li>○ Digital Transformation of Cost Audit: Technology, Analytics and Automation</li> <li>○ Cost Audit and ESG: Measuring Sustainability, Efficiency and Long-Term Value</li> <li>○ Strengthening Risk Management and Corporate Governance Through Cost Audit</li> <li>○ Sector-Specific Applications and Emerging Perspectives in Cost Audit</li> <li>○ The Future of Cost Audit: The Evolving Role of Cost and Management Accountants</li> </ul>                                                                                                                                                |
| January 2027  | Theme | The Future of Banking: AI, Risk, Resilience and the CMA as a Strategic Business Partner | Subtopics | <ul style="list-style-type: none"> <li>○ Artificial Intelligence Governance in Banking — the CMA's role in AI cost-risk audit.</li> <li>○ Profitability, cost efficiency and value-based banking</li> <li>○ Corporate Bond Market Development and the Changing Bank-Centric Model</li> <li>○ Credit risk, ECL, NPA management and early-warning systems</li> <li>○ Cybersecurity and operational resilience in the digital era</li> <li>○ Digital transformation, fintech and the changing banking business model</li> <li>○ Risk-adjusted performance measurement and strategic decision-making</li> <li>○ Sustainable finance, climate risk and ESG in banking</li> <li>○ The evolving role of CMAs in banking: from finance professionals to strategic business partners</li> <li>○ NPA Management, SMA Monitoring and Credit Discipline</li> </ul> |
| February 2027 | Theme | Beyond Automation: Preparing CMAs for an AI-Driven Future                               | Subtopics | <ul style="list-style-type: none"> <li>○ From Cost Data to Cost Intelligence</li> <li>○ AI-Assisted Budgeting, Forecasting and Scenario Planning</li> <li>○ AI for Cost Optimization, Pricing and Profitability</li> <li>○ AI-Assisted Cost Audit, Assurance and Internal Control</li> <li>○ AI for Sustainable Cost and Resource Management</li> <li>○ Preparing CMAs for AI: Practical Training, Skills and Professional Judgment</li> <li>○ Responsible AI: Ethics, Governance and Human Accountability</li> <li>○ From Pilot to Practice: Implementing AI and Measuring Value</li> </ul>                                                                                                                                                                                                                                                           |

*The above subtopics are only suggestive and hence the articles may not be limited to them only.*

Articles on the above topics are invited from readers and authors along with scanned copies of their recent passport size photograph and scanned copy of declaration stating that the articles are their own original and have not been considered for anywhere else. Please send your articles by e-mail to [editor@icmai.in](mailto:editor@icmai.in) latest by the 1<sup>st</sup> week of the previous month.



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# RESEARCH BULLETIN

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## THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

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**Research Bulletin, Vol. 52 No. III October 2026 (ISSN 2230 9241)**



### Call for Research Papers/Articles

We invite you to contribute a research paper/ article for “Research Bulletin”, a peer-reviewed Quarterly Journal of The Institute of Cost Accountants of India. The aim of this bulletin is to share innovative achievements and practical experiences from diverse domains of management, from researchers, practitioners, academicians and professionals. This bulletin is dedicated to publishing high quality research papers providing meaningful insights into the management content both in Indian as well as global context.

### Guidelines to submit full Paper

- Soft Copy of the full paper should be submitted in double space, 12 font size, Times New Roman, keeping a margin of 1 inch in four sides, MS Word (.doc) format.
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- The cover page should contain the title of the paper, author's name, designation, official address, contact phone numbers, e-mail address

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- ▲ ESG Measurement, Reporting, and the Role of Management Accountants
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*The Editorial Board welcomes original research papers, review articles, case studies, and empirical research on the above themes and other contemporary issues related to Commerce, Management, Economics, Finance, and Allied Disciplines.*

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Since 1944

The Institute of Cost Accountants of India is a premier professional Institute and a Statutory Body functions under the jurisdiction of the **Ministry of Corporate Affairs, Government of India** to regulate and develop the profession of **Cost and Management Accountancy (CMA)** in the country.

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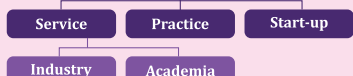
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- Cost Controller
- Risk Manager
- Business Analyst
- Research Analyst
- Dean/Professor of Finance

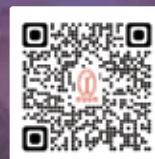
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