



Reskilling the Banking Workforce in the Age of Artificial Intelligence: Emerging HRM Priorities and Future Skill Requirements in the Indian BFSI Sector

Dr. Avadhesh Vyas¹, Mr. Virendra Choudhary²

Assistant Professor, Department of Management & Technology, Engineering College Bikaner¹

Assistant Professor, Department of Management & Technology, Engineering College Bikaner²

Abstract: Artificial Intelligence (AI) is transforming the banking, financial services and insurance (BFSI) industry, affecting job profiles, work procedures and client engagement models. AI-driven automation delivers efficiency and innovation benefits, but it also generates new skill requirements and intensifies the demand for continuous workforce upskilling. Reskilling thus became a key Human Resource Management (HRM) response to AI-driven transformation. This study explores the changing skill requirements of employees in the Indian BFSI sector and the new HRM priorities related to AI adoption. The study adopts a secondary-data-based conceptual review design and synthesizes evidence from more than twenty-five peer-reviewed articles, systematic reviews, and institutional and regulatory publications, including reports from the World Economic Forum, the Reserve Bank of India, and the State Bank of India. The review identifies five broad skill categories that are becoming increasingly important in AI-enabled financial organizations: AI and online literacy, data and analytical skills, cybersecurity and risk-governance capabilities, human-centric skills, and adaptability and continuous learning. Reskilling must integrate technical training with domain knowledge, ethical judgment, critical thinking, and human-oversight capability, the paper argues, and proposes a six-stage HRM reskilling framework — skill-gap identification, role-based mapping, targeted reskilling, internal mobility, continuous capability assessment, and a responsible AI culture — supported by a “Reskill–Redeploy–Retain” strategic model. The results suggest a change from training-oriented HRM to strategic, skill-based, and adaptive talent management in Indian BFSI organizations.

Keywords: Artificial Intelligence; Reskilling; Human Resource Management; Banking Sector; BFSI; Future Skills; Digital Transformation; Employee Development; India

1. INTRODUCTION

Historically, the financial-services industry has been one of the first industries to adopt technological change. Technology has transformed the way financial institutions operate from computerization, and automated teller machines to internet banking, mobile banking, digital payments and fintech platforms. The rise of Artificial Intelligence (AI), machine learning, generative AI, and advanced analytics is the latest and perhaps most profound stage in this evolution. AI applications in finance are increasingly being used in fraud detection, credit assessment, customer service, financial advisory, risk management, compliance, cybersecurity, document processing, and personalized banking. The banking literature, reviewed systematically, shows that AI research in banking has matured along three broad dimensions – strategy, process and customer experience – mirroring the width of technological change now taking place in the sector (Fares, Butt, & Lee, 2022; Kalyani & Gupta, 2023). Similarly, additional analyses show that AI use cases are mainly focused on fraud detection, wealth management, and credit-risk evaluation, as well as employee-facing advantages like predictive analytics and reduced workload (Garg, 2024).

The growing adoption of AI is not just a tech question, but a human-resource question as well. Automation is increasingly taking over routine, repetitive tasks and workers are expected to do the work that requires analytical reasoning, technology fluency, professional judgment, managing relationships and complex problem solving. Recent systematic reviews on AI implementation in organizations confirm that the success of AI adoption is less about the sophistication of the technology and much more about organizational readiness, infrastructure, leadership support and critically, the capability of the people who need to work alongside it (Lee, Scheepers, Lui, & Ngai, 2023). The traditional conception of a job-specific skill is thus yielding to a more fluid conception of employability that involves continuous learning and adaptability.

Reskilling and upskilling the current workforce is one of the most anticipated organizational strategies for navigating AI-driven disruption, according to the World Economic Forum's Future of Jobs Report 2025. The vast majority of



employers surveyed worldwide plan to prioritize reskilling and upskilling initiatives thru 2030 (World Economic Forum, 2025). According to the same report, over the next five years, technological skills—specifically, AI and big data literacy, networks and cybersecurity, and technological literacy—are expected to increase in importance more quickly than any other skill category, along with resilient human skills like creativity, curiosity, and resilience (World Economic Forum, 2025).

The Indian BFSI sector is a particularly interesting setting for studying this change. With mobile banking, real-time digital payments, fintech platforms, and data-driven lending, India has developed one of the largest digital financial ecosystems in the world. Adoption of AI is already changing day-to-day work, according to empirical studies of Indian banking employees. While employees express concerns about job security and demand structured upskilling support, they also report positive attitudes toward AI's contribution to accounting, sales, contract processing, and cybersecurity (Dwivedi & Kochhar, 2023). The workforce must develop skills that enable it to collaborate well with intelligent systems while maintaining the human judgment that is still essential to financial decision-making as Indian financial institutions expand their usage of AI.

This is not a hypothetical concern The Reserve Bank of India (RBI) has proposed that regulated entities maintain "kill-switch" arrangements, board-approved model risk frameworks, and meaningful human oversight of AI-driven decisions in its draft Guidance on Regulatory Principles for Model Risk Management, 2026, explicitly warning against "automation bias" — the tendency of staff to accept algorithmic outputs without exercising independent judgment. RBI Governor stated that Indian banks must invest in both technology and personnel reskilling, and that human oversight would remain vital even as AI usage rises (Business Today, 2026). This regulatory emphasis builds on the recommendations of the RBI's own Committee on the Framework for Responsible and Ethical Enablement of Artificial Intelligence (FREE-AI), which urged banks to develop policies to mitigate the risks associated with AI use in financial services (Reserve Bank of India, 2025). Taken together, these developments demonstrate that the central HRM question is no longer whether employees should be trained in new technologies, but rather what specific skills banking employees will need to remain productive, employable, and responsible in an AI-enabled financial-services environment.

The remainder of this paper addresses this question through a structured secondary-data review. The remainder of this paper addresses this question through a structured secondary-data review. Section 2 reviews the academic and institutional literature on AI in banking, AI in HRM, and workforce reskilling, and identifies the research gap this study addresses. Section 3 describes the methodology. Section 4 presents the findings and discussion, including a proposed skill matrix and reskilling framework for Indian BFSI organizations. Section 5 concludes with implications, limitations, and directions for future research.

1.1 Objectives of the Study

- To examine the changing skill requirements of employees in the Indian BFSI sector in the age of Artificial Intelligence.
- To identify the major skill categories required for AI-enabled banking workplaces.
- To examine the emerging role of HRM in workforce reskilling.
- To identify major challenges associated with reskilling banking employees.
- To propose an HRM-oriented framework for reskilling the Indian BFSI workforce.

1.2 Research Questions

- RQ1: How is Artificial Intelligence changing skill requirements in the Indian BFSI sector?
- RQ2: What technical and human skills are likely to become increasingly important for banking employees?
- RQ3: What role can HRM play in preparing employees for AI-enabled work?
- RQ4: What are the major challenges associated with workforce reskilling in Indian financial organizations?
- RQ5: What strategic framework can Indian BFSI organizations adopt for effective employee reskilling?

2. LITERATURE REVIEW

This section summarizes the academic and institutional literature relevant to AI-driven workforce transformation in banking, organized into six thematic streams: AI in the banking sector; AI and human resource management; AI, reskilling and upskilling as a workforce strategy; AI adoption and workforce transformation in Indian BFSI; the emerging cybersecurity, governance, and explainability skill domain; and institutional evidence from Indian financial-sector employers. The section concludes by outlining the research gap addressed by this study.



2.1 Artificial Intelligence and the Banking Sector

A large and rising collection of systematic literature demonstrates that artificial intelligence has advanced from a peripheral experiment to a key operational capacity in banking. Fares, Butt, and Lee (2022), after examining 44 articles published since 2005, conclude that AI research in banking clusters around three themes: strategy, process, and customer experience, and suggest an AI banking-service architecture that connects academic and industry expertise. In a systematic review and meta-analysis, Kalyani and Gupta (2023) report that AI and machine-learning initiatives in banking are focused on fraud detection, wealth management, and credit risk assessment, while also providing employee benefits such as predictive analytics and reduced manual workload.

Garg (2024), after evaluating 54 papers, confirms this tendency, stating that AI applications that help bank employees include predictive analytics and cybersecurity support, as well as customer-facing chatbots and robo-advisors.

Ghandour (2021) and Bag (2025) expand on this picture by conducting broader systematic reviews of AI applications in banking and financial operations, concluding that while AI adoption yields efficiency and cost benefits, it requires parallel investment in governance, skills, and organizational readiness to be sustainable. Dewasiri, Dharmarathna, and Choudhary (2024) concentrate on AI's function in banking risk management, suggesting that AI-enabled risk solutions raise the necessity for professionals capable of evaluating model outputs rather than just executing transactions.

Ali and Shah (2024) investigate the particular challenges to AI adoption for cybersecurity reasons in banking, concluding that organizational and skill-related barriers, rather than technological limits, are the most significant impediments. At a more general organizational level, Lee, Scheepers, Lui, and Ngai (2023), in a systematic review of AI implementation across organizations, conclude that successful AI adoption is dependent on organizational readiness, appropriate infrastructure, and, most importantly, employee capability, reinforcing the proposition that the AI transformation of banking is inextricably linked to workforce transformation.

2.2 Artificial Intelligence and HR Management

AI is also revolutionizing human resource management (HRM). Böhmer and Schinnenburg (2023) provide a critical examination of AI-driven HRM, stating that while AI may improve organizational skills in recruiting and personnel planning, it must be approached with caution to ensure fairness and employee confidence. Charlwood and Guenole (2022) investigate the paradoxes that HR departments encounter while adapting to AI, highlighting conflicts between efficiency advantages and the degradation of human judgment in personnel choices.

In a systematic review of AI and automation in Human Resource Development, Ekuma (2024) concludes that a skilled workforce is required for effective AI adoption, and that organizations must identify skill gaps, design customized learning programs, and cultivate a culture of continuous learning to reap the benefits of AI in HRD. A broader bibliometric and systematic review of AI-HRM interactions identifies recruitment efficiency, personalized learning, and workplace analytics as the most important application areas, while transparency, fairness, and data-privacy governance remain unresolved issues (Chamorro-Premuzic et al., 2025).

This image is supported by research that focuses on employee-lifecycle applications. Nosratabadi, Zahed, Ponkratov, and Kostyrin (2022) use the PRISMA systematic review method to find that AI models are already used across all stages of the employee lifecycle — recruitment, onboarding, employability, retention, and offboarding — emphasizing that AI-related HRM cannot be limited to training but must address the entire employment relationship.

2.3 Upskilling and Reskilling as a Workforce Strategy for the AI Era

The literature on AI and labor places a lot of emphasis on the idea of reskilling. Five essential talents for employee upskilling in the AI age are identified by Jaiswal, Arun, and Varma (2022) based on interviews with twenty professionals in multinational firms operating in India: data analysis, digital fluency, sophisticated cognitive skills, decision-making, and continuous learning. Their work is especially pertinent to the current evaluation since it shows, using data from Indian organizations, that the requirement for upskilling goes well beyond specialized technical training to encompass judgment and flexibility.

The most comprehensive global data on this topic can be found in the World Economic Forum's Future of Jobs Report 2025, which projects that 39% of core workforce skills will change by 2030 and that most employers plan to prioritize reskilling and upskilling programs during that time. The fastest-growing skill areas are cybersecurity, technological literacy, and artificial intelligence and big data (World Economic Forum, 2025). Sector-specific evidence from the United States banking industry corroborates the same trend: a systematic review of AI's effect on recruitment, selection, and retention in banking finds that reskilling investment is increasingly treated as a retention strategy rather than a discretionary training expense (Akerle & Ajijon, 2025).

2.4 AI Adoption and Workforce Transformation in the Indian BFSI Sector

Evidence specific to Indian banking employees is now emerging. Dwivedi and Kochhar (2023) use a mixed-methods design that includes surveys and interviews with Indian banking employees to discover a mix of optimism and concern: employees value AI's contribution to accounting, sales, contract management, and cybersecurity, but they also express



concerns about job security and call for structured training and upskilling support from their employers. Gajanand and Trivedi (2026) investigate the influence of AI-assisted HR practices on employee performance and profitability in an Indian public-sector bank, finding meaningful improvements in both areas when AI-enabled HR practices were combined with proper employee training.

McKinsey estimates that generative AI could add between \$200 billion and \$340 billion in annual value to the banking industry globally — equivalent to 9-15% of operating profits — driven primarily by productivity gains, but cautions that capturing this value depends on financial-services firms determining which new competencies their workforce requires and investing accordingly in reskilling and upskilling. These data combined show that the Indian BFSI sector is following the similar trend observed elsewhere, but with particular regulatory and workforce features that require focused research.

2.5 Emerging Skills Domain: Cybersecurity, Governance, and Explainability.

A unique and fast developing body of research focuses on the cybersecurity and governance abilities necessary when AI is integrated into financial decision-making. The ISC2 Cybersecurity Workforce Study reveals a persistent and growing global shortage of skilled cybersecurity professionals, with AI and machine-learning proficiency rising from unranked to one of the top five most in-demand cybersecurity competencies in a single survey cycle (ISC2, 2025). In finance, Weber, Carl, and Hinz (2023) conduct a systematic review of explainable AI (XAI) across finance, information systems, and computer science literature, concluding that the ability to interpret and explain AI-driven financial decisions is becoming a distinct professional competency rather than a purely technical add-on. This is directly relevant to the Indian regulatory context: the RBI's FREE-AI committee report calls for financial institutions to build internal capacity for responsible and ethical AI governance (Reserve Bank of India, 2025), while the RBI's subsequent draft Guidance on Regulatory Principles for Model Risk Management, 2026 requires regulated entities to ensure that staff overseeing AI-driven decisions possess sufficient understanding of the underlying models to challenge. Governor Sanjay Malhotra reiterated this expectation in August 2026, saying that Indian banks must combine AI investment with reskilling and ongoing human monitoring (Business Today, 2026).

2.6 Institutional Evidence for Skill-Based Talent Management in Indian BFSI

Institutional evidence from Indian financial-sector employers supports the tendency outlined in the scholarly literature. The State Bank of India's Integrated Annual Report 2024-25 describes a skill-based talent management approach that now incorporates performance assessment, learning and development, career progression, and succession planning across a workforce of over 236,000 employees (State Bank of India, 2025). In terms of national digital-skills policy, a joint Deloitte-Nasscom report finds that India's AI talent demand is expected to roughly double between 2022 and 2027, creating a demand-supply gap that can only be closed thru a combination of new entrant training and large-scale reskilling of the existing workforce. Nasscom's previous FutureSkills demand-supply research also shows a continuing multiple-fold imbalance between digital-skills need and the available new talent pool in India, with employers currently conducting large reskilling activities to close the gap (Nasscom, 2021). Taken together, this institutional data suggests that Indian BFSI businesses are gradually transitioning from a job-based to a skill-based model of human capital management, in line with the worldwide pattern observed by the World Economic Forum (2025).

2.7 Research Gap.

Despite this huge corpus of material, there are three gaps. First, much of the AI-in-banking research (Section 2.1) focuses on technology adoption, operational efficiency, and customer experience rather than the workforce competencies necessary for long-term AI adoption success. Second, existing AI-HRM literature (Section 2.2) usually focuses on recruiting, performance management, or employee lifecycle analytics, but reskilling the existing banking personnel receives far less sustained attention. Third, while emerging Indian evidence (Sections 2.4 and 2.6) confirms that AI adoption and skill-based talent management are underway in Indian BFSI organizations, this evidence remains fragmented across employee-attitude studies, institutional annual reports, and general digital-skills policy documents; it has not yet been synthesized into an integrated HRM framework that connects skill categories, reskilling stages, and the specific regulatory expectations the RBI has. The current study fills this gap by combining the material described above into a role-based skill matrix and a six-stage HRM reskilling methodology suited to the Indian BFSI industry.

3. Methods and Materials

3.1 Design of Research

The study uses a conceptual review design based on secondary data. For this article, no primary survey or interviews were carried out. Rather, the study builds an integrated conceptual framework for reskilling in the Indian BFSI industry



and identifies recurrent trends in AI-driven workforce transformation by synthesizing data from scholarly literature and reliable secondary sources.

3.2 Data Sources and Search Methods

Five categories of secondary sources were used to gather evidence: World Economic Forum publications; Reserve Bank of India publications and regulatory releases; annual and integrated reports of Indian banks, primarily the State Bank of India; peer-reviewed journal articles and systematic literature reviews; and industry or professional reports, such as those from Nasscom, Deloitte, ISC2, and McKinsey. Using combinations of the terms "artificial intelligence," "banking," "BFSI," "reskilling," "upskilling," "human resource management," "employee lifecycle," "cybersecurity skills," "explainable AI," and "India," as well as database- and publisher-level searches of journals indexed by Scopus, Web of Science, and ABDC, Google Scholar, SSRN, and institutional publication repositories, sources were found. Literature and reports produced between 2020 and 2026 received special attention, while previous basic works that are still theoretically essential to the area were kept. In addition to the institutional and regulatory papers mentioned in Sections 1 and 4, around twenty-five different sources that satisfied these requirements were kept for synthesis in Section 2.

3.3 The Analytical Method

The method used was a thematic review. After a thorough reading of the retained literature and secondary evidence, the following recurrent themes were identified: (1) AI and digital literacy; (2) data and analytical capabilities; (3) cybersecurity and risk governance; (4) human-centric capabilities; (5) adaptability and continuous learning; (6) HRM and talent management; and (7) responsible AI and human oversight. The skill matrix, the suggested HRM reskilling framework, and the discussion in Section 4 were all arranged using these themes, which were inductively developed from the literature examined in Section 2. The objective of the analysis was to develop an integrated conceptual understanding of workforce reskilling requirements in AI-enabled Indian banking, based on and traceable to the reviewed literature, rather than to statistically estimate relationships between variables, which would require primary data collection.

3.4 Boundaries and Scope

Without making significant distinctions between these subsectors, the research takes a comprehensive view of the Indian BFSI sector, using data from public-industry banks, private banks, and, when applicable, related financial-services industries like fintech and insurance. The conceptual, review-based aspect of the study is reflected in this scope choice; Section 5.3 discusses the ensuing restrictions.

4. FINDINGS AND CONCLUSIONS

A suggested skill matrix, a six-stage HRM reskilling framework, a conceptual model, implications for HR managers, the main obstacles to reskilling, a suggested strategic model, and a synthesizing discussion follow the findings of the thematic review, which are arranged around the five emerging skill categories mentioned in Section 3.3.

4.1 Digital Literacy and AI

The first significant conclusion is that, rather than being a specialized ability exclusive to IT workers, fundamental AI and digital literacy are becoming a common labor necessity. The utilization of AI systems, what AI can and cannot accomplish, how AI-generated data should be processed, and the fundamentals of machine learning, generative AI, and digital banking platforms are all becoming more and more important to banking staff. This result is in line with Dwivedi and Kochhar's (2023) finding that Indian banking employees who understood AI's role in their function reported more positive attitudes toward its adoption, as well as Lee et al.'s (2023) conclusion that AI implementation only succeeds where organizational capability, including general staff literacy, keeps pace with technology deployment. A credit officer utilizing an AI-supported lending system must comprehend the limitations of algorithmic outputs, and a relationship manager utilizing an AI-enabled customer-profiling tool must have the knowledge to evaluate its suggestions. Therefore, rather than being a specialized talent, AI literacy should become a general worker competence.

4.2 Analytical and Data Skills

The studied literature repeatedly cites data interpretation, analytical thinking, and evidence-based decision-making as key future capabilities. AI-enabled banking is essentially data-driven (Kalyani & Gupta, 2023; Garg, 2024). This does not imply that all employees need to be highly skilled programmers. Rather than implementing a uniform training standard across the workforce, HRM should develop tiered analytical capabilities calibrated to role, in line with Jaiswal, Arun, and Varma's (2022) finding that data-analysis skill is one of five critical upskilling priorities identified by professionals in Indian organizations.



Table 1. Suggested Tiered Analytical Capability by Employee Category

Employee Category	Suggested Analytical Skill Level
Frontline employees	Basic data interpretation
Relationship managers	Customer and financial analytics
Branch managers	Business intelligence and dashboards
Credit officers	Risk and predictive analytics
Compliance officers	Data-driven monitoring
Senior management	Strategic analytics
Specialist teams	Advanced AI/ML capabilities

4.3 AI-Governance, Cybersecurity, and Risk Skills

New risk categories pertaining to data privacy, cybersecurity, algorithmic bias, model risk, and explainability are also brought about by the growing usage of AI. According to the ISC2 (2025) Cybersecurity Workforce Study, there is a growing global shortage of cybersecurity professionals despite the fact that proficiency in AI and machine learning has emerged as one of the top five most sought-after skills in the field. This finding directly relates to banking, as cybersecurity lapses have systemic repercussions. In a similar vein, Weber, Carl, and Hinz (2023) discover that explainability—the capacity to decipher and elucidate AI-driven financial decisions—is beginning to emerge as a separate professional capability rather than an incidental technological issue. The FREE-AI committee report, which urges financial institutions to develop internal capacity for ethical and responsible AI governance (Reserve Bank of India, 2025), and the RBI's 2026 draft Guidance on Regulatory Principles for Model Risk Management, which specifically warns against "automation bias"—the propensity to accept AI outputs without independent scrutiny—both directly support this conclusion. RBI Governor Sanjay Malhotra's August 2026 remarks that banks must combine AI investment with reskilling and sustained human oversight (Business Today, 2026) confirm that this is now an active supervisory expectation rather than a theoretical concern. Employees involved in AI-enabled processes therefore require a working understanding of AI risk, cybersecurity, and responsible technology use, calibrated to the materiality of the decisions their role influences.

4.4 The Growing Importance of Human Skills

One of the main conclusions of the examined literature is that technical aptitude should not be the only emphasis of reskilling. Critical thinking, creativity, emotional intelligence, communication, negotiation, leadership, empathy, ethical judgment, and relationship management are all uniquely human skills that are becoming more, not less, useful as AI replaces monotonous analytical and administrative tasks. Two of the five crucial upskilling goals in AI-affected Indian enterprises, according to Jaiswal, Arun, and Varma (2022), are sophisticated cognitive skill and decision-making, both of which are closer to human judgment than technical capability. This is especially crucial in the banking industry because financial decisions often involve human relationships, trust, and uncertainty. For example, an AI system may identify a customer as a possible credit risk, but before making a decision, a seasoned banker may need to review contextual information that the model is unable to capture. As a result, future banking workers are unlikely to be only tech users; instead, they are gradually evolving into AI-enabled decision makers whose worth is found in their ability to make decisions that AI cannot.

4.5 Adaptability and Continuous Learning

The literature is in agreement that one-time training programs are no longer adequate due to the fast evolution of AI technology. With the percentage of workers who have finished training increasing from 41% in 2023 to 50% in the most recent survey cycle, the World Economic Forum (2025) concludes that an increasing emphasis on lifelong learning, upskilling, and reskilling has already helped employers worldwide better anticipate and manage future skill requirements. This worldwide trend is explicitly supported in an Indian corporate context by Jaiswal, Arun, and Varma (2022), who rank continuous learning as the fifth of their five essential upskilling goals. The AI era necessitates a cycle model of continual learning, experimentation, application, feedback, reskilling, and relearning; traditional HRM often followed a linear model of training leading to skill acquisition leading to work performance. Therefore, rather of considering training as a sporadic, discrete occurrence, Indian BFSI businesses must establish learning environments where employees are expected and supported to regularly upgrade their capabilities.



4.6 The Changing Role of HRM

All of the results point to the need for HRM to change concurrently. Strategic AI-era HRM must ask what competencies the firm will need in three to five years and how they may be created internally, whereas traditional HRM asks what training program should be done. This is a change from training administration to strategic workforce planning, which is directly supported by Böhmer and Schinnenburg's (2023) contention that AI-driven HRM must be integrated as an organizational capability rather than a discrete technology deployment, and Ekuma's (2024) finding that effective AI adoption in HR development depends on organizations identifying skill gaps and building customized, continuous learning programs rather than one-time training interventions.

Table 2. Traditional versus AI-Era HRM Priorities

Traditional HRM Priority	AI-Era HRM Priority
Job descriptions	Skill-based role profiles
Periodic training	Continuous learning
Recruitment	Build–buy–borrow talent strategy
Annual performance appraisal	Continuous capability assessment
Job-specific skills	Transferable skills
Promotion based on tenure	Skill-based career progression
External hiring	Internal talent mobility
Training completion	Demonstrated capability

This shift is already occurring in Indian BFSI practice, as demonstrated by the State Bank of India's current skill-based talent management approach, which integrates skills with performance evaluation, learning, career advancement, and succession planning across a workforce of over 236,000 employees (State Bank of India, 2025).

4.7 Emerging Skill Matrix for Indian BFSI

Synthesizing Sections 4.1-4.5, the future skill requirements of the Indian BFSI workforce may be divided into five major areas, each evaluated as having very high strategic relevance based on the convergence of academic, institutional, and regulatory data discussed above.

Table 3. Emerging Skill Matrix for AI-Enabled Indian BFSI Organizations

Skill Category	Key Skills	Importance
AI & Digital	AI literacy, generative-AI usage, digital platforms	Very High
Data & Analytics	Data interpretation, predictive analytics, visualization	Very High
Risk & Governance	Cybersecurity, model risk, privacy, explainability, compliance	Very High
Human Skills	Critical thinking, communication, empathy, leadership	Very High
Adaptive Skills	Learning agility, adaptability, creativity, problem-solving	Very High

The significant point is that the future banking staff will need a mixed skill set. Technical talents and traditional interpersonal skills will not suffice; instead, the developing employee profile might be expressed as: Financial Domain Knowledge + Digital Literacy + Data talents + Human Skills + Ethical Judgment + Learning Agility.



4.8 Proposed HRM Reskilling Framework.

Based on the results presented above, this study suggests a six-stage methodology for reskilling the Indian BFSI workforce.

Stage 1 — Skill Gap Identification: Organizations should identify current workforce skills, future job requirements, AI exposure by position, skill gaps, and individual employees that need to be reskilled.

Stage 2 — Role-Based Skill Mapping: Rather than providing identical AI training to all employees, organizations should map skill requirements to specific roles. For example, credit officers require AI-supported credit analytics and model interpretation; relationship managers require AI-enabled customer analytics and digital relationship management; compliance officers require AI governance and regulatory-technology skills; and branch managers require AI-enabled business

Stage 3 — Targeted Reskilling: Learning programs should include classroom learning, digital learning, micro-learning, simulations, AI laboratories, certification programs, experiential learning, and peer learning, rather than depending just on one training modality.

Stage 4 — Internal Mobility: Employees whose current tasks are severely impacted by automation should be offered organized opportunity to transition into new positions whenever possible, reflecting the HRM philosophy that firms should reskill before replacing.

Stage 5 — Continuous Capability Assessment: Rather than just attending training, skill growth should be assessed based on demonstrated capability — AI tool usage, certification, productivity, problem-solving ability, digital adoption, decision-making quality, and employee mobility.

Stage 6 — Responsible AI Culture: Employees should be trained to understand human accountability, AI bias, data privacy, cybersecurity, explainability, ethical decision-making, and human oversight, which directly aligns with the RBI's expectations under the FREE-AI framework and the 2026 draft Model Risk Management guidance.

4.9 Conceptual Framework

A sequential conceptual framework can be used to illustrate the findings: Adoption of AI in BFSI results in job transformation and changing work processes, which creates emerging skill gaps; these gaps are addressed thru HRM reskilling strategies spanning AI and digital literacy, data analytics, risk and cybersecurity, human skills, and adaptability; this process creates an AI-ready workforce, which in turn drives organizational outcomes like employee employability, workforce adaptability, productivity, innovation, internal mobility, and responsible AI adoption. According to the framework, reskilling serves as the strategic bridge connecting technological transformation to workforce readiness — and without it, AI investment risks becoming a purely technological exercise disconnected from organizational capability, echoing Lee et al.'s (2023) finding that AI implementation succeeds only when organizational and human capability keep pace with the technology itself.

4.10 HRM Implications for Indian BFSI Companies

Transition from training to developing capabilities: Instead of focusing only on training hours completed, organizations should consider if employees have developed skills that will be useful in their future responsibilities.

Adopt talent management based on skills: In line with the model already used at SBI, job descriptions should progressively be supplemented by talent profiles that are linked to recruiting, assessment, career advancement, and succession planning (State Bank of India, 2025).

Give internal talent first priority: Given the size of India's digital skills demand–supply gap as reported by Nasscom (2021) and Deloitte India and Nasscom (2024), reskilling current employees who possess institutional and subject expertise may be more effective than depending solely on external recruiting.

Establish AI learning ecosystems: Banks should offer ongoing access to internal knowledge communities, digital learning platforms, AI learning modules, micro-credentials, and hands-on AI experimentation.

Protect human judgment: In line with the Reserve Bank of India's emphasis on significant human supervision, AI should enhance rather than replace human responsibility in high-impact financial choices (Reserve Bank of India, 2026).

Promote a culture of learning: Reskilling should not be seen by workers as a reaction to job insecurity; rather, learning should be seen as an essential component of career advancement and company culture.

4.11 Challenges in Reskilling the Indian BFSI Workforce:

Workforce reskilling confronts a number of real-world obstacles despite its significance. Employees used to conventional banking procedures frequently oppose change. Because employees have very diverse baseline levels of digital literacy when they join the reskilling process, there is skill imbalance. Participation is limited by time restrictions since banks employees sometimes find it challenging to participate in extended training programs due to their current task obligations. When generic AI training does not transition into real workplace capacity, a training-relevance gap may result. This danger is explicitly implied by the role-based mapping suggested in Stage 2 of the framework



above. Cost is another barrier since creating extensive AI learning programs necessitates a huge organizational investment; this issue is mirrored in India's larger demand-supply imbalance for digital skills (Nasscom, 2021). If workers think reskilling is primarily meant to aid workforce reduction, fear of job displacement can lead to resistance to AI adoption itself. This is a problem that Dwivedi and Kochhar (2023) directly documented among Indian banking employees. Lastly, the RBI's worry about automation bias is clearly reflected in the need for employees to comprehend not only how to utilize AI but also when AI-generated outputs should not be accepted without human assessment due to ethical and legal complexity (Reserve Bank of India, 2026).

4.12 A Proposed Strategic Model: Reskilling, Redeployment, and Retention

Building on the methodology presented above, this study suggests that Indian BFSI businesses use a "Reskill-Redeploy-Retain" strategy. Reskilling entails building new technical, analytical, digital, and human competencies among current employees. Redeployment entails shifting employees from highly automated duties to emergent activities in which their domain expertise might add more value. Employees that effectively adapt to AI-enabled employment can be retained thru career development, skill-based growth, and relevant job possibilities. This model provides an alternative to a purely technological approach in which automation is followed by mechanical workforce reduction, and it is consistent with the Reserve Bank of India's emphasis on human oversight as a permanent — rather than transitional — feature of AI-enabled banking.

4.13 Discussion.

According to the assessment, AI is more likely to modify the nature of banking job than to abolish it entirely. The most significant change may be in the composition of work: routine processing, documentation, basic queries, and repetitive analytical tasks are becoming increasingly automatable, while employees are expected to devote more time to complex decision-making, relationship management, problem-solving, exception handling, and strategic activity. This alteration alters the definition of an effective bank employee. Previously, accuracy, procedural knowledge, and experience were central to many banking roles; in the AI-enabled environment, these characteristics are still important but must be supplemented by digital fluency, analytical capability, adaptability, and the ability to evaluate technology-generated information. The research examined suggests two simultaneous transitions: from job-based to skill-based HRM, and from periodic training to continual reskilling. This strategy is supported by institutional data from SBI's skill-based talent management approach (State Bank of India, 2025) as well as national evidence on India's expanding digital talent gap (Nasscom, 2021; Deloitte India & Nasscom, 2024). At the same time, the RBI's present emphasis on human oversight (Reserve Bank of India, 2025, 2026; Business Today, 2026) shows that the future banking staff cannot be fully technology-dependent. AI adoption requires employees who can question, understand, and override AI results as needed. The central proposition emerging from this review is that AI-enabled banks' competitive advantage will be determined not only by the quality of their AI systems, but also by their ability to develop employees capable of effectively collaborating with, critically evaluating, and responsibly managing those systems.

5. CONCLUSION

Artificial intelligence is redefining the Indian BFSI business and altering the skills demanded of bank employees. The transformation is expected to have an impact on not just technological functions, but also customer service, credit, risk management, compliance, operations, and managerial decision-making. This secondary-data-based review identifies five major categories of future skills — AI and digital literacy, data and analytical capabilities, cybersecurity and risk-management skills, human-centric skills, and adaptability and continuous learning — based on a synthesis of over twenty-five academic, institutional, and regulatory resources. According to the findings, reskilling should be considered a strategic HRM priority rather than a supplemental training activity. Banking businesses must anticipate future skill requirements, connect existing employee skills to them, offer role-specific learning opportunities, allow internal mobility, and implement continuous capacity evaluation. Importantly, the study challenges the simplistic view of reskilling as merely technical training. The future banking workforce will require a mix of technical skills and uniquely human abilities: critical thinking, ethical judgment, communication, empathy, creativity, and relationship management are expected to become more vital as AI takes over mundane duties. Therefore, the goal for Indian BFSI companies should be to develop an AI-ready staff rather than just an AI-enabled bank. The capacity of financial organizations to effectively combine three components—Artificial Intelligence, Human Capability, and Responsible HRM—may determine their future competitive advantage.

5.1 Implications for Theory and Practice

The study theoretically links the AI-HRM literature (Böhmer & Schinnenburg, 2023; Charlwood & Guenole, 2022; Ekuma, 2024) to the employee-lifecycle viewpoint put forward by Nosratabadi et al. (2022) and extends it into the particular institutional and regulatory environment of Indian banking. Practically speaking, the "Reskill-Redeploy-



Retain" model and the suggested six-stage reskilling framework provide Indian BFSI HR managers and policymakers with a structured, role-based approach that can be tailored to institutions of varying sizes and levels of digital maturity and that synchronizes organizational reskilling practices with the RBI's regulatory requirements regarding human oversight and responsible AI governance (Reserve Bank of India, 2025, 2026).

5.2 Limitations of the Study

There are several limitations on the study. First, it lacks primary employee-level evidence from Indian BFSI businesses and is solely dependent on secondary data. Second, the RBI's Model Risk Management advice, for example, was still in draft form at the time of writing (Reserve Bank of India, 2026). This indicates that particular skill needs and the regulatory guidance mentioned in this study may change quickly due to the rapid speed of AI development. Third, the report takes a wide view of the Indian BFSI industry and does not make significant distinctions between banks, NBFCs, insurance companies, and fintech companies, all of which can have different reskilling goals. Future studies may use employee surveys or interviews from various Indian financial institution types to experimentally test the suggested framework.

5.3 Directions for Future Research

- Empirical measurements of AI preparedness among Indian banking workers across various positions and types of institutions.
 - The connection between employee employability in Indian BFSI and reskilling investment.
 - The effect of AI literacy on decision-making and worker performance.
 - Employee opinions about AI-driven work changes in Indian banks, both public and private.
 - The function of HRM in mitigating employment instability associated with AI.
 - The efficacy of particular micro-credentialing models and AI-based training programs.
 - The connection between employee retention and reskilling in Indian BFSI.
 - There are generational differences in digital skills among banking workers.
 - The importance of corporate culture and leadership in creating a banking staff prepared for AI.
- A particularly promising empirical model for future study would look at the journey from AI literacy to reskilling readiness to employee employability, with Organizational Support for Learning examined as a potential modulator of this link.

REFERENCES

- [1]. Akerele, O., & Ajiyon, S. T. (2025). Effect of artificial intelligence on employee's recruitment, selection and retention in the US banking sector: A systematic review. SSRN.
- [2]. Ali, A., & Shah, M. (2024). What hinders adoption of artificial intelligence for cybersecurity in the banking sector? *Information*, 15(12), 760. <https://doi.org/10.3390/info15120760>
- [3]. Bag, S. (2025). Applications of artificial intelligence for optimizing banking and financial operations: A systematic literature review and future research agenda. *Journal of Economic Surveys*, 39(5), 2284–2302. <https://doi.org/10.1111/joes.12693>
- [4]. Böhmer, N., & Schinnenburg, H. (2023). Critical exploration of AI-driven HRM to build up organizational capabilities. *Employee Relations*, 45(5), 1057–1082. <https://doi.org/10.1108/ER-04-2022-0202>
- [5]. Chamorro-Premuzic, T., et al. (2025). Artificial intelligence, knowledge and human resource management: A systematic literature review of theoretical tensions and strategic implications. *Journal of Innovation & Knowledge*.
- [6]. Charlwood, A., & Guenole, N. (2022). Can HR adapt to the paradoxes of artificial intelligence? *Human Resource Management Journal*, 32(4), 729–742. <https://doi.org/10.1111/1748-8583.12433>
- [7]. Deloitte India, & Nasscom. (2024). Advancing India's AI skills: Interventions and programmes needed [Report]. Deloitte India.
- [8]. Dewasari, N., Dharmarathna, D., & Choudhary, M. (2024). Leveraging artificial intelligence for enhanced risk management in banking: A systematic literature review (pp. 197–214). De Gruyter. <https://doi.org/10.1515/978311172408-013>
- [9]. Dwivedi, A., & Kochhar, K. (2023). Employee's attitude towards artificial intelligence in the Indian banking sector. *International Journal of Professional Business Review*, 8(11), Article e04099. <https://doi.org/10.26668/businessreview/2023.v8i11.4099>
- [10]. Ekuma, K. (2024). Artificial intelligence and automation in human resource development: A systematic review. *Human Resource Development Review*. <https://doi.org/10.1177/15344843231224009>



- [11]. Fares, O. H., Butt, I., & Lee, S. H. M. (2022). Utilization of artificial intelligence in the banking sector: A systematic literature review. *Journal of Financial Services Marketing*. <https://doi.org/10.1057/s41264-022-00176-7>
- [12]. Gajanand, J. S. S. S., & Trivedi, A. (2026). Impact of artificial intelligence assisted HR practices on employee performance and profitability of public sector bank in India. *Cineforum*, 66(2), 923–937.
- [13]. Garg, N. (2024). A systematic literature review on artificial intelligence technology in banking. *Academy of Strategic Management Journal*, 23(S1), 1–20.
- [14]. Ghandour, A. (2021). Opportunities and challenges of artificial intelligence in banking: Systematic literature review. *TEM Journal*, 10(4), 1581–1587.
- [15]. International Information System Security Certification Consortium [ISC2]. (2025). ISC2 cybersecurity workforce study 2025. ISC2.
- [16]. Jaiswal, A., Arun, C. J., & Varma, A. (2022). Rebooting employees: Upskilling for artificial intelligence in multinational corporations. *International Journal of Human Resource Management*, 33(6), 1179–1208. <https://doi.org/10.1080/09585192.2021.1891114>
- [17]. Kalyani, S., & Gupta, N. (2023). Is artificial intelligence and machine learning changing the ways of banking: A systematic literature review and meta-analysis. *Discover Artificial Intelligence*, 3(1), 41. <https://doi.org/10.1007/s44163-023-00094-0>
- [18]. Ketchiwou, G. F., & Ngulube, P. (2026). Prerequisites for the successful implementation of artificial intelligence in human resource management: A systematic review. *Journal of Contemporary Human Resource Management*, 17(2), 92–107.
- [19]. Lee, M. C. M., Scheepers, H., Lui, A. K. H., & Ngai, E. W. T. (2023). The implementation of artificial intelligence in organizations: A systematic literature review. *Information & Management*, 60(5), 103816. <https://doi.org/10.1016/j.im.2023.103816>
- [20]. McKinsey & Company. (2023). Capturing the full value of generative AI in banking. McKinsey & Company.
- [21]. Nasscom. (2021). FutureSkills talent in India: Demand–supply analysis. Nasscom.
- [22]. Nosratabadi, S., Zahed, R. K., Ponkratov, V. V., & Kostyrin, E. V. (2022). Artificial intelligence models and employee lifecycle management: A systematic literature review. *Organizacija*, 55(3), 197–211. <https://doi.org/10.2478/orga-2022-0012>
- [23]. Reserve Bank of India. (2025). Report of the Committee on the Framework for Responsible and Ethical Enablement of Artificial Intelligence (FREE-AI) in the Financial Sector. Reserve Bank of India.
- [24]. Reserve Bank of India. (2026). Draft guidance on regulatory principles for model risk management, 2026. Reserve Bank of India.
- [25]. State Bank of India. (2025). Integrated annual report 2024–25: People — A future-ready workforce. State Bank of India.
- [26]. Weber, P., Carl, K. V., & Hinz, O. (2023). Applications of explainable artificial intelligence in finance — A systematic review of finance, information systems, and computer science literature. *Management Review Quarterly*. World Economic Forum. (2025). The future of jobs report 2025.