

Capacity Enhancement among Banks' Employees for ESRM Skill Enhancement: A Case of Nepalese Commercial Banks

Rashesh Vaidya^{1,*}, Prajan Pradhan² and Ajaya Ghimire³

¹Faculty of Management and Law, Nepal Open University; rashesh@nou.edu.np

²Governance & Innovation Pvt. Ltd.; prajan.pradhan@gmail.com

³Governance & Innovation Pvt. Ltd.; ajghimire@gmail.com

*Correspondence: rashesh@nou.edu.np ( <https://orcid.org/0000-0003-1536-6032>)

Abstract: This study examines capacity enhancement initiatives for Environmental and Social Risk Management (ESRM) skill development across Nepal's commercial banks, categorized by ownership. Through a quantitative evaluation of training programs and competency gaps, the research reveals a decisive, large-scale strategic commitment to ESRM. Financial investments are substantial and varied for the period of F/Y 2021-22 to F/Y 2024-25: Joint Venture banks lead with NPR 29.6 million allocated, followed by Nepalese Investors' Owned (NPR 18.1 million) and Government-Owned banks (NPR 6.5 million). Training scale also differs; Nepalese Investors' Owned banks conducted the most sessions (294) for the largest audience (7,104 attendees), whereas Joint Venture banks focused on 246 trainings for 5,269 employees, suggesting deeper engagement. Government banks conducted fewer, more concentrated sessions. This data signifies an industry-wide evolution from building specialist cadres towards embedding a resilient, bank-wide ESRM culture as a 'first line of defense.' The maturation is evident in the exponential growth in funding, training frequency, and employee reach. The study concludes that to sustain this progress, banks must advance towards structured competency-based frameworks, supported by regulatory reinforcement and industry collaboration. Strengthening ESRM proficiency is critical for improving risk management, ensuring compliance, and promoting sustainable financial practices in Nepal.

Keywords: Capacity enhancement, Commercial banks, Employee skills, ESRM, Nepal

1. Introduction

Effective Environmental and Social Risk Management (ESRM) is crucial for sustainable banking practices globally. In Nepal, commercial banks face increasing regulatory and stakeholder pressures to integrate ESRM into their operations since 2018. However, the lack of skilled employees poses a significant challenge. Enhancing the capacity of bank employees in ESRM is essential to ensure compliance, mitigate risks, and promote sustainable development. One of the most important ways to lessen negative effects and encourage sustainable growth is through green banking, which may be important in managing Nepal's fiscal deficit. At the same time, foreign assistance appears important to manage the resource gaps under the priority sector lending considering the environmental and social impact

(Mishra & Aithal, 2021). Nonetheless, Nepal's commercial banks are only beginning to implement green banking practices.

Regulatory bodies like Nepal Rastra Bank (NRB) have encouraged banks to incorporate Environmental and Social Risk Management (ESRM) into their credit and investment processes. As banks in Nepal increasingly finance infrastructure, hydropower, and construction projects, the environmental and social impacts of these ventures have drawn attention. Human Resource Management (HRM) plays a vital role in building capacity to address these risks. Budhathoki and Rai (2018) found that increasing staff salaries does not necessarily increase net profit in Nepalese commercial banks. Instead, they suggest reducing staff-related expenses to enhance profitability. Staff costs, including training and development, are a significant portion of a bank's operational expenses. Optimizing staff expenses could improve net profit margins, suggesting cost management in staffing rather than salary increments as a viable approach for boosting overall profitability in the banking sector. Nevertheless, Pradhan and Shah (2019) briefly highlighted the critical role of employee training and capacity enhancement in ensuring bank performance and profitability. By equipping employees with the necessary skills and knowledge, banks enable them to perform regular activities efficiently and make tactful decisions. This, in turn, supports effective credit risk mitigation, reducing the likelihood of non-performing assets (NPAs) and loan loss provisions (LLPs). Thus, there is a clear interconnection between proper employee training, risk management, and the overall financial health of banks. Strengthening workforce capabilities directly contributes to improving bank performance and stability.

Regarding the significance of competent and skilled human resources in the banking system, Kamara (2024) proposed that efficient credit risk management has enhanced the bank's operational performance and liquidity. Operational performance is influenced by a variety of factors, including financial and market performance, human resource performance, organizational efficiency, and customer-focused performance, demonstrating the greater importance of human resource performance in managing credit risk. Niraula and Kharel (2025) confirmed that efficient training, supportive leadership, and clear work alignment are key factors that significantly enhance employee engagement in Nepalese commercial banks. Therefore, bank management should strategically focus on these specific areas within their training and development practices to effectively engage their workforce.

With the changing dynamic of the banking industry and adaptation of ESRM by the Nepalese banking industry as per the guidelines of the central bank, Nepal Rastra Bank, there is a need for continuous capacity enhancement of the employees to cope with the new work dynamic. Therefore, as per the No. 6 directive of Directive No. 6/081 issued by Nepal Rastra Bank stressed engaging the employee in different

training and development programs to enhance their capacity. Similarly, as per No.6(a) directive of Directive No. 6/075 issued by Nepal Rastra Bank (NRB), the central bank of Nepal, has mandated that the commercial banks need to spend at least 3 (three) percent of personnel expenses on training and development of the employees. By mandating a minimum 3 percent training expenditure, NRB aims to strengthen the banking sector through human capital development, directly linking employee expertise to reduce financial risks and sustainable bank performance. This move aligns with the best global practices, where continuous learning is key to maintaining a robust and competitive banking system.

With these directives, banks and financial institutions in Nepal need to allocate expenses for capacity enhancement programs focused on credit risk management, banking operations management, soft skill training, leadership development programs, professional certification sponsorship, and digital and fintech training. Against this backdrop, the paper tries to interpret and evaluate the expenses made on Environmental and Social Risk Management (ESRM) under the capacity development program for the banks' employees.

2. Literature Review

This section of the paper presents a theoretical and empirical review relevant to the topic.

2.1. Environmental and Social Risk Management (ESRM)

Progress in climate and green finance is pushing financial institutions (FIs) to improve their environmental and social (E&S) risk management and adopt more sustainable lending and investment practices. While many FIs in the region were previously less engaged in green finance, growing awareness of E&S risks—such as climate change, pollution, health hazards, and threats to biodiversity—has highlighted how client activities can indirectly expose FIs to financial, legal, and reputational risks. Since FIs primarily face E&S risks through their clients' operations, poor management by borrowers (e.g., regulatory fines or disaster-related losses) can harm the FIs' stability and reputation. Nearly all business activities carry some E&S risk, influenced by sector, location, and regulations, and failure to address these risks can lead to financial losses, legal penalties, and reputational damage for both businesses and the FIs supporting them, ultimately harming the environment (Martin et al., 2021).

2.2. Intellectual Capital

Intangible assets, a result of the science and technology revolution, are crucial for business organizations. They accumulate knowledge gained through work practices, guidance from leaders, sharing ideas with colleagues, following competitors, and addressing customer demands. These assets are known as intellectual capital, the true wealth of organizations. It is the result of continuous learning processes in educated

organizations. Intellectual capital is a crucial and intangible asset in today's highly technology-dependent economies, representing a significant proportion of an organization's assets. Therefore, organizations invest in training and development efforts to maintain their intellectual capital (Alrafadi, 2020). Intellectual capital as an intangible asset is priceless, as it is managed and used to stimulate innovation and creativity, competitiveness, value creation, and corporate performance (Bontis et al., 2000; Tayles et al., 2007).

Intellectual Capital (IC) is a fundamental driver of effective Environmental and Social Risk Management (ESRM) in banking, enabling the assessment and mitigation of non-financial risks while uncovering business opportunities. A bank's IC—its human expertise (Human Capital), internal systems (Structural Capital), and stakeholder relationships (Relational Capital)—provides the necessary skills, tools, and social license to conduct in-depth due diligence, develop sustainable finance products, and engage with clients on risk mitigation strategies. Research confirms that IC significantly enhances key bank performance indicators linked to risk management, such as asset quality and profitability, and shows resilience during crises (Ozkan & Zeytinoglu, 2024; Rong et al., 2025; Xu et al., 2023). Ultimately, integrating IC with ESRM transforms it from a compliance exercise into a mechanism for strategic value creation and long-term competitive advantage(<https://www.deloitte.com/>).

2.3. Capacity Development for ESRM

To establish the Environmental and Social Management System (ESMS), banks and financial institutions (BFIs) need to create a detailed implementation plan. This should outline how environmental and social (E&S) risk management will be incorporated into their current credit risk framework, such as the Credit Manual. The plan should also include a testing phase for the ESMS, specifying timelines, assigned staff, and key tasks. These tasks may involve assessing Nepal's E&S regulations, developing staff training and communication strategies, assigning roles to relevant personnel, and conducting regular ESMS reviews for ongoing enhancements (NRB, 2022). ESRM (The 'What & Why') is a mandatory regulatory framework. Established by the Nepal Rastra Bank (NRB) in 2018, it requires banks to proactively evaluate and integrate environmental and social risks into their core credit risk assessment and decision-making processes, while ESMS (The 'How') is the bank's internal management system. As mandated by the ESRM guidelines, every bank must develop its own ESMS. This system comprises the specific policies, procedures, staff responsibilities, and tools the bank uses daily to execute the ESRM process.

The BFIs must report to the central bank, NRB, regarding expenses made on employees' training and capacity building as per Annex 11 of the ESRM Guidelines

forwarded by the central bank. The report must cover the funds allocated for ESRM training/programs/seminars/workshops, as well as the number of related activities conducted within a specific period. Additionally, it should include the number of attendees during the same period, particularly on an annual basis.

2.4. Empirical Review

Pradhan and Shah (2019) emphasized the importance of employee training and skill development in boosting bank performance and profitability. By enhancing employees' expertise, banks enable them to carry out daily operations more efficiently and make sound decisions, which helps mitigate credit risks. This reduces the chances of non-performing assets (NPAs) and loan loss provisions (LLPs), ultimately strengthening financial stability.

Bouslama and Bouteiller (2019) found training and experience of French banks' human capital in SME loan officers show that their ability to anticipate risk depends above all on their training rather than on their experience. Some methods of anticipating risk are more important than others. Loan officers monitor their clients in similar ways, whatever the degree and nature of their experience.

Adhikari (2020) revealed that private commercial banks prioritize staff training and development, which significantly contributes to their staff costs and has a positive impact on operational profit.

Tiwari (2024) revealed that while most Nepalese commercial banks have established Environmental and Social Risk Management (ESRM) policies and invested in employee training programs, they must further embed these risk management principles into their central business strategies. This deeper integration is essential to demonstrate effective policy execution and long-term sustainability.

Nhumg (2024) emphasized the importance of integrating Environmental and Social (E&S) risk management into banking and financial operations. This shift can mitigate risks, enhance sustainability, and drive positive societal impact. In Vietnam, prioritizing E&S risk management is an ethical duty and strategic necessity. It strengthens institutional resilience, attracts sustainability-focused investors, and fosters stakeholder trust. Adopting ESRM ensures long-term viability, contributes to equitable and sustainable development, and aligns with global best practices and emerging market expectations.

Choudhary (2025) emphasized that the organization is responsible for providing staff with the necessary skills to achieve organizational goals while also ensuring equal access to learning opportunities based on organizational capabilities and competency

needs, which ultimately leads to a proactive human resource that deals with risk management of an organization.

3. Materials and Methods

The paper deals with the scenario of capacity enhancement training for Nepalese commercial banks' employees. The paper considered data related to capacity development activities and costs incurred for all twenty (20) commercial banks operating in Nepal. Hence, the paper used secondary data published by the central bank of Nepal, Nepal Rastra Bank. The paper followed a descriptive research design to illustrate the investment made in training, the number of trainings conducted, and the number of attendees at the capacity enhancement training related to ESRM skill enhancement. The data for the paper covered four fiscal years only, from F/Y 2021-22 to F/Y 2024-25.

3. Results and Discussion

The table below illustrates the scenario of capacity enhancement training for Nepalese commercial banks' employees:

Table 1

Scenario of Capacity Enhancement Training for Banks' Employees for F/Y 2021-22 and F/Y 2022-23

Banks	F/Y 2078-79 (2021-22)			F/Y 2079-80 (2022-23)		
	Fund allot- ted in NPR	No. of ESRM Training	No. of Attendees	Fund allot- ted in NPR	No. of ESRM Training	No. of Attendees
ADBL	500,000	1	28	650,000	Nil	Nil
BOK	Nil	Nil	Nil	Merged or acquired		
CCBL	181,200	2	40			
CZBIL	Nil	1	1	449,500	2	50
CBL	18,080	3	6	Merged or acquired		
EBL	16,000	2	4			
GIME	Nil	2	8	220,000	2	11
HBL	Nil	3	132	480,000	16	726
KBL	9,040	1	1	Nil	2	140
LBL	26,500	2	3	Nil	4	80
MBL	26,500	2	3	Nil	Nil	Nil
MBL	Nil	3	36	4,398,000	1	2
MEGA	Nil	2	8	Merged or acquired		
NABIL	Nil	4	19			
NBL	200,000	1	2	Nil	6	301
NCCB	15,006	1	2	465,560	2	38
NIMBL	500,000	3	194	Merged or acquired		
SBI	42,239	3	7			
NICA	Nil	Nil	Nil	30,000	2	286

NMB	249,289	16	670	4,038,420	13	193
PRVU	Nil	2	4	Nil	3	99
PCBL	110,019	7	63	408,361	10	231
RBB	Nil	Nil	Nil	Nil	Nil	Nil
SANIMA	2,097,238	7	248	459,402	7	344
SBL	48,794	3	151	178,157	2	53
SCB	Nil	Nil	Nil	Nil	Nil	Nil
SRBL	Nil	3	8	Merged or acquired		

Note. Nepal Rastra Bank

Table 1 reveals a significant and evolving commitment to ESRM training across the Nepalese banking sector, but with considerable disparities between banks. The period shows a clear trend of increased investment and institutionalization of ESRM training, moving from ad-hoc initiatives to more structured, high-capacity programs. However, the merger and acquisition phase in the sector also caused disruptions for some banks.

Based on Table 1, there is a clear and substantial increase in financial commitment towards Environmental and Social Risk Management (ESRM) training across banks. Institutions like NMB and MBL have escalated their funding from nominal amounts to millions of NPR, signaling a recognition of ESRM as a critical strategic function. This investment is likely driven by regulatory pressures and the growing complexity of risks, compelling banks to allocate significant resources to this area.

The strategy for ESRM training has evolved from building a core team of experts to fostering mass-capacity building. Initially, many banks focused on specialized, low-attendance training for niche staff. Subsequently, a distinct shift occurred towards large-scale dissemination, with banks like GIME and NICA training hundreds of employees in just a few sessions. However, this progress is not universal, as mergers and acquisitions temporarily disrupted training activities in several banks, and others like RBB and SCB showed no activity at all, raising concerns about their ESRM readiness.

Overall, the landscape is marked by significant improvers and high performers. Banks such as NICA, GIME, and NABIL demonstrated dramatic scale-ups in employee reach, indicating a top-priority commitment to ESRM. Conversely, some institutions exhibited stagnation or inconsistency, with banks like LBL ceasing activity and others like KBL and HBL reporting high training numbers alongside a 'Nil' fund allotment, suggesting potential internal budget reallocations or reporting discrepancies amidst a sector-wide push for greater ESRM competency.

The two F/Y 2021-22 and F/Y 2022-23 show a positive trajectory for ESRM capacity building in Nepal, with most banks escalating their efforts. The key

challenge for the sector will be to maintain this momentum post-merger and ensure that even the currently inactive banks begin their ESRM upskilling journeys.

Table 2

Scenario of Capacity Enhancement Training for Banks' Employees for F/Y 2023-24 and F/Y 2024-25

Banks	F/Y 2080-81(2023-24)			F/Y 2081-82(2024-25)		
	Fund allotted in NPR	No. of ESRM Training	No. of Attendees	Fund allotted in NPR	No. of ESRM Training	No. of Attendees
ADBL	1,000,000	3	44	410,000	1	39
BOK	Merged or acquired					
CCBL						
CZBIL	23,730	2	2	254,589	8	204
CBL	Merged or acquired					
EBL	410,000	3	36	228,000	4	9
GIME	96,995	14	90	1,201,570	37	371
HBL	300,000	5	137	190,000	12	84
KBL	42,375	2	4	102,943	11	25
LBL	1,426,985	11	96	2,000,000	20	93
MBL	172,000	5	206	Nil	9	21
MEGA	Merged or acquired					
NABIL	2,232,044.68	15	780	Nil	16	74
NBL	168,935	1	13	40,793	10	24
NCCB	Merged or acquired					
NIMBL	2,060,000	10	245	125,000	9	427
SBI	50,850	1	5	50,850	6	15
NICA	100,000	2	133	1,342,000	12	102
NMB	8,720,000	29	789	6,670,000	38	834
PRVU	Nil	11	165	Nil	19	121
PCBL	144,000	1	2	94,686	8	43
RBB	2,300,000	30	237	753,090	21	491
SANIMA	527,558.24	7	316	60,027	12	677
SBL	543,855.36	6	82	1,011,103.69	14	1909
SCB	2,841,665	5	26	260,000	37	130
SRBL	Merged or acquired					

Note. *Nepal Rastra Bank*

Table 2 shows that ESRM training has undergone exponential growth in scale and frequency, moving from a periodic activity to a continuous, integrated process for the F/Y 2023-24 and F/Y 2024-25. Banks like NMB, GIME, and SCB have dramatically increased their number of training sessions, with some conducting nearly 40 sessions per year. This indicates that ESRM is no longer a compliance

formality but a sustained effort to build a deeply ingrained and resilient organizational risk culture.

The dominant strategic focus has shifted decisively towards mass capacity building, aiming to embed risk awareness across the entire employee base. This is evidenced by staggering attendance numbers, with SBL training 1,909 employees and NMB consistently reaching nearly 800 attendees annually. Even previously inactive banks like RBB have made major comebacks, training hundreds of staff. This trend highlights a strategic priority to create a robust ‘first line of defense’ where every employee is equipped to manage risk in their daily role.

This expansion is supported by sustained and strategic financial investment, though banks are employing different models. NMB remains the undisputed leader in funding, allocating millions of NPR, while others like SANIMA and PRVU demonstrate high efficiency, achieving significant reach with minimal or nil reported budgets. The landscape now features clear leaders with evolving strategies, such as NABIL’s pivot from mass training to specialized sessions, indicating a maturing approach where institutions are tailoring their investments to move from broad awareness to advanced, expert-level competency.

The two F/Y 2023-24 and F/Y 2024-25 show the full-scale institutionalization of ESRM training across the sector. The scale, frequency, and financial commitment have grown exponentially, indicating that risk management is now a core, non-negotiable component of banking strategy. The era of tentative, small-scale training is over, replaced by a clear focus on enterprise-wide penetration and deep skill enhancement.

Table 3

ESRM Cost Segregation as per Nature of the Banks

Nature of Banks	Fund allotted in NPR	No. of ESRM Training	No. of Attendees
Government Owned	6,488,378	70	916
Nepalese Investors’ Owned	18,053,714	294	7104
Joint Venture	29,638,258	246	5269

Note. *Nepal Rastra Bank*

Table 3 reflects that joint venture banks operating in Nepal lead significantly in total funds allotted (NPR 29.6 million), indicating the highest financial commitment to ESRM initiatives. They conducted 246 training sessions for 5,269 attendees, showing a focus on large-scale, high-capacity training. Nepalese investors’ owned banks allocated the second-highest funds (NPR 18.1 million) but conducted the highest number of training sessions (294) for the largest number of attendees (7,104). This suggests a strategy prioritizing widespread training across many employees. Government-owned banks allocated the least funds (NPR 6.5 million) and held the fewest sessions (70), training the smallest audience (916 attendees). This points to a more limited or focused scope of ESRM investment and training.

While Joint Venture Banks invest the most money per training, Nepalese Investors' Owned Banks achieve the broadest reach in terms of personnel trained. Government-owned banks have a notably lower level of activity in comparison. This reflects differing priorities and resource allocation strategies for risk management culture building across Nepal's banking sectors.

Discussions

Based on the empirical findings of previous studies and current analysis, there is a clear and progressive alignment in the training on Environmental and Social Risk Management (ESRM) within Nepalese commercial banks, noting a significant evolution in both scale and strategic intent. Earlier research, such as that by Pradhan & Shah (2019) and Adhikari (2020), underscored the critical role of employee training in enhancing bank performance, mitigating risks, and boosting profitability. The present study's findings validate this perspective by revealing a substantial sector-wide transition from theoretical recognition of the need for ESRM training to actionable implementation. While Tiwari (2024) pointed out that Nepalese banks were just beginning to adopt green banking methodologies requiring deeper integration of ESRM, recent data from fiscal years 2023-24 and 2024-25 indicate that this integration is now occurring at an unprecedented rate.

The findings highlight a dramatic increase in training frequency, funding, and participant attendance, with institutions such as NMB and SBL training hundreds of employees annually. This shift directly responds to the call from scholars like Nhumg (2024) for ESRM to be considered a strategic imperative. Moreover, the insights from Bouslama & Bouteiller (2019) are reflected in the current data, emphasizing the necessity of formal training over mere experiential learning for effective risk anticipation. The strategic evolution seen in Nepalese banks, which now favors continuous, high-frequency training programs over sporadic sessions, marks a significant institutional acknowledgment of the importance of systematic training in managing risks.

Consequently, the current study empirically substantiates earlier literature recommendations, indicating that the Nepalese banking sector is actively enhancing its human capital via sustained investments in ESRM capacity building. This proactive approach signifies a decisive movement toward bridging the gap between policy formulation and effective execution across the organization.

4. Conclusion and Implications

This study examined the capacity enhancement initiatives for Environmental and Social Risk Management (ESRM) among employees of Nepalese commercial banks over four fiscal years (F/Y 2021-22 to F/Y 2024-25). The trajectory of ESRM training in Nepalese commercial banks reveals a clear and decisive sector-wide shift

from tentative, ad-hoc initiatives to a phase of full-scale institutionalization. Initially, the strategy has evolved into a committed drive for mass capacity building, characterized by exponential growth in financial investment, training frequency, and employee reach. This indicates that ESRM is no longer viewed as a mere compliance formality but as a critical, strategic function integral to banking operations.

While leading banks have demonstrated sustained investment and sophisticated maturing strategies, others have shown inconsistency, stagnation, or have been disrupted by mergers. The presence of banks reporting high attendance with minimal budgets further suggests uneven implementation and potential reporting discrepancies. The key challenge remains to consolidate this momentum, ensure all banks are actively engaged, and transition from broad awareness to deep, expert-level competency across the sector.

The disparity in investment levels and training strategies underscores a sector in transition. While joint venture banks lead in per-capita investment for intensive training, and Nepalese investor-owned banks prioritize expansive reach, the significantly lower activity from Government-Owned Banks highlights an area for strategic alignment. These differing investment patterns reflect varied stages in institutionalizing ESRM, from foundational awareness to advanced strategic integration.

Implications

Shift from Awareness to Specialization: Banks must move beyond generic mass-training to develop tiered programs that cater to different employee roles, building foundational awareness for all staff while developing advanced, specialized expertise for risk and credit teams.

Strategic and Sustained Budget Allocation: ESRM training requires deliberate and transparent financial commitment. Inconsistent or "nil" funding is unsustainable for long-term capacity building. Banks must institutionalize ESRM training budgets within their annual operational plans to ensure continuity and quality.

Integration into Core HR and Risk Frameworks: To build a resilient "first line of defense," ESRM competencies should be formally integrated into job descriptions, performance metrics, and career progression pathways, ensuring risk management becomes an ingrained part of the organizational culture.

Focus on Post-Merger Integration and Lagging Banks: A targeted intervention is needed for banks that have been inactive or disrupted by mergers. Regulators or banking associations could facilitate shared resources or mandatory catch-up programs to prevent the emergence of significant ESRM skill gaps within the sector.

Emphasis on Efficiency and Impact Measurement: With the scale of training increasing, banks must focus not just on attendance numbers but on measuring the actual impact on risk identification and mitigation. This involves evaluating training

effectiveness and adopting efficient models to maximize reach and competency development per rupee spent.

Tailored Benchmark: Joint venture banks appear to prioritize substantial capital investment, while Nepalese-owned banks focus on maximizing employee reach. This divergence may lead to uneven levels of enterprise-wide risk management maturity across the banking sector. Regulators, like Nepal Rastra Bank, might need to consider tailored benchmarks to ensure a uniformly robust risk culture, especially in institutions with more limited initiatives.

By addressing these gaps, Nepalese commercial banks can strengthen their ESRM frameworks, enhance employee proficiency, and contribute to sustainable financial practices while mitigating environmental and social risks effectively.

Author Contributions: All three authors worked on conceptualization. Vaidya worked on methodology, formal analysis, and investigation. Pradhan and Ghimire worked on data validation. And finally, Vaidya worked on original draft preparation, writing, review, and editing. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Adhikari, N.R. (2020). Training and development costs, staff costs, and operational profitability in Nepalese commercial banks. *Management Dynamics*, 23(2), 109-118. <https://doi.org/10.3126/md.v23i2.35813>
- Alrafadi, K.M.S. (2020). The effect of intellectual capital on the financial performance of Libyan banks. *European Journal of Business and Management Research*, 5(4), 1-7. <https://dx.doi.org/10.24018/ejbmr.2020.5.4.341>
- Bontis, N., Chua, W.C.K., & Richardson, S. (2000). Intellectual capital and business performance in Malaysian Industries. *Journal of Intellectual Capital*, 1(1), 85-100. <https://dx.doi.org/10.1108/14691930010324188>
- Bousslama, G., & Bouteiller, C. (2019). Human capital and credit risk management: Training is more valuable than experience. *Problems and Perspectives in Management*, 17(1), 67-77. [https://dx.doi.org/10.21511/ppm.17\(1\).2019.07](https://dx.doi.org/10.21511/ppm.17(1).2019.07)
- Budhathoki, P. B., & Rai, C. K. (2018). Staff expenses and its effect on the bank's net profit. *Researcher: A Research Journal of Culture and Society*, 3(3), 63-71. <https://doi.org/10.3126/researcher.v3i3.21550>
- Choudhary, S. (2025). A study on human resources: Role in risk management. *International Journal of Multidisciplinary Research and Development*, 12(1), 7-11.
- Deloitte (2024). *Business as unusual: Assessing legislative challenges to common ESRM practices*. <https://www.deloitte.com/content/dam/assets-zone3/us/en/docs/industries/financial-services/2024/us-business-as-unusual-assessing-legislative-challenges.pdf>

- Kamara, A.K. (2024). The study of credit risk management and its impact on operational performance: Case study of the Standard Chartered Bank in Sierra Leone. *European Journal of Social Science Studies*, 10(1), 169-192. <https://dx.doi.org/10.46827/ejsss.v10i1.1735>
- Martin, P., Elbeltagy, Z., Hasannudin, Z., & Abe, M. (2021). *Factors affecting the environmental and social risk management of financial institutions in selected Asia-Pacific developing countries*. United Nations ESCAP, Macroeconomic Policy and Financing for Development Division, March 2021. Bangkok.
- Mishra, A. K., & Aithal, P. S. (2021). Foreign aid movements in Nepal. *International Journal of Management, Technology, and Social Sciences*, 6(1), 142-161. <https://doi.org/10.5281/zenodo.4677825>
- Nepal Rastra Bank (NRB). (2022). *Guideline on Environmental & Social Risk Management (ESRM) for banks and financial institutions*. Banks and Financial Institutions Regulation Department. <https://www.nrb.org.np/contents/uploads/2022/02/Final-ESRM-with-cover.pdf>
- Nhung, P.T.T. (2024). Banking in a changing world: The rise of ESRM. *International Journal of Research Publication and Reviews*, 5(3), 5592-5600.
- Niraula, G.P., & Kharel, S. (2025). Impact of training and development on employee engagement in Nepalese commercial banks. *Nepalese Journal of Management Research*, 5(1), 38–46. <https://doi.org/10.3126/njmgtr.v5i1.75870>
- Ozkan, N., & Zeytinoglu, E. (2024). Intellectual capital and asset quality: A nonlinear investigation in the Turkish banking sector. *Borsa Istanbul Review*, 24(3), 592-606. <https://doi.org/10.1016/j.bir.2024.03.005>
- Pradhan, S., & Shah, A. K. (2019). Credit risk management of commercial banks in Nepal. *Journal of Business and Social Sciences Research*, 4(1), 27–37. <https://doi.org/10.3126/jbssr.v4i1.28996>
- Rong, C., Sial, M.S., Álvarez-Otero, S., & Jo, H. (2025). Assessing the intellectual capital of the value creation process of commercial banks in the European Union. *Journal of the Knowledge Economy*. <https://doi.org/10.1007/s13132-024-02348-3>
- Tayles, M., Pike, R.H., & Sofian, S. (2007). Intellectual capital, management accounting practices, and corporate performance: Perceptions of managers. *Accounting, Auditing & Accountability Journal*, 20(4), 522-548. <https://doi.org/10.1108/09513570710762575>
- Tiwari, G. (2024). Green banking initiatives: Policy and practices in commercial banks in Nepal. *INTELLIGENCE Journal of Multidisciplinary Research*, 3(1), 119-134. <https://doi.org/10.3126/ijmr.v3i1.65481>
- Xu, J., Haris, M., & Irfan, M. (2023). Assessing intellectual capital performance of banks during COVID-19: Evidence from China and Pakistan. *Quantitative Finance and Economics*, 7(2): 356-370. <https://doi.org/10.3934/QFE.2023017>