



USJ FMSC
FACULTY OF MANAGEMENT STUDIES AND COMMERCE

Student Conference in Finance 2026

22nd International Conference on Business Management 2026

“Inclusive and Responsible Management for a Circular Economy and Digital Future”

Proceedings



Department of Finance
Faculty of Management Studies and Commerce
University of Sri Jayewardenepura



Student Conference in Finance 2026

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**Department of Finance
Faculty of Management Studies and Commerce
University of Sri Jayewardenepura
Gangodawila, Nugegoda
Sri Lanka
16th February 2026**

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Message from the Vice Chancellor



It is with great pleasure that I extend my warmest greetings to all participants of the Undergraduate Research Day (URD), conducted as part of the 22nd International Conference on Business Management (ICBM) 2026, hosted by the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura. The URD is a meaningful platform that celebrates undergraduate scholarship and encourages young researchers to engage in inquiry, evidence-based reasoning, and academic communication skills that are essential for the future of our nation and the global community.

Aligned with the ICBM 2026 theme, “Inclusive and Responsible Management for a Circular Economy and Digital Future,” the URD reflects the importance of building research capacity from the early stages of higher education. Undergraduate research not only strengthens critical thinking and problem-solving but also nurtures responsible citizenship by encouraging students to examine real-world issues with curiosity, integrity, and social awareness.

The University of Sri Jayewardenepura remains committed to supporting academic excellence and creating opportunities for students to develop as confident, ethical, and competent knowledge creators. I am pleased to note that the URD brings together diverse research topics and innovative perspectives from our undergraduates, and I trust that the experience will motivate them to pursue further research, professional growth, and meaningful contributions to society.

I convey my sincere appreciation to the organising committee, departmental coordinators, supervisors, reviewers, and all staff members for their dedication to making the URD a success. I also congratulate all student presenters featured in this proceedings volume and wish them every success in their academic and professional journeys.

Senior Professor Pathmalal M. Manage

Vice Chancellor

University of Sri Jayewardenepura

Message from the Dean



On behalf of the Faculty of Management Studies and Commerce (FMSC), University of Sri Jayewardenepura, I warmly welcome you to the Undergraduate Research Day (URD) held in conjunction with ICBM 2026. The URD is a proud academic initiative of the faculty that showcases the creativity, discipline, and commitment of our undergraduates as they present research conducted across multiple fields of business and management.

This year's overarching conference theme, "Inclusive and Responsible Management for a Circular Economy and Digital Future," provides an important context for undergraduate scholarship. Many of the challenges we face today—environmental pressures, social inequalities, governance concerns, and rapid technological change—require thoughtful analysis and evidence-based solutions. The URD encourages our students to contribute to these conversations early in their academic journeys, strengthening not only their research competence but also their sense of responsibility to society.

At FMSC, we place strong emphasis on cultivating a research culture that extends beyond postgraduate study. Through research supervision, methodological training, and academic platforms such as URD, we strive to empower students to develop analytical thinking, academic writing, and professional presentation skills that will benefit them in both academia and industry.

I extend my sincere gratitude to the URD organising team, departmental coordinators, supervisors, and evaluators for their support in ensuring the quality and success of this event. I also congratulate all student researchers whose work is presented in this proceedings volume, and I wish you a rewarding and inspiring URD experience.

Professor Dushan Jayawickrama

Dean, Faculty of Management Studies and Commerce
University of Sri Jayewardenepura

Message from the Co-Chairs



We are pleased to present the Proceedings of the Undergraduate Research Day (URD) conducted as part of the 22nd International Conference on Business Management (ICBM) 2026, organised by the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura. The URD is designed to provide an encouraging and scholarly platform for undergraduates to share their research, build confidence in academic communication, and experience the standards of academic dissemination and peer review.

Guided by the ICBM 2026 theme, “Inclusive and Responsible Management for a Circular Economy and Digital Future,” the URD recognises that responsible and inclusive solutions require contributions from all levels of the academic community, including emerging researchers. The student papers featured in this volume reflect a diverse range of topics and approaches, demonstrating the ability of undergraduate research to generate valuable insights relevant to organisations, communities, and the broader economy.

We extend our sincere appreciation to the supervisors, reviewers, evaluators, departmental coordinators, and organising committee members for their commitment and support. We also commend all student presenters for their effort, curiosity, and professionalism in completing and presenting their research. We trust that the URD experience will inspire our undergraduates to pursue lifelong learning, uphold academic integrity, and continue contributing to knowledge creation in meaningful ways.

We hope this proceeding volume serves as a lasting record of their scholarly achievement and encouragement for future research endeavours.

Dr. Isuru Manawadu, Co-Chair, ICBM 2026

Dr. Sepali Bamunusinghe, Co-Chair, ICBM 2026

International Conference on Business Management (ICBM) 2026

Faculty of Management Studies and Commerce,

University of Sri Jayewardenepura

Message from the Head of the Department



It is my great honour and privilege, as the **Head of the Department of Finance**, to welcome you all to the **9th Students' Conference in Finance (SCF)**. Reaching the ninth consecutive year of this conference is a significant milestone for the Department, reflecting our sustained commitment to academic excellence and undergraduate research.

The Students' Conference in Finance is a flagship academic event of the B.Sc. Finance (Special) degree programme and highlights the central role of **undergraduate research** in finance education. In an environment where professional qualifications are increasingly common, rigorous research training provides our students with a clear academic advantage. It develops critical thinking, analytical rigour, and scholarly writing skills, preparing graduates for postgraduate studies, research-oriented careers, and evidence-based decision-making roles in both the public and private sectors.

This conference showcases the quality and depth of research undertaken by our undergraduates under the guidance of academic supervisors. It offers students a valuable platform to present their work, engage in scholarly dialogue, and receive constructive feedback—experiences that mirror international academic practice and strengthen intellectual confidence and professional readiness.

At the Department of Finance, our mission is to foster academic excellence through critical inquiry and research-led learning. We aim to produce well-rounded graduates capable of addressing complex financial and economic challenges and contributing meaningfully to policy formulation and sustainable development.

I extend my sincere appreciation to **Prof. P.A.N.S. Anuradha, Ama Hinguralarachchi, and Aishcharya Bopitiya** for their guidance and continued support. I also thank the reviewers, organizing committee, technical staff, and all student presenters for their dedicated efforts in making this conference a success.

I wish you all a productive and memorable conference experience.

Thank you.

Warm regards,

Dr. N. S. Nanayakkara

Head

Department of Finance

Faculty of Management Studies and Commerce

University of Sri Jayewardenepura

Message from the Conference Chairperson/ Coordinator



It is both a privilege and a great responsibility for me to serve as the Chairperson/Coordinator of the **9th Student Conference in Finance (SCF)** in my role as the coordinator of the research project of the Department of Finance. The Department is pleased to continue this important academic tradition for the ninth consecutive year.

The Student Conference in Finance is an annual event organized by the Department of Finance to showcase the research carried out by the students of the B.Sc. Honors in Finance Degree programme. This year, **eight students** will present their research findings on a variety of relevant and insightful topics. This conference provides a valuable platform to share the new knowledge created within the university with the wider academic and professional community. We sincerely wish all presenters the very best in their future academic and research careers.

I would like to extend my heartfelt gratitude to the Head of the Department of Finance, the Dean of the Faculty of Management Studies and Commerce, and the Vice Chancellor of the University of Sri Jayewardenepura for their continuous support and guidance. I also wish to thank the ICBM team for their financial support, the reviewers for their valuable feedback, the organizing committee, and the technical support staff of the faculty for their commitment and hard work in making this conference a success.

Prof. P. A. N. S. Anuradha
Conference Chairperson/ Coordinator
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Keynote Speech



Artificial Intelligence, Market Efficiency, and the Transformation of Irrationality

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Introduction

Introduction

Artificial Intelligence (AI) refers to computer systems capable of performing tasks that traditionally require human intelligence, including reasoning, learning, decision-making, and perception. AI encompasses a broad spectrum of technologies, most notably machine learning, deep learning, and natural language processing (NLP). A defining feature of AI is its ability to learn from data and adapt over time. Machine learning employs techniques such as linear and logistic regression, decision trees, random forests, support vector machines (SVMs), k-nearest neighbors (KNN), and clustering. Each technique is suited to specific types of data and analytical tasks. Among these, neural networks are widely used for modeling complex patterns, while deep learning—a subset of machine learning—utilizes multilayered neural networks to approximate the decision-making capabilities of the human brain.

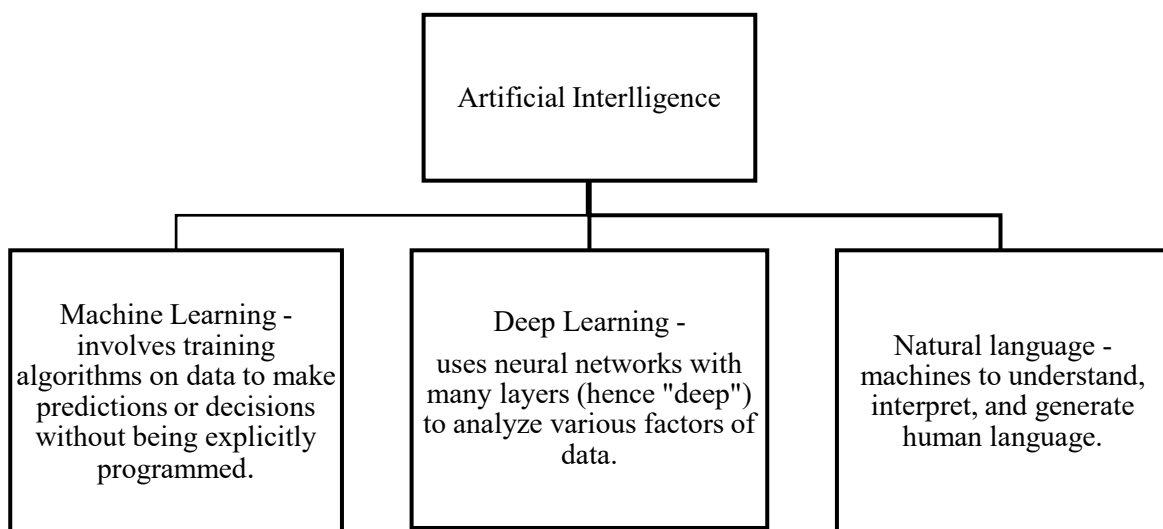


Figure 01: AI Technologies

Generative AI, or “Gen AI,” represents an advanced application of deep learning, capable of producing original content, such as text, images, and audio, based on user prompts. Generative AI operates through three phases: training to develop a foundation model, tuning to adapt it to a specific context, and iterative generation and evaluation to improve accuracy.

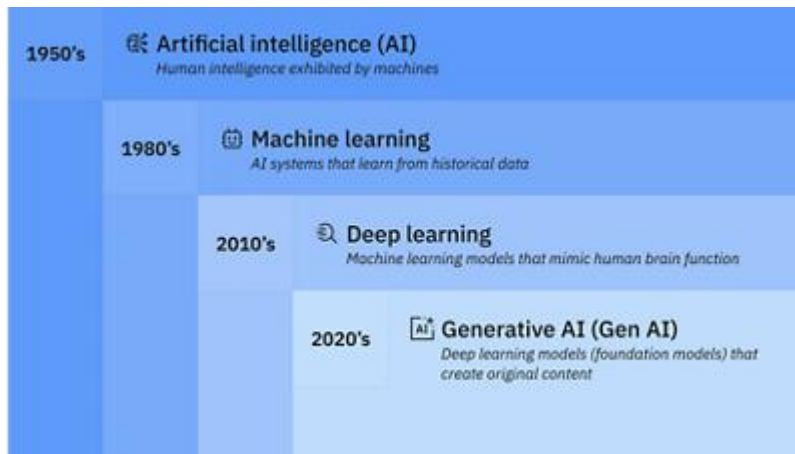


Figure 02: Development of AI

True AI

Despite its widespread application, there is debate regarding whether contemporary AI constitutes “true” intelligence. Most systems today exhibit narrow intelligence, effective only within the domain for which they are trained, such as fraud detection, facial recognition, or portfolio optimization. Achieving artificial general intelligence (AGI), which would emulate human-like cognition across diverse tasks, remains an aspirational goal.

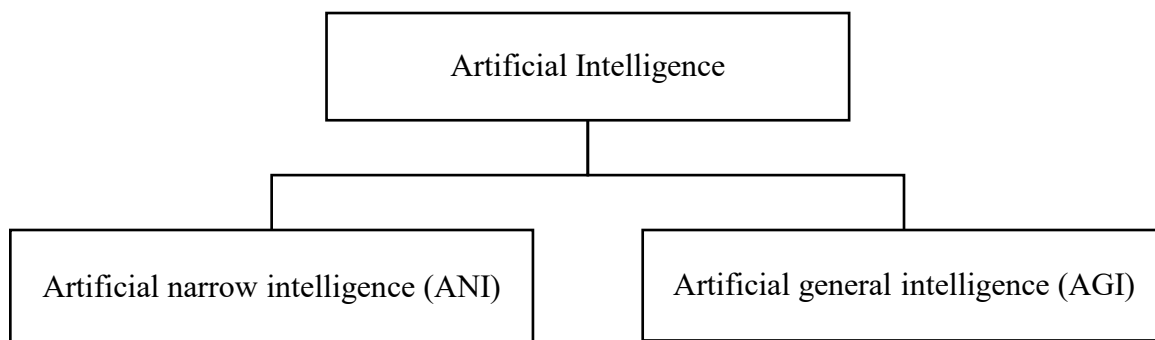


Figure 03: AI Branches

For AI to be effective, it requires three critical components: high-quality, unbiased data, robust computational infrastructure, and optimized algorithms. Continuous retraining with up-to-date data is essential, as static models quickly become obsolete in dynamic environments.

AI and Financial Markets

In the context of financial markets, the quality and bias of data are particularly consequential. AI-driven investment decisions rely on historical and real-time data to identify trends, assess risk, and forecast returns. Biased or outdated data can lead to erroneous predictions, mispricing of assets, and amplification of systemic market biases. Conversely, high-quality,

unbiased data enables AI to enhance investment strategies, improve risk assessment, and support evidence-based decision-making, providing a potential edge over traditional investment approaches.

The increasing adoption of artificial intelligence (AI) in financial markets has reignited debates on market rationality and efficiency. Traditional finance theory, particularly the Efficient Market Hypothesis (EMH), posits that asset prices reflect all relevant information. The semi-strong form of EMH assumes that publicly available information is fully incorporated into prices, leaving no opportunities for abnormal returns (Fama, 1970). Behavioural finance challenges this ideal by highlighting cognitive biases, emotional decision-making, and heterogeneous information processing. AI enters this landscape as a powerful, data-driven intermediary, yet its impact on rationality is complex and multifaceted.

AI and Market Rationality

On one hand, AI can enhance market rationality by reducing human biases and improving information processing. Algorithmic systems can analyse earnings reports, macroeconomic indicators, financial news, and online sentiment at high speed, narrowing information asymmetries and supporting faster price discovery. Such capabilities align with the semi-strong EMH, theoretically allowing public information to be more efficiently reflected in prices.

However, AI's reliance on historical and publicly available data limits its ability to fully realise semi-strong efficiency. AI does not independently generate new information, and its output may lag when responding to rapidly evolving events or context-specific developments. Unequal access to AI tools further challenges the semi-strong assumption of homogeneous interpretation of public data. Overreliance on AI can also reduce human critical thinking, resulting in automation bias and algorithmic herding, which can amplify noise trading—price movements disconnected from underlying fundamentals (De Long et al., 1990).

Even rational investors may avoid participation due to limits to arbitrage, such as transaction costs, model risk, or the possibility that deviations from fundamentals persist longer than expected (Shleifer & Vishny, 1997). As a result, AI can simultaneously reduce individual-level biases while increasing systemic inefficiencies, creating a feedback loop where rational behaviour is constrained and mispricing persists.

A conceptual model of AI's influence on semi-strong efficiency can be represented as:

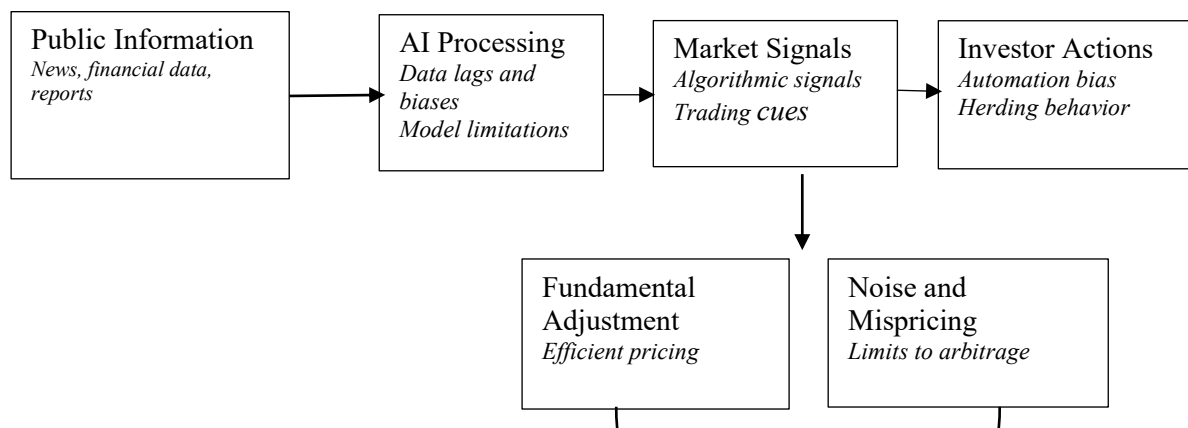


Figure 03: AI's Influence on Market Efficiency

AI Processing: Enhances speed and scale but is constrained by data completeness, timeliness, and embedded historical biases. Investor Action: Human oversight or overreliance determines whether algorithmic signals reflect fundamentals or generate coordinated irrationality. Price Adjustment: Prices may reflect true fundamentals or deviate due to algorithmic herding, noise trading, and limits to arbitrage. This framework demonstrates that AI acts as both a rationalising and destabilising force, restructuring rather than eliminating irrationality.

Forward-Looking Consideration: Artificial General Intelligence

Looking ahead, the emergence of Artificial General Intelligence (AGI) could further transform market dynamics. Unlike current AI, AGI could potentially integrate real-time, unstructured, and context-specific information with human-like reasoning. This may accelerate efficiency and reduce cognitive biases, but it also raises the possibility of more sophisticated, coordinated forms of market irrationality, magnifying systemic risks. Whether AGI will enhance market rationality or exacerbate new forms of inefficiency remains a critical theoretical and empirical question.

Conclusion

AI does not simply improve or undermine market rationality; it reshapes the structure of inefficiencies. While enhancing information processing and reducing individual-level biases, AI may amplify noise, algorithmic herding, and systemic risks. Semi-strong efficiency in AI-driven markets is therefore conditional, dependent on human–AI interaction, information accessibility, and the limits to arbitrage. The rise of AGI presents further theoretical challenges and opportunities, requiring future research to examine how advanced AI may transform both rationality and inefficiency in modern financial markets.

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The authors used OpenAI’s ChatGPT (GPT-4) to assist with language refinement and summarizing background literature. All interpretations, critique and conclusions are the authors’ own work.

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INVESTOR AWARENESS AND PERCEPTION OF UNIT TRUST INVESTMENTS IN SRI LANKA

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Keywords: Investor Awareness, Investor Perception, Unit Trusts, Financial Literacy, Investment Behavior

Introduction

Unit trust investments have emerged as a significant element of contemporary financial systems in terms of diversification, professional portfolio management, and their availability to the individual segment of the market. Within the context of Sri Lanka, despite the steady enhancement of the unit trust market with the support of regulations, its uptake still remains quite limited relative to the widely practiced financial avenues of fixed deposits and savings accounts. Lack of financial knowledge, unavailability of investment-related data, and pessimistic attitudes concerning risks and returns have impeded the development of the unit trust investment sector. Hence, the importance of analyzing the awareness level among investors cannot be overstated with a view to improving uptake, financial inclusion, and development of the capital market in the country of Sri Lanka.

Literature Review

Previous research has focused on the fact that financial literacy is a significant determinant of investment decisions and the participation in market-based financial instruments. As Lusardi and Mitchell (2014) have indicated, individuals with greater financial knowledge are more likely to participate in diversified investment products. The Theory of Planned Behavior describes how attitudes, subjective norms, and perceived behavioral control influence investor intentions. Social Learning Theory further explains how investors form perceptions through social interaction and peer influence. Empirical emerging market studies indicate that ignorance, perceived risk, and low trust of financial institutions prevent mutual fund and unit trust investments. However, very few empirical studies are available in the Sri Lankan context that combine investor awareness and perception with unit trust investment behavior, indicating a clear research gap that this study explicitly covers.

Problem Statement and Research Questions

Although there are advantages that can be gained from investing through unit trusts, the issue is that the rate of participation among retail investors is low in Sri Lanka due to a lack of awareness and unfavorable perceptions. This is considering that some investors may lack sufficient knowledge with regards to unit trust instruments and might perceive them as being risky and/complex in nature. The issue can be dealt with by investigating awareness, perceptions, and behaviors with regards to unit trust investments.

Research Questions:

The first research question examines the current level of awareness among Sri Lankan retail investors about the features, benefits, risks, and regulatory framework of unit trusts, in order to understand how informed investors are regarding this investment option. The second research question explores how Sri Lankan investors perceive the risk, return potential, trustworthiness, and liquidity of unit trusts compared to traditional savings and investment products such as fixed deposits or government securities. The third research question investigates the extent to which investor awareness and perceptions collectively influence their willingness to invest and their actual participation in unit trusts.

Objectives

Main Objective:

To examine the impact of investor awareness and perception on unit trust investment behavior in Sri Lanka.

Sub Objectives:

To assess the level of awareness among Sri Lankan retail investors regarding unit trust investments, to evaluate investor perceptions of risk, return, trustworthiness, and liquidity associated with unit trusts, to analyze the relationship between investor awareness, perception, and willingness to invest in unit trusts, and to determine how awareness and perception influence actual participation in unit trust investments.

Research Methodology

The research followed a quantitative research paradigm, which utilized a structured questionnaire. Data was collected from 205 retail investors in Sri Lanka using a simple random sampling method. These variables of the study included financial literacy, sources of information, marketing, investor education, social influence, investor awareness, and investor perception, which were all measured using a five-point Likert scale. These data were analyzed using descriptive statistics, reliability analysis, correlation analysis, and regression analysis.

The questionnaire instrument was structured around **six main research constructs**, namely financial literacy, information sources, marketing and investor education, social influence, investor awareness, and investor perception. Each main construct was operationalized using **five sub-items**, resulting in a multi-dimensional measurement structure. This design approach was adopted to ensure comprehensive representation of each construct, as complex behavioral and psychological concepts such as awareness, perception, and investment behavior cannot be adequately captured through single-item or limited-item measurements. The use of multiple sub-questions for each main variable enhances **construct validity, content validity, and internal consistency**, while also improving the reliability and robustness of the empirical findings. Furthermore, this structure allows for a more accurate assessment of investor attitudes, knowledge levels, and behavioral intentions, thereby strengthening the overall methodological rigor and analytical quality of the study.

Table 1 - Operationalization of Variables

Variable	Dimension	Indicator	Measurement Item	Scale	Source
Financial Literacy	Basic financial understanding	Knowledge of interest, inflation, risk	I understand basic financial concepts such as interest, inflation, and risk.	5-point Likert	Lusardi & Mitchell (2014)
Information Sources	Accessibility and clarity	Ease of obtaining information	I can easily access reliable information about investment products.	5-point Likert	Kellerman (2019)
Marketing & Investor Education	Awareness creation	Knowledge from programs	Investor education programs increase my awareness of investment risks.	5-point Likert	Ansari & Riasi (2016)
Social Influence	Peer & family influence	Social encouragement	Friends and colleagues encourage me to consider unit trust investments.	5-point Likert	Ajzen (1991)
Investor Awareness	Product knowledge	Understanding of operations	I understand how unit trusts operate.	5-point Likert	Alexander et al. (1998)
Investor Perception	Trust & perceived safety	Belief in credibility	I believe unit trusts are a trustworthy investment option.	5-point Likert	Kim & Prabhakar (2000)

The measurement items used in this study were adapted from multiple established empirical and theoretical studies to ensure strong content validity and theoretical grounding. Constructs such as financial literacy, investor awareness, investor perception, and social influence are inherently multi-dimensional, and therefore cannot be adequately captured using items from a single source. The integration of items from different validated studies is a common practice in behavioral finance and social science research to ensure comprehensive construct representation.

Furthermore, all items were contextually modified to suit the Sri Lankan financial environment and the unit trust investment context, ensuring both contextual relevance and

construct validity. This approach strengthens the conceptual robustness of the instrument and ensures alignment with established theories such as the Theory of Planned Behavior, Financial Literacy Theory, and Social Learning Theory

Findings and Conclusions

Table 2 - Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Financial Literacy	205	1.00	5.00	3.573	0.750	-0.965	0.338
Information Sources	205	1.00	5.00	3.400	0.883	-0.667	0.144
Marketing & Investor Education	205	1.00	5.00	3.687	0.744	-0.166	0.048
Social Influence	205	1.00	5.00	3.550	0.766	-0.933	0.672
Investor Awareness	205	1.00	5.00	3.569	0.678	-0.630	0.881
Investor Perception	205	1.00	5.00	3.633	0.749	-0.676	0.130

Table 3 - Reliability and Validity Analysis

Construct	Cronbach's Alpha	KMO	Bartlett's Test (χ^2)	Sig.
Financial Literacy	0.808	0.825	302.139	0.000
Information Sources	0.900	0.881	616.319	0.000
Marketing & Investor Education	0.894	0.862	575.472	0.000

Social Influence	0.880	0.857	518.711	0.000
Investor Awareness	0.802	0.804	299.702	0.000
Investor Perception	0.874	0.833	508.478	0.000

Table 4 - Pearson Correlation Matrix Among Study Variables (N = 205)

Variable	1	2	3	4	5
1. Financial Literacy	—				
2. Information Sources	.579**	—			
3. Marketing and Investor Education	.631**	.621**	—		
4. Social Influence	.594**	.641**	.761**	—	
5. Investor Awareness	.562**	.535**	.546**	.589**	—

Note. $p < .01$ (two-tailed).

Table 5 – Regression Analysis

Predictor	Beta (Standardized)	t	Sig.
Financial Literacy	0.258	3.542	0.000
Information Sources	0.164	2.201	0.029
Marketing & Investor Education	0.071	0.799	0.425
Social Influence	0.278	3.165	0.002
R²	0.435	F	38.420

Regression of Investor Perception on Investor Awareness			
Predictor	Beta (Standardized)	t	Sig.
Investor Awareness	0.715	14.589	0.000
R²	0.512	F	212.847

In the case of Sri Lanka, moderation is observed. Financial literacy, information accessibility, and social influences play a major role herein to establish investor awareness. A positive association between investor awareness and investor perception is found to be established. The conclusion made is that through improvements made to financial literacy and investor education initiatives accompanied by improvements made to information dissemination channels, unit trust investments can be positively influenced. Such efforts are the prescribed steppingstones for the development of the unit trust sector within Sri Lanka.

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EXPLORING THE INTERSECTION OF DIGITAL TRANSFORMATION AND SUSTAINABLE FINANCE: HOW EMERGING TECHNOLOGIES DRIVE THE TRANSITION TOWARD NET-ZERO CARBON INVESTMENT PRACTICES

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Keywords: Digital Transformation, Sustainable Finance, Net-Zero Investment, Artificial Intelligence, Blockchain

Introduction

The world financial sector is experiencing a revolutionary change that has been precipitated by two forces: climate change and digital innovation. Climate change is being viewed as a systemic financial risk, and financial institutions are now requiring sustainability to be part of their decision-making. The Paris Agreement and other international endeavors have enhanced the speed of working on strategies for net-zero carbon investment. Nevertheless, conventional financial systems are usually not able to handle climate risks. Digital transformation, in this context, can be viewed as one of the keys enabling factors for the development of sustainable finance. Technologies such as AI, blockchain and big data analysis are enhancing transparency, thereby boosting the level of risk, climate-related financial risks, and their measurement/monitoring abilities. The present paper sets out the potential of digital transformation to support the introduction of net-zero carbon investment practices to close the current gap in the literature on the application of these technologies in the financial field of sustainability.

Literature Review

The literature indicates that digital technologies such as artificial intelligence, big data analytics, blockchain technology and FinTech support net zero and sustainable finance principles when interpreting the findings using theories such as stakeholder theory, legitimacy theories, institutional theory, theory of the diffusion of innovation and accountability theory. For example, the stakeholder theory indicates digital technologies help build trust through transparency in ESG reporting while satisfying the expectations of the broader society and all types of investors. Legitimacy theory indicates that digital technologies support sustainable finance principles while building trust for financial institutions. On the other hand, the institutional theory indicates that digital technology helps financial institutions meet the expectations set by government legislation aimed at mitigating climate change. In terms of the diffusion of innovation theory, this indicates the pace of technology assimilation in financial institutions varies while maintaining the overall benefits of digital technology. Lastly, the accountability theory indicates that digital technology helps bridge the existing gap in knowledge while reducing the risk of greenwashing in finance.



Figure 1: Conceptual Framework

Table 1: Operationalization of variables

Variable	Conceptual Definition	Indicators	Measurement Source
Digital Transformation	Strategic integration of digital technologies into financial decision-making	Level of digital adoption, automation, analytics capability	Peer-reviewed empirical studies
Artificial Intelligence	Use of machine learning for climate and investment analytics	Climate risk modeling, predictive analytics	Empirical evidence from finance journals
Big Data Analytics	Processing of large ESG and climate datasets	Data integration, scenario analysis	Reported case studies and surveys
Blockchain	Distributed ledger technology for verification	Transparency, traceability, reduced greenwashing	Sustainability and FinTech literature
Net-Zero Investment Practices	Climate-aligned investment strategies	Emissions reduction, green capital allocation, ESG integration	Sustainable finance studies

Problem Statement and Research Questions

Despite the rapid growth of research on digital transformation and sustainable finance, the mechanisms through which emerging technologies support net-zero carbon investment practices are not yet clearly understood. The lack of integrated evidence limits the ability of financial institutions to strategically leverage digital tools for climate-aligned investment. Accordingly, this study addresses the following research question: How do emerging digital technologies contribute to accelerating net-zero carbon investment practices according to existing literature?

Main Objective:

To systematically review empirical evidence on how digital transformation drives the adoption of net-zero carbon investment practices in the global financial sector.

Sub-Objectives:

To identify key digital technologies supporting climate-aligned investment decisions, to examine mechanisms through which digital transformation enhances transparency and climate risk assessment, and to evaluate challenges and limitations associated with digital-driven sustainable finance.

Research Methodology

The study is based on a qualitative approach of Systematic Literature Review (SLR) to integrate the available literature on digital transformation and net-zero investment practices. To conduct a review, peer-reviewed articles will be selected that were published in the period of 2015-2025 and that are found in databases (Scopus and Google Scholar). Within the PRISMA framework, qualitative content analysis and thematic syntheses are going to be applied to the selected studies to determine the patterns, mechanisms, and problems associated with the use of emerging technologies in sustainable finance. Such a methodological process can be used to have a broad insight into how the phenomenon of digital transformation promotes the shift towards the net-zero carbon investments, as well as addressing the gaps in existing literature.

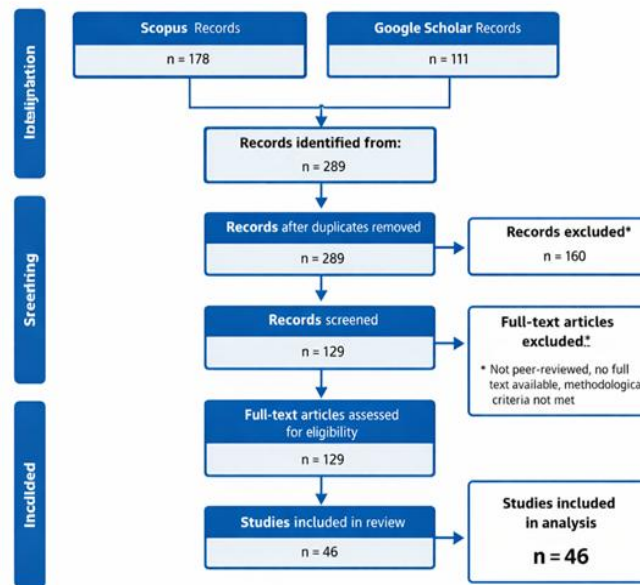


Figure 2: PRISMA framework

Findings and Conclusions

The initial evidence suggests that digital transformation plays an important role in net-zero investment practices through the enhancement of climate risk assessment, transparency in sustainability reporting, and removing the barriers to implementing ESG factors in investment decisions. Pricing of climate risks is more precise with the help of technologies such as AI and big data analytics and the traceability and validity of carbon credits and sustainability reports can be increased with the help of blockchain. Nonetheless, the regulatory heterogeneity, data privacy issues and integration of various ESG standards remain the impediments to the complete potential of digital tools in sustainable finance. The paper

finds that digital transformation is an essential facilitator of net-zero investment, but it is not effective without overcoming regulatory, technological and institutional obstacles. The digitalization of sustainable finance should be supported by policymakers with the creation of standardized ESG metrics and data infrastructure.

Table- Definitions of core construct

Theoretical Contribution	The research provides explanations on the diverse theories of sustainability and finance and their link with the value of digital technologies for supporting net zero carbon investment as well as the significance of digital technologies to aspects of transparency, evaluation of climate change risks and accountability in finance-related activities.
Policy Contribution	The study would be instrumental to policymakers and policy regulators since it will provide an insight into the implications of digital technologies on sustainability reporting, ESG rules and climate regulations in emerging economies.
Practical Contribution	This study is helpful for financial institutions and investors to grasp the ways in which technology such as AI, big data, blockchains and FinTech can be utilized for climate-related risks, ESG and net-zero investment.

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IMPACT OF FINANCIAL LITERACY ON THE INVESTMENT AND SAVING DECISIONS OF WORKING WOMEN IN SRI LANKA

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Keywords: Contextual Differences, Financial Literacy, Investment Behaviour, Savings Behaviour, Working Women

Introduction

Financial literacy is gradually being identified as a major factor that dictates individual financial well-being and economic sustainability in the long run. With increasingly complicated financial products, households are being compelled to take additional responsibility to save, invest, and protect their financial future. In this context, financial literacy has been characterized in the academic literature as the capacity to comprehend and use the financial knowledge and skills to budget, save, borrow, invest, and deal with risk (Lusardi & Mitchell, 2014). Empirical research indicates that financially literate people are more likely to exhibit high savings, investment, and better retirement planning. Nevertheless, it has also been found that financial knowledge does not necessarily result in actual financial behaviour. This gap in knowledge-behaviour indicates that the effect of financial literacy on the real saving and investment results can be undermined by psychological and contextual factors (Raut, 2020). Despite an increasingly growing interest, this gap has been under-researched, especially in the developing economies. Within this broader gap, working women are a unique and understudied segment. Working women, unlike the male labour force, often engage in income generation along with a primary role in household financial decision-making. At the same time, working women tend to be less financially confident, more risk-averse, and less inclined towards engaging in formal investment markets than men (Bucher-Koenen et al., 2017). These attributes indicate that the effects of financial literacy on saving and investment behaviour might be different among working women relative to working men. This possibly different manner of how financial literacy affects saving and investment behaviour amongst working women is highly relevant to Sri Lanka, with the recent economic volatility and the sharp rise in cost of living, which has increased the financial instability of households, thereby possibly altering working women's financial behaviours. However, the literature gap created by the poor scholarly focus on this relationship in Sri Lanka is currently set to be bridged by this study to support both theory and policy development.

Literature Review

The recent literature tends to elaborate on saving and investment behaviour using behavioural and psychological explanations instead of considering the behaviour using solely rational-choice models. One of the most prevalent theories is the Theory of Planned Behaviour (TPB), which assumes that intention causes behaviour, which, in turn, is influenced by attitudes, subjective norms, and perceived behavioural control (Bhabha et al., 2014). The recent real-

world literature builds on TPB by showing that financial literacy enhances all three factors: it enhances attitude toward saving and investing, by making the benefits of long-term behaviour clear, it promotes subjective norms, through informed social learning, and it increases perceived behavioural control, through more confidence and skill (Raut, 2020). But empirical results also point out that financial knowledge in itself frequently does not result in action, especially in women, which shows that there are psychological frictions. The reason behind this gap is further explained by behavioural finance theories, in particular, Prospect Theory, focusing on loss aversion, probability weighting, and framing effects in economic decision-making. Modern studies indicate that financially literate people have more constrained risk perception, less risk aversion, and actively invest in markets, whereas less literate people have exaggerated downside risk and do not invest formally. Risk perception, hence, is a mediating mechanism that is vital in mediating the effects of financial literacy on behaviour. On a similar note, financial self-efficacy, or the belief in the ability to perform financial tasks, has also been repeatedly found to mediate the literacy-behaviour relationship, especially with women, who have confidence limitations that tend to exist regardless of sufficient knowledge (Harahap et al., 2022). The use of more integrative models, including the COM-B model, also proposes the idea that behaviour is not only related to the capability (financial literacy) but also to opportunity (access to financial services, contextual factors) and motivation (self-efficacy and risk perception). Empirical research proves that the impact of financial literacy on saving and investment would be greatly mitigated in the presence of access to formal financial services, which would be particularly significant in developing economies (Raut, 2020). There are three areas where research gaps exist. First, not many studies incorporate TPB and behavioural finance perspectives within a unifying explanatory paradigm. Second, women in emerging economies, especially in Sri Lanka, who are employed, are under-researched but have unique socio-economic and psychological limitations. Third, the previous literature does not focus much on simultaneous mediation (self-efficacy, risk perception) and moderation (financial access, and contextual elements) with primary data. By filling these gaps, the explanation of how and when financial literacy is converted into saving and investment behaviour is better explained.

Problem Statement and Research Questions

The key problem addressed in this study is the limited empirical understanding of the effect of financial literacy on the saving and investment behaviour of working women in Sri Lanka, considering the different situational and psychological elements. In response to the identified problem, this study seeks to answer the following research questions:

The first research question examines the current level of financial literacy among working women in Sri Lanka. The second research question explores how financial literacy influences the saving–investment behaviour of working women in Sri Lanka. The third research question investigates whether the relationship between financial literacy and saving–investment behaviour varies across demographic characteristics of working women in Sri Lanka. The fourth research question examines whether access to financial services moderates the relationship between financial literacy and saving–investment behaviour of working women in Sri Lanka. The fifth research question evaluates whether financial self-efficacy and risk perception mediate the relationship between financial literacy and saving–investment behaviour of working women in Sri Lanka.

Objectives

The primary objective of this study is to examine the impact of financial literacy on the investment and saving behaviour of working women in Sri Lanka. To achieve this overarching aim, the study pursues the following specific objectives:

To assess the current level of financial literacy among working women in Sri Lanka, to evaluate the effect of financial literacy on the saving–investment behaviour of working women in Sri Lanka, to analyse variations in this relationship between financial literacy and saving–investment behaviour across demographic characteristics of working women in Sri Lanka, to examine the moderating role of access to financial services in the relationship between financial literacy and saving–investment behaviour of working women in Sri Lanka, and to investigate the mediating roles of financial self-efficacy and risk perception in explaining how financial literacy influences the saving–investment behaviour of working women in Sri Lanka.

Research Methodology

This research adopted a positive, deductive, and explanatory research model with a cross-sectional survey design to achieve its objectives. The conceptual model determines the independent variable as financial literacy and the dependent variables as saving behaviour and investment behaviour, and the mediating variable as financial self-efficacy and risk perception, and the moderating variables as age limit, household responsibilities, residential setting, and access to financial services. In line with this, seven hypotheses were developed to test the direct, mediating, and moderating relationships between these constructs. A sample size of 385 working women was used, and information was gathered through a structured questionnaire in the form of close-ended statements rated on a five-point Likert scale of strongly disagree to strongly agree. To measure the quality of measurement, first, it was tested by reliability and validity, Cronbach's alpha, and exploratory factor analysis. Thereafter, statistical techniques were used to test the proposed hypotheses in a comprehensive manner by incorporating descriptive statistics, Pearson correlation, multiple regression analysis, subgroup and interaction-based moderation analysis, and mediation analysis using the PROCESS macro with bootstrapping.

Findings and Conclusions

The study presents extensive evidence regarding the role of financial literacy on the saving and investing behaviour of working women in Sri Lanka in terms of the role of psychological and contextual mechanisms on financial outcomes. The results demonstrate that the general standard of financial literacy among female workers is average, not high, which means that they are aware of simple financial principles and do not have the skills to convert the knowledge into higher financial planning and disciplined behaviour. Financial literacy is also unevenly spread and varied in socio-demographic circumstances, with significant differences in the life stages, residential environments, and household job duties. The empirical findings indicate that financial literacy is strongly positively correlated to saving and investment behaviour, albeit less strongly to investment behaviour. This implies that financial literacy is especially essential when it comes to complicated risk-sensitive financial choices involving an analysis of returns, uncertainty, and long-term perspectives. The component-level analysis also reveals that financial behaviour and financial responsibility are even more dominant in saving behaviour, and investment behaviour relies on a balanced interaction between financial knowledge, financial behaviour, and financial responsibility. The findings also

revealed that this significant impact of financial literacy on both investment and savings behaviour is also situation-specific. The strength of this relationship is significantly influenced by life stage, residential setting, and household responsibilities, which points to the fact that financial literacy does not work effectively across groups. Besides, the relationship is greatly moderated by access to financial services, particularly in relation to investment behaviour, and, as such, it is found that financial knowledge alone is insufficient without it causing institutional infrastructure. Moreover, the results prove the presence of the mediation of financial self-efficacy and risk perception between financial literacy and financial behaviour. This highlights the fact that faith and measured risk knowledge are the two vital psychological channels through which financial literacy is transformed into practice. Collectively, these results make a contribution to the existing literature on financial literacy by proving that the financial literacy and saving-investment behaviour nexus of working women is different in demographic settings and is influenced by contextual and psychological factors. Consequently, this aids the development of national policies that support financial literacy programmes targeting working women to enhance their saving and investment behaviour effectively.

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IMPACT OF BANK SIZE ON LIQUIDITY CREATION IN SRI LANKAN LISTED BANKS

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Keywords: Bank Size, Liquidity Creation, Economies of Scale, Fixed Effect Panel Regression, Sri Lankan Listed Banks

Introduction

The banking sector serves as a cornerstone that drives economic growth by facilitating financial intermediations, channeling savings into investment and providing liquidity to support growth. Liquidity creation, the transformation of illiquid assets into liquid liabilities, is one of the most fundamental functions of banks, supporting capital allocation and economic expansion. As an emerging economy where capital markets are relatively underdeveloped while concentrated banking system dominates financial intermediate, understanding the determinants of liquidity creation is very important. Among the bank specific factors, bank size is expected to influence liquidity creation through economies of scale, risk absorption capacity, and systemic importance.

In recent years, the sector has operated under heightened macroeconomic stress arising from the Covid-19 pandemic, sovereign debt challenges, and prolonged economic contractions. These conditions have intensified the importance of banks' liquidity creation function, especially in supporting economic recovery and maintaining depositor confidence. Consequently, understanding how bank-specific characteristics influence on liquidity creation has become increasingly relevant for ensuring both efficiency and systemic stability in the Sri Lankan banking system.

The study investigates the impact of bank size on liquidity creation in twelve listed Sri Lankan banks from 2015 to 2024, using panel data analysis of hundred and twenty total observations. The study addresses a significant research gap in emerging market contexts, providing evidence-based insights for bank managers, regulators, and policymakers to promote efficient liquidity provision while maintaining financial stability during economic stress.

Literature Review

Existing studies suggest mixed results, especially by Berger and Bouwman (2009) in his foundational work on US banks, through the development of a comprehensive liquidity creation measure, suggested that larger banks create more absolute liquidity through the diversification while underperforming relatively because of the complexity. Niu (2021) demonstrated that the above relationship is time dependent and contingent on regulatory regimes and economic cycles. Economies of scale theory and "too big to fail" theory are some of research that discussed on positive size impacts, still emerging market evidence including South Asian are limited. Considerable results have been analyzed following the 2007-2009 financial crisis in past literature. In emerging market studies like Gupta and Kashiramka (2020) in India, Pham et al. (2021) in Vietnam showed mixed results that larger

banks creating more absolute liquidity while facing inefficiencies from regulatory barriers. A considerable research gap lies in Sri Lanka specific analysis where regulatory differences and structural factors exist, making contextual applicability is less viable. Moreover, limited emerging-market evidence, time-dependent relationships, and mixed empirical results in prior studies highlight the need for a focused investigation. Accordingly, this study provides the first comprehensive empirical analysis of how bank size influences both absolute and relative liquidity creation in Sri Lankan listed banks.

Problem Statement and Research Questions

Despite the critical importance of liquidity creation for banking operations and economic growth, there is a significant knowledge gap lies on how the bank size impact on liquidity creation and its efficiency in emerging markets especially in Sri Lanka. This gap is exacerbated by recent pandemics, crisis and several other changes that have occurred. Therefore, it has identified several questions to be answered through the study.

Primary Research Question:

What are the optimal bank sizing strategies for maximizing liquidity creation efficiency in Sri Lankan listed banks?

Secondary Research Questions:

The first research question examines whether larger banks create more liquidity in absolute terms as well as in relative terms in Sri Lanka. The second research question investigates whether economies or diseconomies of scale exist in liquidity creation activities among Sri Lankan listed banks.

Objectives of the Study

Main Objective:

To examine and quantify the bank size's impact on liquidity creation for providing evidence-based insights for policy formulation and economic developments especially to suggest optimal bank sizing strategies for liquidity creation.

Sub-Objectives:

To assess whether there are economies or diseconomies of scale in liquidity creation, to analyze the temporal dynamics of the bank size–liquidity creation relationship across pre-crisis (2015–2019) and post-crisis (2020–2024) periods, and to investigate how the capital adequacy ratio (Tier 1) and asset quality (Non-performing Loans Ratio) influence liquidity creation as control variables.

Research Methodology

The study adopted a quantitative explanatory research design using panel data from twelve Sri Lankan listed banks over the period 2015–2024, resulting in hundred and twenty bank-year observations. The focus on listed banks was motivated by their systemic importance, higher regulatory scrutiny, and data availability, which enhance the reliability and consistency of the analysis. Secondary data sourced from Colombo Stock Exchange annual reports and CBSL financial stability reports to ensure reliability.

Liquidity creation, the dependent variable, was measured in both absolute and relative terms using the maturity-based classification approach proposed by Berger and Bouwman (2009).

This allowed the study to capture not only the total contribution of banks to liquidity supply but also the efficiency of liquidity creation relative to their asset base. This dual measurement approach provides a more comprehensive understanding of how bank size influences liquidity creation behavior across different scales and over varying economic conditions. Bank size was measured as the natural logarithm of total assets, while asset quality and capital adequacy were included as control variables and proxied by the non-performing loans ratio and Tier 1 capital adequacy ratio, respectively.

The empirical analysis incorporated descriptive statistics to characterize sample distribution and compare larger banks with smaller banks. Pearson's correlation analysis assisted in understanding the bivariate relationship among dependent variables with other variables. Suitable diagnostic tests were conducted, and a fixed-effects panel regression model was employed to account for time-invariant bank-specific heterogeneity. Robustness was assessed through sub-period analysis comparing the pre-2020 period with the post-2020 crisis and early recovery period.

Findings and Conclusions

The findings disclosed that larger banks dominate the sample by creating eighty-five percent total absolute liquidity compared to smaller banks but relatively in similar ratios. Correlation analysis presents a strong positive correlation between bank size and absolute liquidity creation with low multicollinearity. Stationary test confirmed all variables are stationary at level or logarithm transformation except ROA which was dropped from the model. There is a significant positive impact of bank size in absolute liquidity creation (coefficient =81.7 million, p value= 0.0009) implying that one percent increase in assets boost liquidity by eighty-one point seven million rupees. NPL impact for the absolute liquidity creation shows a significant but positive which deviates from conventional expectations, supporting the risk-liquidity trade-off hypothesis. The possible explanation is that higher NPLs may engage in more aggressive liquidity creation which reflects the banks' risk-taking nature that an enhancement in loan performance. CAR was insignificant in models.

In contrast, bank size indicated a statistically significant negative relationship with relative liquidity creation, suggesting that larger banks are relatively less efficient which supports the presence of diseconomies of scale in efficiency, that probably arising from regulatory burdens, organization complexities and structural rigidities. (coefficient = -0.052, p=0.0129) These findings suggest that beyond a certain size threshold, further expansion may generate diminishing efficiency gains in liquidity creation, despite positive contributions to overall system liquidity.

Robustness checks certified the results with stronger effects in post-2020 reflecting the critical role of larger banks in sustaining liquidity during periods of economic stress and recovery. (coefficient =132 million post-2020 vs 55.7million in pre-2020). Therefore, hypotheses testing supported H1 (significant size impact) H2 (economies of scale in absolute terms).

Overall, the study infers that bank size plays a dual role in liquidity creation within the Sri Lankan banking sector. Larger banks increase aggregate liquidity creation and contribute to economies of scale in absolute terms, especially during periods of financial stress. However, increase in size results in reduced relative efficiency in liquidity creation. Therefore, the selection of appropriate bank strategy depends on the objective that whether it needs to increase absolute liquidity creation or relative while the findings underscore the importance

of balanced bank growth strategies and effective regulatory oversight to ensure that scale advantage does not compromise the efficiency or financial stability. Additionally, it should enhance risk management to mitigate NPL effects and regulatory reforms to balance scale advantages with liquidity transformation.

The findings offered important implications for bank managers, regulators, policymakers in designing optimal bank growth/ size strategies and strengthening financial stability in Sri Lanka. This can be considered as the first comprehensive empirical analysis of the size-liquidity creation nexus in Sri Lankan listed banks which contributes to the emerging market banking literature.

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EXPLORING THE EFFECTIVENESS OF GAMIFIED BUDGETING TOOLS IN IMPROVING SAVING BEHAVIOR OF GENERATION Z EXECUTIVE-LEVEL EMPLOYEES IN SRI LANKA

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Keywords: Gamification, Budgeting Tools, Saving Behavior, Generation Z, Sri Lanka

Introduction

Saving habits play an essential role in being financially stable for an individual as well as accumulating wealth over time. In Sri Lanka, the household (personal) saving ratio has fluctuated over the past five years, reflecting changes in income, expenses, and economic conditions. According to historical data, the household saving ratio in Sri Lanka has fluctuated between 22–29% over the past five years, reflecting volatility in household savings behavior. Digital financial services usage increased, with 62 % of adults using mobile, online banking, or card payments in 2021.

In this study, Executive-level employees are salaried professionals in entry- to mid-level positions with decision-making responsibilities and 1–6 years of work experience. Generation Z (born 1998–2006, age 20–28) are digitally native who form a growing proportion of the executive workforce and often demonstrate weak saving discipline despite stable incomes (Lusardi & Mitchell, 2014). Traditional budgeting methods are frequently perceived as rigid, effort-intensive, and unengaging, resulting in low adherence among digitally native users.

Budgeting tools have become new digital tools that involve the application of game based features in financial applications like goal base savings, roundup savings, challenges, and progress tracking. Gamification converts otherwise dull financial activities into enjoyable activities, thus making them more motivating and usable over the long term (Hamari et al., 2014). Although, the study has demonstrated effectiveness of gamified financial applications in enhancing engagement and saving behavior, empirical studies in the context of the Sri Lankan setting, especially in relation to Generation Z workforce at an executive level, are scarce. The proposed study fills this gap by analyzing how effective gamified budgeting tools are in enhancing saving behavior in Sri Lanka.

This study makes a contribution to theory in terms of enriching the behavioral finance body of literature on gamification and saving behavior in a non-Western, developing country context. Contextually, this research offers new empirical findings on the impact of gamified budgeting tools on saving behavior in Generation Z executive employees in the distinctive economic and technological environment of Sri Lanka.

Literature Review

Prior literature highlights that saving behavior is not solely driven by income levels but is significantly influenced by psychological and behavioral factors. The available empirical research indicates that the motivation to save is characterized by a strong impact of the psychological and behavioral factors, as opposed to the rational decision-making related to financial choices. Self-Determination Theory is a theory that describes the context of intrinsic motivation when a person feels autonomy, competency and relatedness (Ryan & Deci, 2000).

In line with this theory, the gamification attributes like goal setting, progress tracking, rewards, and achievement level make users feel their control and accomplishment, thus motivating them to save. While Hamari et al. (2014) found that gamification increases motivation, Bitrián et al. (2021) emphasized that perceived usefulness mediates behavioral outcomes. This suggests that motivation alone may not fully explain saving behavior, especially in developing countries like Sri Lanka.

Behavioral Economics also describes the case of why people do not usually save enough even though they have enough income. Cognitive biases like present bias and loss aversion make people focus on the short-term consumption of goods and services instead of long-term financial objectives (Thaler and Sunstein, 2009). Gamified budgeting applications serve as behavioral incentives by making financial decisions easier, sending timely alerts, and showing saving progress. Such mechanisms decrease the cognitive load and promote positive saving habits without restrictions, which makes them especially appropriate among the users of Generation Z who are fond of interactive and feedback-oriented online space.

Technology adoption in terms of technology adoption model (TAM) shows that the variables, which determine the acceptance of digital systems by users are perceived usefulness and perceived ease of use (Davis, 1989). According to this paradigm, gamification contributes to perceived usefulness by showing the perceived usefulness of budgeting tools in expense tracking and saving objectives. Simultaneously, the perceived ease of use is increased by the friendly interfaces and interactive features, which in turn makes it less likely to give up on further usage. Unified Theory of Acceptance and Use of Technology (UTAUT) also underline the role of these constructs in the use of technology adoption behavior (Venkatesh et al., 2003).

Table 1 – Definitions of the Variables

Variable	Definition	Sources
Gamification Features (GF)	Game elements in budgeting apps that enhance engagement and reinforce saving habits (points, badges, levels, challenges, progress indicators).	(Juho Hamari et al., 2014)
Motivation (MOT)	Psychological drive that encourages users to engage consistently with apps and pursue financial goals.	(Ryan, 2000)
Perceived Ease Of Use (PEOU)	Degree to which using the app is effortless and user-friendly.	(Davis, 1989)
Perceived Usefulness (PU)	Degree to which the app improves financial management and helps achieve saving goals.	(Davis, 1989)
Saving Behavior (SB)	Actual financial behavior reflecting frequency, consistency, and effectiveness of saving.	(Lusardi & Mitchell, 2014)

Empirical findings indicate that gamification has a positive impact on the perceived usefulness and motivation, which subsequently result in a more positive financial engagement

and saving behavior (Bitrián et al., 2021; Bitrián, 2021). Most of these studies however are done in the developed economies with little focus being paid to the developing regions like Sri Lanka. This underscores a major gap in context, which the current study fills by empirically studying the effect of gamified budgeting tools in influencing saving behaviors in employees of the Generation Z, at the executive level, in Sri Lanka in terms of motivational and technological acceptance factors.

According to SDT, gamification features satisfy intrinsic needs (autonomy, competence, relatedness), which increases motivation and promotes saving behavior. TAM indicates that perceived usefulness translates these gamification features into actual behavioral outcomes. Hence, motivation and perceived usefulness are theoretically justified as mediators.

Problem Statement and Research Questions

Saving behavior among Generation Z executive-level employees in Sri Lanka is challenged by lifestyle pressures and rising financial obligations despite stable incomes, while conventional budgeting methods remain ineffective in engaging this digitally oriented group. Although gamified budgeting tools have gained global attention for enhancing motivation and financial awareness, their development and behavioral effectiveness in Sri Lanka remain limited, creating a clear empirical research gap that this study addresses.

Main Research Question

To what extent do gamified budgeting tools influence the saving behavior of Generation Z executive-level employees in Sri Lanka, and how are these effects mediated by motivation, perceived usefulness, and perceived ease of use?

Research Questions

The first research question examines how gamified features influence the saving behavior of Generation Z executive-level employees in Sri Lanka. The second research question investigates whether motivation, perceived usefulness, and perceived ease of use mediate the relationship between gamified features and saving behavior. The third research question explores the behavioral, technological, and organizational barriers that limit the adoption and effective use of gamified budgeting tools among Generation Z executives in Sri Lanka.

Objectives

To analyze the direct relationship between gamified features and saving behavior among Generation Z executives, to assess the mediating effects of motivation, perceived usefulness, and perceived ease of use on the relationship between gamified features and saving behavior, and to examine the barriers and challenges that hinder the adoption and use of gamified budgeting tools in Sri Lanka.

Main Objective

To examine the effectiveness of gamified budgeting tools in improving the saving behavior of Generation Z executive-level employees in Sri Lanka.

Sub Objectives

To analyze the direct relationship between gamified features and saving behavior among Generation Z executives, to assess the mediating effects of motivation, perceived usefulness, and perceived ease of use on the relationship between gamified features and saving behavior, and to examine the barriers and challenges that hinder the adoption and use of gamified budgeting tools in Sri Lanka.

Research Methodology

The research design that was adopted in this study was a quantitative research design to investigate the efficacy of gamified budgeting tools to enhance the saving behavior of Generation Z employees in the executive level working in Sri Lanka. The quantitative approach was suitable because hypothesized relationships between latent variables were to be tested and generalize the findings across a specified population by utilizing statistical methods.

The structured self-administered questionnaire was used to collect primary data on a sample of 205 Generation Z employees with executive backgrounds who are knowledgeable about digital financial resources. A non-probability convenience sampling technique was employed to select 205 Generation Z executive-level employees in Sri Lanka. The sample size of 205 is adequate for PLS-SEM analysis, following the '10-times rule' where the minimum sample should be ten times the largest number of structural paths to any construct (Wah, 2025). The questionnaire was constructed on the basis of the measurement scales used by previous researchers of gamification, motivation, technology acceptance, and saving behavior.

The operationalization of gamification features was taken as an independent variable, which was the existence of game-like features in the budgeting tools. Saving behavior was the dependent variable, and the motivation, perceived usefulness, and perceived ease of use have been included as mediating variables.

The data were processed with the help of a Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS, which is an appropriate method of conducting both predictive and exploratory studies with a number of constructs and mediation paths. PLS-SEM was chosen because it operates with complicated models, non-normal data distributions, and moderate sample sizes. The analysis was done in a two-step process, which included the measurement model and structural model assessment.

To determine construct reliability and validity, the measurement model was measured on Composite Reliability. Hypothesized relationships were tested by examining the structural model on the basis of path coefficients (which are β values) and significance levels (p-values). The mediation analysis was performed to discuss the impact of gamification characteristics on saving behavior via motivation, perceived usefulness and perceived ease of use. The statistical significance of the direct and indirect effects were obtained through bootstrapping procedures. Also To check for common method bias, Variance Inflation Factor (VIF) values for all constructs were below 3.3, indicating no significant multicollinearity and confirming that common method bias did not threaten the results,

Altogether, the proposed methodological approach allowed examining direct and indirect interdependence comprehensively, which offers a strong empiric on the impact of gamified budgeting tools on saving behavior among employees of the executive level (Generation Z) in Sri Lanka.

Findings and Conclusions

Based on the structural equation modeling results, this study provides empirical evidence on how gamified budgeting tools influence saving behavior among Generation Z executive-level employees in Sri Lanka.

The direct relationship between gamification features and saving behavior was not statistically significant ($\beta = 0.097$, $p = 0.226$), indicating that gamification alone does not directly improve saving behavior. This finding confirms that the presence of game-like elements by itself is insufficient to change financial behavior.

However, gamification features showed a strong and statistically significant positive effect on motivation ($\beta = 0.656$, $p < 0.01$). Motivation, in turn, had a significant positive impact on saving behavior ($\beta = 0.236$, $p < 0.05$), demonstrating that increased motivational engagement leads to improved saving discipline. This establishes motivation as a key psychological mechanism through which gamified budgeting tools influence saving behavior.

Gamification features also had a statistically significant positive effect on perceived usefulness ($\beta = 0.579$, $p < 0.01$) and Perceived usefulness further exhibited a significant positive relationship with saving behavior ($\beta = 0.239$, $p = 0.002$). The total indirect effect of gamification features on saving behavior through motivation and perceived usefulness was statistically significant ($\beta = 0.357$, $p < 0.01$), confirming the presence of full mediation. Although gamification features significantly influenced perceived ease of use ($\beta = 0.475$, $p < 0.01$), the relationship between perceived ease of use and saving behavior was not statistically significant ($\beta = 0.133$, $p > 0.05$). This underscores the point that ease of use does not necessarily result in better saving behaviors if it is not accompanied by motivation and perceived useful value.

The structural model explained 43.0% of the variance in motivation ($R^2 = 0.430$), 33.6% in perceived usefulness ($R^2 = 0.336$), 22.6% in perceived ease of use ($R^2 = 0.226$), and 34.9% in saving behavior ($R^2 = 0.349$). The f^2 effect sizes indicate a large effect of gamification on motivation (0.756) and perceived usefulness (0.506), a medium effect on perceived ease of use (0.292), and a negligible direct effect on saving behavior (0.007). Mediators, motivation (0.035), perceived usefulness (0.049), and perceived ease of use (0.016), all have small effects on saving behavior. And also Composite reliability values for the constructs were all above the recommended 0.7 threshold, indicating strong internal consistency, Gamification Features = 0.739, Motivation = 0.772, Perceived Usefulness = 0.749 Perceived Ease of Use = 0.766, and Saving Behavior = 0.768. This confirms that all constructs are reliably measured and suitable for hypothesis testing

The findings indicate several barriers to the effective use of gamified budgeting tools in Sri Lanka. Gamification alone does not consistently influence saving behavior unless it enhances motivation and perceived usefulness, while limited availability of fully gamified applications, financial literacy gaps, habitual spending, and high living costs further constrain adoption and sustained use.

This study contributes to developing-country fintech literature by showing motivation and perceived usefulness mediate gamification's effect on savings. Financial institutions should prioritize goal-oriented, reward-based features and provide financial literacy support. Limitations include cross-sectional design, self-reported bias, and convenience sampling, future research should explore longitudinal designs and broader populations.

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ADVANCED STOCK MARKET PREDICTION: A DEEP LEARNING FRAMEWORK INCORPORATING SENTIMENT ANALYSIS

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Keywords: Stock Market Prediction, Sentiment Analysis, Behavioral Finance, Long Short-Term Memory (LSTM), Deep Learning

Introduction

Stock markets are essential components of global economies; they provide key tools for capital formation and allocation in support of economic growth. Stock market forecasting for financial and economic plan formulation is of paramount significance. It may be noted that the stock market is a complex process involving economic fundamentals and processes that have inherent complexities such as non-linear behavior and dynamic interactions. It is thus a challenging task to forecast financial market behavior.

Traditional approaches to stock market prediction, are mainly based on statistical and econometric techniques involving Autoregressive (AR), Autoregressive Moving Average (ARMA), and Generalized Autoregressive Conditional Heteroskedasticity (GARCH) processes. While such techniques work satisfactorily to model the linear association and volatility processes in the market, they can only do so under the assumptions of linearity and stationarity. However, in finance and financial markets, such assumptions do not hold in practice, especially in markets characterized by increased volatility and the rapid spread of information. This affects the performance of the prediction model negatively in such markets. Recently, many breakthroughs have been achieved in the field of artificial intelligence (AI), in particular in deep learning techniques, leading to new efficient methods being sought to model complex financial time-series data efficiently. Of particular interest in this area is the Long Short-Term Memory (LSTM) model, proven to be effective in exploring complex patterns in data while learning temporal dependencies in financial data efficiently by overcoming many challenges posed by conventional time-series analysis methods.

In parallel, the growth in availability of unstructured textual data, such as financial news articles, drew greater attention to investor sentiment as an important factor in market movements. Studies in behavioral finance indicated that market prices are influenced not just by fundamentals but also by the way investors feel, perceive events, and react to news. This implies that the sentiment carried in financial news can then serve as a valuable indicator of market expectations about future price movements.

The aim, therefore, is an advanced framework for stock market prediction that effectively fuses structured market data with unstructured news sentiment using LSTM-based deep learning models. Financial news sentiment is extracted using both lexicon-based (VADER) and transformer-based (FinBERT) sentiment analysis techniques to capture complementary sentiment signals. With a combination of numerical market indicators and sentiment-driven features, the study aims at enhancing predictive accuracy for major U.S. stocks while adding to the increasing body of literature on AI-driven financial forecasting and providing practical insights on data-driven investment decision-making.

Literature Review

The existing literature on stock market prediction can be segregated broadly into three streams: traditional econometric models, machine learning and deep learning-based approaches, and sentiment-driven forecasting models.

Early studies in stock market forecasting mostly adopt econometric techniques for which the models are based on AR, ARMA, and GARCH models. Box and Jenkins (1976), along with Bollerslev (1986), present some of these models that have been commonly used in explaining linear relationships and volatility clustering in financial time series. However, strong assumptions of linearity and stationarity in these models hamper their abilities to capture nonlinear and dynamic natures of financial markets during times of high market stress or structural breaks, as Tsay (2010) describes.

With increasing data availability and computational power has encouraged researchers to use machine learning techniques, for example, Support Vector Machines (Vapnik, 1995) or Random Forests (Breiman, 2001) to improve predictive performance. These models showed that financial data could pursue nonlinear patterns, unlike traditional econometric approaches. However, many conventional machine learning models consider the observations to be unrelated, and these models are not very efficient in modelling the sequential dependencies of time series data (Fischer & Krauss, 2018).

Recent work has examined deep learning models, particularly Long Short-Term Memory LSTM networks. The vanishing gradient issue of recurrent neural networks is avoided by employing LSTM architectures, which are beneficial for learning long-term temporal dependencies (Hochreiter & Schmidhuber, 1997). Studies have empirically shown that LSTM-based models are superior to classical econometric and conventional machine learning models when predicting stock prices, returns and volatility, especially during turbulent times (Nelson et al 2017; Fischer and Krauss 2018).

Yet another strand of literature stresses on the role of investor sentiments. The behavioral finance theory suggests that market prices are affected not only by fundamentals but also by investors' emotions, beliefs, and reactions to information (Shiller, 2003; Baker and Wurgler, 2006). The ability to extract sentiment from financial news and social media is due to advancements in natural language processing. Lexicon-based approaches, such as VADER, are computationally efficient and interpretable (Hutto & Gilbert, 2014), while transformer-based models, such as FinBERT, provide superior contextual understanding of financial language and domain-specific semantics (Araci, 2019). Various research has shown that adding sentiment indicators to prediction models makes the forecasting more accurate. This however depends on the methodology of sentiment, the data used and prediction horizon. (Tetlock, 2007; Hu et al, 2018)

There is still a noticeable gap in the literature nonetheless. The majority of research is limited to just one sentiment extraction technique and involves a small number of stocks or sectors and short prediction horizons. Furthermore, comprehensive frameworks do not exist that compare the lexicon-based (VADER) and the transformer-based (FinBERT) sentiment indicators within the same deep learning architectures. The aforementioned gap is resolved in this paper with an application of sentiment-enhanced LSTM that fuses structured market data with multiple sentiment measures. We apply our framework to a handful of large-cap US stocks with a medium-term forecasting horizon.

Problem Statement and Research Questions

Stock Price Prediction despite deep learning-based forecasting has always been a challenging art due to complexity in financials and the qualitative information being not in use in many of

the models. LSTM models can capture the historical price data. The sentiment of financial news may not be captured enough.

The existing literature identifies the need for an effective and validated deep learning framework with advanced LSTM architecture and financial news sentiment to improve stock prediction accuracy.

Questions for Research

The first research question examines how accurately LSTM-based deep learning models can forecast stock price movements in the market. The second research question investigates whether the incorporation of financial news sentiment enhances the forecasting ability of LSTM models. The third research question evaluates the predictive accuracy of VADER-based sentiment-enhanced LSTM and FinBERT-based LSTM models. The fourth research question explores whether the effectiveness of sentiment-enhanced predictions differs across specific stocks and sectors.

Objectives

Main Objectives: To create and assess a sophisticated framework for stock market prediction, using an integration of LSTM networks and the evaluation of financial news sentiment.

Sub Objectives

To construct a baseline LSTM model using historical stock market data, to use the VADER and FinBERT techniques to extract financial news sentiment, to incorporate sentiment indicators into prediction models based on LSTM, to evaluate the predictive performance of both the baseline and sentiment-enhanced LSTM models, and to analyze how the impact of sentiment differs across stocks and sectors.

Research Methodology

This research takes a quantitative research methodology through secondary data, affect financial news sentiment towards stock market forecasting.” For the selected stock period, Yahoo finance daily stock market returns of closing price, returns, traded volume as well as volatility data is collected. The New York Times API fetches financial news articles related to the selected stocks. It ensures reliable and credible news coverage. The news data gathered goes through text cleaning, tokenization, and normalization to make it suitable for sentiment analysis.

To measure investor sentiment, the study adopted two techniques: VADER, the lexicon-based technique, and FinBERT, the transformer-based model. Through a joint experimental evaluation of traditional rule-based sentiment analysis and advanced deep learning-based sentiment classification, they will be compared with one another. Each day, the sentiment scores from both approaches are coupled with the various stock market indicators.

The financial variables and sentiment variables are then used to create ML and DL forecasting models. Evaluating model performance with the help of standard metrics such as RMSE and MAE allows objective comparisons among models and sentiment techniques.

This method offers a framework to evaluate the predictive power of news sentiment that is robust, comparable, and generalizable.

Findings and Conclusions

Table 1 - Model Performance

Stock	Baseline LSTM R ²	VADER Enhanced LSTM R ²	FinBERT Enhanced LSTM R ²	Baseline RMSE Factor	VADER Enhanced RMSE Factor	FinBERT Enhanced RMSE Factor
AAPL	96.19%	96.18%	96.20%	1.952	1.954	1.949
MSFT	86.36%	83.65%	86.83%	3.693	4.044	3.629
AMZN	73.38%	73.36%	72.71%	5.159	5.161	5.224
GOOGL	96.82%	97.53%	96.92%	1.783	1.572	1.755
META	94.30%	94.00%	93.87%	2.387	2.449	2.476
NVDA	73.81%	68.99%	73.20%	5.118	5.569	5.177
TSLA	89.93%	89.35%	90.15%	3.173	3.263	3.138
JPM	77.56%	77.01%	77.58%	4.737	4.795	4.735
WMT	93.73%	93.55%	94.74%	2.504	2.540	2.293
DIS	86.62%	86.69%	86.66%	3.658	3.648	3.652

According to this research, financial news sentiment has a significant effect on stock price movements with more effectiveness at lower forecasting horizons. Models including sentiment variables almost always outperform only price historical models. The FinBERT-based sentiment measures indeed have more predictive power. The predictive power of the FinBERT-based sentiment measures is more than the lexicon-based VADER approach sentiment. Thus, context-aware transformer models have an advantage over lexicon models.

The study also finds that the inclusion of sentiment indicators alongside typical market variables like returns and volatility produces a better forecast. Deep learning models, especially those that can capture nonlinearities, perform better when combined with sentiment data. In contrast, the sentiment's usefulness isn't uniform across market conditions. Investor reaction to news is evidently not the same in each case.

To conclude, the research study confirms the vital role of modern sentiment analysis techniques for stock market prediction. Having VADER and FinBERT in the same modeling framework allows the paper to fill the gap in the literature. The results highlight the importance of sentiment-aware models for improved prediction performance and emphasize how transformer-based methods will gain importance in financial market prediction in the future.

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ENVIRONMENTAL, SOCIAL, AND GOVERNANCE DISCLOSURE AND FINANCIAL PERFORMANCE: SPECIAL REFERENCE TO LISTED COMMERCIAL BANKS IN SRI LANKA

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Introduction

Environmental, Social, and Governance (ESG) practices have become a vital focus in the corporate reporting, driven by increasing global concerns about sustainability, stakeholder transparency, and long-term value creation. Strong ESG engagement is linked to better operational resilience as well as financial performance, particularly in the financial services sector. In emerging economies such as Sri Lanka, ESG disclosure remains largely voluntary and uneven across institutions. Although guidelines have been introduced by regulatory bodies for encouraging sustainability reporting, there is limited empirical evidence on whether ESG disclosure generates measurable financial benefits for banks. Understanding this relationship is particularly important in the Sri Lankan context, where the banking sector is highly regulated, more sensitive for reputation, and central to economic stability. This study aims to address the limited empirical research on ESG disclosure in Sri Lanka by examining its extent, quality, and relationship with financial performance. The findings of this study provide insights for academic knowledge, policy development, and decision making in the banking sector. And the findings of this study contribute to a deeper understanding of how ESG practices influence risk, profitability, and overall institutional performance within Sri Lanka's commercial banking industry.

Literature Review

The relationship between ESG disclosure and financial performance has been a widely discussed subject in the literature with theoretical frameworks being based on such theories as Stakeholder Theory, Legitimacy Theory, and Agency Theory. According to the Stakeholder Theory, responsible ESG practices place a firm in a better position to meet the expectations of the stakeholders, which enhances reputation and financial performance. The Theory of Legitimacy implies that ESG disclosure is a strategic reaction to the pressure of the society to ensure organisational legitimacy. The Agency Theory indicates the disclosure of ESG as a way of minimizing the information asymmetry between the managers and the stakeholders.

Empirical evidence on the ESG and financial performance relationship remains mixed and context dependent, particularly within the banking sector. Meta analytical studies by Friede et al. (2015) and Whelan et al. (2021) provide strong global evidence of a generally positive relationship between ESG engagement and financial performance, attributing these benefits

to enhanced risk management, reputational gains, and improved stakeholder trust. The contextual characteristic of the ESG and financial performance relationship is further provided by the recent empirical evidence of emerging economies. To illustrate this, Bui et al., (2024) analyzed Vietnamese commercial banks revealed that overall ESG disclosure has a positive effect on the financial performance of bank, especially the return on equity. However, sector specific studies indicate that the relationship may differ in highly regulated industries such as banking. Buallay (2019) found that sustainability reporting has a statistically significant negative relationship with banking sector performance, suggesting that ESG disclosure may create additional compliance and implementation costs that reduce short-term profitability. Likewise, studies such as Utz (2017) argues that ESG initiatives often involve substantial compliance, monitoring, and implementation costs, which may outweigh immediate financial benefits. In the banking sector, these costs are further amplified by stringent regulatory requirements and limited flexibility in operational adjustments, resulting in weaker or adverse short-term profitability effects. This evidence suggests that the financial outcomes of ESG disclosure are sensitive to time horizons, institutional environments, and the maturity of ESG integration, reinforcing the need for context specific analysis in emerging economies.

Despite growing global evidence, empirical studies focusing on ESG disclosure in Sri Lankan commercial banks remain limited. Existing local research largely emphasizes corporate governance or sustainability reporting in non-financial firms, with little attention for the ESG disclosure at the banking sector. Moreover, limited studies examine the disaggregated effects of environmental, social, and governance disclosures. This study attempts to fill these gaps by empirically investigating the relationship between ESG disclosure and financial performance of listed commercial banks in Sri Lanka.

Problem Statement and Research Questions

Despite the growing global emphasis on ESG reporting, its adoption for developing economies remains largely voluntary and inconsistent, particularly within the banking sector. While banks allocate significant resources to sustainability initiatives and reporting, the extent to which ESG disclosure contributes to financial performance is unclear. This lack of clear and context specific evidence present a significant research problem for academics, practitioners, regulators, and investors. Without empirical validation, banks may remain uncertain about the strategic value of ESG disclosure, regulators may struggle to design effective sustainability reporting frameworks, and investors may face challenges in integrating ESG considerations into their investment decisions. Therefore, an in-depth empirical investigation into the relationship between ESG disclosure and the financial performance of Sri Lankan commercial banks is necessary to address this gap.

Accordingly, the study seeks to answer the following research questions:

The first research question examines the extent of ESG disclosure among listed commercial banks in Sri Lanka. The second research question investigates the relationship between ESG disclosure and the financial performance, measured by ROA and ROE, of listed commercial banks in Sri Lanka. The third research question explores which ESG disclosure component or components most significantly influence the financial performance (ROA and ROE) of listed commercial banks in Sri Lanka.

Objectives

Main Objective:

To examine the ESG disclosure practices of listed commercial banks in Sri Lanka and analyze the relationship between ESG disclosure practices and financial performance.

Sub Objectives:

To evaluate the overall level of ESG disclosure among listed commercial banks in Sri Lanka, to identify the relationship between overall ESG disclosure and the financial performance (ROA and ROE) of listed commercial banks in Sri Lanka, and to identify which ESG disclosure component or components most significantly influence the financial performance (ROA and ROE) of listed commercial banks in Sri Lanka.

Research Methodology

This study adopts a quantitative research design using balanced panel data. Data were drawn from published annual reports and sustainability reports covering the period from 2020 to 2024 relating to 8 listed commercial banks. The study developed individual and integrated scores to measure the ESG disclosures and examine the individual and collective effect of ESG disclosures on financial performance. Financial performance was measured using Return on Assets and Return on Equity. Firm size and leverage were included as control variables. Panel regression models were estimated using SPSS to test the hypothesised relationships. Diagnostic tests, including Variance Inflation Factor, Durbin Watson statistics, and residual normality checks, were conducted to ensure model robustness.

Findings and Conclusions

The empirical results demonstrate that overall ESG disclosure is positively and statistically significantly correlated with ROA and ROE, which results in the fact that more bank is characterized by high ESG transparency; the greater the financial performance of the bank. This observation confirms Stakeholder and Legitimacy Theories, indicating that ESG disclosure enhances stakeholder trust, institutional legitimacy and operational efficiency.

Analyzing the ESG components individually, social disclosure can be observed as the most influential component that shows a strong positive relationship when it comes to the financial performance. This shows the commitment of employee welfare, protection for customers, financial inclusion, and community engagement in the banking sector. In contrast, Environmental and governance disclosures, do not have statistically significant short-term impacts on ROA or ROE, This suggests that investments in environmental initiatives and governance mechanisms may generate benefits primarily for long-term strategic channels rather than immediate profitability. Environmental initiatives often require substantial upfront investments and are aimed at long-term risk mitigation, regulatory compliance, and sustainable financing, which may not be immediately reflected in short-term financial indicators. Similarly, governance practices in the banking sector are largely standardized due to strict regulatory requirements, resulting in limited variation across banks and reducing their observable impact on short-term profitability measures.

Overall, the findings suggests that ESG disclosure particularly the social dimension plays a meaningful role in improving bank performance in Sri Lanka. The study contributes to the limited empirical literature on ESG disclosure in emerging markets and provides practical implications for practitioners in the banking sector and policymakers, With Sri Lanka remaining on the path of sustainable finance, the results of the current study can be used to

make informed decisions and help create a more resilient, transparent, and sustainable banking system.

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DETERMINANTS OF PERSONAL FINANCIAL MANAGEMENT: A SYSTEMATIC LITERATURE REVIEW AND BIBLIOMETRIC ANALYSIS OF INDIVIDUAL, SOCIO ECONOMIC AND TECHNOLOGICAL FACTORS

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Introduction

Now a days, Personal finance management has become a important topic in the modern economic environment. Because, all the individuals are required to make complex financial decisions relating to their savings, borrowings, investing and retirement planning. Individuals should manage their finance effectively due to the large number of financial innovations, the expansion of financial services and rising household debt levels. Not only that, economic uncertainty, income instability and unequal access to financial services create significant challenge to the developing countries.

Effective personal finance management is linked with the individual financial wellbeing, household stability and overall economic resilience. Poor personal finance management can lead to excessive debt, inadequate savings and unable to face financial shocks. Sound financial management supports to enhance quality of life and long-term financial security. As a result, researchers, policymakers and financial institutions give their attention for personal finance management.

Although research on personal finance management has expanded, existing studies often focus on limited aspects of financial behaviour. Many studies emphasis financial literacy as the primary solution. Some of studies examine behavioral or socio-economic factors separately. The rapid growth of digital finance and fintech has changed that how individuals manage money.

This study aims to provide a comprehensive understanding of personal finance management by conducting a systematic literature review and bibliometric analysis. It addresses the fragmentation in the literature and contribute to more balanced understanding of Personal Finance management behaviour.

Literature Review

The literature on personal finance management identifies several key determinants. Those determinants influence that how individuals manage their financial resources effectively. Among them financial literacy is the one of the most widely studied factors. which is defined as knowledge and understanding of basic financial concepts such as interest rates, inflation,

risk diversification and debt repayment. Higher levels of financial literacy consistently linked to better retirement planning, budgeting and saving (Lurardi & Mitchell, 2014).

However, recent studies show that financial literacy alone is not sufficient to explain financial behaviour. Behavioral theories highlight the role of cognitive biases and psychological tendencies. As an example, present biases can lead to prioritize immediate consumption rather than long-term financial goals. And also, overconfidence may result in excessive risk taking (Thaler, 2016). These factors help explain why individuals with similar levels of financial knowledge show different types of financial behaviors.

Financial capability theory provides a broader framework by combining financial knowledge with skills, attitudes and confidence. Therefore, individuals need knowledge, ability and opportunity to apply that knowledge in real-life financial situations (Xiao & O'Neill, 2016).

Socio-economic factors also play an important role in personal finance management. Income level, employment stability, education and demographic characteristics influence an individual's financial capacity and decision-making ability. In developing economies, informal employment and volatile income streams often limit savings and long-term planning, even among individuals with more financial knowledge (Demirci-Kunt et al., 2018).

Technological developments have transformed personal finance management. Mobile banking, digital wallets and online budgeting tools offer new opportunities for financial inclusion and improved financial control. Overall, the literature reveals three key gaps.

The first research gap is the lack of integrated analysis across determinants. The second gap is the limited focus on developing economies. The third gap is the insufficient use of systematic and bibliometric review methods.

This study addresses these gaps by providing a structured and comprehensive synthesis of existing research.

Problem Statement and Research Questions

Although there is a growing volume of research on personal finance management, there is limited understanding of how individuals, socio-economic and technological factors interact to shape financial behaviour. Many studies examine determinants in isolation. In addition, the rapid expansion of digital financial services has not been fully integrated into existing theoretical frameworks.

Main Research Problem = How do individuals, socio-economic and technological determinants jointly influence personal finance management?

The study addresses the following research questions.

The first research question examines what individual factors impact personal finance management behaviour. The second research question explores how socio-economic conditions affect personal finance management practices. The third research question investigates the role of technological factors in shaping personal finance management. The fourth research question identifies research trends and gaps in the existing literature.

Objectives

Main objective

To systematically analyse existing literature on personal finance management to identify key determinants, research trends and gaps.

Sub objectives

To examine individual determinants. - . This includes understanding individual determinants such as financial literacy, financial attitudes, self-control and other behavioral traits affect individuals' personal financial management decisions.

To analyse the influence of socioeconomic factors. – This involves analysing the influence of socio-economic factors on personal finance management including income level, income stability, education, employment status and demographic characteristics shape individual's ability to plan, save and manage their finances effectively.

To evaluate the role of digital financial literacy. – This involves analysing the influence of technology, particularly fintech tools and digital financial literacy. This objective focuses on understanding how digital banking, mobile payment systems, budgeting applications and online financial platforms influence personal finance management and how digital skills affect the effective use of these tools.

To identify directions for future research in personal finance management. - Determining future directions for personal finance management research is the last sub-objective. This aims to identify areas that require more research, particularly in developing economies and in relation to digital finance and behavioral factors, based on the gaps and limitations identified in previous studies.

Research Methodology

This study qualitative and quantitative research design by using systematic and bibliometric analysis. This review follows the PRISMA guidelines. Peer reviewed journal articles were selected using predefined inclusion and exclusion criteria.

Bibliometric analysis was conducted to examine publication trend, influential authors, key journals and thematic patterns. The main variables analyzed individual factors, socio-economic conditions and technological determinant.

Findings and Conclusion

The findings shows that personal finance management is influenced by a combination of individual capabilities, socio economic conditions and technological access. Financial literacy plays a foundation role. Behavioral biases and psychological traits significantly shape decision making. Socio economic factors influence individual's ability to apply financial knowledge. Technological tools such as fintech applications can improve financial management.

In conclusion, the study demonstrates that personal finance management should be

understood through an integrated framework rather than isolated determinants. The findings highlights the need for holistic financial education, inclusive digital finance policies and increased research attention on developing economies.

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