GLOBAL FINTECH FEST 2025

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A collection of articles on the AI sessions at the GFF

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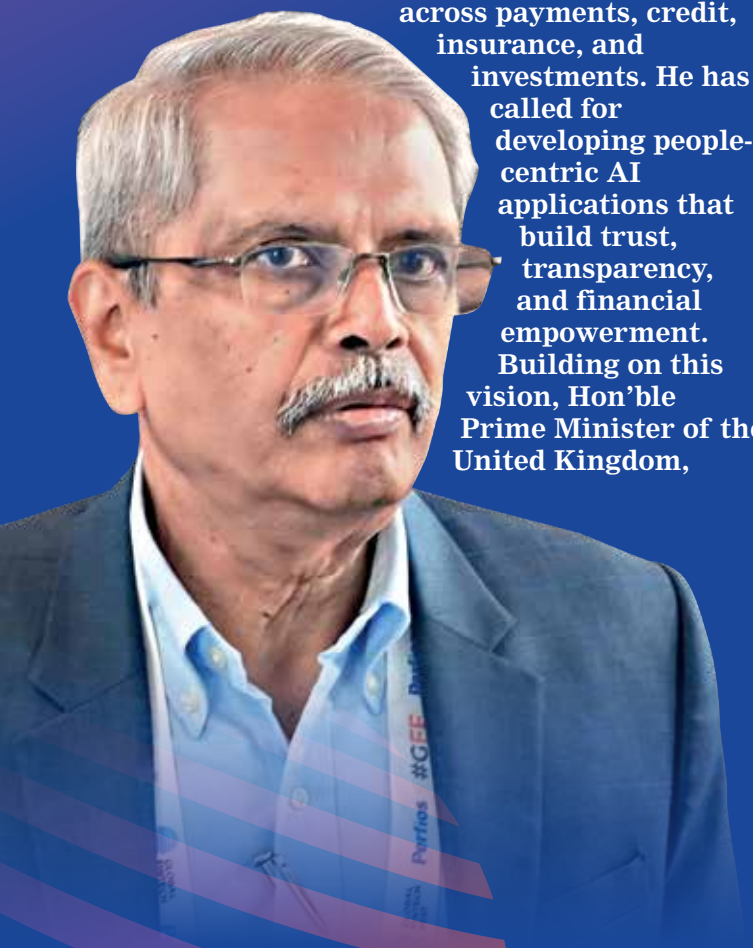
FOREWORD

Global Fintech Fest (GFF) 2025 has once again demonstrated why it is the world's premier forum for fintech innovation and collaboration. With over 100,000 footfalls and participation from 100+ countries, this year's edition placed a powerful spotlight on Artificial Intelligence in Financial Services, bringing together policymakers, technologists, entrepreneurs, and industry leaders to explore how AI can reshape the future of finance.

True to its vision, GFF 2025 delivered transformative insights. Hon'ble Prime Minister of India, Shri Narendra Modi emphasised how India's DPI—UPI, Aadhaar, DigiLocker, and Open Networks have democratized technology and enabled inclusive digital finance at scale. He highlighted AI's expanding role in underwriting, real-time fraud detection, and improving access across payments, credit, insurance, and investments. He has called for developing people-centric AI applications that build trust, transparency, and financial empowerment. Building on this vision, Hon'ble Prime Minister of the United Kingdom, Sir Keir Starmer, underscored the role of AI and fintech in shaping future-ready economies. He highlighted how UK–India collaboration can combine India's scale and talent with the UK's innovation, research, and financial expertise to build globally competitive, AI-driven financial ecosystems.



GFF 2025 showcased a plethora of AI-first product launches, reflecting India's emergence as a global innovation hub. From agentic AI for KYC and compliance to conversational AI for customer engagement and graph analytics for fraud detection, the solutions demonstrated at the Fest underscored how AI is accelerating efficiency, enabling hyper-personalized services, and strengthening financial trust.

This report has been curated as a comprehensive compilation of the key discussions that shaped GFF 2025. It aims to capture the essence of these conversations and their potential impact on the financial services industry. It highlights how these insights will influence policies, strategies and technology adoption in the coming years. This publication will set the stage for future iterations that will continue to explore emerging technologies in financial services, ensuring that stakeholders remain informed and prepared for the next wave of innovation.

I extend my heartfelt gratitude to all participants, partners, and innovators who contributed to making GFF 2025 a resounding success. As we advance, GFF will continue to champion responsible innovation, celebrate technological leadership, and strengthen the global financial ecosystem. We lo ok forward to welcoming you to GFF 2026, where together we will shape the next chapter of an AI-driven financial future for India and the world.

Mr Kris Gopalakrishnan

Chair-Global Fintech Fest 2025
Chairman, Axilor Ventures, Co-founder, Infosys

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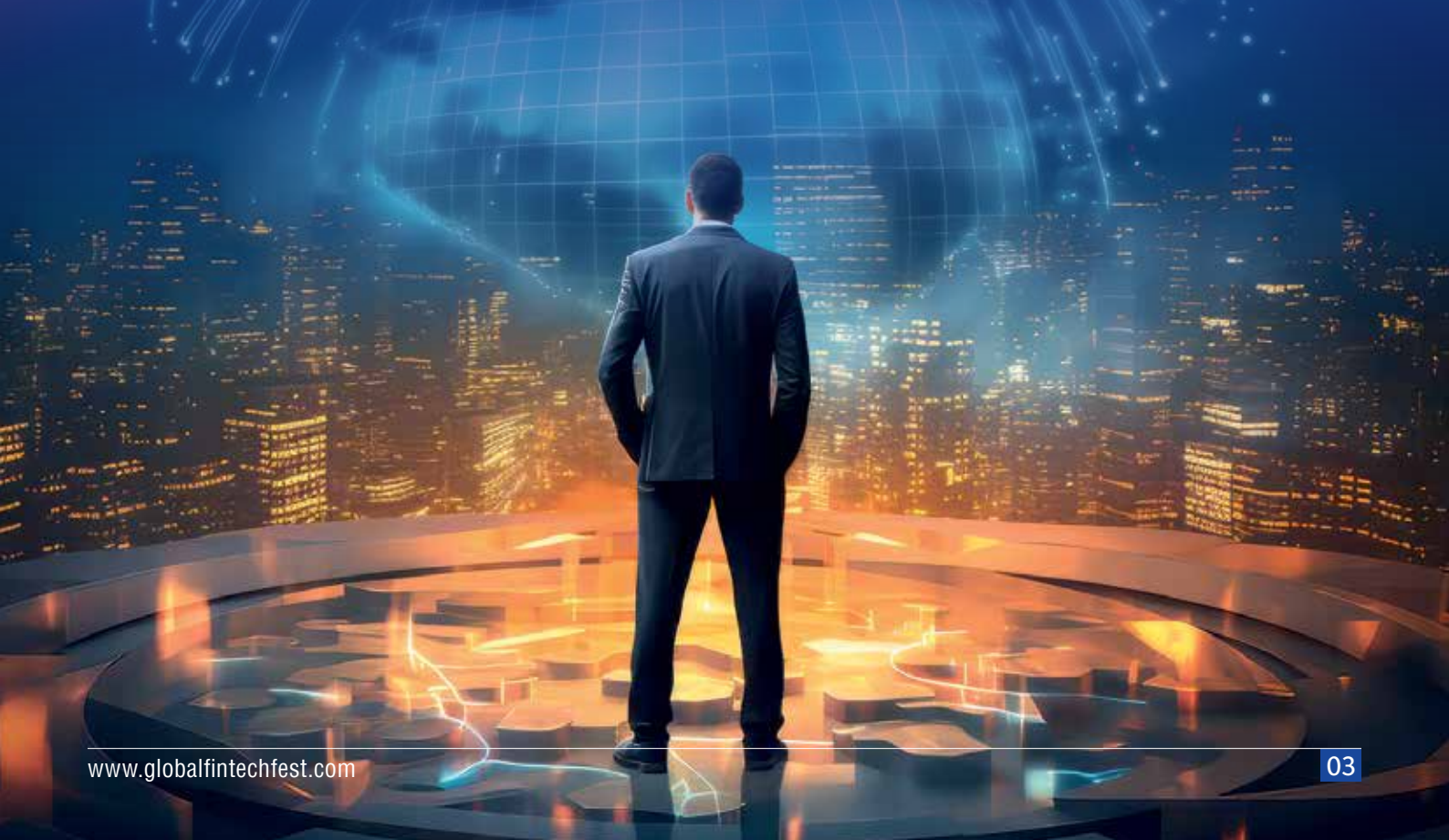
INTRODUCTION

The global adoption of AI in financial services has accelerated rapidly, driven by both market demand and increasing investor confidence. In 2024 alone, the sector reached $26 billion, supported by double-digit growth over the past two years. A sharp rise in capital flows reinforces this momentum—AI-related venture funding surged 60% to $110 billion, and fintech startups embedding AI capabilities captured a significant share of this investment. As a result, leading banks and financial institutions across North America, Europe, and Asia have stepped up AI deployments, embedding these technologies into core operations. The impact is visible across a wide spectrum of use cases, from fraud detection and credit risk modeling to robo-advisory, underwriting, and customer service automation, establishing AI as a foundational pillar of the modern financial ecosystem.

Artificial Intelligence in Financial Services emerged as one of the most prominent themes at this year's Global Fintech Fest. With over 50 dedicated sessions and participation from more than 130 speakers—including leaders from banks, fintechs, central banks, regulatory bodies, investors, and technology firms—the theme attracted widespread attention and engagement. The discussions spanned a broad spectrum of perspectives, underscoring the transformative potential of AI across the financial ecosystem. Conversations were structured around six key sub-themes within AI in financial services, which are outlined below.



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KEY VOICES

Shri Narendra Modi

Hon'ble PM of India

India's fintech journey demonstrates how digital public infrastructure can democratise finance at population scale. Built on the JAM trinity (Jan Dhan, Aadhar and Mobile) and India Stack, platforms such as UPI, ONDC, and OCEN have expanded payments, credit, and market access for MSMEs and citizens. As India emerges as a global fintech leader, AI is poised to reduce underwriting bias, strengthen fraud detection, and improve service delivery. Anchored in equitable access, large-scale skilling, and responsible deployment under the India AI Mission, India aims to combine scale with trust. Through global partnerships — including the UK–India Fintech Corridor — India is positioning its digital and AI frameworks as global public goods.

Sir Keir Starmer

Hon'ble PM of UK

The UK–India partnership is entering a new phase, anchored in finance, technology, and fintech-led growth. The landmark UK–India trade agreement creates a launchpad to deepen services trade, expand capital flows, and accelerate collaboration across financial services, AI, and digital infrastructure. With both countries among global fintech leaders, the partnership combines India's scale and talent with the UK's deep capital markets, regulatory sophistication, and innovation ecosystem. UK and Indian firms are expanding across each other's markets, including through GIFT City, positioning the corridor as a powerful engine for global fintech, investment, and technology-driven economic growth.

Smt Nirmala Sitharaman

Hon'ble Minister of Finance & Corporate Affairs, Government of India

India's fintech leadership is anchored in digital public infrastructure, responsible regulation, and applied AI. Initiatives spanning UPI, DBT, India Stack, GIFT IFSC, and the India AI Mission highlight how technology can democratise finance, strengthen trust, enable real-time cross-border settlements, and position India as a global hub for inclusive, ethical financial innovation.

Shri Piyush Goyal

Hon'ble Minister of Commerce & Industry, Government of India

India's fintech and technology ecosystem is emerging as a trusted global engine for growth, powered by digital public infrastructure, resilient connectivity, and affordable data and energy. From UPI's global expansion to applied AI and advanced financial services, technology is enabling inclusion, trust, and scalable participation in global trade and finance.

Shri Devendra Fadnavis

Chief Minister of Maharashtra

Technology and AI are positioned as force multipliers for economic leapfrogging, enabling faster execution, innovation sandboxes, and asset tokenisation. Leveraging India's digital public infrastructure, Maharashtra aims to unlock capital, accelerate fintech, and build scalable, regulator-aligned frameworks where technology, governance, and innovation work together for growth and equity.

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KEY VOICES

Shri Sanjay Malhotra

Governor, Reserve Bank of India (RBI)

India's digital finance journey stands as a testament to how well-designed technology, anchored in public digital infrastructure and responsible regulation, can deliver inclusion at population scale. India's Digital Public Infrastructure—spanning identity, payments, and data—has enabled instant authentication, seamless UPI payments, and data-driven service delivery, catalysing a vibrant fintech ecosystem of over 10,000 firms. The Reserve Bank of India's facilitative approach—through structured engagement, innovation forums, and self-regulatory mechanisms—has helped balance innovation with trust and stability. Looking ahead, artificial intelligence will play a critical role in enhancing user experience, expanding access to credit, and strengthening financial infrastructure, while underscoring the need for robust safeguards against fraud and cyber risks. Fintechs must build for inclusion, innovate responsibly, and anchor global ambition in local trust.

Shri Tuhin Kanta Pandey

Chairman, Securities and Exchange Board of India (SEBI)

India's capital markets have evolved into one of the world's most technologically advanced, transparent, and inclusive ecosystems. A system once driven by paper and long settlement cycles is now fully digital and dematerialised, enabled by reforms aligning market innovation with regulatory intent. Investor participation has crossed 134 million through paperless onboarding, e-KYC, and mobile-first platforms extending access beyond metropolitan centres. A technology-first regulatory approach has strengthened investor protection and efficiency through initiatives such as validated UPI handles, SEBI Check, direct credit of securities to demat accounts, and T+1 settlement. Advanced analytics, AI, and digital forensics now support real-time supervision and fraud detection. As markets grow more digital, responsible adoption of emerging technologies and sustained collaboration remain essential to trust and resilience.

Shri Kalyanaraman Rajaraman

Chairman, International Financial Services Centres Authority (IFSCA)

GIFT IFSC is positioned as a strategic enabler of India's global financial integration—designed not as a tax haven, but as a purpose-built platform to support long-term growth ambitions. It enables Indian corporates to raise foreign capital, issue global bonds, and access international banking services domestically, reducing reliance on offshore centres. Rapid scale-up across external commercial borrowings, global listings, and cross-border activity has been supported by IFSCA's unified and agile regulatory mandate spanning banking, capital markets, insurance, and pensions. Fintech, digital payments, and technology-led services are strengthening cross-border connectivity through sandboxes, digital KYC, and efficient settlement systems. Anchored in sustainability, tokenisation, and global standards, GIFT IFSC is emerging as a hub for global capital, innovation, and responsible finance.

THEMATIC NARRATIVES ON AI IN FINTECH

Real World Generative AI Applications in Financial Services

Generative AI is rapidly reshaping financial services, as seen across GFF 2025 sessions—from automating onboarding and enabling hyperpersonalized engagement to driving fairer, data-led decisions in lending. Domain-specific models, responsible AI practices, and empathetic, conversational systems are transforming compliance, collections, and customer experience, positioning India's fintech ecosystem for more inclusive, transparent, and scalable growth.

From Customer Onboarding to Hyperpersonalization

Generative AI is reshaping onboarding by bridging trust gaps and streamlining processes, making financial services more accessible and reliable for consumers and businesses alike. Earlier, onboarding meant heavy paperwork and manual checks. Today, agentic AI handles these tasks automatically—verifying documents, preventing fraud, choosing the right products, and completing KYC through voice, video, and document analytics in local languages. This not only speeds up the process but democratizes access to financial products for millions in remote and underserved regions.

Till today the banks used to believe that anybody who's wealthy–which is like 1% of the population–should have high wealth managers for those. Today, because of AI, power of thinking is power of doing. It can go down even to a person who probably supports you in day-to-day work ... Now you're going to that 1.4 billion people in the country rather than going to that 1% of the population. So that's called hyperpersonalization.

- VISHAL DHUPAR, Nvidia

Visionaries urged that AI must not merely digitize legacy workflows but emulate the intuition of the neighborhood banker—picking up subtle cues, customizing products, and making judicious lending calls. Companies are experimenting with decentralized, conversational AI agents that capture data previously lost in the analog world: intent, sentiment, behavioural nuances. Speakers emphasized that the future of AI in finance lies in blending sophisticated machine intelligence with personalized human interaction to create seamless, trustworthy customer experiences.

Foundation Models: The Engine of Transformation

Several discussions dissected the emerging role of foundation models—AI systems built as general-purpose engines and trained on vast, multimodal financial datasets — highlighting how they are becoming central to modern finance. Panelists noted that banks and NBFCs are increasingly building and running domain-specific models in-house, orchestrating dozens of specialized agents for functions like credit analysis, customer service, underwriting and marketing, all within a secure, private environment. The challenge, they stressed, is balancing scale with explainability and accountability. Ensuring data privacy, regulatory compliance, and model transparency while maintaining high performance remains a critical priority.

I think the one thing that excites me about where decisioning AI is heading is one: if these decisions can become much more fairer rather than just becoming just smarter and faster ... what that means is that the right price, right product–especially for the next 100 million Indians who don't have that kind of access yet. That would be exciting, especially if it's coupled with GenAI which can provide them that consumer experience as well that they lack.

- SAURABH SHUKLA,
CTO, Bank of Baroda

Speakers described a future where customer AI agents could negotiate with bank-side AIs to craft bespoke financial products, making even complex offerings like climate insurance accessible and dynamic. For the gig economy and the "new to credit," synthetic data and fine-tuned models are breaking down barriers—discovering signals in sparse data and enabling smarter, fairer lending decisions. Experts highlighted customer experience, fraud detection, and underwriting as the fastest-maturing foundation-model use cases.

Compliance, Collections, and Frictionless Recovery

In the high-stakes world of collections, AI is delivering not only efficiency but a cultural shift in how collections are handled. The move is towards empathy and user experience—gamified, multi-channel nudges rather than fear-mongering calls. Machine learning models continue to help rank and segment customers, personalize outreach, optimize agent routes, and predict macro-level risks through early warning signals from transaction data, account aggregators, and behavioral analytics. Digital channels like UPI and account aggregators are enabling seamless, humane recovery, with AI agents handling the early buckets before escalation, respecting consumer dignity and regulatory boundaries. Early pilots showed that reward-based nudges lead to faster customer responses than traditional reminder calls.

The key part is the technology will give you efficiency, regulations give you the oversight, and the pragmatism of sustainability will come through fairness to the customer–because at the end of the day, if you see all the regulators are very concerned about the dignity of the borrower ... We should never lose sight of the fact that the ultimate borrower is a human being and conditions may have had forced him to do what he has done in terms of as you said, he owes money to us so he better pay but at the end of the day it has to–all these as a tripod–all these three have to work in tandem.

- ABHISAR SHARMA,
MD & CEO, NADL

International speakers noted that gamification—where

borrowers earn rewards, badges, and tailored communications for positive actions—improves engagement and recovery rates while reducing delinquency and systemic credit costs. The consensus: AI will not replace human collectors overnight, but will augment, monitor, and empower them, making the collections process fairer, more transparent, and less adversarial.

Profitable by Design: Flexibility and Fairness

Panelists across the banking spectrum emphasized how decisioning AI is now central to optimizing profitability, product fit, and risk management. From microfinance to asset-based lending, AI-driven models enable banks and other financial institutions to reach new customer cohorts, personalize products at scale, predict next-best offers, and automate compliance and explainability. Every step—from origination to cross-sell, from risk management to collections—is now a candidate for intelligent automation and predictive analytics.

Timely, structured open banking data and robust algorithms fuel these advances, but speakers cautioned that models are only as good as the underlying data. As protocols mature, India's DPI infrastructure (UPI for transactions, Aadhaar for identity) is emerging as a gold standard for global south and beyond. The message: real transformation lies not in cost-cutting, but in new revenue streams, dynamic insurance models, hyperpersonalized lending, and population-scale financial inclusion.

Capability Checklist

- Integration of multi-source financial and identity data (credit bureaus, account aggregators) to enrich AI-driven decisions.
- Deployment of agentic AI models for end-to-end customer onboarding, combining video, voice, and document analytics in multiple languages.
- Building domain-specific foundation models trained on vast financial datasets for personalized credit, risk, and product recommendations while ensuring data privacy.
- Use of multimodal AI capabilities including voice recognition, natural language understanding, and image processing to enhance compliance and fraud detection.
- Implementation of orchestration layers and APIs to integrate generative AI smoothly into fintech stacks, supporting flexible workflows and rapid iteration.
- Establishing explainability frameworks and regulatory adherence around AI-driven credit and risk decisions for auditability and fairness.
- Enabling hyperpersonalized lending and insurance products through predictive modeling and customer segmentation at scale.
- Deploying conversational AI and gamification in collections to improve recovery rates with humane, compliant, and engaging approaches.

Guardrails, Explainability, and Domain-Driven Trust: The Real-World Playbook

The Global Fintech Fest sessions underscored that successful generative AI deployments in financial services are defined by much more than technical prowess—they require a nuanced understanding of domain risks, explainability, and regulatory alignment. Experts described live, production use cases in lending, onboarding, fraud detection, underwriting, and collections where generative AI agents and domain-specific foundation models are now in daily use, performing functions previously managed only by experienced human operators.

Over and over, speakers stressed that financial services is a "high-potential and high-risk" domain: every loan, product offer, underwriting or fraud flag is mission-critical for customers, and mistakes erode trust instantly. Hallmark applications include voice-based agents that securely guide rural users through onboarding in local languages, AI-powered document and video verification for fraud prevention, and credit decisioning systems that mix alternate data, transactional analytics, and agentic models to build a comprehensive, real-time risk profiles.

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AI for Risk Management, Fraud Detection and Compliance

GFF 2025 highlighted how AI is reshaping risk management, fraud detection, and compliance. Experts from major institutions showcased gains in real-time monitoring, precision, and reduced manual intervention, while stressing explainability and human oversight. Insights spanned black swan event handling to population-scale financial crime detection, underscoring the need to pair autonomous workflows with strong customer experience and regulatory trust.

Speakers repeatedly noted that always-on payment ecosystems now demand "risk engines that think in milliseconds," as attackers increasingly exploit speed and scale.

Real-World Impact: What's Working—and What's Not

Panelists weren't shy about revealing what actually moves the needle in their organizations. One leader described how their AI-driven transaction monitoring systems slashed human intervention in fraud detection cases by more than half, with a leap in decision-making precision. A representative of fraud control division of banking, recounted how behavioral biometrics—tracking how customers type, swipe, and navigate devices—cut false positives by 50% while quadrupling fraud detection rates.

While AI can take us and help us to cover a certain journey, you may need that last-mile human connect for a higher level of intelligence to take a call on the ground on a particular situation and apply intuitive judgment whether to pass the transaction or not.

- PRASHANT MEHRA,
Group Head Credit Risk, HDFC Bank

AI's ability to map digital footprints and analyze dynamic customer profiles has become pivotal. Several institutions highlighted how automated, real-time transaction analysis reduced fraud at one bank by 25% in just two months, with human-driven compliance layered atop AI flagged risks for better accuracy. Many speakers added that "AI failures usually stem not from weak models but weak data foundations," urging firms to prioritize data lineage and monitoring early.

Yet, caution was a recurring motif. Several panelists shared tales of ambitious models that failed to outperform simple data integrations, reminding attendees to focus on the problem and data long before deploying costly GPUs. As one panelist put it, sometimes "integrate existing datasets and add a rule—AI isn't always the answer."

The False Hype Paradox: Where Does AI Actually Help?

Sessions were refreshingly pragmatic about the hype-versus-reality debate. AI's ascendancy in payment risk engines means near-instant analysis of billions of transactions, spotting trends, and flagging anomalies faster than any team of humans. Yet, leaders from banking technology firms pointed out that fraudsters are evolving just as fast, leading to an arms race between defensive algorithms and inventive threats like deep fakes and fraudulent app packages.

Explainable AI emerged as a must-have, especially as regulators demand transparency not just in blocking transactions, but in laying out the entire logic chain behind every flagged case. Enterprises increasingly need to log, audit, and be able to explain every decision—from stopping a payment to letting a high-value transaction pass unimpeded. Panelists stress that regulators now expect every alert, decline or limit change to leave an auditable trail of "why", with model reasoning translated into business-readable factors for customers, ops teams and supervisors.

The FREE-AI report is structured to strike an exact balance–13 recommendations to foster innovation and 13 to mitigate risk–because the committee's clear view was: we must explore AI's potential, not approach it only with a 'safety-first' fear mindset.

- SUVENDU PATI
Chief general manager, RBI

Cyber resilience in an AI-saturated threat landscape

The cyber-defence panel is blunt: generative AI has supercharged attackers—deepfakes, flawless phishing in local languages and crime-as-a-service are now cheap and abundant—so defenders must wield the same tools or fall behind. Banks are gradually moving from static "moat and castle" or even textbook zero-trust postures toward continuous, AI-assisted anomaly detection that watches identities, infrastructure and models themselves for subtle drifts, poisoning or prompt-based manipulation.

Resilience is being re-imagined through chaos engineering, richer playbooks and federated information-sharing, with national bodies and sector utilities encouraged to pool signals so weak anomalies spotted in one corner become early warnings for the rest of the system.

Black Swans and Chaos Engineering: Building Resilience

One lively session explored the question, "Can AI manage black swan events?" The answer was nuanced: while true outliers remain inherently unpredictable, AI excels at sensing weak signals and stress-testing for emerging risks. Experts from global payments firms, financial-data platforms, and large digital-payments ecosystems examined scenarios ranging from trade disruptions to large-scale cyber-attacks. They introduced a framework built around three capabilities: sense (detect early warnings), simulate (run adversarial models and stress tests), and explain (justify AI-generated conclusions to humans and regulators).

This evolving blend of algorithm and human intuition is vital. Banks must plan for "no regret moves"—building reserves and backup systems even when threats seem remote. The consensus: Resilience isn't just about technology, but about combining data, computation, and human judgment. Panels emphasized that AI is best seen as an "early-signal amplifier," not a predictor of rare events—useful for stress-testing but never a replacement for governance.

AI at Scale: Collections, KYC and Money Mule Detection

Agentic AI—autonomous yet controllable—was the star of sessions on next-generation workflows. Leaders from Amazon Pay, Google Pay, and One Card discussed practical automation: from customer service bots capable of handling collections calls empathetically, to dynamic KYC protocols and multi-step compliance monitoring. Speakers noted that scams in a mobile-first ecosystem increasingly involve money-mule networks and account-takeover attempts, demanding stronger behavioural and device-level defences. Processes once requiring armies of analysts are being distilled into context-aware, self-learning agents, reducing costs and boosting operational efficiency tenfold.

At national scale, the most striking example came from efforts to combat money-muling across India's digital payments ecosystem. One major payments infrastructure provider a population-wide approach, using graph analysis across 780 million profiles and 20 billion monthly transactions. AI models catch suspicious velocity shifts, circular fund flows, and behavioral anomalies—proactively alerting banks, regulators, and law enforcement. Several experts also argued that the real trust gains come not only from blocking fraud but from silently allowing more genuine high-value transactions with fewer false positives. Their secret: continually retraining models to counter drift, and harnessing feedback from financial institutions to sharpen detection.

Capability Checklist

- Ability to integrate and automate traditional rule-based workflows with AI for risk and fraud management.
- Deployment of machine learning models for real-time transaction analysis and anomaly detection on large-scale datasets.
- Implementation of behavioral biometrics and digital footprint analytics to enhance identity verification and detect fraud.
- Support for explainable AI (XAI) to increase model transparency, build trust, and meet audit/regulatory requirements.
- Human-in-the-loop systems enabling AI to handle routine cases while escalating exceptions or high-risk cases to experts.
- Use of chaos engineering and stress testing—including simulations for black swan/extreme events—for operational resiliency.
- Ability to orchestrate agentic AI workflows for autonomous operations, including multi-step processes across compliance, risk, and customer service.
- Adaptive, multi-layered security: combining protection, detection, response, and recovery using AI in both cyber and operational risk domains.
- Continuous learning from live and historical data, with feedback loops to reduce false positives/negatives and improve AI decision accuracy.

As lot of money mules have understood that we are catching them .We are seeing a lot of data drift and feature drift so we have to regularly retrain those models or bring new features out to have lesser false positives.

- SAURAV SINGLA,
Head of Data Science, NPCI

Challenges: Data Drift, False Positives, and Humans in the Loop

The common refrain throughout the festival: AI is indispensable, but it's not infallible. While challenges like false positives, model hallucination, data drift, and ever-evolving fraud tactics persist, the combined strength of AI and human judgment is increasingly being used to counter them. The best setups today combine agent autonomy with human override, keeping intuition in the loop for high-risk, high-impact decisions.

Balancing customer experience with deterrence, securing apps against deep fakes, and ensuring regulatory explainability are all works in progress. And panelists agreed: Success comes only from deeply understanding one's data, starting small, and scaling solutions that genuinely solve user problems—not just impress the sales team.

Human+AI Collaboration: Augmented Intelligence and Inclusion

Human–AI collaboration is redefining financial inclusion, as highlighted at GFF 2025. Voice-led access, open data frameworks, and AI-driven analytics are enabling financial inclusion and innovation. The sessions, spanning topics from voice-enabled trust to AI-driven MSME financing and data-driven finance, have collectively underscored a future where AI is not just a tool but a trusted partner in reshaping financial services. Speakers repeatedly emphasized that AI's role is most powerful when it "extends—not replaces—human capability," especially in low-trust environments.

Voice as the New Literacy for Inclusion

Voice-led interfaces—from checking balances to applying for loans—are rapidly becoming the bridge for millions excluded by language and literacy barriers. One speaker opened the discussion by emphasizing voice interaction as a critical enabler for inclusion. Drawing an analogy to Charlie Chaplin's silent films—where actions spoke louder than words—he highlighted how voice can democratize access for non-literate and multilingual populations in India. His demonstration of voice-driven banking technology showcased how AI can bridge language and literacy barriers, making financial services accessible to millions who struggle with traditional app interfaces. It was noted that real-world deployments already show higher completion rates for voice-first journeys among rural and elderly users. Smt Nirmala Sitharaman, Minister of Finance & Corporate Affairs, Government of India said: "India's AI stack must be rooted in Indian languages, local contexts, and multimodal interfaces so that artificial intelligence is widely accessible and truly inclusive."

Key challenges remain, such as latency and dialect diversity, but with open-source models and reinforcement learning, these are being actively addressed. The emphasis on trust, privacy, and designing voice systems that live

within secure ecosystems reflects a careful approach to inclusion without compromising security or user dignity.

AI-Driven Financial Inclusion for MSMEs

The panel on AI-powered inclusion for Micro, Small, and Medium Enterprises (MSMEs) highlighted the crucial role of data availability, access, and assimilation to unlock credit for the vast MSME segment, which constitutes a significant part of India's economy. Speakers from RBI Innovation Hub and fintech startups described how AI models leveraging GST data, banking transactions, and alternative data like utility payments are transforming credit underwriting and financing.

MSME credit depends on three things – data availability, data access, and data assimilation – and today, these are the biggest barriers to financial inclusion.

- AAKARSH NAIDU,
Head Fintech and Startups, RBIH

The vision is a hyper-customized MSME credit ecosystem where loans are embedded in transaction platforms, reducing transaction costs and credit risk. Ethical guardrails, open data frameworks, and collaboration between regulators, fintech, and financial institutions are vital pillars for this ecosystem. The inclusion gap, especially for women-led and rural MSMEs, remains significant and challenges around data quality and availability persist. Yet these are increasingly solvable through responsible AI innovation and coordinated intent across the ecosystem.

The Future of Data-Driven Financial Services with Augmented Analytics

A panel session delved into the synergy of augmented analytics (AA) and AI, exploring the evolution and future of data-driven financial services. Leaders from Google, Ignosis, and Sarvam AI discussed foundational AI models tailored for India's linguistic diversity and the importance of data residency and governance.

They emphasized how inclusive AI models trained on diverse dialects can catalyze mass adoption, particularly in vernacular and underserved segments. Privacy-enhancing technologies like federated learning are making data collaboration safer, enabling richer insights without compromising user control. This session echoed the sentiment that AI-based trust, compliance, and explainability are the new currencies in financial innovation. Experts reiterated that "AI can analyze at scale, but only humans can interpret impact," underscoring the pairing of augmented analytics with sector expertise for responsible decisioning.

Collaborative Intelligence: Humans and AI Co-creating Value

The session on collaborative intelligence featured industry veterans discussing the nuanced relationship between human expertise and AI capabilities. AI, conceptualized as an ally rather than a replacement, can augment decision-making, personalization, and operational efficiency. This vision mirrors broader conversations on how augmented intelligence is reshaping industries worldwide, with examples ranging from scientific discovery to education, where AI assists millions of learners and researchers across diverse domains. As AI models increasingly understand multiple Indian languages and local contexts, their ability to support inclusive financial innovation becomes even more pronounced.

Speakers acknowledged the complexity of integrating AI responsibly—balancing accuracy, explainability, and compliance—while fostering user trust. The notion of 'human-in-the-loop' evolving to 'human-on-the-loop' illustrates how automation is complemented by human oversight where needed, especially in high-risk financial decisions. Additional perspectives emphasized that human intuition, emotion, and cultural sensitivity remain irreplaceable, anchoring AI systems in real-world context. Evolving skill sets and cultural shifts are preparing workforces to collaborate seamlessly with AI, setting the stage for a future where intelligence transformation transcends digital transformation. Through strategic foresight and design thinking, this human-AI synergy aims not only to boost efficiency but also to safeguard inclusivity across both urban and rural financial ecosystems.

The Inclusion Dividend and Ethical Imperatives

One speaker passionately articulated the concept of the "Inclusion

Dividend"—the measurable economic and societal benefits deriving from embedding inclusion into digital financial transformation. AI amplifies this dividend by personalizing services, reducing onboarding costs, and enhancing fraud detection, thus making financial services more dignified and accessible. In parallel, discussions highlighted how responsible AI must be grounded in transparency, informed consent, and strong privacy measures so that inclusion does not come at the cost of user rights. Practical innovations—such as using AI alongside satellite imagery to verify farm conditions and unlock accurate credit or insurance for rural communities—demonstrated how technology can dismantle information asymmetry and deliver fairness at scale.

Five hundred million people using UPI deserves applause–but at the current pace, onboarding the next five hundred million will take nearly eighty years. That should tell us clearly: we are doing well, but nowhere near fast enough on inclusion.

- P VASUDEVAN
Executive Director, RBI

However, realizing this potential demands intentional design, bridging digital divides in infrastructure, literacy, and trust. Ethical AI frameworks, community engagement, and interoperable platforms like India Stack exemplify enablers for scalable, inclusive AI innovation. The ultimate goal is near-zero exclusion by 2030, ensuring dignity and prosperity for all. Achieving this also requires anticipating future disruptions through structured foresight methods, ensuring that systems remain resilient, human-centric, and aligned with societal values.

In an increasingly AI-driven landscape, success will ultimately be judged by how well technology strengthens trust, protects the vulnerable, and expands opportunity for underserved populations.

Capability Checklist

- Multilingual Voice Interaction – Ability to support voice-based financial transactions and services in multiple local languages and dialects, improving accessibility for non-literate and vernacular users.
- Personalized AI-Driven Inclusion – Leveraging mobile usage, transaction patterns, and alternative data to customize financial products addressing specific underserved community needs.
- Open Data Integration & Aggregation – Capability to collect, unify, and securely process diverse data sources such as GST, banking transactions, utility payments, and more for comprehensive credit assessment.
- Human-in-the-Loop Collaboration – Blending AI automation with human oversight where necessary, ensuring explainability, trust, and effective decision-making in financial services.
- Ethical AI Governance and Oversight – Establishing AI ethics boards, regulatory compliance, and transparent accountability mechanisms to build trust and prevent exclusion or bias.
- Digital Infrastructure & Connectivity – Ensuring broad access to affordable devices, broadband, digital ID frameworks, and interoperable platforms underpinning AI-driven fintech solutions.
- AI-Enabled Credit and Risk Modeling – Advanced AI models for automated credit scoring, risk assessment, fraud detection, and loan underwriting tailored for MSMEs and low-income segments.
- Augmented Analytics & Ecosystem Collaboration – Deploying augmented intelligence for data-driven insights, open innovation, and partnerships across fintech, regulators, and civil society for sustainable inclusion.

AI is a catalyst for inclusion because it enables personalization for underserved communities by analyzing mobile usage, payment patterns, and alternative data to unlock access for as many people as possible. But to do that, we must be intentional in everything that we do to ensure we design for individuals, those who have solutions in their hands and don't trust them or those that don't have them at all.

- MS L NSHUTI MBABAZI,
MD, Better Than Cash Alliance

AI in Market Infrastructure and Capital Markets

AI is reshaping market infrastructure and capital markets by transforming data analytics, trading, compliance, and cross-border payments. GFF 2025 highlighted how intelligence from diverse data, sentiment signals, and advanced models enhances policy decisions, risk management, and surveillance. With AI acting as a human co-pilot and strong governance frameworks emerging, financial markets are moving toward greater efficiency, trust, and resilience.

The Pillars of AI in Capital Markets

Industry experts converged on a shared framework for understanding AI's rising influence in capital markets—built on three intertwined pillars: signals, smarts, and sentiment. Signals capture the torrents of structured and alternative data now flowing across exchanges and macro feeds, from market prices and order books to satellite imagery and consumer-spend patterns. Smarts represent the learning engines—ranging from gradient-boosted forecasts to deep time-series models and graph networks—that transform these signals into trading strategies, surveillance alerts, and real-time risk insights. Sentiment adds a vital human layer, quantifying market psychology through news analytics, call-transcript audio, and social-media behavior to detect mood shifts before they surface in prices.

Together, these pillars reflect a capital-markets environment that is rapidly becoming AI-native rather than merely data-driven. With exchanges handling millions of trades in microsecond windows and surveillance systems monitoring for spoofing, contagion and manipulation across equities, derivatives, and alternative venues, only machine learning can separate noise from insight at the required scale. The opportunity is two-sided: AI can unlock sharper alpha, deeper liquidity, and personalized

market access—yet the same capabilities can amplify fraud, herding, or systemic risk if not governed responsibly. In this new architecture, humans move from processing data to supervising intelligence.

AI is not here to replace humans but to act as a co-pilot – assisting professionals with recommendations, highlighting risks, and providing alternative strategies while humans remain ultimately in control and accountable." – Prominent academic on AI application in capital markets

- PROF UMESH BELLUR,
Professor of Data Science,
UC San Diego

Market infrastructures: deterministic cores, probabilistic edges

India's market leaders described how exchanges have evolved from shouting pits to demat, from T+5 to T+1—and why AI is the next structural shift. The core of market infrastructure remains uncompromisingly deterministic: order routing, matching, clearing, and risk must reconcile to the last decimal, leaving no room for probabilistic models. AI's power instead lies at the perimeter, where patterns hide in sprawling logs, documents, and behavioural signals. Large language models now scan offer documents for red flags, while other tools map hidden relationships across registries, court records, and social media to spot early signs of misconduct. Commodity markets are using similar techniques to detect shadow trading that traditional systems struggle to surface.

This shift is driving a quiet redesign of infrastructure. Surveillance teams aim to automate 70–80% of routine checks so human expertise can focus on judgment calls. But latency remains the brutal constraint: high-frequency traders fight for microseconds, prompting exchanges to explore edge data centres so AI inference doesn't become the bottleneck. The conversation has moved beyond GPU counts to harder questions: can networks, data pipelines, and governance frameworks support a shared, sector-regulated AI layer? In a market handling a significant share of global order flow, these choices will define the next decade of market integrity.

Real-Time Speed and Accuracy

Capital markets operate at millisecond speeds, demanding ultra-low latency AI systems capable of processing vast, diverse data at high velocity. Edge computing and specialized infrastructure are essential to deliver timely insights that can preempt market movements and detect fraud. AI algorithms automate complex trading decisions, portfolio optimization, and surveillance, reducing false positives and enabling human experts to focus on critical interventions.

Instant, Intelligent, Invisible Rails

Across adjacent stages, speakers outlined a unified vision for how AI is transforming the underlying pipes of global money movement. Panels on cross-border payments and real-time trade anchored themselves on a simple user dream: sending or receiving money across currencies and time zones should feel as effortless as a local instant payment. With more than 70 countries now operating real-time payment systems—India's UPI, Australia's NPP, Kuwait's W-Pay and others—and global experiments stitching them together, the infrastructure for seamless international payments is rapidly taking shape.

AI is emerging as the real-time intelligence layer that makes these systems viable at scale. Bank and fintech leaders described models that perform dynamic risk scoring, sanctions screening and fraud detection on every transaction, allowing compliance to move at the exact speed of the payment. Document-intelligence engines now read trade contracts, invoices and customs papers to create verifiable "fingerprints," cutting processing times for Indian corporates by more than half. What once required opaque fees, T+2 settlement cycles and mountains of paperwork is evolving into smart, API-driven rails where AI handles the complexity in the background—making global payments feel instant, intelligent and nearly invisible to the end user.

When Central Banks Go AI-Native: Building Intelligent, Trustworthy Monetary Systems

As capital markets race ahead with AI-driven intelligence, central banks are quietly—but decisively—integrating AI into the command centre of economic

management. From Washington to Frankfurt to Mumbai, monetary authorities are applying machine learning and NLP to strengthen data analysis, economic forecasting, and market surveillance. Models now parse satellite imagery, consumption data, and social-media signals to nowcast GDP, inflation, supply-chain stress and credit conditions far faster than traditional indicators. Open-source language models are being fine-tuned to summarize economic narratives, detect turning points, and understand nonlinear inflation dynamics when older models fall short.

On the financial-plumbing side, central banks are piloting graph neural networks to monitor cross-border payments, map transaction networks, and spot AML risk across correspondent banking chains. BIS Innovation Hub experiments such as Project Agora explore tokenised central bank money paired with AI-assisted compliance for next-generation wholesale settlement. Yet policymakers remain cautious: opaque models, model concentration, and the risk of AI agents triggering synchronized behaviors pose emerging threats to stability. Their answer is measured—blend in-house and external models, enforce explainability for anything informing policy, and keep humans firmly in the loop. In this vision, AI becomes an advisor, not an autonomous policymaker.

Central banks must balance the transformative benefits of AI with significant challenges such as model explainability, ethical concerns, and financial stability risks, ensuring AI is adopted in a safe, transparent, and sustainable manner.

- TAO ZANG,
Chief Representative, BIS

Capability Checklist

- Robust Data Collection and Integration from multiple structured and alternative sources (market data, social media, satellite imagery)
- Advanced Machine Learning and Deep Learning models to analyze signals, sentiment, and smart data
- Real-Time Processing Infrastructure supporting ultra-low latency analytics for trading and payments
- Cross-Border Payment Systems optimized with AI for speed, security, and regulatory compliance
- Explainability and Transparency Mechanisms to make AI decisions interpretable and auditable
- Ethical AI Frameworks addressing bias mitigation, fairness, and investor protection
- Central Bank AI Capabilities for policy analysis, financial stability monitoring, and macroeconomic forecasting
- AI-Enabled Advisory Services for personalized, context-aware investor recommendations with human oversight
- Regulatory and Governance Guardrails defining responsible AI adoption with risk management and continuous monitoring
- Collaboration Ecosystems and Talent Development, fostering multi-stakeholder innovation and sustainable AI deployments

AI in Advisory: Balancing Innovation and Investor Protection

AI-driven advisory services are personalizing investment recommendations at scale, improving retail participation and financial inclusion. Yet, advisory applications tread cautiously to avoid biases, opacity, and unsuitable product suggestions. Panelists highlighted AI as a co-pilot for human advisors, enhancing communication with clients through contextualized explanations and hyper-personalized insights. Regulatory frameworks are evolving to mandate transparency, oversight, and robust risk management to protect investors in this new paradigm.

Tokenization is poised to bring the power of high finance down to the last pin code in India, and we must build robust regulatory guardrails to ensure this technology benefits everyone inclusively and securely.

SHARATH BULUSU,
Senior Director, Google Pay India

AI-Powered Innovation and Ecosystem Collaboration

The 2025 Global Fintech Fest highlighted India's responsible, policy-led approach to AI in finance, with fintech–bank partnerships enabling real-time personalization and broader credit access. Discussions showcased AI-driven MSME empowerment, climate-aligned finance, and the continued role of Aadhaar in secure digital infrastructure. Together, the insights reflect AI's growing impact on building an inclusive, trusted, and sustainable financial ecosystem.

India's policy bet: AI at population scale, with guardrails

India's finance minister framed fintech as a public good built on intentionally open digital rails—Aadhaar, UPI, account aggregators and DigiLocker—that have democratized access and enabled India's rise in real-time digital payments.

Her second pillar was AI. India's IndiaAI mission aims to expand compute access, build a national repository of verified datasets, develop multilingual foundational models, and create centres of excellence to support AI-enabled financial services. But she paired this ambition with a clear warning: fraud is shifting from system breaches to trust breaches through deepfakes and synthetic identities. Her call to fintechs was equally pointed—prioritize risk discipline, treat regulation as an enabler, and direct AI toward hard problems like MSME credit, inclusion, and green finance.

Just as no one could have imagined a decade ago that a biker in Leh and a pilgrim in Rameswaram would be connected by the same payment system, we are now at the beginning of a future where AI models built for India will

quietly make lives more resilient, more inclusive, and safer for our citizens.

- SOHINI RAJOLA
Executive Director, Growth, NPCI

Responsible AI: Trust at the Core

A recurring motif was the measured, pragmatic Indian policy approach toward AI in finance. Distinguished leaders from MeitY and India AI mission, championed a "seven pillar" AI strategy—providing broad access to affordable compute, building open-source Indian language models, and robust governance rooted in responsible AI. Rather than hasty regulation, India's path emphasizes empowering domain regulators (like RBI for banking) and developing bias-mitigation, transparency, and stress-testing tools. This holistic view may serve as a blueprint for the Global South, dovetailing public interest, private innovation, and safe adoption.

Responsible AI in finance must be guided by five Ts: Trust, built into every algorithm; Transparency, so decisions can be understood and questioned; Training, to ensure India creates AI, not just consumes it; Technology for good, judged by inclusion and resilience; and Togetherness, where regulators, industry, academia, and global partners co-develop the future.

- T RABI SANKAR
Deputy Governor, RBI

India sees AI as a great kinetic enabler to kickstart economic growth as also to ensure better delivery of public services. Our core strength is our human capital with the top AI talent globally, and through the India AI mission's seven pillar strategy, we are building an indigenous AI stack to empower innovation while ensuring safe, trustworthy AI that prioritizes human oversight and limits harm.

- SHRI ABHISHEK SINGH,
Additional Secretary, Ministry of Electronics and IT, Government of India

Ecosystem Collaboration: Banks, Fintechs, and Beyond

Panelists from banks, fintech companies, and tech providers shared how collaboration, not just competition, now defines the Indian fintech ecosystem. Banks contribute regulatory compliance and scale, while nimble fintechs drive rapid product innovation and data-driven distribution. The vision—truly personalized financial services—is starting to be realized as AI enables real-time insight from UPI and payment platforms, moving past historical credit scores and widening credit access.

Success hinges on strong data quality, trustworthy infrastructure, and shared guardrails for customer safety and data privacy.

MSMEs and Financial Inclusion: AI's Big Test

India's MSMEs—historically under-served and under-banked—are receiving new lifelines as AI reshapes loan origination, onboarding, risk assessment, and collections. Panelists underscored how AI can pre-empt capital needs, automate document processing across languages and formats, and even leverage alternative data (from sales, behaviors, or geolocation) to underwrite the "new-to-credit." Yet, a consistent theme was the need for "human in the loop" systems: AI acts as an amplifier, not a replacement, empowering field agents and experienced staff, not displacing them. The regulatory ecosystem, led by the RBI's "Responsible and Ethical AI" framework (the free AI committee report), is evolving at a measured pace, balancing innovation with inclusion and fairness.

For MSMEs, the real breakthrough is AI's ability to predict capital needs and deliver credit before the need even arises.

- SUDARSHAN CHARI,
MD & Head SME, DBS Bank

Green Finance Goes Digital: Climate, Credit, and Complexity

Perhaps nowhere is the interplay between technology and purpose more visible than in "green finance." As India faces both ambitious climate targets and the reality of extreme weather events, AI and fintech are recalibrating the very fabric of lending. The sessions highlighted innovations such as:

- Using remote sensing and

IoT data for climate-resilient agriculture underwriting.

- Mainstreaming green tagging in loan books with interoperable, AI-enhanced taxonomies.
- Distributed, data-led approaches for small-scale solar, EV, and agri projects—ensuring both reach and risk management in even the most fragmented markets.

The challenge? Data gaps persist, especially in less-digitized, rural contexts, and there are ongoing risks of inadvertently deepening financial exclusion without robust, inclusive models.

Identity, Security, and the Next-Gen Rails

Digital trust is fast becoming the anchor of next-generation fintech. Sessions highlighted how Aadhaar—through biometric authentication and consent-aware, portable identities—is reducing fraud, streamlining KYC, and enabling interoperability across payments, gig platforms, and e-commerce. As AI-enabled payment agents and digital assistants begin to act on behalf of individuals, identity shifts from being a login to becoming the control plane of an AI-powered economy.

This future demands identity rails that are both open and verifiable. Founders argued for standards-based credentials, tokenized data, and privacy-preserving proofs so entities across geographies can authenticate each other without bespoke integrations. India's UIDAI leadership reinforced this direction: Aadhaar will remain the foundational layer, with new capabilities—face authentication, AI-driven document checks, and QR-shareable verified credentials—layered on top. Together, these advancements form the trust backbone for an intelligent, interoperable financial system.

Capability Checklist

- Seamless collaboration mechanisms between banks and fintechs combine regulatory trust, distribution, and technology innovation.
- AI-powered tools for MSME finance, including behavioral scoring, preemptive credit availability, intelligent document processing, and collections automation.
- Integration with India's digital public infrastructure stack, including Aadhaar-based digital identity for secure and interoperable onboarding and verification.
- Scalable AI models supporting multiple Indian languages and dialects, tailored to regional nuances for broad accessibility and acceptance.
- AI-driven payment intelligence supporting embedded finance, credit underwriting, fraud detection, and risk mitigation in near real-time.
- Advanced data aggregation and infrastructure capabilities to enable high-quality, privacy-preserving financial data lakes and AI sandboxes for testing and innovation.
- Development of agentic AI systems and AI digital twins to augment customer service and operational efficiency while maintaining human-in-the-loop oversight.
- Green finance solutions leveraging AI to align credit risk assessment with climate resilience and sustainability goals.
- Ecosystem-wide coordination across regulators, industry, multilateral institutions, and technology players to foster secure, inclusive, and responsible AI adoption at scale.

From e-commerce to "agentic" commerce

In one of the panel, speakers from a global payment network and e-commerce platform described a near-term future in which software agents—not humans—become the primary buyers in digital commerce. Instead of browsing multiple marketplaces for a protein bar, an agent will understand the person's preferences, crawl the entire web, authenticate into merchant sites, compare thousands of options, and complete payment in the background using tokenized credentials. This flips the past 30 years of digital commerce: first the seller went digital (e-commerce), now the buyer goes digital (agentic commerce), with both sides represented by software negotiating, authenticating and settling in milliseconds.

With agents able to surface hyper-granular demand, merchants will be pushed to produce more variants, more quickly, for narrower segments. Panelists argued that what e-commerce did to physical retail—expanding discovery and reach—agentic commerce will do to e-commerce itself, driving a new wave of hyper-personalization and disrupting how products are designed, priced, discovered, and financed.

AI for Efficiency and Customer Experience

AI is reshaping financial services by boosting efficiency and elevating customer experience across banking, payments, and insurance. GFF 2025 highlighted real-time risk detection, rapid automation, and hyper-personalized engagement powered by LLMs and computer vision. With ethical oversight, indigenous models, and collaborative innovation, India is building inclusive, secure, and highly responsive AI-driven financial systems.

Revolutionizing Financial Operations through AI

A standout session on "AI Powered Finance Efficiency in Financial Operations" gathered stalwarts from India's banking and payments ecosystems. With over 300 million transactions daily and a trajectory to hit a billion transactions, AI plays a crucial role in real-time settlement and operational risk management. AI's ability to identify risky transactions early and flag potential fraud has become a lifeline for efficient payment processing at such unprecedented scale. Panelists emphasized how AI-driven analytics not only streamline operations but also reduce manual oversight errors, directly impacting transactional safety and speed without sacrificing reliability. What emerged clearly across sessions is that modern fraud detection, risk scoring, and behavioural profiling are being completely reimagined with AI and ML, turning AI into an invisible but indispensable safety layer for India's high-velocity payment rails.

We process close to 9.5 to 10 billion transactions a month. AI is very important for this, especially for things like near real-time settlement and flagging risk. At

the scale we handle, manual processes can no longer keep up. AI helps us pinpoint risky transactions precisely, making these billions of transactions safer and more secure.

- GUHAN MUTHUSAMY,
co-founder at Mindgate Solutions

The Next Decade of Banking: Customer-Centric, Digital-First, AI-Ready

The discussion on the future of banking underscored an inevitable shift to digital-first, AI-powered models focused on hyper-personalized customer engagement. With banking credit projected to rise significantly over the next decade, AI's role in enabling personalized product offers, real-time data analysis, and dynamic risk assessments has become foundational. Banks are building native digital platforms that leverage AI to optimize customer journeys—from onboarding and credit scoring to ongoing engagement—while balancing the necessity of human touch in complex decisions. They are running hundreds of AI and ML scorecards for different segments and occupations, using rich transaction and ecosystem data so that every interaction—from a collections call to a lending offer—feels tailored to the individual rather than broadcast to the mass market. The marriage of AI tools and human expertise delivers personalized customer experiences that build loyalty without compromising transparency and regulatory compliance.

Customer trust is the foundation of all business in financial services. Our AI initiatives are anchored on fairness, transparency, and compliance. We believe in responsible innovation–always keeping a human in the loop where it matters, especially for final credit decisions. Avoiding that one critical error is more important than getting everything right.

- RAKESH JHA,
Executive Director, ICICI Bank

Transforming Insurance: The Global Reset through AI

Insurance is experiencing an AI-driven reset, blurring the lines between traditional insurers and insurtech innovators. AI enables faster, data-rich underwriting and claims processes that improve cost-efficiency and fraud detection. For example, large vision models help assess vehicle damage with precision, reducing operational costs and improving customer satisfaction through speedier claim settlements. Insurers are also mining call recordings, emails, and chat transcripts with generative models to surface pain points and fraud patterns that were previously buried in unstructured data, letting them redesign journeys and controls based on what customers actually experience rather than intuition alone. Life insurers are integrating AI to evolve from pure risk protectors to lifelong partners in well-being, offering personalized engagement and inclusive financial products. Regulatory compliance and ethical AI frameworks are key themes to ensure trust as AI becomes embedded across insurance value chains globally.

Breaking the 18-Month Barrier: AI in Payments Testing

While India leads with the highest volume of digital transactions worldwide, product launch cycles lag behind, often taking over 18 months due to complex, manual testing procedures. AI-driven automation and simulation are revolutionizing payments testing by drastically reducing testing time—from months to hours—and enhancing accuracy by automating error detection and giving predictive insights on transaction failures. This shift enables rapid innovation and faster go-to-market for new financial products while improving the customer experience by ensuring reliable, seamless payment flows.

India leads with the world's most digital transactions, but product launch cycles remain slow–taking on average 18 months due to manual, fragmented testing processes. AI-driven automation can reduce testing time drastically–from months to hours–freeing teams to innovate faster while ensuring reliability at scale.

- JAMES DANIELS,
P APAC at Fime

Efficient Low-Latency, High-Throughput LLM Deployment for BFSIs

High-performance computing innovations by entities like Nvidia are crucial to power AI models at scale for financial institutions. Large Language Models (LLMs) deployment in BFSI leverages thousands of Graphics Processing Units (GPUs) working in parallel to deliver realtime fraud detection, risk analytics, and intelligent document processing. The ability to handle complex computations rapidly transforms decision-making in trading, credit underwriting, and compliance. Technologies like Compute Unified Device Architecture (CUDA) facilitate seamless scaling from laptops to data centers, enabling both speed and security to meet growing AI demands in financial operations.

Redefining Customer Engagement: From Notifications to Conversations

Customer engagement is evolving from one-way notifications to interactive, AI-powered conversations. Financial institutions use conversational AI to interpret multiple customer signals and deliver highly contextualized, hyper-personalized nudges. Yet, human intervention remains essential, especially in complex or sensitive interactions, fostering trust and loyalty. Novel conversational channels built on partnerships between tech providers and financial institutions bridge language, regulatory, and legacy system gaps to create secure and trusted AI-driven customer experiences.

Capability Checklist

- Ability to process extremely high transaction volumes with AI-driven real-time risk detection and settlement (payments scale of billions/month).
- Implementation of ethical AI frameworks prioritizing transparency, fairness, and human-in-the-loop decision-making for customer trust.
- AI-powered hyperpersonalization leveraging rich customer data platforms to deliver segment-specific offers and improve customer engagement.
- Conversational AI and multichannel interactive communication tools replacing one-way notifications to create trusted, real-time customer conversations with relevance and context.
- Advanced AI models including large vision models and large language models (LLMs) deployed for underwriting, claims assessment, and fraud detection.
- AI-enabled automation and orchestration of payments product testing processes reducing time-to-market from 18+ months to hours through simulation, comprehensive test case management, and AI-based error detection.
- Integration of AI observability platforms built on open telemetry for causal impact analysis, monitoring, and root cause detection to drive operational reliability.
- Capability to build indigenous, culturally relevant AI models addressing India's diverse linguistic and socio-economic landscape.
- Scalable, low-latency AI deployment infrastructure including edge data centers to meet real-time inference demands at massive scale.
- Collaborative AI innovation ecosystems involving partnerships among financial institutions, fintechs, technology providers, and regulators to drive responsible AI adoption and foster financial inclusion.

Impact to Causation Observability Stack: Unifying Finance Operations

Behind the scenes, supporting such high-scale AI-driven financial services are unified observability platforms built on OpenTelemetry. Addressing siloed teams and alert chaos, these platforms correlate technical incidents with business impacts to expedite root cause analysis and improve system reliability. NPCI's greenfield data centers and a robust observability ecosystem enable monitoring millions of spans (a span is a single event or or action captured by a system) per second, reflecting system health at granularity critical to maintaining trust and operational excellence in India's vast payment infrastructure.

REPORTS

Convergence: Human + AI for the Next Era of Finance

This flagship Global Fintech Fest 2025 report examines how Artificial Intelligence is reshaping financial services through a "Human + AI" convergence model, where AI augments—rather than replaces—human decision-making. AI is positioned as a structural layer embedded across banking, fintech, and insurance value chains, spanning credit underwriting, fraud detection, compliance, customer servicing, MSME finance, and internal operations.

The report notes that institutions deploying AI at scale are delivering 20–25% cost efficiencies and 10–20% revenue uplift, though maturity remains uneven, with only 27% of banks considered future-ready. Generative AI emerges as a key productivity driver through copilots, intelligent document processing, conversational interfaces, and workflow automation, alongside early momentum in agentic AI systems executing multi-step workflows under defined guardrails.

A strong emphasis is placed on India's AI advantage, anchored in population-scale Digital Public Infrastructure such as UPI, Account Aggregator, OCEN, and DigiLocker. DPI-integrated, vernacular, and mobile-first AI solutions are enabling low-cost, high-impact financial services and shifting credit from collateral-led to data-driven models.

Responsible AI forms a core pillar, referencing the RBI's FREE-AI framework and underscoring trust, fairness, explainability, accountability, and human oversight as prerequisites for scale. Strategically, the report calls for BFSI-native AI models, sustained talent and R&D investment, and deeper ecosystem collaboration—positioning India as a global hub for responsible, inclusive, and exportable AI-led financial services.

From Automation to Autonomy: How Agentic AI Is Revolutionizing Payments

This report examines the shift in payments from rule-based automation to Agentic AI–driven autonomy, where intelligent agents anticipate user needs, make decisions, and execute payments with minimal human intervention. Agentic Commerce is positioned as the next evolution after card, e-commerce, and mobile payments, with AI agents orchestrating end-to-end workflows across consumers, merchants, issuers, and acquirers.

In financial services, Agentic AI moves beyond predictive and generative models by enabling multi-step, goal-oriented decision-making across fraud management, B2B payments, reconciliation, dispute handling, credit offers, and personalised sales. These systems improve efficiency, reduce fraud false positives, accelerate settlements, and enhance engagement, while retaining human oversight for complex cases.

The report highlights India's readiness for Agentic AI, supported by India Stack, large-scale digital payment volumes, and a proactive regulatory environment. RBI initiatives such as MuleHunter.AI and the FREE-AI framework reinforce the importance of responsible AI. Ultimately, trust, governance, and interoperability will determine success in AI-native, agent-orchestrated financial ecosystems.

Reimagining Global Financial Services and Payments with Emerging Technologies

This report positions AI as a foundational enabler of next-generation financial services, shifting institutions from digitisation to AI-native and autonomous finance. It highlights GenAI, AI-driven security, fraud detection, and hyper-personalisation as drivers of real-time, inclusive finance, while emphasising responsible AI, governance, and India's DPI as catalysts for scalable adoption.

LOOKING AHEAD – NEXT DECADE OF AI-DRIVEN FINANCIAL SERVICES

The 2025 convening of GFF marks a generational shift. AI is no longer a back-office novelty or pilot scheme—it's powering mission-critical operations, unlocking new customer segments, augmenting human expertise, and creating a finance sector that is more inclusive, adaptive, and resilient. The true magic, panelists agreed, will not be in the raw efficiency gains but in transformation: fairer terms, richer experiences, proactive financial advice, and digital tools serving 1.4 billion Indians.

Navigating Challenges: bias, ethical AI, transparency, security, and cybersecurity in AI

Financial AI must tackle built in biases and ethics at every turn. Experts warn that bias often sneaks in via skewed data, flawed models or human oversight, potentially entrenching inequality. Regulators, therefore, demand "human-centric" fairness: models should be explainable, with "plain and easy-to-understand" disclosures on how decisions (e.g. loan approvals) are made. Industry guidelines now call for formal AI ethics codes, diverse training datasets, and rigorous oversight to prevent discriminatory outcomes. At the same time, cybersecurity is a front and center concern. Autonomous AI agents and generative tools widen the attack surface – firms have seen AI "agents" mishandle data or operate without authorization. Consequently, new frameworks insist on "secure by design" AI: systems must safeguard data confidentiality, integrity and availability even under attack. Emerging threats like AI-driven deepfakes and fraud make this vigilance vital.

Strategic foresight: what the future holds for AI in fintech — global integration, financial inclusion, scalable AI solutions

Looking ahead, AI promises to bind global finance more tightly together while reaching those at the margins. Cloud-based, modular AI platforms are already enabling small businesses in Asia, Africa and Latin America to handle complex tasks like cross-border payments, FX risk management and personalized customer engagement. Over the next decade, advanced analytics and intelligent agents should make payment and banking networks truly global, while extending services to underserved areas.

In India, public infrastructures (Aadhaar identity, UPI payments, GSTN tax data) have vaulted hundreds of millions into formal finance. Today, UPI alone supports nearly 500 million users and ₹20 billion transactions per month. These digital footprints are already powering new AI-driven fintech: lenders and insurers increasingly mine transaction and behavioral data to score credit for people without formal histories.

Regulatory guardrails and frameworks for sustainable AI adoption

Policymakers are working to ensure that this AI revolution is safe and inclusive. The prevailing approach is risk based regulation: rather than a one-size-fits-all ban, rules get stricter as impact grows. The EU's AI Act classifies credit scoring and insurance-pricing algorithms as "high-risk," forcing providers to build in documentation, data governance and human oversight. Other jurisdictions (Singapore, UK, Japan, etc.) are pursuing similar frameworks.

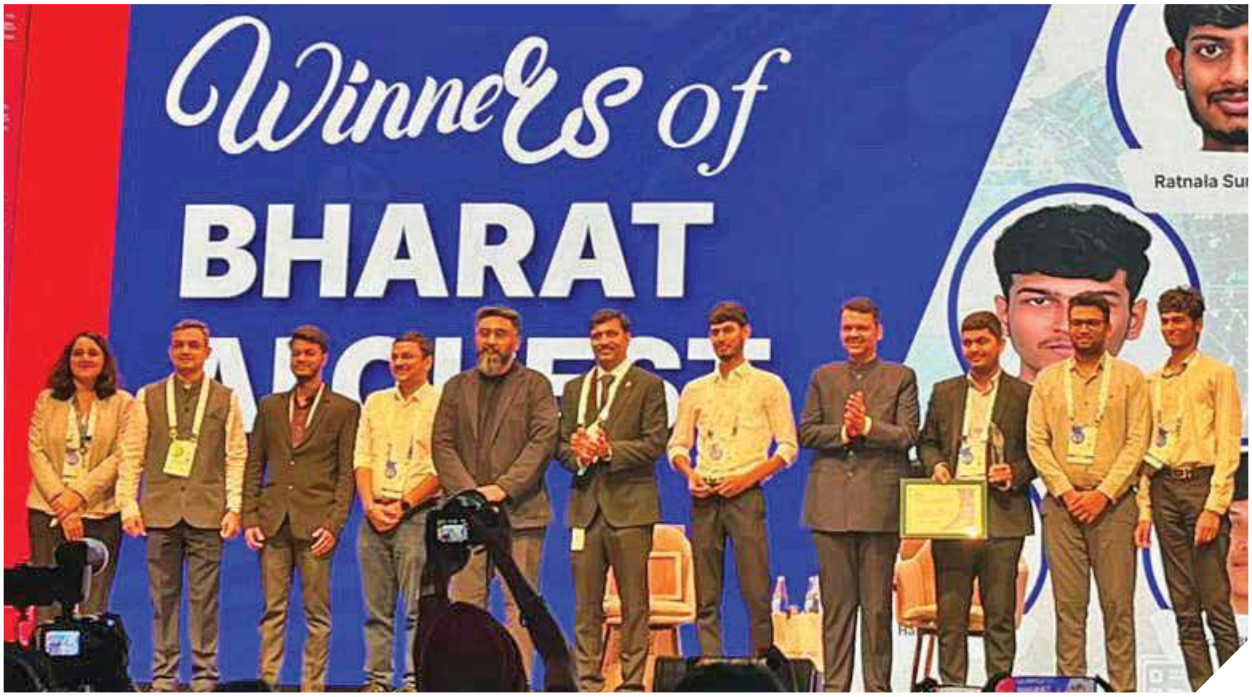
India is moving in this direction too. In 2025 the RBI released a committee report (FREE-AI) outlining 26 recommendations across pillars like governance, risk, security and ethics. The report stresses that innovation must run "in harmony" with risk management: it calls for new oversight bodies, funding for local AI models, strict audit and disclosure rules, and even integration of AI into existing rails like UPI. Meanwhile, NITI Aayog and other bodies have issued voluntary "Responsible AI" guidelines, and draft laws (e.g. a Digital India Act). The result should be a sturdy set of guardrails – protecting privacy and fairness – without stifling innovation.

The next decade will not be defined by whether AI can automate financial tasks—it already can. It will be defined by how responsibly and inclusively we harness its power to build a financial ecosystem that is trusted, adaptive, and transformative for billions.

GLOBAL FINTECH FEST 2025

BHARAT AI QUEST

BY NPCI-NVIDIA



Artificial Intelligence is reshaping industries by driving innovation, enhancing operational efficiency, and enabling smarter decision-making. With AI at the core of its vision, NPCI spearheaded the Bharat AI Experience Zone and Bharat AI Quest at GFF 2025, with the objective of fostering innovation, showcasing cutting-edge AI solutions, and nurturing the next generation of AI talent in India.

As part of this initiative, NPCI conducted the Bharat AI Quest, which saw participation from 700+ aspiring AI professionals through an online entry-level assessment. From this pool, 300+ top performers qualified for the next levels, an on-ground workshop and AI challenge, organized in collaboration with NVIDIA. Designed as India's ultimate AI challenge, the initiative aimed to recognize excellence in AI/ML, coding, and problem-solving capabilities. Participants competed alongside some of India's top AI talent across three progressively challenging levels, earning the titles of AI Enthusiast, AI Expert, and the ultimate AI Elite. All participants who successfully completed Levels 1, 2, and 3 were awarded the NPCI–NVIDIA Certificate, recognizing their achievement and participation.

The top three winners were felicitated by Shri Devendra Fadnavis, Hon'ble Chief Minister of Maharashtra, along with Mr. Vishal Kanvaty, Chief Technology Officer, NPCI, and received cash awards of Rs. 5 lakhs, 3 lakhs, and 2 lakhs, respectively.

Through Bharat AI Quest, NPCI further reinforced its commitment to building a robust AI talent pipeline strengthening its role in nurturing next-generation AI innovators and contributing meaningfully to the future of India's digital ecosystem.

GLOBAL FINTECH FEST 2025

BHARAT AI EXPERIENCE ZONE 2025 BY NPCI-NVIDIA

Top AI innovators showcased how AI has been transforming finance and beyond. They also engaged with global leaders, potential clients, and partners.

AbleCredit
AI-powered credit automation for thin-file and semi-formal MSME customers.

Febi.ai
GenAI accounting copilot for automated invoice, statement, and contract processing.

F5 Networks
Offers AI-driven bot and fraud defense for APIs, apps, and digital channels.

Fundamentao.ai
Builds AI Voice Agents for lending workflows with high accuracy and context handling.

Gnani.ai
Provides a voice-first Agent AI platform powering automated customer interactions.

Gupshup
Enables secure conversational banking, including India's first PSU WhatsApp banking service.

LiaPlus
Enterprise Voice AI Assistants supporting multilingual, real-time customer interaction.

Neural Defend
Specializes in deepfake and synthetic media detection across audio/video.

Razorpay
Provides AI-enabled payment, risk, fraud, and automation solutions for digital finance.

Rooflo
Delivers AI-based gold loan audit and jewelry image assessment for lenders.

Sarvam
Builds Indian-language foundational models and enterprise-grade text/speech AI.

Vobiz
AI-first telecom layer offering APIs for voice AI, DID provisioning, and SIP trunking.

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