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Banking Finance & Insurance Institute of Nepal

BANKING FINANCE
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JOURNAL OF

BANKING, FINANCE & INSURANCE

6 YEARS
ANNIVERSARY
CELEBRATION

6 YEARS
ANNIVERSARY
CELEBRATION

On the auspicious occasion of
6th Anniversary of BFIN,
we thank you for being part of our
company's success over the years.

PROMOTERS

MEMBERS

STRATEGIC PARTNERS

Senior Deputy Governor

MESSAGE

Congratulations and warmest wishes to the Banking Finance and Insurance Institute of Nepal (BFIN) on the momentous occasion of releasing "Journal of Banking, Finance, and Insurance", Volume V, coinciding with its sixth anniversary celebrations.

Throughout recent years, BFIN has been a cornerstone in educating professionals within the Banking, Finance, and Insurance sectors through tailored training programs, enlightening seminars, impactful conferences, and engaging webinars. This proactive approach has not only equipped individuals with foundational knowledge in banking and finance but also prepared them to navigate the complexities of digital finance and e-banking. These efforts have been instrumental in fortifying the strength and resilience of our nation's financial sector.

The publication of the "Journal of Banking, Finance, and Insurance" on this significant milestone underscores BFIN's dedication to advancing industry knowledge and fostering innovation. It serves as a vital platform to educate professionals and stakeholders about emerging research trends and promising avenues for development within the field.

Again, I would like to express a heartfelt congratulations to BFIN on this remarkable achievement! And, I wish for a continued success, sustained growth, and an inspiring future ahead as BFIN continues to shape the landscape of Banking, Finance, and Insurance education all over the world.

July 7, 2024

Dr. Neelam Dhungana Timsina

Deputy Governor

MESSAGE

I express my heartiest congratulations to the Banking, Finance and Insurance Institute of Nepal on the occasion of its sixth anniversary and for publishing Volume V of the "Journal of Banking, Finance and Insurance". As previous volumes, this journal also involves the various articles of the institute that supports it in meeting its objectives for knowledge delivery to the employees of the Nepalese financial sector.

As we navigate through this dynamic global economic landscapes, the role of banking, finance, and insurance sectors has become increasingly pivotal. I hope this journal provides insightful analysis, innovative research, and practical solutions that contributes to the advancement and sustainability of these crucial sectors.

In this regard, I would express my best wishes for the continuation of these efforts for developing the capacity of domestic financial system.

Finally, I express my best wishes for the continuous progress of the institution.

(Bam Bahadur Mishra)

Date : 10th July, 2024

MESSAGE

I am happy to learn that "The Journal of Banking Finance and Insurance," Volume V, is going to be published soon by the Banking Finance & Insurance Institute of Nepal (BFIN) as a part of the celebration of the 6th anniversary of the Institute. Let me congratulate all the professionals, including their leader, Dr. Binod Atreya, for remaining engaged in this journey of creating financial knowledge and sharing it with a broader audience by publishing the journal. This journal is exceptionally well done, providing helpful knowledge products to professionals, particularly the youngest. I feel privileged to have been associated with this initiative since its inception. I am pleased to see that the journal has been regularly published despite many challenges arising from the global economic crisis, the pandemic, and the Russian-Ukraine war. Indeed, the journal has come of an age covering multifaceted aspects of financial services and related human capital development issues promoted by BFIN. Its range of coverage of the issues has been very robust, including leadership challenges, skills development, mental health challenges created by the pandemic, and financial transparency through better audit and financial reporting. I hope it will also focus on digital banking processes that have been gaining steam. Climate change challenges are accelerating throughout the world. Nepal, too, experienced one of the worst floods recently, causing several deaths, even in Kathmandu. Besides this human cost, the financial loss due to climate change must have also been severe. Therefore, it is essential to focus on the risks of climate change and design a sustainable finance policy to address three challenges. I am indeed privileged to have worked on this issue as a Governor. I would happily share my financial regulatory experience with the participants at the upcoming BFIN conference. I have also been privileged to remain engaged with these professionals in taking the knowledge management journey forward.

I am also happy that they have been publishing the journal reflecting the objectives for which BFIN was created. The young leaders under Dr. Atreya's strong mentorship have indeed achieved so much within such a short period. They all deserve the highest appreciation from the regulators and other stakeholders.
I wish both BFIN and the journal continued success.
My profound blessings to all of them.

ATIUR RAHMAN
Emeritus Professor, Department of Development Studies, Dhaka University.
Chairperson, Unnayan Shamannay
Former Governor, Bangladesh Bank.

Centurion University of Technology & Management

Established vide Orissa Act 4 of 2010

Centurion
UNIVERSITY

Shaping lives...Empowering Communities

Prof. (Dr.) Mukti K. Mishra
MA (Applied Eco), MA (Pub Admin)
MBA, PhD (Victoria University)
PRESIDENT

Distinguished Members of BFIN,

Warmest congratulations to BFIN on its 6th anniversary and the forthcoming publication of Volume V of the "Journal of Banking Finance and Insurance." This milestone celebrates BFIN's steadfast dedication to excellence and innovation in the domains of banking, finance, and insurance.

At Centurion University, we acknowledge BFIN's pivotal role in propelling forward the knowledge and practices in these critical sectors. The Journal has consistently served as an invaluable forum for academics, practitioners, and policymakers to share cutting-edge research, explore novel ideas, and engage in meaningful discourse. Your commitment to producing high-quality, peer-reviewed content has greatly enriched our understanding and influenced the trajectory of the industry.

BFIN's efforts transcend mere publications, embodying a concerted endeavour to bridge the gap between theory and practice. This ensures that insights derived from academic research are effectively translated into real-world applications, thereby elevating professional standards and contributing to the stability and development of the financial sector.

The collaboration between Centurion University and BFIN has furthered our mutual mission of advancing education and professional development in banking, finance, and insurance. Our joint endeavours—ranging from conferences and workshops to research projects and training programs—have provided invaluable opportunities for knowledge exchange, capacity building, and professional networking.

In an era of rapid technological advancements and evolving financial landscapes, the role of scholarly publications like yours has become increasingly vital. The insights and innovations documented in the Journal serve as beacons of thought leadership, guiding us towards sustainable and inclusive growth. They equip professionals with the knowledge and tools necessary to address complex challenges, seize emerging opportunities, and drive transformative change within their organizations and communities.

The impact of BFIN's work extends far beyond the immediate academic and professional communities, benefiting society at large. By fostering a culture of rigorous inquiry, critical thinking, and evidence-based practice, BFIN contributes to the creation of a more resilient, transparent, and equitable financial system. This, in turn, supports broader economic development and social progress, aligning with our collective vision of a better future.

On behalf of Centurion University, I extend our deepest appreciation and best wishes for the continued success of BFIN and the Journal of Banking Finance and Insurance. We look forward to many more years of groundbreaking research, insightful publications, and fruitful collaboration. Together, we can continue to advance the frontiers of knowledge, drive innovation, and make a lasting impact on the world.

Congratulations once again, and thank you for the esteemed opportunity to be part of your celebration.

Mukti Mishra

MESSAGE

Our warmest congratulations and best wishes to the entire team at
Banking Finance and Insurance Institute of Nepal Ltd. (BFIN) as you celebrate your 6th year anniversary!

The release of the "Journal of Banking Finance and Insurance," Volume V on this remarkable occasion is a testament to your dedication, innovationand relentless pursuit of excellence.

Your commitment to advancing the knowledge and fostering growth in these critical field is truly inspiring.

Again, from the APRACA CENTRAB, our Warmest Congratulations on the release of Volume V of the "Journal of Banking Finance and Insurance!" Here's to many more years of successes, impactful research, and industry leadership. Cheers to the achievements of the past and the exciting journey ahead!

LECIRA V. JUAREZ
Managing Director

MESSAGE

Congratulations on the 6th year Anniversary of Banking Finance and Insurance Institute of Nepal (BFIN)!

We sincerely congratulate the entire team at BFIN on this remarkable milestone. Over the past six years, BFIN has published notable journals, consistently providing thought-provoking perspectives, insightful analysis, and cutting-edge research in the disciplines of finance, banking, and insurance.

May the upcoming years be characterized by continued success, innovation, and growth. Wishing you many more years of exceptional scholarship and publication!

DR. MEENA BHATIA
Professor (Accounting and Finance)
Dean (Executive Education), Chairperson
(Accreditation and Rankings)
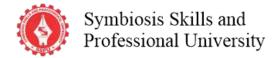BIMTECH
Mobile No. - 9810839449

MESSAGE

On behalf of the MCDGI management, I would like to congratulate BFIN on the constant publication of its journals on a timely basis. This journal is a proof to BFIN dedication to progressing learning, advocating research, and professional capacity development in the banking, finance, and insurance related areas in Nepal and in the region. It is commendable to note that BFIN is spreading knowledge in Nepal and in the region. BFINs visit to Maldives have been immensely valuable learning and exposure experience for Maldivian professionals as well as eye opener for the Nepalese delegation in the pathways that Maldives finance sector have excelled in recent years.

A hearty congratulations to BFIN on its 6th Anniversary. I wish both BFIN and the journal continued success.

MS. FATHIMATH SHAFEEGA
CEO & Founder
Maldives Capacity Development and Governance Institute
Deputy Managing Director
Capital Market Division

MESSAGE

It is commendable how the Banking, Finance and Insurance Institute of Nepal has established itself so well in a period of six years.

I appreciate your work in helping organizations to enhance and strengthen skills in the BFSI sector both locally and internationally. Your efforts to help strengthen the financial systems in Nepal are noteworthy.

We would continue to support BFIN through our Skill based Training programs for your members.

Heartfelt congratulations on the sixth anniversary of your esteemed organization.

DR. SWATI MUJUMDAR
Pro Chancellor
Symbiosis Skills Universities, Indore and Pune

MESSAGE

This year marks a momentous occasion for the Banking, Finance, and Insurance Institute of Nepal (BFIN) – our sixth anniversary! It is with immense pride that we announce the release of the fifth edition of our esteemed publication, "Journal of Banking, Finance and Insurance, Volume V "registered under ISSN: 2795-1715. This journal embodies our unwavering commitment to fostering dialogue, promoting research, and driving innovation within Nepal's financial industry, and at large the world.

BFIN has emerged as a significant professional organization in Nepal, providing substantial training and capacity building programs in banking, finance, and insurance. It has held over 365 national and international trainings with over 200 titles of training programs, 11 national conferences, and provided skill enhancement to more than 16,000 individuals. BFIN's reach extends to all seven provinces of Nepal, as well as ten nations and seventeen cities throughout the world. The Institute has delivered training in rural Nepal as well as globally in Australia, the Philippines, Thailand, Sri Lanka, Hong Kong, the United Arab Emirates, United Kingdom, Bangladesh, the Maldives, and India, with aspirations to expand into Europe and North America. BFIN has strategic alliances with 28 institutions worldwide to boost collaboration, knowledge sharing, and international ties in banking, finance, and insurance sectors.

Reaching this milestone would not have been possible without the invaluable support of a vast network of partners and supporters. I extend my deepest gratitude to central bank of Nepal, Nepal Rastra Bank (NRB), Government Ministries and agencies, BFIN Board members, banks and financial institutions, promoters, international strategic partners, institutional members, insurance companies, micro-credit institutions, corporate houses, well-wishers, and all individuals who have stood by me throughout our journey. All of your continuous support and collaboration have been instrumental in our success. The contributions, resources, and guidance received have significantly shaped the effectiveness of our initiatives. I deeply value your dedication to excellence and look forward to continuing our collaborative efforts to further strengthen Nepal's financial sector.

I would like to express gratitude to the Respected Governor, the Deputy Governors, strategic partners, experts, and well-wishers for their encouraging wishes and unwavering support for BFIN initiatives. I also express my sincere appreciation to all the authors whose contributions form the foundation of this publication. These contributions address a wide range of topics in banking, finance, and insurance, including digitization, the economy, and the stock market. Their invaluable work caters to our esteemed professional readers and customers. Each article undergoes a rigorous review process by a panel of experts, ensuring the highest standards of precision and academic excellence. Creating this journal requires considerable effort and dedication from all parties involved. I am committed to continuously elevating its quality. It is my sincere hope that this journal serves as a valuable resource, empowering our readers with relevant and insightful content. I actively solicit feedback and suggestions from our esteemed readers to continuously enhance the journal's relevance and utility to our community.

I extend a heartfelt appreciation to the Editorial Board for their meticulous review of articles and their commitment to upholding the publication's high standards. Finally, I want to acknowledge the tireless efforts of the BFIN employees who have made this publication a reality. The continued hard work has been paramount to our achievements.

With immense optimism, I look forward to the future of BFIN's journey, continuing to serve the financial industry through knowledge creation and collaborative initiatives.

DR. BINOD ATREYA
Managing Director, BFIN

BOARD OF DIRECTORS

TOP LEFT TO RIGHT:
JALAJ KUMAR ADHIKARI, SUJATA JOSHI, KAILASH GAUTAM

BOTTOM LEFT TO RIGHT:
BHAWANI DHAKAL, DR. BINOD ATREYA

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CONTENTS

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Nexus between Financial Inclusion, Financial Inequality, Economic Growth and Income Inequality

SIDDHA RAJ BHATTA
DEPUTY DIRECTOR

Office of the Governor
Nepal Rastra Bank(Central Bank of Nepal),
Kathmandu, Nepal

Mr. Bhatta works at Nepal Rastra Bank. He is a graduate in Economics from Boston University, USA and has more than ten years of experience in central banking. Currently, he is serving the International Monetary Fund in the capacity of Advisor to Executive Director.

Abstract

This article attempts to analyze the nexus between financial inclusion, inequality in the distribution of financial services, economic growth and inequality by using a sample of 112 countries. It estimates financial inclusion index for the countries using a number of access and usage indicators and then investigates the linkages of such index with growth, financial inequality, and income inequality. Results show that even though Nepal has progressed a lot in expanding financial inclusion, it ranks 70 out of the 112 countries included in the study in a cross-country context implying that more need to be done in the future to come in the forefront. In addition, results from the growth and inequality regression demonstrate that in the presence of higher inequality in the distribution of financial services, the gains from financial inclusion might not be realized as expected. This calls for the attention of the policymakers to address the inequality in financial services so that financial inclusion can contribute to higher and equitable growth.

KEYWORDS: **Financial inclusion, Growth, Inequality**

Introduction

The discussion on the relationship between financial access, economic growth and inequality has received considerable attention of the policymakers, academicians, and scholars in the recent years. It has been argued that financial inclusion fosters economic growth and helps in reducing economic inequality by making financial services available to the public at a reasonable cost and increases the gains of individuals from participation in financial markets. Early discussions on this issue show that financial inclusion relaxes the credit constraints for the poor by lowering the borrowing and information costs, enhances growth and reduces inequality (Galor and Zeira, 1993; Aghion and Bolton, 1997). However, recent studies have come up with mixed conclusions. In addition, some studies have focused on the non-linear relationship between financial inclusion and income inequality (Greenwood and Jovanovic, 1990; Townsend and Ueda, 2006). Also, some of the recent studies have emphasized on financial inclusion as a broader concept which includes not only the access to financial services, but also the use of services, ease of accessing the services, quality of the services and inequality in the distribution of such services. These studies argue that in the presence of higher financial inequality, increasing financial access can disproportionately benefit the wealthy agents and thus increases income inequality in the early stages, thereby nullifying the positive effects (Dabla Norris et al., 2015; Sahay et al., 2015).

This article attempts to analyze the nexus between financial inclusion, inequality in the distribution of financial services, economic growth and inequality by using a sample of 112 countries. First, it estimates financial inclusion index for the countries using a number of access and usage indicators and then investigates the linkages of such index with growth, financial inequality and income inequality. Then, it investigates the financial access and inequality in Nepalese context and draws some policy implications for maximizing the gains from expanding financial access.

The rest of the article is structured as follows: section two constructs financial inclusion index and assesses the status of financial inequality, section three investigates the relationship among the variables under consideration, section four delves into a discussion in Nepalese context and the final section concludes the article with some policy implications.

Status of Financial Inclusion and Financial Inequality

The available measures on financial inclusion show that financial inclusion has improved rapidly in all countries over the years but there is still a huge spatial as well gender gap across the globe. The percentage of adults having an account at financial institution has increased to 71 percent in 2021 but at the country level, such share varies from 21 percent to 100 percent (World Bank, 2021), creating large geospatial difference across the countries. In addition, the differences in other aspects of financial inclusion such as the usage of financial services, restrictions at place in accessing the services and the quality of services offered by the financial institutions are even more pronounced (World Bank, 2021).
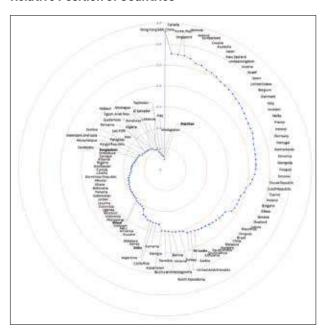
To evaluate the level of financial inclusion within a cross-country context, a financial inclusion index has been computed by using six financial access indicators and seven usage indicators spanning 112 countries. The list of the indicators used for the computation is provided in Table 1 below. The data are available in the Findex Survey published by the World Bank and Financial Access Survey published by the IMF. The financial inclusion index has been computed as the weighted average of the indicators normalized by using the global mini-max criterion. This method has been used by Sarma (2012), AFI (2016), Park and Mercado (2018), Nguyen (2020) and RBI (2021) to compute such index.

Table 1: Indicators Used for the Estimation of Financial Inclusion Index

Access Indicators	Usage Indicators
Account (% age 15+)	Used a debit or credit card (% age 15+)
Owns a debit or credit card (% age 15+)	Has an inactive account (% age 15+)
No. of commercial bank branches/1,000 km2	Saved at a financial institution (% age 15+)
Commercial bank branches/ 100,000 adults	Borrowed any money (% age 15+)
No. of ATMs per 1,000 km2	Made or received a digital payment (% age 15+)
No. of ATMs/100,000 adults	Deposits of household sector with commercial banks (% of GDP)
Outstanding loans from commercial banks (% of GDP)	

Estimation results show that while Hong Kong, Canada, Korea, Singapore, and Norway are on the top of the financial inclusion frontier as of 2021, Pakistan, Madagascar, Iraq, Tajikistan and Lebanon are on the lower end. Nepal has achieved moderate type of progress in this journey compared to other countries. It ranks 70 out of the 112 countries included in the computation implying that more than half of the countries in the sample are ahead of Nepal. In terms of the individual indicators, Nepal is behind in terms of the percentage of adults that use debit/credit card, the percent of adults who save at financial institutions and the percent of adults who make digital payments. In terms of these three indicators, Nepal's position is far below the average of the 112 countries included in the sample. In the south Asia, Sri Lanka and India are ahead of Nepal while Bangladesh and Pakistan are behind (Chart 1).

Chart 1 : Financial Inclusion Index and Relative Position of Countries

Source: Author's Estimation from Findex, World Bank (2021) and FAS, IMF (2021)
Note: Outer circle represents higher financial inclusion.
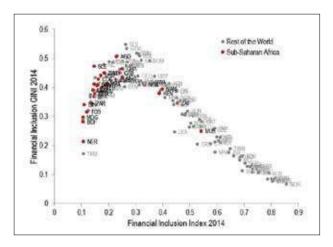
In the context of financial inclusion, one of the recently focused issues is the inequality in the distribution of financial services. Literature shows that in the initial stage, inequality in the access to financial services worsens as access to financial services increases and after a certain level of financial access, such inequality declines (Aslan et al., 2017). This effect is referred to Kuznets-type relationship followed by financial inequality. Aslan et al. (2017) show that more than half of the countries in the world have moderate to high level of financial inequality as reflected by a Gini coefficient of 0.30 or higher (Chart 2), which has created corresponding adverse impact on income inequality in the countries. While very few high-income countries have the issue of such inequality, majority of the lower middle-income countries and upper middle-income countries included in the sample have higher financial inequality (Table 2).

Table 2: Financial Inequality by Income Groups

Income Groups	Lower Gini (up to 0.30)	Higher Gini (>0.30)	Total
High income	37	4	41
Low income	3	3	6
Lower middle income	7	25	32
Upper middle income	6	27	33
Grand Total	**53**	**59**	**112**

Source: Author's Estimation based on Aslan et al. (2017) estimation of financial Gini Coefficients

Chart 2 : Financial Inclusion and Financial Inequality

Source: Aslan et al., (2017)
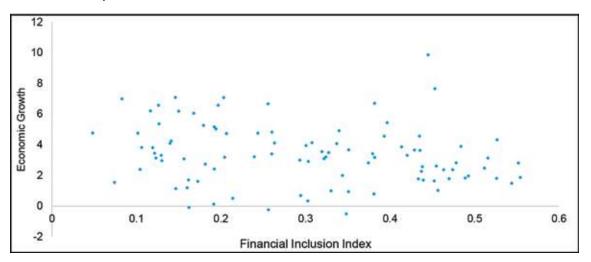
Relationship between Financial Inclusion, Growth and Inequality

There exists a strong theoratical argument in favor of the positive relationship between financial inclusion and economic growth. The most important channel argued behind this mechanism is the greater gains achieved from expanding participation in fianncial markets, removal of credit constraints and reduced cost of financial services. Majority of empirical literature support this argument and conclude a positive association between financial inclusion and growth. Some of the studies in this line include Estrada et al. (2010), Kpodar and Andrianaivo (2011), Camara and Tuesta (2014), Lenka and Sharma (2017), Le et al. (2019), Vo and Nguyen (2019), Ifediora, et al. (2022), and Abdallah et al. (2023). On the other hand, some studies document a low or even negative impact of financial inclusion on economic growth (Gómez Rodríguez et al., 2021).

Chart 3 plots the financial inclusion index from the sample countries against economic growth achieved by the countries during 2015-2019. It shows that the association between financial inclusion and economic growth appears to be weak.

To estimate the effect of financial inclusion on economic growth, the growth regression has been estimated for the low and medium-income countries with the widely used control variables in the literature. The regression results of the growth equation show that despite the expected positive sign of financial inclusion index and expected negative sign of financial inequality, structural features as proxied by the share of agriculture in total output and traditional factors of production matter more for economic growth. This might be because of the structural rigidities present in the countries as measured by the share of agricultural sector in total output which constraints financial inclusion as a lubricant of economic growth.

Chart 3: Scatterplot of Financial Inclusion Index and Economic Growth

Source: World Bank (2021), IMF (2021) and Author's Estimation

Table 3: Regression Results for the Growth Equation

Growth	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
lnindex	.01	.456	0.02	.983	-.903	.922	
Inf	-.046	.031	-1.47	.147	-.109	.017	
Lncf	1.67	.789	2.12	.039	.09	3.25	**
Lntrade	.277	.641	0.43	.667	-1.006	1.56	
Lnagri	1.321	.33	4.01	0	.661	1.981	***
Lnpop	.341	.176	1.93	.058	-.012	.694	*
Ineq	-.275	.519	-0.53	.598	-1.315	.765	
Constant	-10.929	5.491	-1.99	.051	-21.925	.067	*
Mean dependent var.		3.748	SD dependent var.			2.022	
R-squared		0.425	Number of obs.			65	
F-test		6.015	Prob > F			0.000	
Akaike crit. (AIC)		255.034	Bayesian crit. (BIC)			272.429	

*** p<.01, ** p<.05, * p<.1*

Source: Authors Estimation from World Bank Data

Note: lnindex=Log of financial inclusion index, inf=Inflation, lncf=log of capital formation, lntrde=log of trade

Regarding the relationship between fiancial inclusion and income inequality too, the available empirical literature is not conclusive. Some studies find that financial inclusion leads to a reduction in income inequality implying that the authorities need to pay more attention to financial inclusion to effectively reduce income inequality. These studies argue that financial inclusion create opportunities for the poor and the disadvantaged thereby creating positive income effect (Omar and Inaba, 2020; Dabla-Norris et al., 2015; García-Herrer and Turégano, 2015; Salazar-Cantú et al., 2015; Sahay et al., 2015). On the other strand, other studies including Honohan (2007), Park and Mercado (2015) and Park and Mercado (2018) find little econometric evidence on the argument that financial inclusion lowers income inequality. They argue that financial inclusion could benefit those who already have access to financial inclusion and disproportionately benefit the rich.

Recently, focus has been given to the inequality in financial services while examining the effect of financial inclusion in growth as well as income inequality. In this context, Aslan et al. (2017) investigate the links between financial inclusion,

gender, and income inequality and argue that inequality in financial access is significantly related to income inequality. Dabla Norris et al. (2015) argue that financial inclusion can help reduce income inequality only if it increases the access of the poor thereby reducing the financial inequality. Otherwise, such inclusion can disproportionately benefit the wealthy agents and increase income inequality.

Chart 4 presents the scatterplot between financial inclusion index and income inequality in the sample countries. It shows that there is likely to be negative association between financial inclusion and income inequality, however, after controlling for the other variables in the inequality regression, the relationship appears to be weak as shown by the regression results in Table 4.

Chart 4: Scatterplot of Financial Inclusion Index and Income Inequality

Source: World Bank (2021), IMF (2021) and Author's Estimates

The regression results show that economic growth and trade openness help improve income inequality while the inequality in financial services worsens it. This implies that in the presence of high inequality of financial services, progress in financial access does not create its intended impact on income inequality. These results are consistent with the findings of Aslan et al. (2017).

Table 4: Regression Results for the Inequality Equation

| Lngini	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Lnindex	-.073	.047	-1.56	.123	-.167	.02	
Inf	.001	.003	0.27	.79	-.006	.008	
Lntrade	-.093	.044	-2.13	.036	-.18	-.006	**
Ineq	.114	.052	2.21	.03	.011	.217	**
Growth	-.023	.011	-2.09	.039	-.045	-.001	**
constant	3.896	.211	18.50	0	3.478	4.315	***
Mean dependent var		3.567	SD dependent var			0.218	
R-squared		0.315	Number of obs			90	
F-test		7.726	Prob > F			0.000	
Akaike crit. (AIC)		-42.045	Bayesian crit. (BIC)			-27.046	

*** p<.01, ** p<.05, * p<.1*
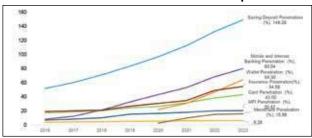
lngini=Log of Gini coefficient, inf=Inflation, lntrde=log of trade GDP ratio, ineq=dummy for financial inequality (high=1), growth=economic growth rate. Note: Data refer to 2019. Earlier data used because of COVID crisis and subsequent disturbances in the world economy.

Nepalese Context

Financial services has expanded rapidly in Nepal during the past one decade along with the expansion of bank branches and adoption of Fintech in financial service delivery. It has been reflected in the increase in the number of savings accounts, use of debit cards, wallets, mobile banking as well as internet banking for payments. Chart 5 shows the growth of various indicators of financial inclusion over the last seven years.

Chart 5: Financial Access Indicators for Nepal
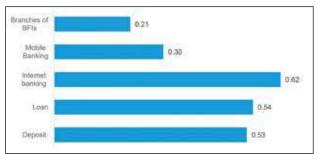
Source: Author's Estimation from NRB and CBS Data[1]

As presented in Chart 5, most of the financial inclusion indicators have shown rapid progress. Saving account penetration ratio has increased from 83 percent in 2019 to 149 percent in 2023, mobile and internet banking penetration has increased from 32 percent to 80 percent and card penetration has increased from 24 percent to 43 percent during the period. After the COVID-19, wallet penetration has also increased rapidly from 22 percent in 2020 to 64 percent in 2023. The only indicator that grew slowly over the years is the loan penetration ratio implying a slower progress in access to loans provided by the banks and financial institutions.

Despite the significant progress achieved in expanding the access to financial services, inequality in the distribution of financial services is still higher which might have reduced the benefits of financial inclusion. Chart 6 shows the Gini coefficients for the district wise distribution of deposits, loans, internet, and mobile banking as well as the distribution of the branches of the BFIs. In particular, the Gini coefficient for loan, and deposits are still above 0.50 indicating the need of more pro-equal policies for ensuring a fair and equitable distribution of financial services.

Chart 6 : Gini Coefficient for Districtwise Distribution
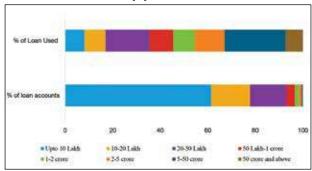
Source: Author's Estimation from NRB and CBS Data

Looking from another spectrum, use of loans from the banking sector shows that the distribution is not even-handed. In terms of the size of the loans, about 77.7 percent of the loan accounts have a loan size of Rs. 20 lakhs or less while 61.5 percent of the loan accounts have a loan amount of Rs.10 lakhs or less. These 77 percent of the loan accounts use only about 17 percent of the loan amount from the banking system. On the other hand, there are less than one percent of loan accounts that use a loan of more than Rs. 5 crores and use about 33 percent of the total loan amount. Top one percent of the loan accounts use 39 percent while the top five percent use about 60 percent of the loan amount (Chart 7). Though, this result is not surprising given the structural characteristics of the economy and large portion of lending being provided against the back-up of fixed assets, further facilitation and initiatives from the government and regulators are required to create an even-handed distribution of resources from the financial system in the long run.

Chart 7 : Distribution of Loans by Loan Accounts and Amount (%)

Source: Author's Estimation from NRB Data

These inequality indicators are consistent with the findings of Aslan et al. (2017) for Nepal indicating that the inequality in the distribution of financial services is still higher which may be one of the causes of weak performance of the economy in terms of growth and reduction in income equality. These call for additional efforts in reducing financial inequality to leverage from the expansion in financial services.

In terms of the loans used by economic sectors, most of the sectors have unequal distribution of loan amount except Agriculture and consumption loan. And in terms of the loan product, longer term loans including the working capital loans has more uneven distribution among the borrowers.

Nepal Rastra Bank has taken a number of initiatives to expand financial access and ensure an equal access to affordable financial services. Some of the policy initiatives are:

[1] Penetration ratios have been calculated by dividing the number of accounts/ number of cards/number of insurance policies/number of members by population and multiplied by 100.

- Financial Inclusion Road map (2017-22)
- Subsidized Loan program
- Policy of expanding bank branches in local levels
- Digital lending guidelines
- Focus on digital payments
- Grievance redressal mechanisms
- Project based lending practices
- Deposit guarantee scheme
- Deprived sector lending
- Minimum lending requirements to micro, small and medium sized industries.
- Collateralless lending under microfinance models

These initiatives have resulted into accelerated progress in financial inclusion over the years but the inequality in the financial services has not improved noticeably. It demands future efforts of the government as well as NRB to improve the quality of access to financial services and ensure that everyone has such access at easier and affordable terms. These initiatives could include a lending approach based on the credit history of the borrowers rather than the current fixed asset backed lending practices, easier terms of lending for the start-ups, use of digital channels to reduce the cost of financial services, enhancing financial literacy and strengthening financial consumer protection.

Conclusion and Policy Implications

Financial inclusion can work as a vehicle for economic growth and reduction in income inequality. However, in the presence of higher inequality in the distribution of financial services, the gains from inclusion might not be realized as expected. This calls the attention of the policymakers to consider the equality issue so that growth can be achieved with more equal distribution of the gains. In case of Nepal, financial access has been expanded rapidly in the recent years which is expected to augment the growth rate, but financial inequality is still higher which might be one of the major causes of slow progress in the reduction in income inequality. This implies that policy efforts should be focused to ensure a more equitable access to financial services.

Secondly, Nepal needs to move further in terms of deepening financial inclusion as its relative position is weaker compared to more than half of the economies. This can be done by further promoting digital financial services while encompassing the unbanked population in the financial inclusion spectrum.

Thirdly, to reap full benefits from financial inclusion, structural issues in the economy should be addressed first, so that financial inclusion can be used as a modern vehicle of growth and equality.

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Reflecting on the Last Decade: How We Fared in terms of Economic Progress

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Abstract

As we head into the next decade, it is important to reflect upon the economic progress we achieved during the last ten years. When we assess Nepal's progress during the period through various measures of economic growth, competitiveness and strength, we find that we were far from attaining the economic advancement we desired. While progress in some key areas like hydroelectricity and ICT was quite encouraging, most other sectors performed poorly. The last ten years were marred by the unprecedented events like the major earthquake of 2072 BS and the COVID-19 pandemic later in the decade. However, the main culprit behind Nepal's lackluster performance are the long standing impediments such as governance & ethical issues, political instability, unfavorable business environment and ineffective policy implementation. Nepal apparently remains stuck in a low growth, high migration trap. Remittance from the migrant workers has become the crucial part of the national income. However, it has also contributed to the country's weak productivity. Nepal needs strategies to boost public and private investments in infrastructure, technology and people thereby enhancing productivity and exports. Only then we can create opportunities for the youth within the country and create favorable environment for achieving desired economic goals in the coming decade.

Background

After years of political stalemate, Nepal promulgated a new constitution in 2072 BS that included a federal structure of government designed to devolve power to provincial and local level governments. People hoped that the new constitution would pave the way for greater inclusion and stability leading the country toward the path of economic prosperity. However, after almost a decade, the economic progress doesn't look reassuring. The economic growth has been sluggish. The lack of job opportunities has compelled the young people to leave the country for work and study. This paper reflects upon how our country fared in terms of various measures of economic progress in the last decade, as well as, where we showed some progress and where we fell short. The paper further discusses on what the major constraints to our economic advancement are and what strategies could lead us to our desired economic goals.

Economic Progress: How to measure it?

Gross Domestic Product (GDP) is one of the most widely used macroeconomic indicators to measure economic growth. It measures the total value of goods and services a country produces in a given period. GDP is useful in comparing various economies and assessing a country's economic performance in one period over another. While GDP is considered to be a good indicator for measuring economic size and activities, it has several limitations. GDP is easily affected by short-term events, doesn't tell us about the quality of production, and fails to indicate whether the growth is sustainable or not.

Another way to measure a country's economy is through the assessment of its competitiveness. A competitive economy is considered to have a sustained rate of productivity that can drive growth and consequently achieve higher prosperity and improved well-being. The World Economic Forum defines competitiveness as "the set of institutions, policies, and factors that determine the level of productivity of a country". The Global Competitiveness Report published by the World Economic Forum until recently ranked countries based on the Global Competitiveness Index (GCI) computed by taking a weighted average of different variables grouped into 12 pillars. These pillars range from basics like infrastructure and macroeconomic environment to complex areas like sophisticated production and innovation.

Another relevant way of measuring a country's economy is the concept of economic strength (Rim, et al., 2020). As per this approach, a country is considered to have a high economic strength if it shows "a high capability of satisfying its needs for material and cultural wealth by itself, and even under any unfavorable external environment". The economic strength, as per this method, should be measured through the combination of different indicators concerning self-reliance and ultramodern-ness. The paper argues that this way of assessing the economy leads to an actual understanding of economic strength and truly captures the developmental potentialities of a country.
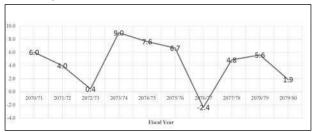
Many other indicators have been developed to address the limitations of GDP and productivity indicators in taking into account human well-being, social inequality, and environmental factors. These indicators include measures of socioeconomic progress such as the Human Development Index (HDI), the Genuine Progress Indicator (GPI), and the more recently introduced Happy Planet Index (HPI). The HDI covers three dimensions: a long and healthy life measured through life expectancy at birth; knowledge measured through expected years of schooling and mean years of schooling; and a decent living standard measured through Gross National Income per capita. The GPI incorporates social and environmental factors such as crime, pollution, family structure, and volunteerism among others to gauge a nation's economic health. Likewise, the HPI considers life expectancy, experienced well-being, and ecological footprint in computing the index.

Nepal's performance: How well did we perform?

Nepal experienced uneven and overall low economic growth in the last ten years. The country had set lofty targets for GDP growth in its national periodic plans. The growth rate targets for the 13th Plan (FY 2070/71-72/73), 14th Plan (2073/74-75/76) and 15th Plan (2076/77-80/81) were 6 percent, 7.2 percent, and 9.6 percent respectively. However, Nepal could achieve an average growth rate of only 4.4 percent in the decade, which was lower than the South Asian average of 5.5 percent (IMF, 2023) during the period. The economic growth rate was near zero in the year hit by the major earthquake and even negative in the year affected by COVID-19. The country fell short of achieving the desired growth rate across all the major sectors, viz., Agriculture, Industrial, and Service Sectors.

Figure 1: GDP Growth Rate (%) at a Constant (FY 2067/68) Price

Source: National Statistics Office, Nepal
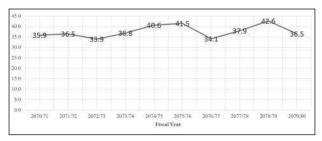
As per the World Economic Forum's Global Competitiveness Report[1], Nepal showed a slight improvement in competitiveness from 2012 to 2019 on the basis of country rankings. Nepal ranked 125th out of 144 economies in 2012/13. The ranking improved to 108th out of 141 economies in 2019. However, the country still performed poorly in some of the pillars of competitiveness such as 'Infrastructure' (112th), 'Skills' (109th), 'Product Market' (132nd), and 'Innovation Capability' (112th).

Rim's approach suggests using the import dependence index expressed by the ratio of imports to GDP to measure self-reliance when other indicators for self-reliance are not available. We find that Nepal failed to make progress in becoming a more self-reliant economy in the decade when measured in terms of the import dependence index. The country's dependence on imports persisted throughout the decade. The Import to GDP ratio was 35.9 percent in Fiscal Year (FY) 2070/71. The index even crossed 40 percent in some of the years and has come down to 36.5 percent in FY 2079/80. Nepal is highly dependent on imports of merchandise ranging from petroleum products and machinery to food and medicine items. Further, around

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[1] *The Global Competitiveness Report was a report published by World Economic Forum annually between 2004 and 2020. The Report ranked the countries based on Global Competitiveness Index developed by Xavier Sala-i-Martin and Elsa V. Artadi. Currently, the World Economic Forum has stopped the report and is working on a new index.*

two-thirds of the total imports are from India, and around 14 percent are from China.

Figure 2: Import to GDP Ratio (%)

Source: Nepal Rastra Bank (NRB), Current Macroeconomic and Financial Situation of Nepal

Rim's approach suggests assessing ultramodern-ness, besides self-reliance, to measure the economic strength of a country. The approach recommends using indicators such as the number of scientists and technologists per 100,000 of the population, and the degree of equipment with high-tech machinery to assess the ultramodern-ness of an economy. As we do not have reliable data to measure these indicators and Nepal's economy hasn't reached the level of ultra-modernity, we can gauge areas such as Information and Communication Technology (ICT) adoption, and Digitalization to assess the modern-ness of the economy.

Table 1: Digitalization Indicators

Indicators	FY 2070/71	FY 2079/80
Internet Density	30.7%	130.64%
Mobile phone users	19.3 million	36.8 million
Mobile Banking Customers	1.07 million	21.36 million
Internet Banking Customers	0.42 million	1.85 million
QR-based Payment, NPR	Not Available	245.41 billion

Sources: NRB, Payment Systems Department; Ministry of Finance, Economic Survey
Note: Data for indicators other than Internet Density has been taken from the Payment Systems Department, NRB. The QR-based payment was introduced in Nepal only in 2019 and hence the figure is not available for FY 2070/71.

While this increase in ICT adoption and digitalization as shown by the data may not be as impactful on economic growth as the use of high-tech in industrial production, it is indeed a contributing factor to economic efficiency.

We do not have data available to compare Nepal's GPI and HPI in the initial and final years of the decade. Nepal has shown some improvement in terms of HDI, which increased from 0.58 in FY 2070/71 to 0.602 in FY 2079/80. Likewise,

Nepal's Human Assets Index (HAI)[2] improved from 59.8 in the United Nations triennial review of 2012 to 75 in the triennial review of 2021.

I. The Key Sectors: How we fared in the sectors that matter most?

The indicators discussed in the previous section form the basis for assessing the economic progress Nepal achieved during the decade. Nonetheless, it is also important to dive deeper into the sectors that are most relevant to the country's economic growth, productivity, and strength. In this section, we will look at the performance of such sectors: Hydropower, Tourism, Agribusiness, Manufacturing, and ICT. These sectors have also been considered to be crucial for Nepal's economic transformation in the national plans and policy documents as well as reports of think tanks and international organizations.

Hydroelectricity

The last ten years have been very encouraging for the hydroelectricity sector even though the country's electricity production has remained far behind the potential capacity. The current level of hydroelectricity generation is way below the target of 10,000 MW the government had announced for the decade 2016-2026[3]. However, we have seen some notable progress in this sector in recent years. The installed capacity in FY 2070/71 was 746 MW, which increased by more than threefold to 2,449 MW in FY 2079/80. Likewise, the national transmission line expanded from 1,987.4 km in FY 2070/71 to 5,669 km in FY 2079/80. While Nepal continues to buy electricity from India during the dry season, it also has begun exporting electricity to India, thereby narrowing the electricity trade deficit. With many large projects ongoing, and the new power deal agreed between Nepal and India, where India has agreed to purchase 10,000 MW of Nepal's electricity in the next ten years, hydroelectricity can potentially be a leading driver of the country's growth. While abundant, Nepal's hydropower resource has been vastly underexploited. If the country can sufficiently exploit its hydroelectricity production capability, it can achieve enhanced productivity across sectors, become self-reliant on renewable energy, and increase income through the export of surplus electricity.

Travel and Tourism

Nepal performed poorly in the travel and tourism sector during the decade. Nepal's National Tourism Strategic Plan (2016-2025) had set the target of attracting 1.34 million foreign visitors in 2020 and 2.52 million foreign visitors in 2025. However, the country was able to attract only slightly around 1 million tourists in 2023, which was a mere 25 percent increment from ten years before. With its world's tallest mountains, vast natural preserves, and key religious sites, Nepal has the potential to attract many more tourists than it currently does. To revamp this sector, the government and private sector must collaborate to implement proper branding and promotion strategies,

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[2] *HAI is the composite Index of education and health used by the United Nations as one of the three criteria for graduation from LDC status.*
[3] *The Ministry of Energy has declared the decade 2016-2026 as the National Energy Crisis Reduction and Electricity Development Decade.*

invest in modern tourism infrastructure, and enhance visitors' experience during their stay. If Nepal can reach its potential in this sector, travel and tourism can earn ample foreign exchange income for the country as well as generate employment and entrepreneurship opportunities for its youth who seem determined to leave the country at the slightest opportunity.

Agribusiness

The agriculture sector, which comprises around a quarter of the national economy, grew only modestly in the last ten years, with an annual average rate of 2.9 percent. Although most of Nepal's population relies on agriculture for living, farming is mostly at the subsistence level. The country has been annually importing hundreds of billions worth of agricultural products that range from top cereals like rice and wheat to fruits and vegetables. Low adoption of technology, limited availability of fertilizers and irrigation facilities, poor access to finance, as well as limited investment in the sector have all hindered agricultural growth and productivity. Nepal launched the Prime Minister Agriculture Modernization Project in FY 2073/74[4]. However, notable improvement in productivity has not been observed yet in the sector. Nepal must adopt a wide scale practice of commercial farming through the use of modern techniques. Modernization of agriculture can help Nepal generate revenue through exports of competitive agro-products, meet its domestic food demand, and allow youth to engage in profitable agribusiness even with small investments.

Manufacturing

Nepal's manufacturing sector expanded slowly during the decade. In the last ten years, the ailing manufacturing sector grew by only 27 percent to Rs.128.58 billion. The sector's contribution to the total GDP fell from 5.6 percent to 5 percent in this period. The country has ranked 130th out of 153 countries in the Year 2021 as per the United Nations Industrial Development Organization's Competitive Industrial Performance (CIP) Index[5] published in July 2023. This is not a sector in which we can develop much due to lack of technical know-how, limited availability of raw materials, small domestic market compared to neighboring countries, etc. However, Nepal must do its best to stretch to its potential due to the large benefits this sector can provide. In manufacturing, there is more opportunity for technological progress and innovation. If we can further develop the manufacturing sector, it can help in utilizing local raw materials, making value addition, generating higher-paying jobs, and making income through exports of manufactured products.

Information and Communication Technology (ICT)

Nepal has increased ICT adoption as well as shown potential in Information Technology (IT) exports and business process outsourcing (BPO) in the last decade.

ICT has become the foundation of modern society driving innovation and enhancing productivity. In Nepal, ICT adoption, particularly in banking and commerce, has gained pace in recent years. E-commerce has created new opportunities for businesses and consumers. Mobile banking and wallet users have soared. The number of mobile banking users has reached 21.36 million and the total wallet plus QR-based payment volume has exceeded Rs.50 billion per month. The decade further saw the increasing use of apps and web browsers for online shopping, ride-hailing, and travel booking. The IT exports and BPO have also risen since they are not impeded by the landlocked state and poor transport infrastructure of the country. As per the Institute for Integrated Development Studies Report (2023), the total number of IT companies grew almost fourfold in the last ten years. As per the report, IT service export is currently valued at approximately USD 515 million, with over 106 IT service export companies and 14,728 IT freelancers in software development and technology. While IT exports still account for a small fraction of total foreign exchange earnings, it does hold immense potential to transform Nepal's economy by generating productive employment to youth and earning crucial foreign currency income for the country.

II. The Major culprits: What's hindering our progress?

As discussed in the previous sections, Nepal failed to achieve the desired economic progress in the last ten years. The economic growth rate was way below the target. Competitiveness and economic strength remained low. The key sectors like tourism, manufacturing, and agribusiness have been underperforming. Even in sectors like hydroelectricity and ICT, where Nepal has shown some progress, the realized benefits were not considerable enough to have a significant impact on the overall economic progress.

Two unprecedented events seriously hit Nepal's economy during the decade. The first was the devastating earthquake of 2015 that took thousands of lives and destroyed infrastructures requiring costly reconstruction. Later in the decade, the country was hit by the COVID-19 pandemic which also affected a large number of countries throughout the world. The pandemic not only crippled the tourism industry but also led to sizable healthcare expenditure. While these natural disasters affected the country's economic performance during the decade, they are not the only factors, or even the main factors, to blame for the country's lackluster performance during the period. Further, these one-off events haven't substantially affected the country's long-term development potential.

The Nepalese economy suffers from more serious long-standing impediments, which are the true culprits hindering the nation from achieving the desired economic progress. Such impediments are briefly described below:

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[4] The project was launched as a complementary project in the implementation of the Agriculture Development Strategy (2015-2035).

[5] This index measures competitiveness regarding the capacity to produce and export manufactured goods, technological deepening, and upgrading.

Governance and Ethical Issues

Ethical lapses have become a serious problem among those people who are in a position of responsibility. The people who are in important positions in politics, administration, and business are focused on amassing wealth regardless of how it is attained rather than taking responsibility and showing accountability. Likewise, corruption is rampant among politicians and bureaucrats. Nepal ranked 108th with a score[6] of only 35 in the Corruption Perceptions Index 2023 published by Transparency International.

Political instability

Political instability is a continuing challenge. The ruling parties have spent much of their time and energy on internal power struggles rather than good governance in the years after the promulgation of the constitution. There have been seven new governments in the last eight years after the new constitution came into effect. Political instability leads to uncertainty concerning future economic policies dissuading local and foreign investors from taking economic risks.

Unfavorable Business Environment

A conducive business environment leads to a vibrant private sector and consequently higher investment and growth. In Nepal, poor business regulatory practices remain a huge hurdle to attracting investments and fostering entrepreneurship. Nepal ranked 94th overall in the Doing Business ranking[7] published by World Bank in 2020. Out of the ten indicators used in ranking the economies, Nepal performed very poorly in 'Starting a Business' (135th), 'Getting Electricity' (135th), 'Paying Taxes' (175th) and 'Enforcing Contracts' (151st).

Ineffective Policy Implementation

Nepal has issued several policy documents in the last ten years to support its economic development targets. These include Trade Policy 2015, Foreign Investment Policy 2015, Public Private Partnership Policy 2015, National Tourism Strategic Plan (2016-25), and Agriculture Development Strategy (2015-35). However, these policies haven't been implemented effectively and the policy objectives are far from being achieved. Lack of political will and commitment, inefficiency of administrative machinery, and lack of coordination among implementing agencies are the major reasons behind lackluster policy implementation.

III. Strategies for Prosperity: How can we achieve the growth we desire?

Political stability, good governance, a sound business environment, and effective policy implementation can be important enabling factors for Nepal to carry out the strategies that it should pursue to embark on the path of high productivity and accelerated growth. In this section, we discuss such strategies.

Nepal is apparently stuck in a low-growth, high-migration trap (Cosic et al., 2017). Currently, exogenous factors are driving Nepal's economy. The last decade saw a mass migration of youth. Around half a million Nepalese left for foreign employment in FY 2079/80 only. Likewise, over one hundred thousand students left Nepal in that fiscal year to study abroad. The large-scale migration is rapidly draining the country's human capital. It has further contributed to the country's low productivity and inability to attain a higher rate of growth. But unfortunately, youth leaving the country has reduced pressure on politicians and policymakers to generate more productive employment in the country.

Bound by the trap, Nepal has not been able to attract and mobilize sufficient physical, financial, and human capital to achieve higher and sustained growth. For Nepal to achieve the economic prosperity it desires, it has to take the appropriate strategies for increasing investment and enhancing productivity. The possible set of broad strategies are described below:

Mobilizing public and private resources for investment

Both public and private investments play a crucial role in the economic development of any country. Nepal has a satisfactory level of savings, with an average Gross National Savings to GDP ratio of 36.1% in the last ten years. Further, Nepal has adequate fiscal space to raise public debt, although it is in an increasing direction. Through proper planning and execution of projects as well as collaboration among related agencies, the public investment process needs to be reformed. Likewise, foreign aid should be mobilized for capital formation in the priority sectors. We also need to have the right policies to crowd in private investment. The remittance income (amounting approx. 25 percent of GDP) needs to be channeled into productive investments by encouraging savings and directing such private savings into productive investments through appropriate financial sector policies. Nepal must also attract FDI by implementing investment-friendly policies. FDI is a relatively stable source of external financing and often comes with technology and knowledge transfer that improve productivity.

Investing in infrastructure

A strong and reliable infrastructure is a hallmark of a thriving economy. Poor infrastructure has been one of the major constraints to Nepal's growth and productivity. Nepalese do not have reliable and adequate access to infrastructure services. Transport costs remain high as the poor quality of road has led to long journey times and high fuel consumption. Nepal's rapid urbanization has put increased pressure on its urban infrastructure. The towns and cities have insufficient water supply, housing, and sanitation facilities. Although public investment

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[6] *As per the Transparency International's Website, the global average score in 2023 is 43 and the score below 50 means that the country has serious corruption problems.*
[7] *In September 2021, the World Bank announced that it's discontinuing the annual Doing Business Report and hasn't resumed the publication yet.*

plays a key role in infrastructure development, involving the private sector through modalities like Public Private Partnership could improve efficiency through private sector management expertise and healthy competition. Nepal should aim to enhance public and private investments in not only major infrastructures like transport and urban infrastructures but also in infrastructures of the key sectors like Commercial Agriculture, Tourism, and Energy. Infrastructure development in such key areas helps create jobs, promote entrepreneurship, and accelerate growth.

Investing in Technology

We are going through a period of rapid technological innovation. Technology has become the backbone of any modern society. New and advanced technologies are changing the way governments and businesses work. Technology is now used in almost all sectors of the economy. With the right use of technology, labor and capital productivity can be greatly enhanced thereby leading to higher growth. Hence, it is important to allocate public investment for technological development and encourage private businesses to invest in technology. We also need to increase people's access to technology so that they can achieve better efficiency in whichever sector they are involved in. Increased adoption of technology can enhance productivity in all the key sectors of the economy for increased income and growth.

Investing in People

Investing in people is critical if Nepal is to achieve accelerated growth for a sustained period. Investing in human capital enhances productivity, which in turn affects economic growth, and growth feeds back to human capital opportunities thereby creating a positive feedback loop (Flabbi & Gatti, 2018). Around two-thirds of Nepal's population is of working age and the country can exploit this opportunity for a demographic dividend through scaling up investments in its human capital. Nepal needs to promote not only skills training and youth empowerment but also early childhood development and social protection. Investments in the current and future workforce combined with policies to increase labor force participation and retain productive labor in the country can revamp all the key sectors of the economy leading to higher and sustained growth.

Enhancing export competitiveness

Nepal has been performing very poorly in terms of exports. In the last ten years, the average exports of goods and services were only 7.8 percent of GDP. Nepal's current level of exports is far below its potential. As per the Gravity model[8], Nepal's predicted goods exports are 15 times larger than the actual exports (World Bank, 2019). Nepal can raise its exports by taking several measures like appropriately identifying and promoting goods with a competitive advantage, increasing global value chain participation through lowering tariffs on intermediate goods, supporting firms to meet the quality control requirements of other countries, and improving the design of export promotion instruments like rewarding more to exports toward new destinations.

Through mobilizing public and private resources toward investment in infrastructure, technology, and people, Nepal can enhance productivity and expand its key sectors. Through higher production and export competitiveness, Nepal can become more self-reliant and achieve export-driven growth with better-paying jobs as well as business opportunities in the country. This will earn more income for the country and its people thereby helping to retain youths in the country. Through these strategies, Nepal can attract FDI, crowd in private investment as well as boost public investment, thereby creating a virtuous cycle of high investment, increased productivity, and accelerated growth.

IV. Concluding Remarks

Nepal's economic growth was sluggish and irregular during the last decade. Some key sectors like Tourism, Agribusiness, and Manufacturing underperformed significantly. Productive employment and profitable business opportunities remained lacking. It was a lost decade for many Nepalese concerning their economic status and security. Apparently, people's expectations and attitudes regarding the future didn't improve. Leaving home and family behind for precarious foreign jobs became the fate of the poor and underprivileged. Many youth from the middle-class to more affluent families chose to move to advanced countries for better opportunities. Nepal is far from escaping the low-growth, high-migration trap.

While Nepal's economic performance was poor in the last decade, the country shows a lot of potential in many areas like hydroelectricity, digitalization, and IT exports – the sectors with potential to drive higher growth. Nepal should work toward greater political stability, better governance, improved business environment, and effective policy implementation to attract private investments and improve public investment process. Further, Nepal should invest in infrastructure, people, and technology to leverage its key sectors and boost its exports to achieve desired economic progress in the coming decades.

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[8] *Gravity model determines the potential goods exports based on the performance of other countries in the world and their characteristics. While measuring trade potential, it considers the economic mass and trade frictions between the countries.*

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A Text Mining Analysis of Monetary Policy Communications in Nepal

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Abstract

This study conducts the text mining analysis of Nepal Rastra Bank's monetary policy communications during period of FY 2019/20 to FY 2023/2024. Text mining methods like word count analysis, readability index and topic modelling are used to evaluate monetary policy communications. The results of the readability index showed that the monetary policy documents readability has increased over recent years. The monetary policy documents are easily readable for 8th to 10th grade students/readers. Similarly, the findings of topic modelling showed that topics relating to "policy response for economic revival "and "macroeconomic stability" were communicated mostly in monetary policy documents over the last five years. As the role of central banks has transformed from being the most secretive institutions to being among the most talked about and transparent ones, effective communication has been a key component in managing market expectations. Thus, Nepal Rastra Bank should focus on institutionalizing and continuously refining communications of policies to enhance the monetary policy transmission mechanism.

KEYWORDS: **Central Banks, Monetary Policy, Communication, Market Expectations**

Introduction

In the pre-Greenspan era, central banks used to be very secretive and esoteric institutions beyond the reach of common people. Yellen (2012) noted in her speech[1] 'when I started my first job at the Federal Reserve Board, it was an article of faith in central banking that secrecy about monetary policy decisions was the best policy'. The practice of being reticent about the central banks policies was prevalent for a long time and the effectiveness of monetary policy was determined based on its ability to shock the markets (Marco Casiraghi and Leonardo Pio Perez, 2022). However, with the positioning of monetary policy as inflation fighter and adoption of inflation targeting policies by central banks during late 1990s, concerns over importance of monetary policy communications started to emerge (Bernanke, 2007). Central bank communications, which once used to be full of constructive ambiguity started to be clear and transparent. Explaining the goals

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[1] *See vice Chair Janet L. Yellen speech on Revolution and Evolution in Central Bank Communications, 2012*
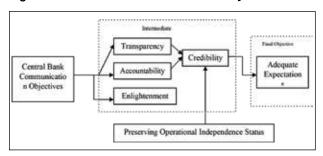
of monetary policy, its frameworks to achieve the stated targets and the long run implications of current policy actions became a norm for central bank communications. In this context, transparent communications in tandem with the information needs of government, markets, and public started to enhance the effectiveness of monetary policy. As suggested from the European central banks survey on theory and practice of central bank communications till 2008, effective communication can be a valuable toolkit for central bank's as it can influence financial markets, increase the predictability of monetary policy choices, and perhaps aid in the achievement of macroeconomic goals (Alan S. Blinder, 2008). With the changing perception of monetary policy as a public good, communicating policy goals with prescience and clarity evolved as an influential instrument of monetary policy to better anchor public expectations and enhance monetary policy transmission (Das, 2022). In this juncture, central banks through its communications provide forward guidance to control economic expectations. Communicating effectively is therefore one of the most powerful tools in the arsenal of contemporary central banks.

In this context, effective communication has been a critical element of monetary policy framework. Communicating with all stakeholders by maintaining the gravitas of central banks has been par of the course. Monetary policy being public policy, everyone has the right to understand what central banks are doing. In addition, monetary policy works better when people understand it as at times when public don't understand it, central bank faces the risk of losing public trust in its policies, actions, and the words (Simon, 2022). For instance, Mr. Mario Draghi's announcement[2] as the President of the European central bank to do "whatever it takes" to protect the euro during the July 2012 eurozone debt crisis buoyed the market sentiments and raised the confidence of people in monetary policy actions. But on the contrary, the risks emulating from the miscommunications makes the central bank communications tool act like a double-edged sword. The instance of Federal Reserve triggering the "taper tantrum[3]" in 2013 led to uncertainty over the course of monetary policy and increased volatility in the world's financial markets. This incident portrayed the unforeseen effects of harsh communications by central banks. Therefore, central bank communications must be balanced and well conveyed to manage the expectations as people hold trust in these institutions to say and do the right things.

The study by Naghdaliyev (2011) states that ineffective communication was one of the key factors in exacerbating the global financial crisis. Central banks depicted their inefficiencies in elaboration of monetary and financial stability expectations. In this regard, communication plays an important role in management of expectations. In his argument, it is important for central banks to have

clear communication objectives to avoid information overload that could lead to the "deterioration of the rational decision-making process by the public". While the final objective relates to the effective management of expectations, the intermediate objectives of central bank communication should necessarily encompass transparency, accountability, and credibility as shown in Figure 1. These arguments are in line with the findings of study by Michael Ehrmann (2017) on how monetary policy communication worked under unconventional times. The study mainly assessed the effectiveness of central bank communications during the announcements of asset purchase programs. The findings revealed that, announcements of asset purchase programs accompanied by a contextual release of implementation details such as the estimated size of the program helped to manage the expectations of market participants by lowering the market uncertainty.

Figure 1: Central Bank Communication Objectives

Source: Naghdaliyev (2011)

As the importance and popularity of central bank communications have grown over time, central banks around the world have developed their policy announcement practices. For example, the European central bank conducts its monetary policy meeting and press release in every six weeks, the Bank of Canada distributes four monetary policy reports in a year, the Federal Reserve issues eight monetary policy statements annually and Reserve Bank of India conducts at least four monetary policy committee meetings in a year. With the rise in availability of central bank communication documents, studies on evaluation of communication strategy of central banks using methods like text mining are also on the rise. The study by Tchebotarev (2019) on Bank of Canada's communication strategy analyzes the length, most frequently used words, and readability levels of core texts of monetary policy. The findings of study revealed that the monetary policy reports were slightly more complicated than the average Canadian can understand.

Similarly, Omotosho (2020) analyzed the communication strategy of Bank of Ghana using monetary policy committee press releases for the period of 2018-2019. Text mining tools such as the Coleman and Liau readability index, sentiment analysis and hidden topics modeling were used.

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[2] See, https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2022)703367
[3] The term "taper tantrum" refers to the 2013 spike in U.S. Treasury yields that followed the Federal Reserve's (Fed) announcement that it will be tapering its quantitative easing program in the future.

The findings showed, the word and sentence structures of press releases were less complex and readable. Likewise, the sentiments analysis showed that the bank expressed positive sentiments while communicating the policy and macroeconomic outlooks. Finally, the study revealed, topic models and evolution of topics using Latent Drichlet Allocation (LDA[4]) method. The results concluded that the topic proportion of "monetary policy and inflation" was prominent in the year 2018 while the topic proportion of "exchange rate" was prominent in the year 2019.

Likewise, Mohammed M. Tumala (2019) evaluated the communication strategy of central bank of Nigeria using monetary policy committee press releases for the period of 2004-2019. Text mining techniques such as Coleman and Liau readability index, sentiments score and topic modeling were employed. The findings showed that the word and sentence structures were more complex and difficult to read. Similarly, the sentiment analysis showed that the bank expressed negative sentiments while communicating the policy and macroeconomic outlooks. Finally, the study revealed the topic models and its evolution from the texts using Latent Drichlet Allocation (LDA) method. A total of 6 different topics were extracted from the policy documents, which are "exchange rate management and exchange rate pass-through to domestic prices", "monetary policy and macroeconomic stability", "macroeconomic implications of oil price shocks", "economic performance, recovery and government policies","economic growth and global developments" and "policy response to domestic constraints".

In this context, the purpose of this study is to analyse the Nepal Rastra Bank's monetary policy communications during period of FY 2019/20 to FY 2023/2024 using text mining techniques. The study aims to determine the word count trends and examine the readability of monetary policy documents. Along with this, the study aims to assess the evolution of topics communicated by Nepal Rastra Bank in its monetary policy documents during the period of FY 2019/20 to FY 2023/2024.

Study Methodology

For the analysis, the textual data used were sourced from the monetary policies published in Nepal Rastra Bank's website[5]. Therefore, the study corpus consists of 5 monetary Policy documents. The monetary policy document for each year comprises of 4 major sections namely, "Review of last year's Monetary Policy", "Macroeconomic Situation and Outlook", "Monetary Policy Framework for this Year" and "Financial and Foreign Exchange Policies for this year". Among these four topics, "Monetary Policy Framework for this year" and "Financial and Foreign Exchange Policies

for this year" were included in the texts to be analyzed as they depict the policy directions of Nepal Rastra Bank. As the topics like "Review of last year's Monetary Policy" and "Macroeconomic Situation and Outlook" are less effective in capturing the current policy directions of Nepal Rastra Bank, texts from these topics were excluded from the corpus. In addition, the appendix and list of statistical tables were also excluded from the corpus.

Text Normalization

To analyze the texts, normalization of the documents was done to make the corpus suitable for text mining analysis. First the numbers, punctuations, spaces, and special characters ('/") were removed from the documents. Then after, all the words were converted to lower case and the English stop words such as "for", "on", "the", "a", "if "as", "to", "therefore", "due" were removed. Furthermore, redundant words like "NRB", "million", "billion", "bfis", etc. were also excluded from the textual data used for analysis. After completing the above stated textual data normalization procedure for all 5 monetary policy documents, a total of 10,419 words were removed and only 7,212 words were used for text analysis as shown in Table 1.

Table 1: Word Count of Monetary Policy, FY 2019/20 to FY 2023/2024

Monetary Policy Release	Word Count
FY 2019/20	3,145
FY 2020/21	4,277
FY 2021/22	4,105
FY 2022/23	3,031
FY 2023/24	3,073
Total	17,631
Removed Words	10,419
Total (After Normalization)	7,212

Source : Authors Compilation

Readabiltiy Index

To evaluate the readableness of the monetary policy documents, redability index developed by Coleman and Liau (1975) was used. By counting the number of characters (Nch), number of sentences (Nst) and number of words (Nw) in documents the readability index is computed. Lower value of Coleman and Liau Index implies the easy readability of documents. Readabiltiy index less than 7 implies the documents are very easy to read. Likewise, the index in between 7 to 10 implies the documents have

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[4] LDA is a model is which words and documents are assigned probabilities and related to multiple topics. LDA has been widely applied in computer science and statistics and is beginning to appear in economics.
See (David Bholat, 2015) for Central Bank Text Mining Techniques.
[5] https://www.nrb.org.np/category/monetary-policy/

conversational english with easy readability. Similarly, index above 10 indicates that documetns are hard to read. The index is calculated using the equation written below:

$$CLI = 141.8401 - 0.214590 * 100 * \left(\frac{100*Nch}{Nw}\right) + 1.079812 * \frac{Nst*100}{Nw}$$

Topic Extraction and Modeling
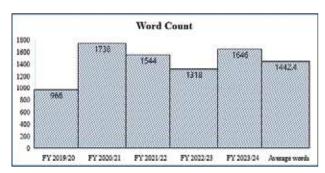
For the purpose of identifying the hidden topics from Nepal Rastra Bank's monetary policy documents, Latent Dirichlet Allocation (LDA) method was executed using the BigML[6] software . The normalized textual data was used as an input in the BigML software. Based on the results generated by software, the key words were categorized into three major topics. As suggested in the topic modelling method by Stefan Debortoli (2016), while defining the topics under each topic, the top 20 words based on their probability of occurrence were listed and appropriate topic name was assigned based on associations of those top 20 words with other words in the monetary policy documents. The topic assignment to categories was driven by author's intuition. Finally, based on the proportion of occurrence of the three topics identified, an area chart was plotted to depict the evolution of the monetary policy communications during the period of FY 2019/20 to FY 2023/2024.

Results and Discusssions

Word Count of Monetary Policy Documents

Figure 1 depicts the frequency of words in the normalized monetary policy documents for the period of FY 2019/20 to FY 2023/2024. During the period, the average word count of documents is found to be 1442. Similarly, the word count during FY 2020/21 and FY 2023/24 are above the average of word count for the last five years. From the FY 2020/21, the word count of monetary policy documents has significantly increased depicting the rising communication efforts of Nepal Rastra Bank in the recent times.

Figure 2 : Word count of Monetary Policy Documents

Source: Naghdaliyev (2011)

[6] https://bigml.com/about/

Readability of Monetary Policy Documents

The readability index assesses the reading complexity level of communications made during FY 2019/20 to FY 2023/2024. Figure 2 exhibits the Coleman and Liau readability index of monetary policy documents. For FY 2019/20, the readability index is found to be 13.95 which means that the documents are understandable to university level students/readers. For FY 2023/24, the readability index stood at 8.06, meaning that, the documents had conversational English and are easily understood by 8th to 10th grade students/readers. The declining trend of readability index in recent years indicates readability of monetary policy documents has been increasing.

Figure 3 : Coleman and Liau Readability Index
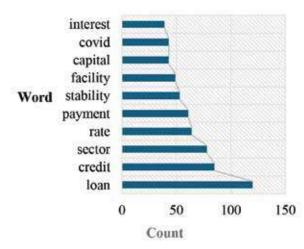
Source : Authors Calculation

Frequent terms in Monetary Policy Documents

To identify the key issues where Nepal Rastra Bank showed its concern through monetary policy documents, the most frequent terms used in the monetary policy documents are presented in Figure 3. As depicted by the histogram and word cloud, the most frequently used term during the period of 5 years is "loan", occurring 120 times. Similarly, terms like "credit", "sector", "rate", "payment" and "stability" are also mostly used in the monetary policy documents. The most frequently used term "loan" is mostly associated with the terms like "refinance facilities" and "working capital". Similarly, the term "credit" is mostly associated with the term "deprived sector lending" in the monetary policy documents. Likewise, the term "sector" is mostly associated with the term "external sector". The term "rate" is mostly associated with "interbank rate", "base rate" and "interest rate". Finally, the word "payment" is mostly associated with "digital payments". This prescribes, Nepal Rastra Bank's monetary policy documents showed concern regarding "loan/credit"," external sector", "interest rates" and "digital payment" during the period of FY 2019/20 to 2023/2024.

Figure 4 : Most used terms in Monetary Policy Documents

Source : Authors Calculation

Topic Modelling

From the corpus of monetary policy documents, it is assumed that communications made on policies can be categorized under three major topics. The top 20 words with highest probability of occurrence under each of three topics are listed in Table 2. Under topic 1, the most probable terms are "sector", "production", "exchange", "economic", "policy", "facilities", "growth", "stability", "inflation, etc. These combinations of words infer the external, real and price sector stability. So "macroeconomic stability" is the topic assigned to these set of words.

Similarly, under topic 2, the most probable terms are "rate", "credit", "digital", "payment", "electronic", "risk", "regulatory", "mobilization", "inflation", "interbank", etc. With the combinations of all 20 words as shown in Table 2, the topic assigned is "interest rates and digitization".

Finally, under topic 3, the most probable terms are "loan", "payment", "covid", "agriculture", "refinance", "extend", "facilities", "borrowers", etc. With the combinations of all

20 words as shown in Table 2, the topic assigned is "policy response for economic revival". So, the three major topics which are communicated in monetary policy documents are "macroeconomic stability", "interest rates and digitization", and "policy response for economic revival"

Table 2 : Topics identified along with their probable terms

SN	Topic 1	Topic 2	Topic 3
1	sector	rate	loan
2	production	credit	payment
3	exchange	foreign	business
4	economic	payment	covid
5	policy	electronic	provision
6	facilities	risk	development
7	growth	regulatory	agriculture
8	stability	merger	transactions
9	inflation	mobilization	limit
10	liquidity	access	financial
11	operation	digital	lending
12	domestic	macroeconomic	projected
13	reviewed	collateral	capital
14	price	interbank	refinance
15	reserves	Inflation	promote
16	resources	international	deposit
17	manage	cooperation	commercial
18	market	flow	extend
19	target	integrated	facilities
20	capital	measures	borrowers
Assigned Topic	Macroeconomic stability	Interest rates and digitization	Policy response for economic revival
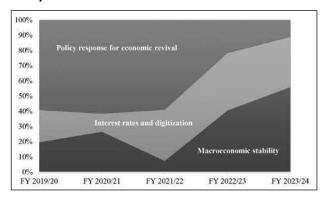
Source : Authors Compilation

Topic Evolution

The topic evolution of Nepal Rastra Bank's monetary policy during FY 2019/20 to FY 2023/2024 is depicted by Figure 5, which plots the proportion of occurrence of the three identified topics. The wider the area for the topic, the more is its probability of occurrence. The area sizes of topics depict the degree of emphasis of the central bank on that

topic. During FY 2019/20 to FY 2022/23, the monetary policy communicated more on the topic "policy response for economic revival". This can be associated with the expansionary policy stance adopted by Nepal Rastra Bank after the outbreak of COVID-19. Similarly, during FY 20/21 and FY 22/23, the monetary policy communicated more on the topic "interest rates and digitization". Likewise, from FY 2021/22, the communications have been mainly driven towards the topic "macroeconomic stability". To sum up, topics like "policy response for economic revival" and "macroeconomic stability" are emphasized mostly monetary policies of the last five years.

Figure 5 : Topic evolution of Monetary Policy Documents

Source : Authors Calculation

Conclusion and Policy Implications

Central banks around the world are emphasizing their communications as the effectiveness of monetary policy and its ability to affect market expectations is largely driven by the art of communicating. Communicating in a transparent, precise, and clear manner builds up the credibility and legitimacy of central banks as public institutions. With the gradual rise in the number of communiques of central banks and easy access to information, the concern of the public and other stakeholders in the words used by central banks has increased. In this regard, communications have become a policy instrument and the evaluation of what and how central banks are communicating has become crucial.

This paper examined the Nepal Rastra Bank's communications through the monetary policy documents.

The results of readability index showed that Nepal Rastra Bank has increased its communication effectiveness over the years. Furthermore, the topic modelling showed that topics relating to "policy response for economic revival" and "macroeconomic stability" are predominant in monetary policy documents during the last five years.

Thus, central banks, from being one of the most secretive institutions to the most open and talked about institutions with wide ramifications of their words and actions, communications have been a strong pillar to manage the markets expectations. The art of communicating the right thing in the right way at the right moment reduces uncertainty and gives confidence to the public and reduces antagonism. Considering the stress currently being observed in Nepalese economy, focus on continuously improving the communications on policies and their spirit is crucial to enhance monetary policy transmission mechanism. This calls for institutionalizing the communications of Nepal Rastra Bank through a clearly defined communication policy and strategy. An institutional document which that combines core principles of communications such as transparency, clarity, consistency and precision with the operational aspects of communication like well-defined internal procedures is a must for building a systemic approach to communicating policies.

Secondly, in order to organize the communications function of Nepal Rastra Bank, establishing a communications department based on the global best practices is essential. Communications department with responsibility of managing the media relations, public affairs, internal communications within the central bank and speeches of the senior management should be envisioned in the organizational structure.

Thirdly, evaluating the impact of communications made in a regular interval is a sine qua non for effective communication. The impact can be assessed simply through surveys as it plays pivotal role in collecting information on expectations of stakeholders. Likewise, the text analysis of news articles would also help to evaluate the tone and sentiment of media coverage regarding the communications made. As central bank communication is also an art of managing expectations, Nepal Rastra Bank should make continual efforts in continuously refining the communications in order to enhance the effectiveness of its policy transmission.

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The Future for Successful CEOs: What Makes Them Different From Others?

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Abstract

The term 'leadership' refers to both the attributes of leaders and the process of leading followers. The purpose of this paper is to discuss what kind of "leadership" will be required of our CEOs in the context of post Covid pandemics, climate change and new technology. It addresses the questions: Why are traditional models of leadership inadequate for the challenges ahead: global threats, digital technology, and its impact, risks of scams, AI, and new business models? How will leaders respond to changes in our institutions, the reported loss of trust and integrity? Is there a cultural problem in our institutions? How are our leader responding to the future challenges? What new models of leadership will fill the gap in present day leadership and meet future demands for a productive economy and socially inclusive society? The paper demonstrates the important role that new leadership competencies and capabilities play in successfully achieving financial stability in an increasingly complex and disruptive environment. It also has implications for the future regulation of governance and leadership in our institutions.

KEYWORDS: **Leadership, Challenges, digital technology, complexity, adaptability, AI, Post COVID 19**

Introduction

The purpose of this paper is to explore what we mean by "leadership" in the context of post Covid pandemics, climate change, economic disruption, and new technology. Western Civilisation has passed through the agricultural revolution, the industrial revolution, the services revolution, the computer revolution and we are fast tracking the artificial intelligence revolution. The disruption to our societies is real and evident in the significance of the problems that are central to political and social concern. Political dissent is affecting the global trade, the rule of law and general loss of trust in governments and institutions Armstrong, 2022a)

The post-covid business environment in the financial sector is concerned with by climate change, ESG reporting and greenwashing (De Silva Lokuwaduge and De Silva 2022). International conflicts, challenges to the rule of law, and changes in technology causing impacts as diverse as loss of administrative jobs and the end of currency as we know it. A global survey by White and KPMG (2023) found that the major challenges were privacy and data protection, and political sanctions. Cybersecurity is seen as the biggest compliance issue for both public and private companies, and for companies of all sizes.

In the Australian financial sector rising inflation is causing the Central Reserve Bank to push up interest rates with the objective of curbing spending and thereby inflation. This is signalling the end of cheap money, rising mortgage rates from fixed rates of 1% to variable rates of 6%, and creating a break on the economy as numerous mortgagees find themselves unable to meet the rising debts. On the other hand, both the Australian Federal and State Governments are spending up big with the purpose of keeping unemployment low and economic activity steady if not up. The confusion for leaders of the financial sector is obvious.

Many changes in society are driven by new innovations in technology such as developments in artificial Intelligence (AI) , data base design and analysis, digital marketing and machine learning. A recent article in the Australian Institute of Company Directors (AICD 2021) describes a new technology, Decentralised Autonomous Organisations (DAOs), that may even replace decision-making in traditional hierarchical organisations. Such programs will operate with rules and regulations coded into the program to guide all decisions so that the "rule of code replaces the rule of law". An Australian Government Select Committee currently exploring Australia as a Technology and Financial Centre has recommended that the Government establish a new decentralised organisation company structure for DAOs in anticipation of their wider adoption. Should this occur, it could make many Board governance structures and responsibilities redundant.

In our workplaces new technology is used for tracking staff time, attendance and scheduling initiatives that monitor for losses in efficiency and/or productivity, establish baseline productivity levels across different segments of an organisation, service staff and administrative HR and capture data for strategic workforce insights into the future. Other more advanced time tracking technology such as biometric tracking (fingerprints, faces), card swipes and web clocks will be widely used to minimize time-tracking or time-card fraud.

Dependence on computers is already ending paper-based records and files, and low-level jobs. Particularly administrative ones will be taken over by computers. Physical presences in stone and concrete are already giving way to building virtual infrastructures. Disappearance of cash and digitisation of money is encouraging automatic charging for services. As cash money disappears to be replaced by digitisation, cyber security grows in importance.

Values and expectations are also changing rapidly (De Silva Lokuwaduge and De Silva 2020). For example, compliance with the 19 UN Sustainability Goals and human rights goals (UN 2023) are growing in importance. To encourage compliance with the Goals, the International Financial Reporting Standards Foundation (IFRS 2022) established the International Sustainability Standards Board (ISSB)

to produce sustainability reporting standards that will be mandatory from 1 January 2024.

The most researched theory of leadership is the model of leadership put forward by Bass and Avolio (1990, 1994). In their model they distinguish between transactional and transformational leadership. Transactional leadership tends to depend on the exchange of followers' efforts for rewards. It is often seen in managers of people engaged in piece work and repetitive tasks. The leader monitors their followers for mistakes or rule violations and then takes corrective action. This differs from transformational leaders who often have a strong set of internal values and ideals and are effective in motivating followers to act in ways that support the greater good rather than their own self-interest. Such leaders become role models, inspire their subordinates who respect and trust them and are dedicated to them.

Previous studies of leadership focussed on personal attributes such as skills, other competencies and psychological traits, both good and bad. Good leaders are said to possess intelligence, self-confidence, determination, integrity and sociability (Northouse 1997). Harvard Review published the results of Jim Collins' (2001) study of the leaders of 11 'Great Companies' selected from 1,435 companies that appeared in the Fortune 500. His study concluded that excellent leaders who build great companies have a duality of personal humility and professional will; they are modest and wilful, shy and fearless and they subjugated their needs to the grater ambition of something larger and more lasting that themselves.

So, what has changed?

Why are traditional models of leadership inadequate for the challenges ahead: global threats, digital technology and its impact, risks of scams, Ai, and new business models?

A new approach to leadership is complexity leadership theory (Uhl-Bien et al 2007). Complexity describes the situation when formal authority is challenged by a crisis such as COVID19 (Uhl-Bien 2021;Lichtenstein et al 2006; Crevani et al 2021). In her study of responses to Covid19 Uhl-Bien concluded that in the face of complexity many leaders do not know what to do, and leadership development has not necessarily trained them for leading in complexity. A result of the Covid crisis is that the ties to orderly responses based on past procedures and orders have been loosened and created the adaptive space which provides a window of opportunity for innovations. In this context, Complexity leadership is an adaptive response that facilitates a rapid operational and entrepreneurial response made possible by the crises.

How are Nepalese leaders responding to the changes that they are experiencing?

In 2022 participants in the BFIN workshop were asked to describe the responses of their leaders to the changes taking place. They noted responses to:

- The impact of technology: adoption of technology, digitisation and visions for its new use
- Changes in values: priority given to health and safety
- Managing staff: monitoring, collaboration, participatory decision making
- Management structures: centralised decision making; executives held accountable, working from home.
- Customer services: use of technology, flexible responses to difficulties – e.g., customers facing difficulties were assisted with changes to loan agreements
- Management responses: proactive response using forecasting, gap analysis, trying to understand the impact of changes on different sectors.

Most responses were driven by the impact of new technology. Some responses recognised the changes taking place in workplaces and the impact that this was having on customers. . There were also attempts to anticipate future changes by forecasting and gap analysis. There were reports of centralised decision making reported by one participant group and participatory decision making reported by others. Few responses came to grips with how leaders themselves should or could respond to the changes taking place.

What new models of leadership will fill the gap in present day leadership and meet future demands for a productive economy and socially inclusive society?

New leadership models to suit post-covid and new technology environments acknowledge that things have changed and that, rather than trying to pull back to the old system, challenges should be embraced, and new solutions sought. The Covid 19 and other crises loosened the ties to orderly responses based on past procedures and orders. and created the adaptive space which provides a window of opportunity for innovations. Complexity leadership is an adaptive response that facilitates a rapid operational and entrepreneurial response made possible by the crises.

In the past leaders had authority because of their position. They expected to tell subordinates what to do and subordinates expected to be told. Today, expectations are different. As Perera (2017) describes it:

> "Your brightest and most motivated team member doesn't want to be told what to do, don't want to be restricted by unnecessary policies and don't want to be constrained by their current position. On the other hand, they don't necessarily want to be left completely free to their own devices either. They recognise the value of being part of a team, working together for a common purpose, and using the organisation to

further their own goals. If you support them, they will be more than happy to support you as well". (Perera, 2017)

Not only people have changed, but tasks, too, are more complex especially where new technology or science are involved. Think about some of the decisions demanded of leaders in the finance sector: the complexity involved in making decisions about balancing a potential loss of customers with rising interest rates, adoption of on-line banking and closure of face-to-face banking. Technology adds to complexity by allowing multi-person nationally diverse organisational teams to operate across distances and time zones via Zoom, Teams and other virtual programs.

Complexity and the rapidity of change demands new leadership models. New leadership models are called various names. Among them are complexity leadership (Uhl-Bien, 2021), collective leadership, stewardship (April et al 2013), Cross-Cultural leadership (Muenjohn and Armstrong ethical leadership (Armstrong 2020), troubled leadership (Armstrong and Francis 2017), catalyst leadership (Akrivov and Bradubury-Huang, 2011).

These models have in common a responsibility for community concerns and values (sustainability, climate change, well-being) Armstrong (2022a). Muenjohn and Armstrong (2009) and Grow and Armstrong (2015) confirmed that perceptions of a leader's role is influenced by their national culture. Leaders are also influenced by community morals and ethics and organisational culture (Armstrong, 2019; Armstrong and Li 2022b). Understanding these helps to build trust and integrity in their relationships with followers (Armstrong 2022c) and other stakeholders. Addressing their issues requires processes that bring together leaders and followers to solve problems and make decisions. Collective leadership processes emphasise collaboration and cooperation.

The ability to make sense of complex situations relies on the personal attributes of complexity differentiation and psychological aspects of self-integration. Akrivov and Bradubury-Huang (2011) proposed a catalyst leadership model in which complexity differentiation demands the intelligence to understand a situation. Self-integration is evident in the ability to harmonise and tolerate unusual amounts of conflict within the self, an ability to critically question one's own behaviour, and to avoid dogmatism by reflexively questioning one's own convictions in light of the information coming through one's conversations with others. Additionally, this type of leader harmonizes service to others, accountability to society (others common good) and to self.

Conclusion

Traditional leadership theories have addressed the personal attributes of leaders, the process of leadership that focusses on motivating subordinates, variations on group and team leadership, and the influence on leadership of national cultures and social norms. The changes taking place in society and our workplaces are impacting on leaders and how they manage leader-subordinate relationships and reach decisions. The conclusion draw from these studies is that a new model of leadership is required to meet the complexity and challenges of our times.

New Leadership has moved away from hierarchical organisation structures supporting authoritative structures and control to the diffusion and sharing of accountability in structures that endorse collective authority and accountability. Driven by the search for leadership models that in today's work environments need to address complex situations and tasks, these are facilitated by new values, leadership self-development and new ways of reaching decisions.

The success of this New Leadership model relies on personal attributes of leaders, such as self-perception, ethics and integrity, and aspiration for goals that are beyond only their personal interests. Leaders' competencies include managing technology and new tasks such as the ability to facilitate agreement from diverse views expressed by followers who may be dispersed across virtual networks and sourced from very different cultures. Their success is associated with the self-development and maturity of leaders and the balance of cognition, emotion and behaviour that inspires followers with clear ethical frameworks and a clear sense of direction (Akrivov and Bradubury-Huang 2011).

The purpose of this paper was not to describe how this self-development in leaders will be achieved but rather to address the questions posed by the Conference: how our leaders will differ from those who went before. It appears that traditional leadership models of command and control no longer serve the needs of our organisations. The conclusions are that New Leadership is a collective and joint phenomenon which will require new attributes and capabilities in leaders and that these will be very different from those advocated in previous models.

Further research is required to establish the extent to which a new model of leadership promoting self-introspection and collective leadership strategies can resolve the complexity of problems and accomplish the desired financial and social outcomes of their organisations.

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The Potential for Postal Banking in the Maldives

MCDGI is a leading institute in the Maldives, providing high-quality professional Training and Consultancy services to up-lift the professional capacities of the workforce while supporting the corporate sector to uphold the governance standards to the international level. MCDGI provides tailor-made training programs to diverse industries to build capabilities by drawing the relevant expertise from its pool of local and global level professionals and work very closely with the state authorities and key policy-making bodies.

Abstract

The Postal Banking / Financial system enables the un(der)-banked people to do banking at an affordable cost based on consumer-driven purposes. The study's main objective is to identify the general public's persuasion and interest in the Postal Banking System in the Maldives.

The Maldives Post Limited formed in 1994 as a limited liability company owned by Maldives' government is the national postal operator with a network of 14 Atoll Post Offices and 172 agency offices across the nation. The postal service was introduced in 1906, and over the 115 years, it has witnessed different phases of development. Maldives Post Limited also offers a wide range of non-postal services, including financial services, focusing on providing solutions for customers' changing needs.

In the 21st century, more than 2 billion people are still considered unbanked or under-banked globally (Findex, 2017). More than 1 billion of the 3.2 billion adult Asians (more than 57% of the world adult population) are served by more than 2 million employees in more than 350,000 post offices and agents across Asia to access essential financial services, including picking up remittances (UPU, 2014).

A Nationwide Survey aims to get the public opinion on postal banking, gauge the demand side factors and the market sentiments for postal banking. The survey findings on the study portray the tremendous demand for postal banking in the Maldives. In this study, it is observed that the majority of Maldivians who participated in this survey (89%) believe that postal banking can help low-income and under-served people.

Furthermore, it will be a crucial factor to enhance the country's financial inclusion and financial literacy. This calls for the consideration of the policymakers to address the difference in financial services so that new products and services will be widely available for financial inclusion that can contribute to higher and equitable growth of the economy.

KEYWORDS: **Financial inclusion, Growth, Inequality, Access to Finance**

Introduction

Global postal connectivity is the world's largest physical network to reach out to the people playing a pivotal role in providing the essential services, connecting communities, and promoting the people's literacy and well-being. Leveraging on the network's reach, the Post Offices, the most trusted public institution in almost all the countries, commenced Banking and Financial Services in the 18th century (Campaign for Postal Banking, 2021).

Postal Banking Services enables the depositors who have no banking or financial services access to carry out their banking transaction conveniently and securely. This is one of the oldest banking systems in the world to promote savings among unbanked and under-banked people.

In the 21st century, more than 2 billion people are still considered unbanked or under-banked globally (Findex, 2017). More than 1 billion of the 3.2 billion adult Asians (more than 57% of the world adult population) are served by more than 2 million employees in more than 350,000 post offices and agents across Asia to access essential financial services, including picking up remittances (UPU, 2014).

One of the oldest and largest physical networks globally is the Postal Network, with over 650,000 post office branches. These Post offices handle about half of the world's e-commerce related parcels and other services. Hence, the Post offices remain potentially relevant for facilitating physical access to billions of customers, exchanging money and fulfilling their financial needs (ADB Institute, 2018).

Postal banking has a long and illustrious history going back to the 1890's and is now making a comeback in a number of jurisdictions including the United States. This revival of postal banking is driven by the need for greater financial inclusion and to expand access to affordable financial services to low and middle classes. Similarly in Maldives, there is a section of our society where people in islands away from population centers are unable to receive banking services effectively.

A Postal Bank would also fast track the achievement of other important economic and social goals such as:

- Better access to finance for Micro, Small and Medium Enterprises (MSMEs)
- Improves financial inclusion and financial literacy rate
- Provide an affordable and accessible e-Commerce platform
- A rebalancing of the economic activities away from the capital city and developing financial services in other islands (decentralization).

The establishment of a Postal Bank in the Maldives would align the Postal Operator with other global postal operators' successful strategy, as demonstrated by operators in Japan, China, Russia, France, South Africa, etc.

Key benefits of a Postal Bank:

- Postal Banks can be used to address geographic, gender, and growth gaps brought about by lack of financial inclusion. Thus, it could result in an increase in financial inclusion and literacy in the Maldives.
- Providing banking and financial services at an affordable cost and easily accessible.

- By providing access to services such as deposits, payments, and insurance, Post Banks increase competition for the underserved segments, thus generating a positive impact on employment and supporting rural and regional economic development.
- Postal Banking is an alternative for the underbanked community to avail financial Services and implement socially responsible financial services.
- Pivotal role in the digitization of financial service and creating a cashless community.

Survey Methodology

Sampling

The targeted research population was the public of the Maldives, covering the main atolls and islands. The Maldives total population is 547, 525 approx. (Anon., 2021) Determination of sample size is crucial in order to get the desired level of statistical power in terms of the research population and adequate size. There are various formulas available to calculate the sample size, but the author has chosen the most recognised Anderson Table (Anderson et al., 2017) to identify the required number of research responses. Hence, the sample target size of the whole study population is 384 with 95% confidence and 5% margin of error, in order to carry out the research effectively.

The author has chosen the positivism approach for the research based on the research paradigm and ensured a highly structured data collection method. The research paradigm is based on ontology and epistemology. Ontology is concerned with the nature of reality, but epistemology examines reality as what constitutes the perceived knowledge (Saunders et al., 2009).

Method

The author undertook both primary data collection procedures for the research. For the primary data collection, a well-articulated questionnaire consists of the information sheet, consent form, general personal information, financial inclusion and postal banking related questions adapted for collecting necessary data. The questionnaire used mainly to measure two constructs by thirty sub-factors incorporated into the research methodology.

This research was carried out as a quantitative research approach by the structured questionnaire to obtain the required information from the targeted respondents.

The survey questionnaire was hosted using the Google Form to collect the data. A total of 1541 questionnaire responses were collected and deemed usable for further analysis. As per the planned time frame of the research, the questionnaires were circulated. Given the time restriction

to collect the data, the minimum required number of responses for the survey surpassed.

The questionnaire contains an information sheet, consent undertaking, demographic and then all variables related instruments measured using a five-point Likert type scale, where 'Strongly Disagree' was given one and 'Strongly Agree' was given five, except the demographic section. The simple random sampling method used in this research.

Results and Discussion

This section discusses the results obtained from the conducted survey in detail to understand the demography, financial inclusion and perception of postal banking.
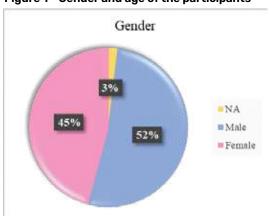
Descriptive information

Demographic data of citizens who participated in this survey consists of age, gender, marital status, education level, occupation and sector.

Age, gender and marital status

A total of 1541 Maldivian citizens answered the Postal Banking Survey during the specified period. As depicted in Figure 1 below, 52% of the respondents were male, and 45% were female. More than half (56%) of the participants were between 19 and 38 years old. In all, 70% of the participants were married, and 17% were single, while 11% had other statuses, i.e., divorces (9%) and widows (2%).

Figure 1 - Gender and age of the participants
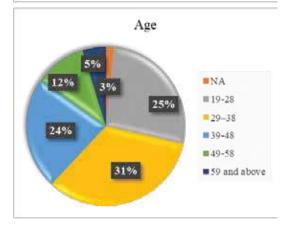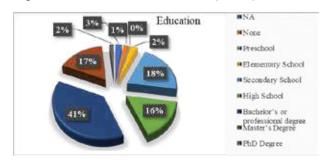
Table 1 - Marital status

Measures	Items	Frequency	(%)
Marital status	NA	36	2%
	Single	260	17%
	Married	1081	70%
	Divorced	143	9%
	Widowed	21	2%

Education, occupation, and sector
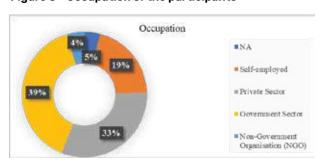
The target sample indicates that 41% of the participants held 'bachelors or professional degree, followed by holders of secondary school certificate (18%). Of the 1541 respondents, 17% held 'master's degree and 16% reached the high school level (see Figure 2).

Figure 2 - The education level of the participants

Concerning the 'respondents' occupation, the study found that 39% of them are working in the government sector, followed by 33% from the private sector. Self-employed workers represent 19%, while 4% of the participants are working in NGOs (see Figure 3).
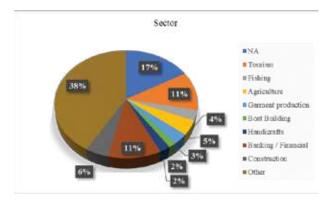
Figure 3 - Occupation of the participants

The type of sector was also involved in the survey. As shown in Figure 4, 38% of the respondents belonged to other than the mentioned categories, such as civil service sector, education, health, and telecommunication sector. Figure 4 also shows that the participants from the tourism and financial and banking sectors account for 11% each, followed by construction (6%), agriculture (5%), fishing (4%) and garment production (3%), and boat building and handicrafts (2% for each).

It is noteworthy that the sample targeted is well diversified in terms of gender, age, education level, occupation and industry, implying that the respondents had at least the basic education level and knowledge to respond to this survey. They could also understand the importance of contributing to the success of postal banking in the Maldives.

Figure 4 - Sector type

Banking and financial literacy

The respondents were asked whether they know or have heard of postal banking. Interestingly, most of them, 69%, either yes, they know or previously heard about postal banking (see Table 2). Of the sample, the study found that 95% of the respondents have a bank account.

By asking the participants about their experience of opening a bank account, the study revealed that most respondents, 79%, view that opening a bank account is pleasant. However, those who answered "No" to the question "Do you have a Bank Account"?", attributed this to the fact that it is expensive, banks are far, products are complex, and Staff is not cooperative.
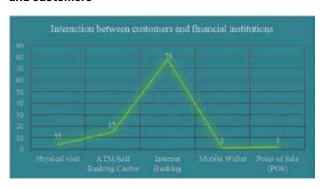
Table 2 - Banking and financial literacy

Measures	Items	Frequency	(%)
Do you know/have heard of Postal Banking?	Yes	1058	69%
	No	483	31%
Do you have a Bank Account?	Yes	1462	95%
	No	79	5%
If Yes (for 2), how was the experience of opening a bank account?	Pleasant	1224	79%
	Unpleasant	120	8%
	Products are complex	81	5%
	NA	116	8%
If No (for 2), then why 'haven't you opened a Bank account yet?	It is expensive	30	2%
	Bank is far	38	3%
	Products are complex	25	2%
	Staff not cooperative	9	1%
	Other	53	3%
	NA	1386	89%

Interaction/communication between customers and financial institutions

The respondents were asked to highlight what is the frequent mode of interaction between them and financial institutions. The results show that internet banking is the most frequent mode used by the participants to interact with the financial institution. Nowadays, individuals and businesses rely on efficient and rapid access to banking information for cash flow reviews, auditing and daily financial transaction processing. Internet banking offers ease of access, secure transactions and 24-hour banking options. Thus, this needs to be considered in the proposed post bank.

Figure 5 - Interaction between financial institutions and customers

As financial institutions need to communicate effectively to be competitive in today's landscape, the survey consisted of a survey question regarding the language that Maldivians prefer to use in communicating with financial institutions. The results demonstrate that more than half of the respondents (53%) prefer to use both Dhivehi and English to communicate with financial institutions.

Table 3 - Language Preference

Language	Frequency	(%)
Dhivehi	314	20%
English	413	27%
Both languages	814	53%

The general perception of postal banking
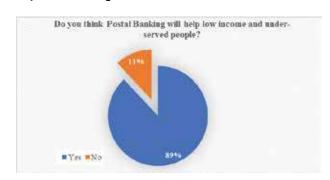
It is well-known that profit-chasing banks abandon low-income people, and thus postal banking is unique to ameliorate financial inequality and increase financial inclusion. The survey responses evidence that the majority of them believe that Postal Banking will help low-income and underserved people.

Furthermore, the survey consisted of 14 questions in the form of a five-point Likert scale anchored between 1= strongly disagree, and 5 = strongly agree, as presented in

Table 4, to measure the 'Maldivians' perception of postal banking.

The first question asks, "Do you agree that the postal banking system is a low-cost alternative to commercial loans"?": A substantial majority (66%) answered that postal banking is helpful in terms of low-cost alternatives to commercial loans. This can also be seen from the mean value of 3.56; it gives a positive impression that Maldivians perceive the importance of postal banking.

Figure 6- 'Maldivians' perception of the benefit of postal banking
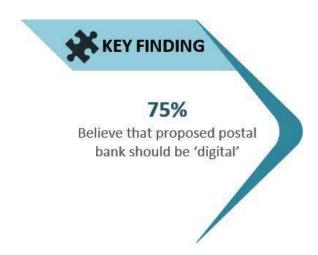
In the responses to the statement, the postal banking system enables the unbanked & under-banked community to have banking affordably. There is a noticeable agreement in how these respondents view the role of the postal banking system in unbanked and under-banked communities to have banking affordably. The results show that 69% of the participants opine that the postal banking system can affordably provide banking and financial services. This also can be observed by the 'responses' mean value of 3.97.

Question 3 explored whether "Postal banking allows low-income earners to maintain a bank account, leading to fulfilling their financial aspirations". The Maldivians, a majority of them (70%), see the importance of postal banking in helping low-income earners maintain a bank account, leading to fulfilling their financial aspirations. The overall mean score of 4.00 gives another indication of the significance of the postal banking system in the community.

Question 4 attempts to understand the general attitude toward postal banking's ability to achieve financial needs. There is explicit agreement among the respondents (70%) with the statement, "the postal banking system can help you achieve your financial needs (savings, investments, consumptions, payments, etc. Moreover, a majority (69%) believe that the postal operator can earn the public trust and confidence to carry out banking, financial and insurance services, as the mean value score was found to be positive (3.56).

Regarding the accessibility to the national postal operator, question 6 examined whether the Postal Operators network of 14 atoll post offices and 172 agency offices

across the nation could be accessible. Most of the respondents (70%) perceive that the Operators network services are accessible across the country. Using a five-point Liker scale, respondents also indicate the extent of their agreement or disagreement with the statement relating to deposit/savings mobilisation schemes of postal banking. A high mean score of 3.97 shows that people perceive that Operators network should offer deposit/savings mobilisation schemes.

KEY FINDING

75%

Believe that proposed postal bank should be 'digital'

Respondents were asked to indicate the extent of their agreement or disagreement with the statement regarding microloans offered by the proposed post bank. The participants believe that the proposed post bank should offer microloans and micro-insurance schemes. This is an indication that microloans and micro-insurance schemes have to be involved in the proposed post bank. In a digital era, most Maldivians (75%) perceive that the proposed post bank should provide payments through the digital mode.

Furthermore, the results of the descriptive statistics, as shown in Table 4, indicate the participants strongly believe that the proposed post bank must offer safe & cost-effective remittance services and provide excellent quality service. They also agreed that Operators network Staff also should be skilled, professional and pleasant.

Table 4 - The general attitude toward the postal banking system

Perception	Number of responses (%)					Mean
	SD	D	N	A	SA	
The postal banking system is a low-cost alternative to commercial loans	90 (6%)	81 (5%)	355 (23%)	911 (59%)	104 (7%)	3.56
The postal banking system enables the unbanked & under-banked community to have banking in an affordable way.	97 (6%)	71 (5%)	312 (20%)	360 (23%)	701 (46%)	3.97
Postal banking allows low-income earners to maintain a bank account which leads to fulfilling their financial aspirations.	92(6%)	77(5%)	309(20%)	346(23%)	717(47%)	4.00
The Postal banking system can help you achieve your financial needs (savings, investments, consumptions, payments, etc.)	101(7%)	75(5%)	298(19%)	349(23%)	718(47%)	3.98.
Postal Operator has earned the public trust and confidence to carry out banking, financial and insurance services.	131(8%)	79(5%)	272(18%)	911(59%)	148(10%)	3.56
Postal Operator network of 14 Atoll Post Offices and 172 agency offices are easily accessible/in your reach.	124(8%)	77(5%)	264(17%)	339(22%)	737(48%)	3.97
Where a Post Bank is proposed it should offer deposit/savings mobilization schemes.	102(6%)	62(4%)	261(17%)	364(24%)	752(49%)	4.04
Proposed Post Bank should offer microloans.	97(6%)	82(5%)	252(16%)	325(22%)	785(51%)	4.05

Perception	Number of responses (%)					Mean
	SD	D	N	A	SA	
Proposed Post Bank should enable digital payments.	101(6%)	77(5%)	209(14%)	334(22%)	820(53%)	4.10
Proposed Post Bank should offer micro-insurance schemes.	106(7%)	63(4%)	256(17%)	329(21%)	787(51%)	4.06
Proposed Post Bank should facilitate government sector salary and social security payments.	99(6%)	75(5%)	250(16%)	324(21%)	793(52%)	4.06
Proposed Post Bank should offer safe & cost-effective remittance services.	110(7%)	58(4%)	232(15%)	336(22%)	805(52%)	4.08
Postal Operator staff are professional and pleasant.	104(7%)	74(5%)	310(20%)	894(58%)	159(10%)	3.60
Postal Operator offers excellent quality service.	102(7%)	90(6%)	900(58%)	306(20%)	143(9%)	3.20

Key Findings & Recommendations

The followings are the summary of key findings from the survey:

- 89% of respondents believe that postal banking can help low-income and under-served people.
- 52% male and 45% were female respondents, aged between 19 and 38, bringing 56% of the participants. The educational level of the participants is quite interesting to note that 41% of the participants held 'bachelors or professional degree, followed by holders of secondary school certificates 18% and 17% had the Masters.
- 39% of them are working in the government sector and 33% from the private sector. 95% of the respondents have a bank account, and 69% knew or heard of Postal Banking.
- The results show that internet banking is the most frequent mode, 78% used by the participants to interact with the financial institution.
- The results demonstrate that more than half of the respondents (53%) prefer to use both Dhivehi and English to communicate with financial institutions.
- Postal banking's general perception shows a positive attitude and strong willingness to accept and support the proposed postal banking system in the Maldives.

Issues and Challenges

While post offices have played an essential role as a gateway for delivering financial services, developing an efficient Post Bank is not a swift task as it faces several challenges. Some of the vital issue and challenges are discussed as follows:

Regulatory framework: Regulating a postal financial system is one of many unique challenges. Although postal finance can have a powerful presence in an economy, it can also be subject to various inefficiencies and mismanagement. Therefore, adequate regulation that is designed and implemented is essential to ensure that postal finance is both effective and accountable. Policymakers can establish particular open and transparent regulatory frameworks for postal finance and plan effective enforcement strategies to implement them.

Enhancing Financial education and literacy: Although a Post Bank system can bring the benefits of financial inclusion, it must be accompanied by a robust program of financial education to realise the full extent of that potential. For example, in Japan, this knowledge base is cultivated from an early age. Even in primary school, schoolchildren open a postal savings account and deposit a small amount every month for six years. Developing financial literacy in this manner is helpful because it creates the knowledge base and breeds the habit of saving by getting children involved at an early age. Post Banks should volunteer a variety of financial literacy programs run in communities across the country.

Regional Cooperation: In a globalised world with increasing financial links, one challenge is to harness greater cooperation and integration among various postal networks across countries to maximise the benefits of postal finance. Given the nature of cross-border remittances, postal finance can be an effective tool for promoting financial inclusion by strengthening cooperation among various postal networks across countries. For example, postal operators can agree to harmonise remittance fees or share best practices promoting remittances through the post offices.

Conclusion

The outcome of this research indicates that there is a strong positive perception of the postal banking system. As a result, it can be concluded that the introduction of the postal bank can gain substantial improvement in financial inclusion and financial literacy in the country, which can enhance the competitive advantage for a postal bank to be outstanding in the market.

The COVID-19 global pandemic changed business priorities with instant digital adoption, contactless banking, the shift in customer behaviours, and the introduction of financial wellbeing by policymakers. The changes experienced will continue to evolve, and the banking industry is not exceptional. Hence, the recommendation of Post Bank will be a 'gamechanger with digital penetration'.

Disclaimer

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Insurance Awareness and Inclusion: A study of Young Women in the National Capital Region (NCR)

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Abstract

Insurance is crucial for financial security, but young women often lack proper coverage and understanding. The industry has traditionally focused on men, creating a knowledge gap for women. This study explores young women's awareness and inclusion in the insurance sector within the National Capital Region (NCR). Conducted to address the knowledge gap created by the industry's traditional focus on men, it surveyed 125 women aged 18-36. The research aimed to understand their views on insurance, information sources, and comprehension of insurance concepts, as well as their perception of the industry's inclusivity efforts. The findings emphasize the importance of tailoring insurance products and information to young women's unique needs, promoting a more equitable insurance market. The study has significant implications for insurance companies, policymakers, and financial educators in developing targeted strategies for insurance awareness and product development. By highlighting young women's perspectives, this research contributes to broader discussions on financial inclusion and gender equality in the insurance sector. Ultimately, it underscores the necessity of addressing young women's specific insurance needs to ensure their financial protection and bridge the existing insurance divide.

Introduction

The insurance industry stands at a critical juncture in its evolution towards gender diversity and inclusion. While progress has been made, young women remain significantly underrepresented in both insurance consumption and industry participation, highlighting a pressing need for gender-inclusive policies and practices.

This study focuses on examining the level of awareness and perceived inclusion among young women in the insurance domain within the National Capital Region (NCR) of India.

The importance of women's inclusion in insurance transcends mere representation. It involves understanding and addressing the unique risks, preferences, and needs women encounter throughout their lives. From health and life insurance to property and business coverage, women's evolving roles and responsibilities necessitate tailored and equitable insurance solutions. This shift towards gender inclusivity is not only a reflection of societal progress but also a strategic imperative for insurance providers, as embracing diversity fosters innovation, creativity, and improved organizational performance. Despite the crucial role of insurance in poverty alleviation and socio-economic development, significant disparities persist. In India, a mere 1% of rural women are insured, while globally, women are more likely to be underinsured compared to men. Barriers such as lack of financial literacy, cultural norms, limited mobility, and inadequate identification documents continue to hinder women's financial inclusion, particularly in the insurance sector.

Several key statistics highlight the significance of this study:

1. Women worldwide are at higher risk of being underinsured compared to their male counterparts, exposing them to greater financial vulnerabilities.
2. While women constitute 57% of the insurance industry workforce, they occupy only 18% of C-suite positions, indicating a pronounced leadership imbalance.
3. A recent survey revealed that just 13% of women aged 18-29 expressed high confidence in their insurance knowledge, in contrast to 24% of men in the same age bracket.

Financial literacy plays a key role in enhancing insurance awareness and inclusion. Lusardi & Mitchell (2014) suggest that financial education programs targeting young females can significantly improve their understanding of insurance products and their benefits. The OECD (2013) recommends that effective financial education should cover topics such as types of insurance, the importance of insurance, and how to evaluate and choose appropriate insurance plans. A 2021 report by McKinsey & Company reveals that women make up only 30% of vice president positions and 18% of C-suite roles in the insurance industry, despite comprising 57% of the total insurance workforce. Additionally, a 2020 survey by The Hartford found that only 13% of women between the ages of 18-29 felt very confident in their insurance knowledge, compared to 24% of men in the same age group. This research builds upon existing literature, aiming to provide fresh insights into young women's perspectives on insurance in the NCR. By exploring their understanding of insurance concepts, information sources, and perceptions of industry inclusivity, we seek

to contribute to efforts bridging the insurance divide. The findings of this study have the potential to inform insurance companies, policymakers, and financial educators in developing targeted strategies for insurance awareness, product development, and ultimately, promoting a more equitable financial landscape. As we delve into this crucial topic, we recognize that addressing the gender gap in insurance is not just about equality—it's about unlocking the full potential of half the world's population and building a more resilient future for everyone.

Literature Review

Muwal, Singh, and Devi (2023) investigate the factors influencing financial inclusion awareness among women. Their study identifies socio-economic factors, educational attainment, and access to financial services as critical determinants. They emphasize the importance of targeted educational initiatives and policy interventions to enhance women's awareness of financial inclusion opportunities. The findings underscore the need for inclusive financial policies that cater to the specific needs of women, aiming to reduce gender disparities in financial access and empowerment.

Bhatia and Singh (2019) examine the impact of financial inclusion on empowering women in urban slums. Their study reveals that access to financial services significantly improves women's economic independence, decision-making power, and overall quality of life. The authors highlight the role of microfinance and digital banking in enhancing financial access for marginalized women. They advocate for targeted financial literacy programs to address the specific needs of women in urban slums, emphasizing that such initiatives are crucial for achieving sustainable development and gender equality.

Weedige et al. (2019) investigate the impact of insurance literacy on personal insurance decision-making, emphasizing that higher levels of insurance literacy lead to more informed and beneficial insurance choices. The study highlights the crucial role of understanding insurance products and terms in enhancing consumer decision-making and satisfaction. It underscores the need for targeted financial education to improve insurance literacy, particularly among underserved demographics. The authors argue that improved literacy can mitigate adverse selection and moral hazard in insurance markets. Their findings suggest that increasing insurance literacy can significantly contribute to individual financial stability and overall market sustainabilit.

Kamanga (2018) explores the role of financial literacy in promoting financial inclusion in emerging markets, using South Africa as a case study. The research reveals that financial literacy significantly enhances access to financial services, enabling individuals to make informed financial decisions and effectively manage their resources. Kamanga highlights that higher financial literacy levels

correlate with increased use of financial products, such as savings accounts and insurance, among marginalized populations. The study advocates for comprehensive financial education programs to bridge the knowledge gap and foster greater financial inclusion. Ultimately, Kamanga's work underscores the critical importance of financial literacy in achieving inclusive economic growth in emerging markets.

Singh and Kumar (2017) examine the state of financial literacy among women in India. Their study delves into the challenges and disparities in financial knowledge and skills among female demographics across various socio-economic strata. The research underscores the critical need for targeted financial education initiatives tailored to enhance women's understanding of financial concepts and practices. It highlights the role of such literacy programs in fostering economic independence and empowerment among women in the Indian context.

Baluja (2016) reviews the landscape of financial literacy among women in India. The study highlights pervasive gaps in financial knowledge and skills among female populations, impacting their ability to engage effectively in financial decision-making. Factors such as educational attainment, socio-economic background, and cultural norms are identified as influencing women's financial literacy levels. The findings underscore the importance of tailored financial education programs and policies aimed at enhancing financial inclusion and empowerment among women in India.

Research Methodology

This study employs a mixed-method approach to evaluate the awareness and inclusion of young women regarding insurance products. The research design combines quantitative and qualitative methods to provide a comprehensive understanding of the subject matter.

Target Population and Sampling

The target population consists of young females aged 18-36, encompassing a diverse group including students, salaried employees, shop owners, young professionals, and self-employed individuals. A sample size of 158 respondents was selected using a stratified random sampling technique to ensure representation across different age groups, educational backgrounds, and occupations within the target demographic.

Data Collection Methods

1. Surveys:
- A structured questionnaire was developed, covering demographics, insurance awareness, sources of information, understanding of insurance concepts, and perceptions of industry inclusivity.

- The survey was administered both offline (paper-based) and online (using digital platforms) to maximize reach and accessibility.
- Questions included a mix of multiple-choice, Likert scale, and open-ended formats to capture both quantitative and qualitative data.

2. In-depth Interviews:
- Semi-structured interviews were conducted with a subset of 56 respondents to gain deeper insights into their perspectives and experiences with insurance.
- Interviews explored personal narratives, barriers to insurance adoption, and suggestions for improving inclusivity.

Data Collection Procedure
- The survey was distributed through various channels, including educational institutions, workplaces, and social media platforms.
- In-depth interviews and focus groups were conducted concurrently with the survey administration, scheduled at the convenience of the participants.
- All participants were informed about the study's purpose and provided informed consent before participation.

Objectives

1. To assess the level of awareness and inclusion towards insurance among young females aged 18-36.
2. To understand their perceptions, knowledge levels, and attitudes towards insurance.
3. To identify barriers to access and utilization of insurance products.
4. To propose recommendations for enhancing insurance awareness and inclusivity among young females.

This multi-method approach ensures a comprehensive understanding of young women's perspectives on insurance and facilitates the improvement of insurance offerings to better meet their needs. Based on the findings, recommendations will be proposed to enhance insurance awareness and inclusivity among young females.

Analysis and Findings

Demographic Insights:
The concentration of respondents in the 18-23 age group (54%) and 24-29 range (21%) provides a crucial snapshot of young women's perspectives on insurance. This demographic is particularly important as they are likely entering the workforce, starting to build financial independence, and making their first major insurance decisions. Their views and behaviors will shape the insurance market for decades to come. Understanding this group's needs and preferences is essential for insurance companies looking to build long-term customer relationships.

Perception of Insurance:
The strong association of insurance with safety and protection (83.2%) is a positive sign for the industry. It indicates that young women grasp the fundamental purpose of insurance, which is a solid foundation for further education and engagement. However, this also presents an opportunity to expand their understanding of insurance beyond just protection, to include concepts like financial planning, wealth building, and risk management. Insurance companies could develop educational campaigns that build on this basic understanding to showcase the broader benefits of various insurance products.

Information Sources and Decision Influencers:
The prominence of social media (47.5%) as an information source reflects the digital-native nature of this demographic. This suggests that insurance companies need to have a strong, authentic presence on platforms like Instagram, TikTok, and YouTube. Content should be informative, engaging, and tailored to young women's interests and concerns. The significant role of insurance agents (36.6%) indicates that personal interactions still hold value, suggesting a need for well-trained, relatable agents who can connect with this demographic.

The influence of friends and family (nearly 25%) on decisions highlights the power of social proof and word-of-mouth marketing. Insurance companies could consider referral programs or community-based marketing initiatives to leverage this trend.

Product Preferences and Purchase Behavior:
The popularity of motor insurance (76.2%) and life insurance (64.4%) suggests that young women are prioritizing essential coverage areas. This could be due to legal requirements (in the case of motor insurance) and a growing awareness of financial security. However, it also indicates potential gaps in awareness or perceived relevance of other insurance products like health, property, or specialized coverage. The preference for online purchase channels (36.6%) aligns with broader digital trends. Insurance companies should invest in user-friendly online platforms, mobile apps, and digital tools to cater to this preference while ensuring that these platforms provide clear information and easy comparison of options.

Decision-Making Factors:
The emphasis on coverage options (63.4%) as a key decision factor indicates that young women are looking for comprehensive and flexible insurance solutions. They want products that can be tailored to their specific needs. The importance of company reputation (48.5%) and customer reviews suggests that young women are doing their research before making decisions. Insurance companies need to focus on building a strong brand image, maintaining high customer satisfaction, and managing their online reputation effectively. This could include encouraging satisfied customers to leave reviews and responding promptly and professionally to any negative feedback.

Trust and Transparency:
While 41.6% of respondents trust insurance companies to fulfill their commitments, this leaves a significant portion who are either neutral or distrustful. The high importance placed on transparency in policy terms (64.4%) indicates that clear, understandable insurance products could significantly enhance trust and customer satisfaction. Insurance companies should focus on simplifying their policy language, providing clear explanations of coverage and exclusions, and being upfront about all costs and fees. They might consider creating educational content that breaks down complex insurance concepts into easily digestible information.

Communication Preferences:
The strong preference for email communication (62.4%) suggests that young women value written, documentable interactions that they can refer back to. This preference aligns with the desire for transparency and clarity. Insurance companies should prioritize clear, concise email communications in their customer engagement strategies. This could include regular policy updates, educational newsletters, and personalized communications about policy changes or renewal options. However, companies should also be mindful of not overwhelming customers with too many emails and should always provide clear opt-out options.

Awareness of Women-Specific Products:
The high awareness of women-specific insurance products (62.4%) is encouraging and suggests that marketing efforts in this area have been relatively successful. However, there's still room for growth. Insurance companies could conduct further research to understand which products are most well-known and why, and use these insights to improve awareness of other offerings. They could also explore developing new products that address specific concerns or life stages of young women, such as coverage for fertility treatments, maternity benefits, or career interruption insurance.

Industry Perception:
The neutral sentiment (40.6%) regarding the industry's friendliness and accessibility to women indicates a significant opportunity for improvement. Insurance companies could differentiate themselves by actively working to be more women-friendly in their products, services, and corporate culture. This could involve initiatives such as increasing female representation in leadership roles, providing specialized training for agents on addressing women's insurance needs, and creating marketing campaigns that specifically speak to women's experiences and concerns. Companies could also consider partnering with women-focused organizations or sponsoring events that align with young women's interests and values.

This research seeks to uncover new insights into how young women in the NCR perceive and interact with

insurance. It explores their grasp of insurance concepts, preferred information channels, and views on industry inclusiveness. The findings could prove invaluable for insurance providers, policy makers, and financial educators in crafting targeted approaches to enhance insurance awareness and develop suitable products.

Results and Discussion

Our study's findings paint a nuanced picture of young females' relationship with insurance. While there's a foundational understanding and generally positive attitude towards insurance among this demographic, significant gaps persist, particularly in awareness of women-specific insurance products. This dichotomy presents both challenges and opportunities for the insurance industry.

The basic awareness and positive perception of insurance among young women provide a solid foundation for the industry to build upon. This suggests that the core value proposition of insurance - providing safety and protection - resonates with this demographic. However, the lack of awareness regarding specialized products tailored for women indicates a critical area for improvement.

This awareness gap highlights a broader issue of gender-specific challenges in the insurance landscape. It suggests that while insurance companies have made strides in developing products for women, their marketing and educational efforts have not fully penetrated their target audience. This misalignment between product development and consumer awareness represents a missed opportunity for both insurers and potential female policyholders. To effectively tap into the young female insurance market, insurers must adopt a holistic strategy that addresses multiple facets of engagement and service. This approach should combine targeted education, innovative product development, and diverse distribution channels to meet the unique needs of women aged 18-29.

Key components include launching digital-first marketing campaigns tailored to this demographic, while also maintaining traditional agent-based services. Insurers should prioritize creating transparent, easily understood products that build trust and resonate with young women's specific concerns. This involves direct engagement with the target audience to refine offerings and develop women-centric solutions.

Furthermore, implementing comprehensive financial literacy programs can empower young women to take control of their insurance and overall financial planning. By fostering a sense of community and enhancing the customer experience, insurers can cultivate loyalty and encourage positive word-of-mouth promotion.

This multi-pronged approach aims to bridge awareness gaps, address the preferences of young female customers, and establish long-term relationships. By executing these interconnected strategies, insurance companies can better serve this vital market segment, ultimately leading to mutual benefits for both insurers and young women seeking financial protection and security.

Conclusion

This study on bridging the insurance divide for young women in the National Capital Region (NCR) reveals a complex landscape of progress and persistent challenges. While young women demonstrate a foundational understanding and generally positive perception of insurance, significant gaps remain in their awareness of women-specific products and overall industry engagement. The findings underscore the critical need for the insurance industry to address the gender gap, not only as a matter of equality but as an economic imperative.

The path forward requires a multifaceted approach, including targeted education campaigns, product innovation, inclusive distribution strategies, and a renewed commitment to transparency and trust-building. By focusing on these areas, the insurance industry can not only tap into an underserved market but also contribute to broader financial empowerment and societal progress. Empowering young women through improved insurance awareness and inclusion is a crucial step towards building a more equitable and financially resilient society.

As the NCR continues to evolve as a hub of economic activity and diversity, addressing the insurance gender gap becomes increasingly important. By tailoring products, improving financial literacy, and reforming industry practices, insurers can play a pivotal role in reducing economic disparities and fostering inclusive growth. Ultimately, this study serves as a call to action for the insurance industry to recognize and address the unique perspectives and needs of young women. By doing so, it can unlock significant potential for growth while contributing to gender equality and financial empowerment, particularly for those in marginalized communities and low-income households. The future of the insurance industry in the NCR and beyond lies in its ability to bridge this divide and create a more inclusive, responsive, and equitable financial landscape for all.

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Challenges and Innovations in Community-Based Health Insurance Scheme for Achieving Universal Health Coverage in Bangladesh

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Abstract

Despite various hurdles in achieving comprehensive health coverage, Bangladesh has significantly improved several health indicators in its healthcare. However, the progression toward Universal Health Coverage (UHC) has been impeded by several factors including limited financial resources, administrative complexity, and inadequate infrastructure that has been investigated in this study. A qualitative research approach has been used to examine the willingness to join (WTJ) the community-based health insurance (CBHI) scheme in rural settings and its potential to address existing challenges. In-depth interviews were conducted to capture the insights of policyholders, healthcare providers, health workers, and community members. The findings of this research will provide insight into the specific obstacles within the health insurance perspective of Bangladesh. Providing policymakers with actionable recommendations, this study accentuates the significance of adapting the CBHI scheme to the unique socioeconomic and demographic landscape of Bangladesh. Therefore, potential solutions through innovative insurance models and broader implications for achieving UHC were highlighted.

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Background

The United Nations Assembly-2030 agenda included Universal Health Coverage (UHC) as part of the Sustainable Development Goals (SDGs), which focused on financial protection for health (World Bank, 2023). Thus, Bangladesh is committed to accelerating its efforts to achieve it by 2030 through expanding services, utilizing resources, and improving efficiency. It has been observed that Bangladesh has achieved significant improvements in various health indicators over the last two decades. Still, there is a lack of adequate financial risk protection mechanisms and low service coverage (Joarder et al., 2019). Besides, a shortage of health workforce, administrative inefficiency, and inadequate infrastructure with improper use have prevented the situation from achieving UHC in the country (Hassan et al., 2016).

Bangladesh has been pushed to low budget allocations by being a resource-scarce economy with a small tax base. The budgetary allocation was 5 percent of the national budget for the FY 2023-24, down from 5.4 percent in the outgoing FY 2022-23(Bangladesh budget, FY 2022-23, FY 2023-24). However, the required benchmark level has been set by the World Health Organization (WHO) which is at least 15% of the total budget of a country. Nevertheless, healthcare expenditures in Bangladesh remain between 4% and 5% of total public spending, unchanged for several years (Hassan et al., 2016; Fahim et al., 2018).

Health care in Bangladesh is provided by various Directorate Generals of the Ministry of Health and Family Welfare (MOHFW), from the national to the community levels (Bangladesh Health Facility Survey, 2014). Whereas, private healthcare encloses not-for-profit private (NGOs), for-profit private, and informal providers (village doctors, various unqualified providers, pharmacies, etc.) (Joarder et al., 2019). Although a large infrastructure exists, a total of 5 million people are impoverished in Bangladesh because of the high burden of out-of-pocket (OOP) payments, which is one of the most inequitable forms of healthcare financing (Ahmed et al., 2016; Joarder et al., 2019). Lack of sufficient healthcare financing has resulted in a heavy burden of OOP expenditures of 68.5%, causing financial insecurity in the country (Bangladesh National Health Accounts (BNHA), 1997-2020). Experts have recommended risk-pooling mechanisms to protect this huge and unpredictable burden of OOP expenditures in healthcare. Hence, by increasing access to healthcare for achieving UHC in Bangladesh, CBHI schemes can be regarded as a new source of funding in addition to tax revenue.

The majority of community-based health insurance schemes (CBHI) have the same characteristics: risk sharing, community solidarity, voluntary membership, a non-profit goal, and participatory decision-making, like getting involved in designing benefit packages, setting premiums, and setting claims (Desai et al., 2014; Binnendijk (2014). At both the national and private levels, health insurance is very limited or non-existent to some extent in Bangladesh and within the framework of microcredit programs, the schemes were initiated. In the early 1970s, Gonoshasthya Kendra (GK) and in the 1990s Grameen Bank (GB) started their pre-paid health insurance program which was the starting journey of health insurance with the private initiatives in Bangladesh. Besides, another micro health insurance (MHI) program named "Amader Shasthya (AS)" by the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B) was introduced in 2012 (Iqbal et al., 2017). On the other hand, a pilot tax-funded health insurance scheme called "Shasthyo Surokhsha Karmasuchi (SSK)" was initiated in 2016 for the below-poverty-line population by the government of Bangladesh (Hassan et al., 2022; Ahmed et al., 2018).

Reviewing literature states that a large population was covered under various health insurance schemes in Ghana, India, and Thailand as representative of low-income, middle-income, and high-income countries respectively. Those initiatives covered poor people who were able to receive social security, even though the insurance coverage was insignificant (Devadasan et al., 2004; Devadasan et al., 2008; Devadasan et al., 2013; Mahmood, 2015; Ngaihte, 2016, HEU, 1999, Poletti et al., 2007). The inadequate legal and policy framework and improper benefit packages with inefficient marketing strategies can be addressed which impede the full-functionality of CBHI schemes in those countries. The study will highlight the obstacles to joining the CBHI scheme in rural contexts and provide suggestions for achieving UHC in Bangladesh.

A national health protection mission about a successful health insurance initiative named "Ayushman Bharat" was initiated in India in 2018 and covered the poorest and most vulnerable segments. This scheme reduced OOP expenditures and increased access to quality healthcare services with medication facilities (Ayushman Bharat, 2018). Therefore, the experience from "Ayushman Bharat" might help initiate the CBHI scheme for people inexperienced with health insurance in the rural community of Bangladesh, considering the socio-cultural similarities with India.

Objectives

This study will investigate the multifaceted hurdles for accelerating progress towards UHC in Bangladesh. Besides, this study aims to address the challenges of joining the CBHI scheme in rural contexts. Moreover, some recommendations by various stakeholders will be explored for the full functionality of the CBHI scheme with a well-functioning healthcare system as a whole.

Methodology

Research Approach
The study is an explorative type that has been conducted with a qualitative approach. A variety of evidence on health insurance was found in the context of Bangladesh, although most of them used quantitative research methods and mixed methods in some cases (Howlader et al., 2001; Mahmood, 2015; Ahmed et al., 2016; Ahmed et al., 2018; Iqbal et al., 2017). However, the current study will use qualitative research methods involving the stakeholders.

Study focus
February 2019 to March 2019 was the period for conducting in-depth interviews with stakeholders.

Sampling
A total of 22 key informants were selected purposively to keep variation in sectoral disposition for understanding impressions with their experiences in more detail.

Sources of Data
In the study, qualitative data were collected through Key Informant Interviews (KIIs) which served as the primary data. Secondary data has been used in this study of sources including relevant books, journal articles, web pages, various reports, and documents.

Data Analysis and Presentation
The data which were collected from KIIs were analyzed with a qualitative approach. After synthesizing views through KIIs regarding accessibility, barriers to receiving healthcare, and challenges in the willingness of joining to CBHI scheme, suggestions were extracted for policy recommendations.

Limitations of the study
The actual perception of the community people may not be reflected in the study as a small portion of community people served as the key informants. Besides, their local accent in Bangla was translated into English thus that may be different from the actual one.

Findings and Discussion

Perception towards the existing Healthcare situation and the CBHI Scheme through KIIs
KIIs regarding the existing healthcare situation from the viewpoint of health workers, community people, community leaders, non-government organization (NGO) workers, policymakers, and political leaders were conducted.

Face-to-face interviews according to the convenient time and place of the KII personnel were taken by applying the qualitative probing techniques with developing guidelines.

The acquired data were divided into two sections, such as (i) the evaluation of the existing health care situation and (ii) the attitudes towards the CBHI scheme in the study area {Table 1 (a) and 1 (b)}.

Table 1 (a): The Existing Healthcare Situation

KII Personnel	Number
Health worker	2
Community people	1
Community leader (Imam of a local mosque and member of Union Parishad)	2
NGO worker	2
Policy maker (Central level)	1
Political leader(Central level)	1

Table 1 (b): Attitudes towards the CBHI Scheme

KII Personnel	Number
Community people	5
NGO worker	1
Policymaker (Central level)	2
Political leader(Central level)	1
Doctors at UHC and district hospital	4

The results through KIIs regarding the existing healthcare situation from the viewpoint of health workers, community people, community leaders, non-government organization (NGO) workers, policymakers, and political leaders are as follows:

(1) Barriers to Achieving UHC

Delay in treatment-seeking behavior
In the study area, high healthcare expenditures especially in inpatient care were identified as late treatment-seeking behavior among people. This is reflected by a statement of a health worker as follows:

"Some people don't seek care timely or seek delayed treatment due to the expenditure of healthcare services especially that occurs in the context of hospital care".

Financial barriers
The high healthcare expenditures in inpatient care create low access to healthcare, which was identified by a statement of a health worker as follows:

"Some people cannot afford surgery cost; some cannot afford the expenditure for staying in the hospital and even some cannot afford the follow-up cost at the hospital".

Low access to healthcare due to financial barriers was highlighted by a community leader (An elderly imam of a local mosque) as well which was as follows:

"If you have the money, you can get treatment, but if you do not have money, it will be difficult for you and sometimes it becomes very pitiful".

Hardship financing
To receive healthcare services by borrowing money and selling assets creates financial hardship mentioned by an NGO worker as follows:

"When people get sick, they arrange money with difficulty. Sometimes they need to sell assets like animals or borrow money to meet their healthcare expenditures. Though they may cure those make their lives harder".

Lack of trust
Lack of trust in the provision of health services was identified as unwillingness to receive treatment. The statement by a community people has been reflected as follows:

"When you go to the hospital for treatment, you become sicker rather than cured".

Geographical access barriers
Geographical distance is a crucial obstacle to increasing access to healthcare. Especially, in some remote or hard-to-reach rural areas, a lack of sufficient transportation and geographic isolation reduces access to care. This is reflected by the statement of a community leader (a member of Union Parishad) as follows:

"Our village is isolated from the other villages of the district. In the rainy season, we can go to the hospital by boat and auto but in the winter season, it becomes very hard for us. We have to walk a long way to seek healthcare services at the hospital".

Lack of awareness
The rural people in the study area were not aware of their right to healthcare which has been reflected by the statement of an NGO worker as follows:

"Sometimes informal payments for drugs increase the out-of-pocket payment of people. Moreover, they have no idea about their right under the ESP".

Inefficiency in resource utilization
There was a lack of efficiency in resource utilization which reflected a lack of transparency and good governance, were mentioned by a policymaker at the central level as follows:

"It was observed in public health facilities that some medical equipment had never been installed in some cases and, sometimes, it had been unused though it was installed".

Misallocation of funds
Misallocation of funds in remote rural areas was explored by a political leader at the central level as follows:
"It is observed that division-wise fund allocation varies in the health sector. Especially it is true for remote rural communities. Sometimes they receive little or no funding and often receive the fund lately."

Addressing the Barriers to Achieving UHC by KII Personnel
A high burden of healthcare expenditures, lack of sufficient health knowledge, and health-harming behavior (unsafe sex, poor diets, smoking, alcohol, and drug abuse) were mentioned as delaying treatment-seeking behavior. Moreover, the rural people of Gaibandha district with low socio-economic status adopted various coping strategies to combat health hazards due to a lack of financial solvency and awareness. Such as selling, mortgaging their properties, and borrowing money even with a high interest rate that results in financial hardship (Ahmad and Sultana, 2020). A study in Nepal (Ghimire, 2013) has reflected those factors where delays in the decision to seek care arose from financial constraints which was consistent with the present study. However, in the case of health facilities, the prescribed medicines and diagnostic services were not always available in the study area. Most of the time the patients had to purchase medicines from pharmacies and go to diagnostic centers for tests which creates high OOP payments for people. Thus, financial barriers lead to low access to healthcare, especially for rural people in Bangladesh.

The study found that some people had a mistrust of quality healthcare services which was provided by government hospitals. They believed that they would not be cured but rather be sick while staying in hospitals. Besides, the traditional beliefs and practices of the low-income respondents directed to delayed health-seeking behavior. In the sample area Fulchhari Upazila, the people living in the remote rural area (char area) had to walk or travel by boat and three-wheeler vans to reach the Upazila Health complex. Thus, most of the time they were reluctant to receive quality healthcare. Moreover, they received self-prescribed medicines from pharmacies or consulted with various informal healthcare providers as this is a very popular option in rural areas. Even they received lower quality of medicine at a low price which more often led to health hazards as well as untimely death of them. This is supported by a study by Evans et al., 2022, where 1 km of increasing geographical distance monthly consultation rates by 28.1% were decreased due to geographical access barriers.

Lack of awareness about health rights with a limited understanding of health issues, may avert individuals from accessing care to which they are entitled. Such as, even though the services included in the Essential Service Package (ESP) are supposed to be free for all people, in reality, the community people do not get access to free

care in Bangladesh. Sometimes they have to pay informally for getting drugs which leads to high OOP expenditures. Moreover, there is a lack of knowledge among the communities about their right under the ESP.

Although an extensive health infrastructure exists in Bangladesh, a shortage of healthcare facilities in rural areas limits access to healthcare. Moreover, a lack of qualified health workforce with inefficient resource utilization was observed at the health facilities in the study area. This is supported by a study (Hassan et al., 2016), where most public health facilities observed a lack of health workers with logistic support. This was identified as an obstacle to performing optimally in those facilities for providing healthcare services. In 2012, a survey by the World Bank identified that around 20% of medical apparatus in public health facilities had never been installed after purchasing, whereas 10% were unused after completing the installation process (Hassan et al., 2016). The insufficient number of health professionals, including doctors, nurses, and supportive staff with a lack of proper monitoring creates inefficiency in resource utilization, which can be a hurdle for achieving UHC.

Misallocation of funds was identified as one of the obstacles to achieving UHC, supported by a study (Hassan et al., 2016) with unequal distribution in allocating funds at seven different divisions in Bangladesh. Around half of the budget in the health sector was allocated for the Dhaka division, the second largest amount for the Chittagong division. In contrast, less than one-fourth of the budget in Dhaka was allocated jointly for the Sylhet and Barisal divisions (Hassan et al., 2016). This discrimination of financing leads to low access to healthcare and high OOP expenditures in Bangladesh.

(2) Barriers to the Willingness of Joining the CBHI Scheme

Incurring loss
A number of the community people as key informants explored the CBHI scheme as a loss investment as they did not need health insurance. The statements were as follows:

"If we fall sick then we can get treatment but if we do not need treatment, we would get nothing in exchange for the premium and the money will not be paid back".

"CBHI scheme would be of no use to us. We don't want to bear any risk of losing money from the scheme".

Financial barriers
Financial inability was identified as unwillingness to join the CBHI scheme by an NGO worker as follows:

"If the village people had money, they could join the CBHI scheme but they are very poor. Thus, affordability is a major issue of unwillingness to join the scheme".

Problems with Choosing the Healthcare provider
Problems of choosing the healthcare provider were considered as unwillingness to join the CBHI scheme by a community member as follows:
"We prefer to be treated by doctors who are practicing in the district town. Thus if the CBHI scheme would not cover our choice of healthcare provider, the scheme would never be beneficial for us".

Lack of trust
Lack of trust in the quality healthcare services was mentioned by a community people as follows:
"If the scheme succeeds after running and the quality treatment is ensured, then we will join in it".

Addressing the Barriers to the Willingness of Joining the CBHI Scheme by KII Personnel
The vast majority of the rural population works in informal sectors with seasonal fluctuations of income that constrain their ability to pay for the premium of joining the scheme. Several community people who served as key informants explored the CBHI scheme as a loss investment as they did not get the money back if they were not affected by diseases according to the benefit package. Hence, the insight explores the incurring loss as a barrier to joining the CBHI scheme. Moreover, the key informants also felt that the poor could not pay a high premium due to their financial inability. This is supported by a meta-analysis (Dror et al., 2016) where lack of money was identified as a common reason for unwillingness to join the CBHI scheme. Thus, they expressed the government will provide all types of healthcare services free of cost. It is supported by a study mentioning that a common perception exists among people that the government is merely responsible for providing healthcare free of cost. Thus, they never showed interest in paying for government healthcare, whether prepayment or other forms (Joarder et al., 2019).

It was explored in the study that community people can receive healthcare services at flexible times by making appointments with doctors according to their choice. Thus, they can avoid maintaining round-the-clock for seeking healthcare services with long queues in waiting periods. Therefore, the problems with choosing the healthcare provider were explored as the unwillingness to join the scheme.

A lack of trust in ensuring quality health services was identified as a delay in the decision to join. Thus, lack of trust and risk aversion attitudes were explored regarding the CBHI scheme in the study area. Besides, in a well-functioning scheme, involving the government was also highlighted. In addition, the respondents mentioned that they did not want to face any fraud. Thus, involving the government made them trust in giving a premium for the scheme. Moreover, an overall lack of trust regarding insurance among people was observed due to sociocultural barriers which was supported by a study (Joarder et al., 2016).

(3) Strengths of the CBHI Scheme

A policymaker at the central level explored the strengths of the CBHI scheme as follows:
"Health insurance might not alone ensure the improvement of the quality of healthcare services; rather it is only a tool for delivering healthcare services. But I believe through increasing utilization as well as collecting more resources for health, the CBHI scheme can improve quality of healthcare services to a great extent."

"The CBHI scheme is in the designing phase in Bangladesh, thus it is not high time to make comments about it."

CBHI scheme was explored as a cross-subsidized scheme mentioned by a community people as follows:

"If we do not need treatment then we can consider the premium as a donation for the poorest portion of the society. Our small contribution will become a great benefit in the future."

Government healthcare providers at the Upazila and district levels mentioned the strengths of the CBHI scheme as follows:

"To increase access and utilization of healthcare services, the CBHI scheme can be a good initiative".

"If the government orders us to attach with the CBHI scheme, we will certainly co-operate".

(4) Weaknesses of the CBHI Scheme

There are problems with the financial capability of the schemes mentioned by a political leader at the central level as follows:

"The government will not provide subsidies for community-based health insurance as available funds are already being channeled into priority-based areas".

Government healthcare providers at the Upazila and district levels mentioned the weaknesses of the CBHI scheme as follows:

"We could not provide the expected healthcare services to the members of the CBHI scheme due to a lack of health staff".

"In district hospitals and the UHC, we have to provide healthcare services to a huge number of people every day. Most of the time, the expected quality of healthcare services cannot be ensured due to a lack of qualified health staff. Hence, if the CBHI scheme is launched, it will be very difficult to run the scheme successfully with a lack of a sufficient number of trained and skilled healthcare staff".
Addressing the Strengths and Weaknesses of the CBHI Scheme by KII Personnel

The CBHI scheme was explored as a way of providing quality health services with comprehensive strategies. However, one of the central-level policymakers did not want to compare the CBHI scheme with the existing healthcare system as health insurance is still in the designing phase in Bangladesh. The CBHI scheme was mentioned as a way of cross-subsidization which was the strength of the scheme. Thus, as a way of increasing social capital through the cross-subsidization method, the scheme was explored. Although the scheme was highlighted as a good initiative to increase access and better utilization of healthcare services, a lack of quality health staff was an obstacle to providing expected services. In addition, government subsidies are necessary at the initial stage for initiating the scheme. Besides, coordination between the government, NGOs, and donor support is needed to ensure the long-term sustainability of the scheme.

Government Health Insurance Plans and Policies
The Government of Bangladesh has adopted the healthcare financing strategy, 2012-2032, as a plan for achieving UHC by improving access to essential health services and reducing dependency on OOP payments. There was a reflection on health insurance in the documents of the sixth Five-Year Plan (FYP, 2011-2015) through cost-sharing by well-to-do patients when they are treated in public hospitals in rural areas. Another document of the National Health Policy-2011(NHP-2011) addressed the necessity of health insurance in the formal sector and phases extending to other sections of the population. In Vision 2021, health insurance was mentioned for mitigating the healthcare expenditures of individuals and society. Besides, in 2010, the Rockefeller Foundation instigated health reforms to support UHC initiatives through various health programs in Bangladesh (Ahmed et al., 2016). The foundation addressed the necessity of health insurance especially for the informal sectors which will open a new pathway to economic and social empowerment for the poor and vulnerable segments of the world.

Recommendations
A trained and skilled workforce is a key determinant for ensuring quality healthcare. Proper monitoring and supervision are needed for the efficient use of resources. A lack of health infrastructure exists in rural areas, however, to increase access and better utilization, community clinics can be an option for providing healthcare services to scheme members. The model of community clinics (CC) of Bangladesh has been recognized worldwide and appreciated for providing healthcare services at the nearest distance from their residences. Moreover, in rural areas, qualified doctors cannot survive due to the absence of regular cash flow of income as most people are engaged in informal sectors. However, if the doctor's payments are ensured from the CBHI scheme regularly, doctors can provide healthcare services to the people through CC in rural areas. This will accelerate the integration of the CBHI scheme with the broader healthcare system. Thus, utilization and access to healthcare services will be increased which will lead to achieving UHC in Bangladesh.

The benefit package should be designed as consistent with the local healthcare needs and should make an effort to fill the gap in government services. Besides, a low understanding and knowledge regarding the scheme at the community level were found. Thus, awareness creation programs must need to be increased through various marketing strategies. Apart from this, schemes should be modified over time while keeping flexibility by new economic phenomena, such as social realities, changing morbidity patterns, population trends, and modern medical technologies. Besides, gaps in policy implementation and governance should be minimized as they can impede the worthwhile delivery of healthcare services. Moreover, political instability may be an obstacle to effective health planning and implementation for achieving UHC in Bangladesh.

Conclusion

World Health Organization (WHO) is providing various support to the government of Bangladesh in implementing UHC and giving rise to a general understanding of it among the stakeholders. Increasing awareness with a common understanding of UHC has been the main focus of the Health Care Financing Strategy 2012-2032. However, various challenges, such as delays in the treatment–seeking behavior, lack of trust, financial barriers, geographical access barriers, hardship financing, lack of awareness, inefficiency in resource utilization, and misallocation of funds were identified through KIIs for achieving UHC in Bangladesh. The identified challenges with prospective suggestions, will lead toward achieving UHC in Bangladesh.

In the context of health insurance, the experience of Bangladesh is small. Hence, CBHI needs to be addressed in the relevant area of research to increase knowledge and understanding of it. The key informant suggested strengthening the overall health system to minimize the implementation barriers of the CBHI scheme and improving monitoring with supervision to provide quality health services. Besides, based on the research, advocacy regarding the CBHI scheme is significant in policy implications for accelerating UHC in Bangladesh.

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Corporate Payout Policy in the Nepalese Stock Market

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Abstract

This study examines factors influencing dividend payout policy in the Nepalese stock market. This study utilizes a quantitative approach, using descriptive statistics and cross-sectional regression analysis to examine dividend payout behavior. The study used data from 28 companies listed on the Nepal Stock Exchange (NEPSE) between 2012 and 2023, including both financial and non-financial institutions. The research finds that larger, more profitable companies (measured by free cash flow) tend to pay higher dividends. Interestingly, a positive relationship is identified between leverage (debt) and dividend payouts, suggesting debt can be a tool to increase shareholder returns. Companies with high future earnings growth, however, prioritize reinvestment over dividends. Insider ownership has a negative impact on dividends, potentially indicating decisions favoring all shareholders. The inconclusive relationship between leverage and stock price, particularly for high-growth companies, warrants further investigation. Finally, the study suggests a weaker role for dividend signaling in the Nepalese market compared to developed economies, highlighting the need for improved

market efficiency and investor education.

Introduction

Dividend payout policy, the process by which firms allocate cash to shareholders, presents a multifaceted challenge for management. Determining the optimal size and distribution pattern of dividends necessitates careful consideration of a multitude of financial factors (Breuer et al., 2014). Understanding the determinants of corporate dividend policy is a cornerstone of modern financial theory, yet a universally accepted explanation for observed firm behavior remains elusive (Allen & Michaely, 2003; Breuer et al., 2014). Existing literature suggests significant cross-country variation in dividend payouts, likely due to differences in institutional frameworks and stock market development (Chen et al., 2011; Elmagrhi et al., 2017). This research delves deeper into this complex landscape, aiming to shed light on the factors influencing dividend payout decisions in the Nepal Stock Market.

Dividend policy is a cornerstone of bank management, impacting investor attraction and revenue generation (Al-Najjar & Hussainey, 2009). However, banks face a balancing act. While dividends attract investors, retaining profits for reinvestment in core operations and growth is crucial (Elmagrhi et al., 2017). Excessive payouts can deplete free cash flow, hindering operational needs (Miletkov et al., 2015). This complexity is further amplified for Islamic banks, whose regulatory frameworks are often less understood (Al-Kayed, 2017). This research explores bank dividend policy, focusing on how banks determine the portion of earnings distributed to shareholders while ensuring sufficient resources for growth and operations. Understanding how dividend policy influences shareholder returns, a key research area (Miletkov et al., 2015), is central to this investigation.

Dividend policy remains a complex and debated topic in financial theory. While seminal works like Miller and Modigliani (1961) and Lintner (1956) emphasize its impact on bank stock value, Black's (1976) observation highlights the "puzzle" – a lack of clear consensus on how these pieces fit together. Agency theory, the "bird-in-hand" theory, and the "dividend irrelevance theorem" all offer potential explanations for dividend policy decisions aimed at maximizing shareholder value. However, the "dividend irrelevance hypothesis" by MM (1961) posits that dividends are irrelevant in a perfect market, a notion challenged by growing evidence linking dividend payments to enterprise value. Trade-off theory, proposed by Easterbrook (1984), suggests a more nuanced approach, where firms balance the advantages of stock issuance and debt financing to maximize value. This research delves into this intricate

landscape, examining how bank dividend policy decisions are made in the face of these competing theories and empirical observations.

Understanding how companies in Nepal distribute their profits (dividends) is crucial for both investors and managers. Dividend policy can significantly impact shareholder wealth and signal a company's financial health and plans (Baskin, 1988; Black, 1976). While extensive research exists on dividend policies in developed and emerging markets, Nepal remains understudied. This is especially intriguing because Nepal's unique institutional and economic environment presents a valuable case study for examining corporate payout behaviors in an emerging market.

This research seeks to fill this gap in the literature by investigating the factors influencing dividend payouts in the Nepalese stock market. Specifically, it addresses key questions: What are the primary drivers of corporate payout behavior in Nepal? How do these behaviors compare to those in developed and emerging markets, including India? By exploring these questions, the research aims to contribute to the understanding of Nepalese dividend policies and identify potential divergences from global trends. The Nepalese market, with its limited trading volume and information constraints, offers a unique opportunity to investigate how payout decisions impact financial indicators like earnings stability, capital structure, and stock prices. Furthermore, this study will explore the potential of dividend behavior to predict aggregate economic indicators in Nepal, an under-researched area with the potential for significant insights.

Literature Review

The relationship between dividend policy and stock returns remains a complex and debated topic. While some studies, like those by Fama and French (1968, 1974), La Porta et al. (2000), Easterbrook (1984), and Grullon and Michaely (2002), suggest that dividend yield can predict returns, the picture isn't entirely clear. These studies highlight the role of stock price volatility in returns, and while dividend yield may have some predictive power, it doesn't necessarily predict the amount of dividends paid. This creates a curious situation where price variation seems primarily driven by expected excess returns, rather than the dividends themselves (Kilincarslan and Ozdemir, 2018). Adding another layer of complexity is the question of industry influence. Some researchers, like Florence (1959), argue that industry characteristics don't significantly impact dividend policy. However, others like Michel (1979), Baker (1988), Baker and Powell (2000), and Gill et al. (2010) find a positive correlation, suggesting that the type of industry a company operates in can influence how it distributes profits.

Further muddying the Kuo et al. (2013), studies have explored the connection between dividend yield, future returns, and earnings growth. While initially, a link seemed

evident, with dividend yield seemingly predicting both higher returns and earnings growth, a surprising finding by Kuo, Philip, and Zhang (2013) revealed a negative correlation between returns and earnings growth in the short term. This implies a counter-intuitive dynamic: in economic downturns, investors might be more willing to invest in companies with lower expected earnings, demanding a higher return to compensate for the increased risk. This research underscores the need for a nuanced understanding of how various factors interact to influence dividend policy and its relationship with stock returns.

Grullon and Michaely (2002), Kuo et al. (2013), and Kumar and Waheed (2015) identify a consistent pattern: companies with lower risk profiles tend to pay out higher dividends. This finding holds across both developed markets (US and Europe) and developing markets (UAE), suggesting a general risk-dividend relationship. Interestingly, some studies (Kilincarslan and Ozdemir, 2018; Elmagrhi et al., 2017) also highlight the importance of liquidity in certain markets, implying that companies with greater access to cash are more likely to engage in higher dividend payouts.

The significance of dividend policy remains a central theme in financial research. Studies by Abbasi et al. (2014) and Uwalomwa et al. (2015) emphasize its importance, with some scholars even classifying it as one of the top unresolved issues in the field. This heightened focus coincides with growing recognition of the banking sector's critical role in driving economic growth (Jaara et al., 2018). A bank's dividend policy is a fundamental aspect of its overall strategy. Increasing net profit is a primary objective, as it enhances shareholder returns and overall bank value. However, management must carefully balance this objective with the need to attract and retain investors. Al-Najjar and Hussainey (2009) highlight this challenge, noting that low return on capital can deter investment. Therefore, dividend policy decisions require a delicate balancing act between maximizing shareholder returns and ensuring sufficient resources for reinvestment and future growth.

A significant gap exists in the understanding of dividend policy within the Nepalese market. While extensive research has explored factors influencing payout decisions in developed and some developing economies, the specific context of Nepal remains unexplored. This lack of research presents a compelling opportunity. By investigating dividend policy in Nepal, The study can contribute to financial theory in several ways. First, it allows for a broader understanding of corporate payout behaviors globally, leading to more comprehensive financial theories that account for the diverse environments of emerging markets. Second, studying Nepal can refine existing financial frameworks by testing their validity in a new context and identifying any additional factors influencing dividend decisions there. Finally, the insights gained can have practical implications for both investors and managers. Investors will gain a clearer picture of the factors driving company payouts, enabling them to make informed investment decisions. Managers, on the other hand, can benefit from understanding how their dividend policies impact stakeholders and contribute to the long-term success of the company. This research aims to address this critical gap by investigating the determinants of dividend payouts in Nepali companies.

Research Methodology

3.1 Data description and variables

This study examines the dividend payout policies of 28 companies listed on the Nepal Stock Exchange (NEPSE) from 2012 to 2023. The study analyzes data from 18 financial institutions and 10 non-financial institutions. All data was collected from secondary sources, including the Nepal Rastra Bank (central bank), Nepal Stock Exchange, and SEBON (Securities Board of Nepal). The data encompasses various financial and non-financial characteristics of the companies, compiled from their annual reports up to mid-July 2023. This comprehensive dataset allows for a detailed investigation of the factors influencing dividend payouts across different sectors within the Nepalese market.

Table 1: Variables and their proxies

Variables	Proxies
Dividends / operating income (DIV)	The ratio between dividends and operating income is the portion of the cash from the income paid out as a reward to the investors against their investment. This variable plays a vital role in determining the dividend policy.
Earnings growth (EG)	Growth is presented in terms of the compounded annual earnings for common shareholders. It is also targeted to find the impact of the earnings growth on the dividend policy.
Payout or Dividend yield	The dividend payout ratio, which compares dividends per share to earnings per share, offers a steadier analysis than just looking at net income. This ratio avoids skewing results from years with low or negative profits.

Variables	Proxies
Earning to price ratio (E/P)	The price-to-earnings ratio (E/P) compares a company's stock price to its earnings per share. A high E/P ratio can indicate that investors are willing to pay more for future growth, & vice versa. It is the explanatory variable and it shows the proportion between earnings and market price per share.
Leverage (LEV)	The proportion between total debt and total assets is issued by the corporation. Total debt includes both short-term liabilities as well as long-term debt and it is known as the leverage capital. It is targeted to capture the effect of the leverage capital into the payout policy.
Free cash flow (FCF)	Cash flow is the total cash earned by the corporation within a fiscal year. It includes the final income and depreciation. The variable in this analysis is the ratio of (Income + depreciation) / total assets. It is targeted to capture the effect of cash flow to determine the dividend equation.
Natural log of market value of equity (SIZE)	The market value of the equity of the corporation is large and it brings the one-sided impact into the analysis. It is taken in natural terms to neutralize the effect. It is targeted to capture the effect of the equity to decide the dividend policy.
Profitability (ROA)	Return on Assets (ROA) is a profitability metric that measures how effectively a company uses its assets to generate profit. A higher ROA indicates a company is squeezing more earnings out of its investments, suggesting efficient management and potentially stronger financial health.

Sources: From dividend-related theories and literature review

3.2 Methods of analysis

This study used secondary data to examine how different financial indicators (like company size, debt levels, dividend payouts, and profitability) influence dividend policy in the Nepalese stock market. The study explores the relationship between dividend payout and investment decision-making in the stock market in Nepal. The study used various statistical and econometric models to analyze secondary data.

The different econometric models are employed to assess the payout behavior on the aggregate stock market. The study will cover different dividend-related variables, namely, ownership proportion, leverage, cash flow, and proportion as an explanatory variable to explain the payout policy. In order to explain the effect Jensen (1986) estimated the following linear regression by ordinary least squares.

$$DIV = \alpha_0 + \beta_1 Size + \beta_2 Leverage + \beta_3 Alpha + \beta_4 FCF + \beta_5 Growth + \epsilon_t \ldots (1)$$

In equation (1) DIV indicates the Payout or Dividend yield (the same equation can be used for dividend payout as well as dividend yield). Leverage refers to the proportion of leverage capital used by the firms to build the capital structure. Alpha refers to the portion of outstanding equity owned by the insider owner. Size refers to the natural logarithm of the market value of equity. FCF refers to the ratio between free cash flow and total assets (Free Cash Flow/Total Assets). Growth refers to the average annual growth rate of assets over the previous five years. α_0 is the intercept term and $\beta_1, \beta_2, \beta_3, \beta_4, \text{ and } \beta_5,$ are the parameter of the explanatory variables.

This study investigates the link between a company's dividend payouts and its future earnings growth. Using the Fama and MacBeth (1974) procedure, the study uses a statistical technique to consider multiple factors, including a company's past earnings, to predict future dividend payments. The analysis is based on multiple years of data, and the results show that factors like a company's debt levels and asset growth are expected to influence its dividend payouts.

$$EG = \alpha_0 + \beta_1 Payout + \beta_2 Size + \beta_3 ROA + \beta_4 E/P + \beta_5 LEV + \beta_6 PEG + \epsilon_t \ldots (2)$$

Equation (2) focuses on factors influencing a company's future earnings growth (EG). It considers various variables: dividend payout, company size, return on assets (ROA), leverage, earnings yield (E/P), and past earnings growth (PEG). Each variable is represented by a Greek letter (β) along with a subscript number to indicate its relative importance in explaining future earnings growth.

In terms of the empirical test, it is specified as a cross-section regression model. The initial framework adopts a conventional share-price model, which offers a resolution to the equilibrium equation governing capital market prices amidst idealized uncertainty. In this model, the share price (Po) is determined by the discounted present value of anticipated future dividends, contingent upon a market rate reliant on the risk-free rate and the security's inherent risk. This model further suggests that the current price-to-earnings ratio (Po/Eo) is influenced by factors such as the projected dividend growth rate (g), the dividend payout ratio (Do/Eo), and a gauge of the security's risk (R).

$$\frac{P_0}{E_0} = f\left(g, \frac{D_0}{E_0}, R\right) \ldots (3)$$

Building on the work of Brigham and Gordon (1970), this research utilizes a similar model to explore dividend payout decisions by companies. The study takes this established model as a starting point and modifies it to investigate the factors influencing a company's choice to pay dividends. The specific form of the adapted model is presented in the following section.

$$\frac{P_0}{E_0} = \alpha_0 + \beta_1(g) + \beta_2\left(\frac{D_0}{E_0}\right) + \beta_3(LEV) + \beta_4(ORE) + \epsilon \ldots\ldots\ldots\ldots (4)$$

In equation (4), P0/E0 indicates the Closing market price, g refers to the expected growth rate measured by the compound annual rate of growth in assets per share, D0/E0 refers to the dividend payout measured by cash dividends divided by earnings, LEV refers the financial risk measured by leverage capital, ORE refers the operating risk measured by the standard error for the regression of earnings per share and u refers the random error term.

Equation (4) dives into the factors influencing a company's closing market price (P0/E0). The equation considers the expected growth rate (g), measured by the annual increase in assets per share. The dividend payout ratio (D0/E0), indicates the portion of earnings distributed to shareholders as dividends. The equation also incorporates financial risk (LEV), represented by the company's leverage (debt financing). Additionally, operating risk (ORE) is factored in, measured by the standard error of its earnings per share, reflecting the inherent volatility of the company's profits and ε represents the stochastic error term.

Result and Discussion

Dividend equation with explanatory variables
Various studies in the research literature have presented diverse empirical findings influencing dividend payout decisions, employing different explanatory variables in both mature and non-mature economies. Jensen (1986) utilized ordinary least squares to estimate a linear regression aimed at elucidating these effects.

Table 2: Regression result of the dividend with explanatory variables

Dependent variable: Dividend (DIV)

$$DIV = \alpha_0 + \beta_1 Size + \beta_2 Leverage + \beta_3 Alpha + \beta_4 FCF + \beta_5 Growth + \epsilon_t$$

Model	α_0	LEV	Alpha	Size	FCF	Growth	F	AR2	DW
I	2.612 (2.23*)	4.181 (3.89**)	-2.089 (-2.45**)			-2.557 (-5.71*)	99.32*	59.07	1.77
II	0.987 (2.88*)	4.189 (6.73*)	-9.575 (-1.98**)		7.58 (1.689)		92.08*	58.33	1.85
III	7.662 (2.05**)			12.407 (7.33*)		7.960 (-6.45*)	88.95*	60.42	1.76
IV	2.142 (2.09**)		-7.635 (-2.06**)	8.032 (5.04*)	5.577 (1.92**)		87.41*	64.73	1.84
V	1.833 (1.607)	12.895 (4.39*)	-9.286 (-3.11**)		5.234 (2.93**)	-4.087 (-6.22*)	86.92*	58.41	1.79
VI	1.988 (4.94*)	2.517 (2.11**)		3.733 (5.65*)	7.422 (4.63*)	-4.711 (-5.93*)	83.67*	61.27	1.82
VII	2.086 (5.09*)	1.079 (5.12*)	-3.311 (-4.91*)	5.835 (2.81**)	2.412 (3.44**)	-5.841 (-4.67**)	81.27*	68.42	1.96

*Note: T-statistics are shown in parentheses underestimated values of the regression coefficients. * & ** denote the significance of coefficients at 1 percent and 5 percent level of significance respectively.*

Table 2 shows the results of a regression analysis on the dividend payout (DIV) of companies listed on the Nepalese Stock Exchange (NEPSE) from 2012 to 2023. (LEV) refers to the proportion of leverage capital used by the firms to build the capital structure. (Alpha) refers to the portion of outstanding equity owned by the insider owner. (Size) refers to the natural logarithm of the market value of equity, Due to the higher variability in the size of the corporation under a developing market, it is taken as a natural log of the market value of the equity to capture the real impact as an understandable size. (FCF) refers to the ratio between free cash flow and total assets (Free Cash Flow/Total Assets). (Growth) refers to the average annual growth rate of assets over the previous five years. The analysis examines how several explanatory variables influence the dividend payout. The table shows several regression models (denoted by I through VII) with different combinations of explanatory variables. For each model, the table shows the estimated coefficient for each independent variable, the t-statistic for the coefficient (in parentheses), the F-statistic, the adjusted R-squared (AR²), and the Durbin-Watson statistic (DW).

The coefficient for size is positive and statistically significant in all models. This suggests that larger companies tend to pay higher dividends. Similarly, the coefficient for FCF is positive and statistically significant in most models. Companies with higher free cash flow (FCF) tend to distribute more dividends to shareholders, as indicated by the positive and statistically significant coefficient for FCF in dividend payout. This implies that firms with a surplus of cash after expenses are more likely to share it with investors. These results mirror previous research by Michaely & Roberts (2006), La Porta et al. (2000), and Kuo et al. (2013), who identified a positive impact of company size on dividend payouts. This reinforces the idea that dividend payouts can be a way to address the issue of excess free cash flow within companies.

In addition, a negative coefficient for leverage on dividend payout signifies that companies with higher debt levels tend to distribute fewer dividends to shareholders.. Its statistical significance underscores the robustness of this relationship, implying that changes in leverage have a substantial impact on dividend policy. This finding highlights the importance of financial leverage considerations in determining dividend distribution strategies. Furthermore, a negative and statistically significant coefficient for alpha in dividend payout suggests companies that outperform the market (higher alpha) tend to pay lower dividends. This might be because they reinvest their profits for future growth rather than distributing them to shareholders. Moreover, the coefficient for growth is negative and statistically significant in models. This suggests that companies with higher growth rates tend to pay lower dividends, possibly because they prefer to reinvest their profits for further growth. These findings align with earlier

academic research by Lintner (1956), Miller & Modigliani (1961), and Easterbrook (1984), who demonstrated that dividend payout patterns in developed markets are influenced by factors such as current profitability and leverage.

The F-statistic is significant for all models, which means that the overall model is statistically significant. This means that at least one of the independent variables has a statistically significant relationship with the dependent variable. In addition, the adjusted R-squared (AR^2) is high for all models, which means that the models explain a large proportion of the variation in the dividend. Lastly, the Durbin-Watson statistic (DW) is close to 2 for all models, which suggests that there is no serial correlation in the errors.

Finally, the table suggests that several factors influence the dividend payout of companies listed on the Nepalese Stock Market. Company size, leverage, alpha, free cash flow, and growth all appear to play a role, with the direction of the relationship varying depending on the specific variable.

Payout and earnings growth with independent variables

Fama and MacBeth (1974) advocated for yearly regression coefficients to address cross-sectional dependence. Reported coefficients are averages of yearly regressions. A distinction between Arnott and Asness is the time horizon: Arnott and Asness focus on long-term growth earnings, while this study considers five-year earnings growth, reflecting investor choices in short and intermediate terms in developing markets.

Table 3: The regression result of the payout and future earnings growth with explanatory variables

Dependent variable: Earning Growth (EG)

$$EG = \alpha_0 + \beta_1 Payout + \beta_2 Size + \beta_3 ROA + \beta_4 E/P + \beta_5 LEV + \beta_6 PEG + \epsilon_t$$

Variables	One-year PEG (-1,0)		Three-year PEG (-3,0)		Five-year PEG (-5,0)	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	2.043	7.115*	1.441	4.922*	0.231	3.022**
Payout	-1.973	-2.855**	-1.211	-3.072**	-0.092	-2.095**
Size	1.022	5.057*	0.983	4.633*	0.330	1.973**
ROA	2.117	6.089*	0.774	3.322**	0.227	4.511*
E/P	1.807	3.122**	0.183	1.932**	1.015	1.889**
Leverage	-0.892	-1.904**	-0.471	-2.944**	-0.337	-2.077**
PEG	-0.665	-2.004**	-0.638	-2.115**	-0.183	-1.866**
Adjusted R2	64.13%		61.23%		60.78%	
F-Value	87.455*		88.931*		86.557*	
DW	1.849		1.796		1.833	

Table 3 presents the regression result of the Payout and future earnings growth with different independent variables. The dependent variable (EG) indicates the earnings growth explained by the different independent variables. (Payout) is the dividend payout, measured as Year 0 dividends, (Size) is the natural logarithm of the market value of equity, (ROA) is the return on assets measured as earnings, (LEV) is the leverage measured as the book value of debt, (E/P) is the earnings yield measured as earnings, and (PEG) is the past earnings growth measured as compounded annual earnings.

The coefficient for size is positive and statistically significant in all models. This suggests that larger companies tend to have higher earnings growth. This could be because they have more resources and economies of scale that allow them to grow more quickly. Similarly, the coefficient for ROA is positive and statistically significant in all models. This suggests that companies with higher return on assets (ROA) tend to have higher earnings growth. This makes sense, as companies that are more efficient at using their assets are likely to be more profitable and have more resources to invest in growth. In addition, the coefficient for E/P (price-to-earnings ratio) is positive and statistically significant in two models (Model 1 and Model 3). This suggests that companies with higher E/P ratios tend to have higher earnings growth. This could be because investors are willing to pay a higher price for companies that are expected to grow more quickly. These findings align with previous research by Chen et al. (2011), Miletkov et al. (2015), Mehdi et al. (2017), and Jara et al. (2018).

However, the coefficient for payout is negative and statistically significant at all levels (-1, -3, and -5) in all three models. This suggests that companies with higher payout ratios tend to have lower earnings growth. This could be because they are distributing more of their profits to shareholders rather than reinvesting them in the business. Similarly, the coefficient for leverage is negative and statistically significant in two models (-1 and -3). This suggests that companies with higher leverage (more debt) tend to have lower earnings growth. This could be because they have to use more of their cash flow to service their debt, which leaves them with less money to invest in growth. Furthermore, the coefficient for PEG (price-to-earnings-to-growth ratio) is negative and statistically significant in all models. This seems counterintuitive at first because PEG is a measure of a stock's valuation relative to its expected growth. However, the negative coefficient here might be because companies with higher PEG ratios (i.e., more expensive relative to their growth prospects) are experiencing slower earnings growth than what the market expects. Overall, the results of the regression analysis suggest that several factors can affect a company's earnings growth. Some of the most important factors include payout ratio, size, ROA, E/P ratio, leverage, and PEG.

Payout policy and value of the security

The research starts by building upon a classic stock valuation model. Imagine a perfect market where supply and demand perfectly balance. This model suggests a stock's current price (Po) is essentially the present value of all its future expected dividend payments (discounted for risk and interest rates). This translates to a ratio: the current price divided by earnings (Po/Eo). This ratio, according to the model, is influenced by three key factors: how fast dividends are expected to grow (g), what portion of earnings are paid out as dividends (Do/Eo), and the overall riskiness of the investment (R). Importantly, this general model was adapted for practical use by Brigham and Gordon in 1970, paving the way for this current research to explore dividend payout decisions by companies. Various statistical tools, including F-test, t-test, autocorrelation, and multicollinearity, validate the model. Regression results are presented in Table 4.

Table 4: The regression result of payout policy and value of the security with explanatory variables

Dependent variables: Closing Market Price (P_0/E_0)

$$\frac{P_0}{E_0} = \alpha_0 + \beta_1(\frac{D_0}{E_0}) + \beta_2(LEV) + \beta_3(Growth) + \beta_4(ORE) + \epsilon$$

Model	α_0	D0/E0	LEV	Growth	ORE	F	Adj. R2	DW
I	9.532 (4.94*)	0.552 (7.593*) ((0.213))	1.033(2.328**) ((0.492))	0.496 (4.242*) ((0.181))		30.893*	66.098	1.795
II	11.551 (2.10**)	0.624 (8.921*) ((0.207))	0.982 (1.921**) ((0.402))		-0.262 (-1.881**) ((0.531))	29.887*	64.775	1.834
III	12.871(6.101*)	0.487(7.023*) ((0.190))		0.441(2.811**) ((0.322))	-0.291(-1.947**) ((0.493))	30.155*	70.911	1.963

Model	α_0	D0/E0	LEV	Growth	ORE	F	Adj. R2	DW
IV	8.993 (1.977**)		1.103(2.542**) ((0.382))	0.383(3.045**) ((0.242))	-0.199(-2.004**) ((0.412)	30.005*	68.442	1.797
V	13.091 (2.77**)	0.447 (6.732*) ((0.271))	1.072 (1.902**) ((0.332))	0.547 (5.023*) ((0.102))	-0.273 (-2.643**) ((0.421))	27.573*	74.885	1.963

*Note: T-statistics are shown in parentheses underestimated values of the regression coefficients, and tolerance coefficients are shown in double parentheses. * & ** denote the significance of coefficients at 1 percent and 5 percent level of significance respectively.*

Table 4 presents the regression result of the payout policy and value of the security with different independent variables. The dependent variable P0/E0 indicates the closing market price. (Growth) refers to the expected growth rate measured by the compound annual rate of growth in assets per share. (D0/E0) refers to the dividend payout measured by cash dividends divided by earnings. (LEV) refers to the financial risk measured by leverage capital. (ORE) refers to the operating risk measured by the standard error for the regression of earnings per share and ε refers to the random error term.

The coefficient for dividend yield is positive in all models. This suggests that companies with higher dividend yields tend to have higher closing market prices. This makes sense, as investors are willing to pay more for stocks that pay out higher dividends. Similarly, a positive coefficient for leverage in closing market price is that investors might be willing to pay a premium for companies that utilize debt strategically to finance growth, potentially because the potential for higher returns outweighs the perceived risk of increased debt. These findings support previous research by Michaely & Roberts (2006), La Porta et al. (2000), and Kuo et al. (2013) who all identified a positive impact of dividend yield on stock prices, potentially helping to address the issue of excess free cash flow within companies.

In addition, the coefficient for growth rate is positive which suggests that companies with higher growth rates tend to have higher closing market prices. This is also intuitive, as investors are willing to pay more for stocks that are expected to grow more quickly. However, the coefficient for operating risk is negative and statistically significant. This suggests that companies with higher operating risk tend to have lower closing market prices. This makes sense, as investors are willing to pay less for stocks that are considered to be more risky.

Conclusion and Implication

The research on dividends in Nepal investigates the relationship between company characteristics and payout strategies, offering valuable insights into the dynamics of dividend distribution within the country's corporate landscape. Larger, profitable firms with higher free cash flow tend to distribute more dividends. Surprisingly, debt seems to be positively linked to dividends, potentially indicating its use to boost shareholder returns. Interestingly, companies with high future growth prospects prioritize reinvestment over immediate payouts. Additionally, insider ownership has a negative impact on dividends, suggesting decisions are made for all shareholders. The inconclusive link between debt and stock price, especially for high-growth companies, needs further exploration. Finally, the study highlights a potentially weaker role for dividend signaling in Nepal compared to developed markets, suggesting areas for improvement in market efficiency and investor education.

This study offers valuable insights for investors and companies in the Nepalese market. Investors seeking strong dividend payers should target companies with high profitability, large size, and moderate debt. However, don't chase high dividend yields alone, as they may not be a reliable indicator in Nepal. Companies, on the other hand, should weigh future growth plans when setting dividend policy. If high growth is a priority, reinvesting profits might be more strategic than high payouts. The study also suggests that debt can be a tool to boost shareholder returns through dividends, but responsible management is crucial. Finally, the findings highlight a potentially weaker role for dividend signaling in Nepal's developing market. This implies a need for increased market efficiency and investor education to strengthen the market's communication channels.

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Impact of Digitalization on Financial Performance of Nepalese Financial Institutions

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Abstract

This paper aims to analyze the impact of digitalization on financial performance of Nepalese financial institutions. The study employs balanced panel data collected from the payment oversight report, Bank Supervision Report and Financial Institutions Supervision Report published by Nepal Rastra Bank. The study uses data of all Banks and Financial Institutions (BFIs) of Nepal for the study period from FY 2015/16 to FY 2021/22. In the study, operating profit is the dependent variable and the independent variables are debit cards, atm terminal, number of mobile banking users and number of internet banking users. The study uses descriptive, correlation and regression approach over Panel Least Square Model. The result shows that debit card holders and ATM terminals has a positive and significant impact on operating profit of the BFIs. Likewise, mobile banking and internet banking has positive impact on the operating profit of the BFIs. Similarly, the beta coefficients are positive for debit card holders, ATM terminals, mobile banking users and internet banking users with the operating profit. The result shows that higher the number of debit card holders, ATM terminals, mobile banking and internet banking users, higher would be the operating profit of the BFIs.The study concludes that digitalization seems to be the most dominant factor of increasing the financial performance, indicating increase in operating profit. The conclusion has implications for the bankers in achieving the financial strength of the organization and increasing customer base whereas, forregulators in promoting digitalization in the economy. The finding suggests that financial institutions needto focus on digital services so that they can improve their operational efficiency.

KEYWORDS: **digitalization, financial performance, digital channels, operating profit**

Introduction

Digitalization is application of digital technologies and digital data to transform organization's physical process to digital changing the way of interact between customers and financial institutions. It automates the people-driven work through software driven processes due to which digitalization is expected to increase the productivity and efficiency of the organization and reduces the costs. Digitalization is the way in which many domains of social life are restructured around digital communication and media infrastructures or digitalization is the process of moving physical business to digital (Dunlop, 2018).

With the emergence of digital banking services including-mobile banking, internet banking, credit cards, debit cards, automated teller machine (ATM), Point of sale (POS) machines and so on, the way financial institutions operate these days has completely been revolutionized. As Bank and Financial Institutions acts as intermediary to facilitate the surplus and deficit savings by mobilizing those funds through efficient allocation and increases the quantum of investment in cohesion to theory of money multiplier, they are the major player in the economic development of the nation. Hence, to foster the economic activities, digital banking services has been prioritized in the country as it facilitates the economic activities and supports in the financial inclusion by bringing unbanked population in the banking channels.

In the recent years, the banking industry around the globe has seen a tremendous shift, driven by the development and adoption of innovative digital technologies. The growth in the global digital payment industry has underpinned by a compound annual growth rate (CAGR) of 11% which is USD 5,872 billion and by the end of 2025 it is projected to reach USD 9,073 billion. The growth of cashless transaction volume in Asia-Pacific region is expected to increase by 109 percent from 2020 to 2025 along with an expectation of 76% growth during 2025 and 2030. Other regions, including Africa, Europe,and Latin America, are also witnessing substantial growth, though the US and Canada are expected to have a mild growth (Nepal Rastra Bank, 2023).

In the context of Nepal, there are 5,163 ATM machines, over 12.7 million debit card holders, 0.2 million credit card holders and over 23.7 million mobile banking users (Nepal Rastra Bank, 2024).

Manzoor (2011) expressed that the advent of electronic banking has resulted in a revolution and a redefinition, with an increasing number of institutions offering financial services online. Burnham (1996) stated that e-banking encompasses various technologies, including Automated Teller Machine (ATM), point of sales (POS) system, Telephone banking (Tele-banking), Internet Banking, Mobile Banking, QR and so on. These technologies have revolutionized banking transactions and are crucial for the long-term survival of banks.

According to Suoranta and Mattila (2004) the nature of selling and buying financial services has changes as technological advancement has challenged the providers of financial services. Yao et al. (2020) analyzed that the banking industry is the most important source of economic country for any country hence digital transactions and digitization are necessary for the future, less is known about their economic and financial effects.

In Nepal, 67.3% of the population has access to the bank accounts (Nepal Rastra Bank, 2023). Over the past decade, Nepal has witnessed a surge in digital adoption. The 4G/LTE services now cover 739 out of 753 local levels across 77 districts in Nepal. The smartphone penetration rate stands at 72.94% and 38% households have access to internet services. The cost of connectivity has also dropped significantly from USD 2.25 per GB in 2019 to USD 0.46 per GB in 2023. Thus, digital technologies become accessible and affordable, the digital divide specially the rural and gender divide is gradually narrowing. The opportunities still exist for digital innovators as 50% adults from rural area and 40% adults from urban area still lack an account at financial institutions (Nepal Telecommunication Authority, 2023).

With the increase in internet penetration and access to smartphone, the banking landscape of Nepal has been digitalized. It has further supported the bank to reduce the operational cost, improve their operational efficiency, reduce the need of more human interactions and improve customer satisfaction level and has been reshaping the banking landscape of Nepal. The avenues of digitalization have undergone rapid transformation in the banking industry. It further aims to disrupt the way BFIs used to operate and enhance customer experience hence it become important to understand and examine its impact on the financial performance of the BFIs. Further, it helps to understand the contribution of digitalization on the performance of the BFIs, its impact on the economic activities, how it has been supporting in the economic development and explores the need of digital innovation in the banking industry along with why this topic is crucial in the context of banking industry of the nation.

Further, the remainder of the study is organized into five sections. Section two reviews the relevant literature and section three delineates research methodology. Accordingly, section four presents the results, and the final section, five, draws conclusions of the study findings.

Literature Review

Digitalization in financial sectors started more than two decades back, and with time there has been introduction of advance technologies. Digitalization is believed to reduce the operational cost, improve customer experience

and performance of the banking sectors that further contributes in higher profits. Customers have widely embraced digital payment modes, leading to a substantial increase in both physical and e-commerce transactions. PwC (2021) urged that the remarkable uptrends in the payments industry, particularly in the Asian markets, are driven mainly by new business models and innovation. In addition to digital payments, digital lending is gaining traction, with fintech's applications offering credit through digital channels and employing data-driven underwriting and risk management.

The BFIs has been continuously introducing digital technologies to attract the customers and improve their efficiency. However, it is still unclear how the banking sector has been impacted by digitalization. There is need to understand to what extent digitalization has changed the banking landscape and how the banking sectors are adapting to the changes. PwC (2022) highlighted that data privacy and cybersecurity will be the top concerns for regulators over the next five years, followed by digital identity and authentication, as well as cryptocurrencies and CBDCs.

Omatayo and Olusegun (2023) discovered that the introduction of e-banking had a beneficial impact on the bank's profitability. Nevertheless,the profitability of banks has been improved as a result of the optimization of their operations facilitated by technology primarily through electronic banking platforms.On the other hand, Malhotra and Singh (2009) found that there is no significant correlation between profitability and the provision of internet banking. Conversely, internet banking is significantly and negatively correlated with the risk profile of the banks.

Wagle (2023) examined the e-banking's effects on financial performance of Nepalese selected commercial banks taking the data from fiscal year 2016/17 to 2020/21. The study found that the mobile Banking, Internet Banking, ATM, Debit Card has insignificant impact on profitability of Nepalese commercial banks in terms of Return on Assets (ROA). However, Credit Card has negative but significant impact on profitability. Dangol and Humagain (2020) concluded financial innovation and quality of financial services are the significant determinants of financial inclusion.

Rana (2016) stated those consumers are interested in electronic banking services because of ease and time saving. Increase in use of internet banking services has also led to increase in the number of customers. The study also stated that people are encouraged to engage in banking and financial institutions due to increase in technology and research. However, Nepal is yet to experience a true digital payment system while experimentation is underway for the use of agent network and other payment infrastructure (Atreya, 2018).

One of the study have found that in terms of e-banking, ATM services is adapted by most of the banks in Nepal, while mobile banking getting the popularity but internet (computer-based) banking was still not available (Banstola, 2008). Bhattarai et. al. (2023) examined the effectiveness of digital payments on the performance of Micro, Small, and Medium Enterprises (MSMEs) in Nepal. The study revealed that the frequency of use of digital payments, perceived usefulness, perceived security, and ease in making payments to suppliers/creditors have a significant impact on the firm's performance. However, digital literacy and ease in accepting payments from customers/debtors do not have a significant influence on firm performance.

The conventional banking model has been disrupted by technological innovation leading to a shift towards a totally digital banking landscape. The physical banking of the nation is transforming into a phygital (physical + Digital) banking experience. After the establishment of first bank in Nepal i.e Nepal Bank Limited, the modern banking kicks off in 1990 with the introduction of credit cards by Nabil bank. Later, in 1995 Himalayan Bank introduce ATM along with credit cards. In 2001, internet baking was started by Kumari bank and mobile banking was started by Laxmi Bank in 2004 with the launch of Mobile Khata in 2012.

Therefore, this research is carried out with an intention to find the answer to following questions:

a) What are the trend and pattern of digitalizationon the financial performance of Financial Institutions in Nepal?

b) What is the impact of digitalization on the financial performance of Financial Institutions?

Hence, the primary objective of the research is to explore the impact of digitalization on the performance of BFIs of Nepal. In addition, the specific objective of this research is:
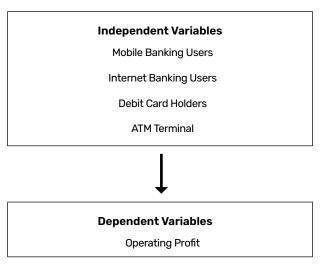
1. To examine trend and pattern of digitalization on the financial performance of Financial Institutions in Nepal.
2. To analyze impact of digitalization on financial performance of Financial Institutions.

Based on the literatures and empirical evidences, the study has developed the following hypotheses:

H1: There is significant relationship between mobile banking and operating profit.
H2: There is significant relationship between internet banking and operating profit.
H3: There is significant relationship between debit card holders and operating profit.
H4: There is significant relationship between ATM terminals and operating profit.

Based on the objective of the study and the literature review following conceptual framework is framed to

summarize the focus and scope in terms of variables included.

Figure 1: Schematic diagram of relationship between operating profit and the digital services.

Independent Variables
Mobile Banking Users
Internet Banking Users
Debit Card Holders
ATM Terminal

↓

Dependent Variables
Operating Profit

Note.Author

Methodology

The study attempts to examine the effect of digital services of Nepalese financial institutions on their financial performance. The study is based on secondary data collected from payment oversight report, bank supervision report and financial institution supervision report published by Nepal Rastra Bank from FY 2015/16 to FY 2021/22.The study employs descriptive, correlation and regression approach over balance panel data regression approach to deal with it. All the data calculation and analysis has been performed on Eviews 12and IBM SPPS 23.0 software packages.

Table 1: List of Sample BFIs along with the Study Period and Number of Observations

S. No.	BFIs	Study Period	Observations
1	Commercial Banks	2015–2021	7
2	Development Banks	2015–2021	7
3	Finance Companies	2015 –2021	7
	Total number of observations		**21**

Note.Author

As of August 2023, there are 20 commercial banks, 17 development banks, 17 finance companies and 57 micro-finance companies (NRB, 2023). Table 1 shows the details of BFIs chosen for the study along with the study period. Thus, the study was based on data of twenty-one observations.

Validity and Reliability of the Study

No attempt has been made to examine the reliability of the available secondary data since they are officially released by the related banks and Nepal Rastra Bank. Thus, the consistency of finding and conclusions are dependent upon the secondary data and information.

Model Specification

In the study, operating profit was the dependent variable and the independent variables were debit cards holders, ATM terminals, mobile banking users and internet banking users.

Thus, the independent variables were segregated into two models. In the model 1, Debit card holders and ATM terminals were considered. And in the Model 2, internet banking users and mobile banking users were taken to check the association with the operating profits. The estimated relationship between the dependent and independent variables are formulated as below:

OPERP = ƒ (DEBITC, ATMT, MOBIB and INETB)

Model 1: Panel Least Square

$$OPERP_{it} = \alpha_0 + \beta_1 DEBITC_{it} + \beta_2 ATMT_{it} + \varepsilon_{it}$$

Model 2: Panel Least Square

$$OPERP_{it} = \alpha_0 + \beta_1 INETB_{it} + \beta_2 MOBIB_{it} + \varepsilon_{it}$$
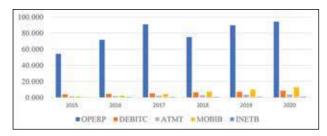
Where, $\beta_n > 0$ (n = 1, 2, 3 and 4), α_0 is the intercept term and ε_{it} is the error term which shows the effect of unobservable cross-section variables changing over time. Under this model, the coefficients of the explanatory variables are restricted to be common across the unit (i) and the time period (t).

Results and Discussions

Structure and Pattern of Variables of the Study

The structure and pattern of digitalization of the commercial banks for the period of FY 2015/16 to FY 2021/22 is presented in Figure 4.1. The figure shows that the operating profit of the BFIs is on increasing trends over the years. Similarly, there is also significant increase in number of debit card holders, increase in number of ATM terminals along with the increase in number of mobile banking users. It can be said that with the increase in Debit card users, mobile banking users, internet banking users and ATM terminals, there has been significant increase in the operating profit over the years. In the year 2021, the operating profit of the commercial bank is high and mobile banking users are also high compared to other years taken in the study.

Figure 4.1: Structure and Pattern of Digitalization of the Commercial Banks

Note.Eviews 12, Author
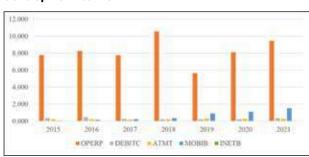
Structure and Pattern of Digitalization of the Development Banks

The structure and pattern of digitalization of development banks for the period of FY 2015/16 to FY 2021/22 is presented in Figure 4.2. The figure shows that the operating profit of the development banks is increasing with the gradual increase in number of mobile banking users. Meanwhile, the debit card holders and number of ATM terminals of the development banks are also increasing significantly over the years. In year 2018, the operating profit of the development bank is high of all time compared to other periods taken in the study. In the year 2021, the mobile banking users have grown significantly that could be the impact of COVID-19 pandemic and adoption of digital payment systems by the users.

Figure 4.2: Structure and Pattern of digitalization of development banks

Note.Eviews 12, Author
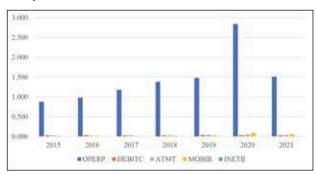
Structure and Pattern of Digitalization of the Finance Companies

The structure and pattern of digitalization of finance companies for the period of FY 2015/16 to FY 2021/22 is presented in Figure 4.3. The structure and pattern of finance companies reveals that with the increase in debit card holders, number of ATM and increase in number of mobile banking users, there has been increase in the operating profits. In FY 2020, the mobile banking users has increased significantly making positive impact on the operating profit. In this year, mobile banking users might have been increased more compared to rest of the years due to COVID-19 breakdowns and the shift of users towards digital payments. However, the debit card holders, ATM users, mobile banking and internet banking users of finance companies are increasing leading to the increase in operating profits. In the FY 2021, the operating profit was high compared to the other years taken for the study.

Figure 4.3: Structure and Pattern of Finance Companies

Note.Eviews 12, Author

Descriptive Statistics

The descriptive statistics used in this study consists of minimum, maximum, mean and the standard deviation associated with variables under consideration. Therefore, descriptive statistics enables to present the data in a more meaningful way, which allows simpler interpretation of the data.

Descriptive Statistics of Commercial Banks

The descriptive statistics of dependent variable i.e operating profit and the independent variables viz. debit card, ATM terminals, mobile banking and internet banking of the Nepalese commercial have beenpresented in Table 4.5:

Table 4.5: Descriptive Statistics of Commercial Banks

Variables	Minimum	Maximum	Median	Mean	Std.Deviation
OPERP	43.86	94.22	75.11	74.26	19.37
DEBITC	4.14	8.46	5.30	5.75	1.63
ATMT	1.48	3.98	2.55	2.61	1.00
MOBIB	0.99	12.64	4.71	5.70	4.49
INETB	0.11	1.01	0.77	0.64	0.31

Note.Eviews 12, Author

From Table 2, the minimum value of operating profit of commercial banks was Rs 43.86 billion while the maximum value was Rs 94.22 billion with a mean of 74.26 billion and has 19.37standard deviation. The minimum debit card userswere4.14 million and maximum debit card users are 8.46 million with a mean of 5.75 and standard deviation of 1.63. The standard deviation of operating profit is higher than the mean value which indicates the volatility of the operating profit across the BFIs during the observation period.

Descriptive Statistics of Development Banks
Table 4.6 shows the descriptive results of the development banks ranging from FY 2015/16 to FY 2021/22.

Table 4.6: Descriptive Statistics of Development Banks

Variables	Minimum	Maximum	Median	Mean	Std.Deviation
OPERP	5.63	10.56	8.10	8.22	1.53
DEBITC	0.21	0.47	0.26	0.29	0.09
ATMT	0.17	0.31	0.23	0.25	0.05
MOBIB	0.05	1.50	0.35	0.61	0.55
INETB	0.01	0.04	0.02	0.02	0.00

Note.Eviews 12, Author

The results shows that the average operating profit of development banks during the review period lies around Rs 8.22 billion whereas the average debit card holders, ATM terminals and mobile banking users of development banks lies below 1 billion. Whereas the average of the internet banking user seems negligible as the internet banking was a new term among the development banks and the adoption of internet banking among customers of development banks was gradually growing over the years.

Descriptive Statistics of Finance Companies
Table 4.7 shows the descriptive statistics of the finance companies from the FY 2015/16 to FY 2021/22.

Table 4.7: Descriptive statistics of Finance Companies

Variables	Minimum	Maximum	Median	Mean	Std.Deviation
OPERP	0.88	2.84	1.38	1.46	0.65
DEBITC	0.02	0.03	0.03	0.03	0.00
ATMT	0.01	0.05	0.03	0.03	0.01
MOBIB	0.01	0.09	0.02	0.03	0.02
INETB	0.00	0.00	0.00	0.00	0.00

Note.Eviews 12, Author

During the review period, the average operating profit of the finance companies lies above Rs 1.4 billion whereas average number of debit card holders, average number of ATM terminals, and average number of mobile banking users lies below 20 million on an average.

Correlation Analysis
Pearson's correlations coefficients of dependent variables and the independent variables are presented in Table 4.8:

Table 4.8: Pearson's Correlation Coefficients Matrix

	OPERP	DEBITC	ATMT	MOBIB	INETB		
OPERP	1					OPERP	1.000
DEBITC		1				DEBITC	0.979**
ATMT			1			ATMT	0.973**
MOBIB				1		MOBIB	0.858**
INETB					1	INETB	0.859**
	OPERP	DEBITC	ATMT	MOBIB	INETB		OPERP

*Note **Correlation is significant at the 0.01 level (2-tailed)*
Source: Eviews 12

The result reveals that debit card holders, ATM terminals, Mobile banking and internet banking users of banks and financial institutions have significant relationship with operating profit of the BFIs. The result is significant at 1 percent level of significance.

Regression Analysis

The estimated results of regression models with independent and dependent variables are presented hereafter:

Panel Least Squares Model

The Table 4.9 represents panel least square regression results on impact of digitalization on the financial performance of the BFIs.

Natural log denotes the constant elasticity among the dependent and independent variables. The natural log has been taken in the regression analysis as it helped to interpret the coefficients in a more meaningful way as the variables taken as sample have multiple effects. It further makes the interpretation of the relationship between the variables easy improving the overall model fit. The regression results reveal that F-statistic is significant at 1 percent level of significance meaning that the model is best fitted. The adjusted R-square value of 0.982667 reveals that the explanatory variables determine the 98.26% percent of the total change in independent variables and the remaining 1.74%percent is explained by other variables, which the study has not taken into consideration. Generally higher adjusted R-square value indicates a better fit of regression model to the data. However, the obtained value here is quite high.

Table 4.9: Model 1: Panel Least Squares Model

Dependent Variable: LOG (OPERP)
Method: Panel Least Squares
Sample: 2015 2021
Periods included: 7
Cross-sections included: 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.25	0.094	34.48	0.00
LOG(DEBITC)	0.30	0.13	2.28	0.03
LOG(ATMT)	0.55	0.15	3.48	0.002
Root MSE	0.205	R-squared		0.984
Mean dependent var	2.225	Adjusted R-squared		0.982
Durbin-Watson stat	2.507	Prob(F-statistic)		0.000

Note: The asterisk signs (**) and (*) indicate that the results are significant at 1 percent and 5 percent level respectively.
EViews 12, Author

The increase in 1 unit of debit card holder increases the operating profit by 0.30 units. Likewise, 1 unit increase in ATM terminal leads to 0.55 units increase in operating profit. From the result, it can be said that there is a positive impact of ATM terminals and number of debit card holders on the operating profit which is significant at 1 percent level of significance. Since the beta coefficient is β=3.25, it implies that 1 unit increase in debit card holders and ATM terminal determines only the 3.25 units increase in operating profit keeping other things constant. The rationale behind this result is that the Nepalese BFIs needs to increase the number of ATM terminals and they need to increase the number of debit card holders so that they can increase their operating profits improving their operational efficiency.

In the regression analysis natural log has been taken for the specification of the model. Natural log denotes the constant elasticity between the dependent and independent variables. If the variables taken as sample have multiple effects then natural log helps to interpret the coefficients in a more meaningful way. It further makes the interpretation of the relationship between the variables easy improving the overall model fit. The regression results the adjusted R-square value of 0.96 reveals that the explanatory variables determine the 96.66% percent of the total change in independent variables and the remaining 3.34% percent are explained by other variables, which the study has not taken into consideration. Generally higher adjusted R-square value indicates a better fit of regression model to the data. However, the obtained value here is quite high.

Table 4.9.1: Model 2: Panel Least Squares Model

Dependent Variable: LOG(OPERP)
Method: Panel Least Squares
Sample: 2015 2021
Periods included: 7
Cross-sections included: 3
Total panel (balanced) observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(INETB)	0.61	0.08	7.04	0.00
LOG(MOBIB)	0.11	0.08	1.29	0.21
C	4.34	0.21	20.54	0.00
Root MSE	0.29	R-squared		0.96
Mean dependent var	2.23	Adjusted R-squared		0.96
Akaike info criterion	0.72	Sum squared resid		1.88
Schwarz criterion	0.86	Log likelihood		-4.51
Hannan-Quinn criter.	0.75	F-statistic		261.17
Durbin-Watson stat	1.39	Prob(F-statistic)		0.00

Note.Eviews 12, Author

One unit increase in internet banking users leads to increase in operating profits by 0.61 units. Similarly, one unit increase in number of mobile banking users can lead to increase in 0.11 units of operating profits of financial institutions. It can be concluded that the number of internet banking users and the number of mobile banking users of the BFIs has a positive effect on the operating profit. Since the beta coefficient is β=4.34, it implies that 1 unit increase in mobile banking and internet banking users determines 4.34 units increase in operating profit keeping other things constant. The rationale behind this result is that the Nepalese BFIs should focus on enhancing their digital services fostering digitalization.

Conclusion

For any institutions whether it be banks or financial institutions finance performance is one of the most important factors that impacts on the overall performance of the organizations and also influence the decision making. This study analyzes

on the relationship between digitalization of banking services and its impact on the operating profit of the Nepalese Banks and Financial Institutions. Balanced panel data was employed ranging from fiscal year 2015/16 to fiscal year 2021/22. The study has taken number of ATM terminals, number of debit card holders, number of mobile banking users and number of internet banking users of the commercial banks, developments banks and finance companies as independent variables to check relationship with the operating profit of the BFIs.

The study reveals that there was positive impact of the debit cards and ATM terminals on the operating profit of the BFIs. It indicates that the BFIs should focus on enhancing the ATM terminals all across the country and also should focus on increasing the number of debit card holders. The banks and financial institutions across the world have given emphasis on the digitalization of the banking services, it not only improves the customer experiences and increase the efficiency and save the cost but it also helps to increase the operating profit as well. The study has found out that there was positive impact of mobile banking and internet banking users with the operating profit of the BFIs.

The major conclusion of the study shows that the increase in digital services such as mobile banking, internet banking, debit cards and ATM terminals can help to increase the operating profit of the bank and financial institutions.

Based on the study, it is recommended that financial institutions must invest on the digital services and integrate innovative digital services in their existing systems to increase their operating profits. The financial institutions need to examine the risk associated with digitalization including phishing, cyber security, deepfakes, data breaches along with its impact on financial stability. Study needs to be conducted to analyze the influence of government regulations and policies on digital transformations and its impact on the financial performance of the financial institutions. The study has important implication to the policy makers inlcuding the central bank viz. Nepal Rastra Bank, Ministry of Finance

to florish the banking service to the unbanked population with the help of the digitalization in the banking sector. As the government data reports that only 67 percent (approx.) of the populaton have the banking access, digitalization can add value to increase more leading to the strong financial performance opportunity to the banks and financial institutions as well.

The study further can be extended by increasing the sample size of the banks considering the more observation period as well. Likewise, further studies can also incorporate other variables like; bank risk, bank age, operating expenses, regulatory requirements and other macroeconomic variables for the comprehensivefindings and policy implications.

Limitations of the Study

Every study has limitations due to different factors of institutions, study period, reliability of statistical data, tools, techniques and variances. All efforts have been made to ensure that the research is done and to optimize the ability to achieve theresearch objective. Following arethe major limitations of this study:

i. The study is limited to electronic banking as an aspect of digital banking services and only the data from 2015-2021 are taken into consideration due to limited availability of the data and limited period.
ii. The sample used in this research has considered the number of digital services rather than the volume or the transaction amount.
iii. Only operating profitis taken as indicator of financial performance in thisstudy and this is not the only measure to determine the performance of the banks.
iv. No attempt has been made to examine the reliability of the available secondary data since they are officially released by the related banks and Nepal Rastra Bank. Thus, the consistency of finding and conclusions are dependent upon the secondary data and information.

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Determinants of Employee Motivation and its Impact on Job Satisfaction in the Context of Nepalese Commercial Banks

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Abstract

This study examines the determinants of employee motivation and its impact on employee satisfaction in the context of Nepalese commercial banks. Employee motivation and employee satisfaction are the dependent variables. The selected independent variables are job security, working environment, training, supervisory support, career growth opportunities and reward. The primary source of data is used to assess the opinions of the respondents regarding employee motivation and level of job satisfaction in Nepalese commercial banks. The study is based on primary data with 120 respondents. To achieve the purpose of the study, structured questionnaire is prepared. The correlation coefficients and regression models are estimated to test the significance and importance of different human resource management practices on employee motivation and satisfaction in Nepalese commercial banks. The study showed that supervisory support has positive impact on employee motivation and satisfaction. This reveals that higher the supervisory support in the banks, higher would be the employee motivation and satisfaction. The result also showed that training has positive impact on employee motivation and satisfaction. It implies that increase in training and development programs leads to increase in employee motivation and satisfaction. In addition, reward has a positive impact on employee motivation and satisfaction. It indicates that fair reward system leads to increase in employee motivation and satisfaction. Similarly, job security has a positive impact on employee motivation and satisfaction. It reveals that increase in security

in employee job leads to increase in employee motivation and satisfaction. The result also showed that working environment has positive impact on employee motivation and satisfaction. This reveals that better working environment leads to increase in employee motivation and satisfaction. Furthermore, career growth opportunities have positive impact on employee motivation and satisfaction. It reveals that increase in career growth opportunities leads to increase in employee motivation and satisfaction.

KEYWORDS: **Employee motivation, job security, working environment, training, supervisory support, career growth opportunities, reward and job satisfaction.**

Introduction

In this today's competitive business world, it is not only important for the organizations to earn profit but it has become most important to satisfy competitive employees. Retention of employees is not so easy, until an organization provide them with intrinsic and extrinsic rewards and opportunities for career progression. This can be done through career counseling and goal setting, so that employees can understand their abilities and take correct action plans to fulfill their career goals (Cardon and Stevens, 2004). The success or failure of an organization depends on the quality of human resources (Rynes et al., 2004). In current era of highly volatile business environment, organizations are facing emerging challenges in form of acquisition and optimization of human resource. Human resources are considered as a source of sustainable competitive advantage. The success of an organization depends upon several factors but the most crucial factor that affects the organization performance is its employee. Human resource is considered as a valuable asset as the success of an organization lies upon how productive the employees of an organization are in terms of achieving the goals of the organization (Armstrong, 2001). Efficient human resource management and maintaining higher job satisfaction level in banks determine not only the performance of the bank but also affect the growth and performance of the entire economy.

Danish and Usman (2010) assessed the impact of reward and recognition on job satisfaction and motivation in the context of Pakistan. The study found that rewards and recognition have a positive impact on employee work motivation. Alonso and Lewis (2001) found that recognition has a significant positive impact on employee satisfaction and motivation. Employees who are able to experience and receive recognition for their work are also able to have a better perception of their work, their workplace and the people they work for. Similarly, Ndungu (2017) examined

the effects of rewards and recognition on employee performance in public educational institutions of Kenyatta University. The study revealed that there is a significant positive relationship of reward and recognition with employee performance. In addition, Baskar and Rajkumar (2015) found that there is a direct and positive relationship of rewards and recognition with employee job satisfaction and motivation. Sadri and Govenas (2013) concluded that there are different parameters of quality of work life such as working conditions, facilities, equipment, compensation and rewards which play vital role in influencing the job satisfaction of the employees. Rifadha (2015) revealed that there is a positive relationship between conducive workplace designs that is suitable for employee's work and the level of employee performance. Similarly, Barry (2008) found that there is a positive relationship between office design and employee performance. In addition, Saidi et al. (2019) showed that there is a significant positive relationship between the working environment and employee performance. Likewise, Tulenan (2015) revealed that work environment has a significant positive effect on employee performance.

Muogbo (2013) investigated the impact of employee motivation on organizational performance of selected manufacturing firms in Anambra State. The study revealed extrinsic motivation given to workers in an organization has a significant positive influence on the organizational performance. Similarly, Manzoor (2012) found that employee recognition and employee motivation towards organizational tasks have positive relationship and reduces turnover intention. Moreover, Vnouckova and Klupakova (2013) revealed that lack of motivational principles leads to employee dissatisfaction and disaffection and may lead to employee turnover. Sattar and Ahmed (2014) investigated factors effecting employee turnover in banking sector. The study revealed that career growth has less influence on employees' turnover. Organizations that retain their high performers are bound to be successful in performance and at the same time avoid expenses that are incurred in advertisement of vacant positions, recruitment and selection, induction and training new employees that follow and employee lost (Okioga, 2012). The organizations with lower employee turnover can gain advantages against them competitors by reducing overall labor costs and improving productivity. Employee retention is important to organizations, as increased turnover creates instability and puts additional workload and stress on remaining staff, increasing job dissatisfaction and hence, turnover. Hanaysha (2016) explored the effects of employee engagement, work environment, and organizational learning on organizational commitment. The study found that work environment has a significant positive impact on organizational commitment. Ekowati et al. (2013) stated that a satisfied employees will always perform better in his/her jobs, they will speak positive about organization, help co-workers, and make their performance beyond expectation. It implies that there is a positive relationship between job satisfaction and employee performance.

Likewise, Hira and Waqas (2012) showed that satisfied worker is always a productive worker for an organization. Incentives, motivations, extra benefit and monitory rewards increase the performance level of the employee. Job performance of employees lays the foundation to achieve desired organizational goals and objectives (Hettiarachchi, 2014). A satisfied employee would have an emotional bond with the organization and takes pride in their membership, which paves way to keep up industrial integrity and a high morale (Shaju and Subhashini, 2017). In addition, Yuliza et al. (2021) revealed that work movements, job promotion and compensation have a positive relationship with employee performance.

Employees who are well-trained can easily share their skills and updated knowledge by using their creativity to improve the output of the organization. Training is the continuous effort and attempt designed to improve the skill and performance of the employee. According to Tahir et al. (2014), training and development have significant positive effect on the productivity and job performance of employee. Moreover, there is a strong positive relationship between training and employee job performance (Sultana et al., 2012). Training and development in organizations positively affect the employee and improves his/her performance and development. As for evaluation, it gives the individual the ability to work better to reach the highest levels. A good compensation package is important to motivate the employees to increase the organizational productivity. Shah et al. (2018) stated that there is a significant and positive relationship of compensation and employee empowerment with job satisfaction. Satisfied employees are creative and innovative in the organization. Nguyen et al. (2015) showed that earning, work environment and promotion opportunities positively influence employee performance. Similarly, compensation, job promotions, and job satisfaction have a positive effect on employee performance (Rinny, 2020). Aloysius and Christy (2013) concluded that there is a significant positive relationship between reward system and job satisfaction. Furthermore, Mabaso and Dlamini (2017) showed positive and significant effect of compensation on employee job satisfaction.

In the context of Nepal, Acharya et al. (2022) showed that recognition, flexible work hour, career development opportunities, belongingness and job security have positive impact on employee motivation among the commercial banks. Yukongdi and Shrestha (2020) examined the effect of affective commitment, job satisfaction and job stress on intention to leave among bank employees in Nepal. The study found that merit-based recruiting, competitive pay structure, timely promotion scheme based on performance, training and development programs, proper rewards and recognition for good work tend to have a positive effect on affective commitment among employees. Similarly, Rawal et al. (2022) examined the impact of workplace environment on employee performance in Nepalese insurance companies. The study showed that supervisor support, flexible working environment, job aids, physical working environment and teamwork have positive effect on employee performance. The study concluded that better workplace environment system leads to increase in employee performance in insurance companies. The study also concluded that team work followed by physical working environment and supervisor support is the most significant factor that explains the changes in employee performance in Nepalese insurance companies. Thami (2022) examined the impact of wages, working environment, work arrangement, job skills and stress management on employee performance in Nepalese insurance companies. The study showed a significant positive effect of wages and working environment on employee performance.

The above discussion reveals that the empirical evidences vary greatly across the studies concerning employee motivation and its impact on employee job satisfaction. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The major objective of the study is to analyze the determinants of employee motivation and its impact on employee job satisfaction in the context of Nepalese commercial banks. More specifically, it examines the impact of job security, working environment, training, reward, supervisory support and career growth opportunities on employee motivation and satisfaction in Nepalese commercial banks.

The remainder of this study is organized as follows. Section two describes the sample, data and methodology. Section three presents the empirical results and the final section draws the conclusion.

Methodological Aspects

The study is based on the primary data. The data were gathered from 120 respondents through questionnaire. The respondents' views were collected on job security, working environment, training, reward, supervisory support, career growth opportunities, level of motivation and satisfaction in the context of Nepalese commercial banks. The study is based on descriptive and causal comparative research designs.

The model
The model estimated in this study assumes that employee satisfaction and employee motivation depend on job security, working environment, training, reward, supervisory support and career growth opportunities. Therefore, the model takes the following forms:

$$EM = \beta_0 + \beta_1\,JS + \beta_2\,WE + \beta_3\,TR + \beta_4\,RE + \beta_5\,SS + \beta_6\,CGO + e$$

$$JOS = \beta_0 + \beta_1\,JS + \beta_2\,WE + \beta_3\,TR + \beta_4\,RE + \beta_5\,SS + \beta_6\,CGO + \beta_7\,EM + e$$

Where,
EM = Employee motivation
JOS= Job satisfaction
JS = Job security
WE = Working environment
TR = Training
RE = Reward
SS = Supervisory support
CGO = Career growth opportunities

Job security was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "Generally, my bank retains people who are considered to be good performers", "I can contradict with my supervisor without feeling the threat of losing my job" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α= 0.869).

Training was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "My bank conducts training program in regular interval", "All the employees get training opportunities fairly" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.826).

Career growth opportunities was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "There is professional growth in my career", "There is clear communication of information concerning career options and opportunities with the bank" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.835).

Working environment was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "My bank provides suitable and comfortable working conditions (working space, sitting arrangement, ventilation and air conditions)", "My work area is sufficiently equipped for my typical needs" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.866).

Supervisory support was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "My supervisor encourages me to seek new training and development opportunities", "My supervisor admires workers opinion" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.768).

Rewards was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "I am satisfied with the existing reward system in my bank", "My bank has satisfactory salary level in relation to the nature of job" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.768).

Employee motivation was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "Equitable salary system motivates me for hard efforts", "Promotional opportunities in my organization encourage for better performance" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.828).

Job satisfaction was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "I am satisfied with the amount of training I receive to do my job.", "Fair treatment among employees increases job satisfaction" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.965).

The following section describes the independent variables used in this study along with the hypothesis formulation.

Job security

Gholamreza et al. (2011) explored the impact of job security on employees' commitment and job satisfaction in Qom municipalities. The results showed a positive effect of job security on employee job satisfaction and long-term commitment. If an organization fails to provide job security to its employees whether they are on contract or permanent member, then the level of motivation and organizational commitment in them decreases and both these things directly affect their job performance (Rosenblatt et al., 1999). Similarly, Imran et al. (2015) assessed the relationship between job security, organizational justice and organizational productivity with the mediating role of job satisfaction in Pakistani organization. The study revealed that lack of job security and organizational justice as well as job satisfaction can be a cause of decrease in organization productivity. When the employees do not feel secure, they develop a feeling of loss of the desired job over their security, which may cause the lack of promotion, no progress in the current project and also get affected in the long-term career opportunities (Lambert, 1991). Based on it, this study develops the following hypothesis:

H1: There is a positive relationship of job security with employee motivation and job satisfaction.

Working environment

A positive working environment is vital in ensuring employee productivity to avoid unnecessary stress to

the employees thus affecting their work performances. Saidi et al. (2019) investigated the relationship between the working environment and employee performance based on five dimensions of the working environment. The finding showed that there is a significant positive relationship between working environment and employee performance. Awan and Tahir (2015) stated that the factors like supervisor support, relation with co-workers, training and development, attractive and fast incentives and recognition plans, adequate work load at work place are helpful in developing a working environment that has positive impact on employee's level of productivity in the organizations. Creating a work environment in which employees are productive is essential to increase profits for the organization and level of motivation as well (Gunaseelan and Ollukkaran, 2012). Based on it, this study develops the following hypothesis:

H2: There is a positive relationship of working environment with employee motivation and job satisfaction.

Training

Training is considered as an important element in the organization. It heavily influences people to learn how to be more effective at work by modifying knowledge, skills or attitudes through the learning experience to achieve a successful performance. Ocen et al. (2017) examined the role of training in building employee commitment and the task of job satisfaction in the association between training and employee commitment in the banking sector in Uganda. The findings revealed that there is a positive relationship of training with employee commitment, job satisfaction and employee commitment. Moreover, Terera and Ngirande (2014) explored the impact of training on job satisfaction and retention of employees at a selected tertiary institution. The results revealed that there is a positive significant relationship between training and employee retention. Schmidt (2007) revealed that training commitment, training needs assessment, training contents and delivery approaches, and training evaluation positively and significantly influence the employee's work commitment, job satisfaction and job performance. Based on it, this study develops the following hypothesis:

H3: There is a positive significance relationship of training with employee motivation and job satisfaction.

Reward

Reward management is one of the strategies used by human resource managers for attracting and retaining suitable employees as well as facilitating them to improve their performance through motivation and to comply with employment legislation and regulation (Martocchio, 2011). Edirisooriya (2014) examined the impact of rewards on employee performance in a public sector organization in Sri Lanka. The study concluded that there is a positive relationship between extrinsic reward, intrinsic reward and employee performance. Similarly, Datta (2012) argued that there is a positive relationship between financial reward

and employee performance. Likewise, Zirra et al. (2019) investigated the impact of fringe benefits on employee performance. The study also found that there is a positive and significant relationship between fringe benefits and employee performance. Based on it, this study develops the following hypothesis:

H4: There is a positive relationship of reward with employee motivation and job satisfaction.

Supervisory support

Okediji et al. (2011) stated that supervisory support is positively associated with the employee job satisfaction. Moreover, Mazumder et al. (2016) showed a positive significant correlation between supervisory support and job satisfaction. Parvin and Kabir (2011) revealed that support of supervisor and co-worker relation are the most important factors contributing to employee job satisfaction. Further, Karatepe (2010) showed that supervisory support reduces the effect of emotional exhaustion on job satisfaction and positively influence the job satisfaction. Qureshi and Hamid (2017) stated that coworker relationship and supervisor support can enhance the level of employee job satisfaction. Based on it, this study develops the following hypothesis:

H5: There is a positive relationship of supervisory support with employee motivation and job satisfaction.

Career growth opportunities

Weng and McElroy (2010) assessed that career growth refers to the extent to which an individual perceives that the employing organization provides an environment where his or her career goals can be attained. Shujaat et al. (2013) determined the relationship between career development opportunities available to the employees and their job satisfaction on private banks in Karachi. The study determined that there is positive relationship between career development and employee job satisfaction in banking sector. Moreover, Merchant (2010) observed that career development program enhances employee performance and has a positive impact on organization's overall effectiveness, performance and employee retention. Further, Chen et al. (2004) investigated the career development programs, job satisfaction, professional development and productivity in the context of Taiwan. The study found a positive association between career development programs, job satisfaction, professional development and productivity. Based on it, this study develops the following hypothesis:

H6: There is a positive relationship of career growth opportunities with employee motivation and job satisfaction.

Employee motivation

Danish andUsman (2010) found motivation as an accumulation of different processes which influence and direct behavior to achieve some specific goal. It is such a

dynamic in today's environment that explicitly creates and encompasses a positive impact on job. According to Irum and Ayesha (2014), employee motivation is considered as a force that drives the employees toward attaining specific goals and objectives of the organization. Moreover, Roos and Van Eeden (2008) assessed the relationship between employee motivation, job satisfaction and corporate culture in marketing research company in South Africa. The study found a positive association between employee motivation, job satisfaction and corporate culture. Based on it, this study develops the following hypothesis:

H7: There is a positive relationship between employee motivation and job satisfaction.

Results and Discussion

Correlation analysis

On analysis of data, correlation analysis has been undertaken first and for this purpose, Kendall's Tau correlation coefficients along with means and standard deviations have been computed, and the results are presented in Table 1.

Table 1: Kendall's Tau correlation coefficients matrix

This table presents Kendall's Tau correlation coefficients between dependent variable and independent variables. The correlation coefficients are based on 120 observations. The dependent variables are JOS (Job satisfaction) and EM (Employee motivation). The independent variables are JS (Job security), WE (Working Environment), TR (Training), SS (Supervisory support), CGO (Career growth opportunities) and RE (Reward).

Variables	Mean	S.D.	JS	WE	TR	SS	CGO	RE	EM	JOS
JS	3.428	0.874	1							
WE	3.514	0.781	0.511**	1						
TR	3.695	0.930	0.420*	0.423*	1					
SS	3.704	0.909	0.481**	0.495**	0.751**	1				
CGO	3.819	1.046	0.490**	0.246	0.517**	0.516**	1			
RE	3.819	0.843	0.238	0.210	0.365*	0.454**	0.559**	1.000		
EM	4.104	0.680	0.122	0.416*	0.226	0.217	0.057	0.200	1	
JOS	4.238	0.656	0.283	0.154	0.419*	0.294	0.537**	0.426*	0.342*	1

Notes: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.

Table 2 shows that reward is positively correlated to employee satisfaction. This reveals that higher the rewards and compensation in the banks, higher would be the employee satisfaction. The result also shows that training is positively correlated to employee satisfaction. It implies that increase in training and development programs leads to increase in employee satisfaction. In addition, job security is positively correlated to employee satisfaction. It reveals that increase in security in employee job leads to increase in employee satisfaction. Similarly, career growth opportunities are also positively correlated to the employee satisfaction. It reveals that increase in career growth opportunities leads to increase in employee satisfaction. The result also shows that working environment is also positively correlated to employee satisfaction. This reveals that better working environment leads to increase in employee satisfaction. Furthermore, supervisory support is positively correlated to the employee satisfaction. This reveals that higher the supervisory support in the banks, higher would be the employee satisfaction.

In addition, the study also shows that supervisory support is positively correlated to the employee motivation. This reveals that higher the supervisory support in the banks, higher would be the employee motivation. Similarly, job security is also positively correlated to the employee motivation. It reveals that increase in security in employee job leads to increase in employee motivation. The result also shows that training is positively correlated to employee motivation. It implies that increase in training and development programs leads to increase in employee motivation. Moreover, career growth opportunities are positively correlated to employee motivation. It reveals that increase in career growth opportunities leads to increase in employee motivation. In addition, working environment is positively correlated to employee motivation. It indicates that better working environment leads to increase in employee motivation. Furthermore, the result also shows that reward is also positively correlated to employee motivation. This reveals that better reward system leads to increase in employee motivation.

Regression analysis

Having analyzed the Kendall's Tau correlation coefficients matrix, the regression analysis has been carried out and the results are presented in Table 2. More specifically, it presents the regression results of job security, working environment, training, supervisory support, career growth opportunities and reward on employee motivation.

Table 2: Estimated regression results of job security, working environment, training, supervisory support, career growth opportunities and reward on employee motivation

The results are based on 120 observations using linear regression model. The model is EM= ß0 + ß1 JS+ ß2 WE + ß3 TR + ß4 RE + ß5 SS + ß6 CGO + e, where dependent variable is EM (Employee motivation). The independent variables are JS (Job security), WE (Working environment), TR (Training), SS (Supervisory support), CGO (Career growth opportunities) and RE (Reward).

Model	Intercept	Regression coefficients of						Adj. R_bar2	SEE	F-value
		JS	WE	TR	RE	SS	CGO			
1	3.499** (15.445)	0.213 (3.954)**						0.102	0.432	15.636
2	2.591 (9.187)**		0.421 (6.398)**					0.236	0.398	40.938
3	2.923 (11.806)**			0.351 (5.952)**				0.211	0.405	35.420
4	2.922 (13.082)**				0.350 (6.615)**			0.249	0.395	43.760
5	1.763 (6.225)**					0.613 (9.300)**		0.399	0.353	86.485
6	1.431 (5.076)**						0.671 (10.521)**	0.460	0.335	110.691
7	2.594 (9.142)**	0.010 (0.152)	0.430 (4.733)**					0.231	0.400	20.324
8	2.548 (8.997)**	0.027 (0.393)	0.304* (2.546)	0.157 (1.632)				0.240	0.397	14.615
9	2.499 (8.976)**	0.034 (0.500)	0.221 (1.820)	0.058 (0.563)	0.202 (2.469)*			0.270	0.389	12.928
10	1.638 (5.576)**	0.094 (1.521)	0.160 (1.458)	0.118 (1.214)	0.118 (1.580)	0.574 (5.579)**		0.412	0.349	19.059
11	0.587 (2.064)*	0.162 (3.084)**	0.165 (1.790)	0.086 (1.048)	0.052 (0.818)	0.405 (4.531)**	0.495 (7.294)**	0.587	0.293	31.550

Notes:
i. Figures in parenthesis are t-values
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Employee motivation is the dependent variable.

Table 2 shows that the beta coefficients for training are positive with employee motivation. It indicates that training has a positive impact on employee motivation. This finding is similar to the findings of Tahir et al. (2014). Likewise, the beta coefficients for rewards are positive with employee motivation. It indicates that rewards have a positive impact on employee motivation. This finding is consistent with the findings of Zirra et al. (2019). Similarly, the beta coefficients for career growth opportunities are positive with employee motivation. It indicates that career growth opportunities have a positive impact on employee motivation. This finding is similar to the findings of Weng and McElroy (2010). Furthermore, the beta coefficients for working environment are positive with employee motivation. It indicates that working environment has a positive impact on employee motivation. This finding is consistent with the findings of Aloysius and Christy (2013). In addition, the beta coefficients for supervisory support are positive with employee motivation. It indicates that supervisory support has a positive impact on employee motivation. This finding is similar to the findings of Mazumder et al. (2016).

Table 3 shows the regression results of employee motivation, job security, working environment, training, supervisory support, career growth opportunities and reward on employee job satisfaction.

Table 3: Estimated regression results of employee motivation, job security, working environment, training, supervisory support, career growth opportunities and reward on employee job satisfaction

The results are based on 120 observations using linear regression model. The model is JOS = ß0 + ß1 JS+ ß2 WE + ß3 TR + ß4 RE + ß5 SS + ß6 CGO + ß7 EM + e, where dependent variable is JOS (Job satisfaction). The independent variables are JS (Job security), WE (Working environment), TR (Training), SS (Supervisory support), CGO (Career growth opportunities), RE (Reward) and EM (Employee motivation).

Models	Intercept	Regression coefficients of							Adj R_bar²	SEE	F-value
		JS	WE	TR	RE	SS	CGO	EM			
1	2.181 (11.981)**	0.421 (7.131)**							0.245	0.509	50.846
2	2.25 (14.089)**		0.497 (7.737)**						0.277	0.498	59.864
3	0.56 (2.588)*			0.827 (13.490)**					0.540	0.397	181.99
4	1.509 (8.717)**				0.523 (11.428)**				0.457	0.432	130.59
5	1.258 (6.592)**					0.574 (11.653)**			0.467	0.428	135.78
6	1.456 (7.315)**						0.575 (10.165)**		0.399	0.454	103.31
7	1.813 (9.798)**							0.351 (4.963)**	0.346	0.474	41.663
8	0.442 (2.097)**	0.11 (2.039)*	0.153 (2.472)*	0.663 (9.177)**					0.577	0.381	71.059
9	0.434 (2.179)*	0.064 (1.158)	0.175 (3.036)**	0.437 (5.108)**	0.238 (4.358)**				0.622	0.360	64.391
10	0.083 (0.419)	0.016 (0.318)	0.155 (2.867)**	0.433 (5.202)**	0.069 (1.094)	0.106 (1.574)	0.251 (4.294)**	0.263 (4.141)**	0.673	0.335	53.886

Notes:
i. Figures in parenthesis are t-values
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Employee job satisfaction is the dependent variable.

Table 3 shows that the beta coefficients for training are positive with employee job satisfaction. It indicates that training has a positive impact on employee job satisfaction. This finding is similar to the findings of Terera and Ngirande (2014). Likewise, the beta coefficients for rewards are positive with employee job satisfaction. It indicates that rewards have a positive impact on employee job satisfaction. This finding is consistent with the findings of Martocchio (2011). Similarly, the beta coefficients for career growth opportunities are positive with employee job satisfaction. It indicates that career growth opportunities have a positive impact on employee job satisfaction. This finding is similar to the findings of Merchant (2010). Furthermore, the beta coefficients for working environment are positive with employee job satisfaction. It indicates that working environment has a positive impact on employee job satisfaction. This finding is consistent with the findings of Saidi et al. (2019). In addition, the beta coefficients for supervisory support are positive with employee job satisfaction. It indicates that supervisory support has a positive impact on employee job satisfaction. This finding is similar to the findings of Qureshi and Hamid (2017).

Summary and Conclusion

In the modern era, organizations are facing several challenges due to the dynamic nature of the environment. One of the many challenges for a business is to satisfy its employees in order to cope up with the ever changing and evolving environment and to achieve success and remain in competition. In order to increase efficiency, effectiveness, productivity and job commitment of employees, the business must satisfy the needs of its employees by providing good working conditions. Job satisfaction is a crucial issue in organizational behavior, human resource management and organizational management.

This study attempts to examine the determinants of employee motivation and its impact on employee satisfaction in the context of Nepalese commercial banks. The study is based on primary data with 120 observations.

The study showed that employee motivation, job security, working environment, training, supervisory support, career growth opportunities and reward have positive impact on employee job satisfaction in Nepalese commercial banks. The study also showed that job security, working environment, training, supervisory support, career growth opportunities and reward have positive impact on employee motivation in Nepalese commercial banks. The study concluded that better practice of human resource management lead to higher level of employee job satisfaction and motivation in Nepalese commercial banks. The study also concluded that career growth opportunities followed by supervisory support are the most influencing factors that explain the changes in employee motivation in Nepalese commercial banks.

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Factors Driving Investment Choices Among Nepalese Individual Investors

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Abstract

This research explores the pivotal factors that impact the investment decisions of individual investors in Nepal's secondary capital market. It categorizes these influencing factors into two main groups: firm-specific factors, including past performance, expected earnings, marketability, and management quality, and behavioural factors, such as herding behaviour, financial security concerns, overconfidence, and recommendations from others. The study collected data from 106 respondents using purposive sampling and employed various statistical analyses including t-tests, Pearson's Correlation, ANOVA (Analysis of Variance), and regression analysis conducted through SPSS software. The findings of the study indicate that both firm-specific factors and behavioural factors exert a significant and positive influence on the investment decisions made by Nepalese investors. This suggests that factors related to the performance and attributes of firms, as well as psychological and behavioural considerations, play crucial roles in shaping how investors in Nepal allocate their capital in the secondary market. In conclusion, this research underscores the importance of considering both firm-specific and behavioural factors in understanding and predicting investment decisions within Nepal's financial landscape. Such insights are valuable for investors, financial institutions, and policymakers aiming to enhance market efficiency and investor outcomes in Nepal.

KEYWORDS: **EDecision Making, Firm-Specific Factors, Behavioural Factors**

Introduction

Decision-making in finance is a multifaceted process that involves selecting the best course of action from a range of alternatives. This process integrates personal resources such as age, education, and income with technical financial models like the Capital Asset Pricing Model (CAPM). Situational factors and cognitive psychology also play pivotal roles in shaping decisions. Effective decision-making in the stock market necessitates a deep understanding of human behavior, financial expertise, and global perspectives. Each investor brings unique objectives, risk tolerance levels, and financial constraints to the table, underscoring the importance of personalized decision-making (Jain & Mandot, 2019). Investor psychology, as delineated by Sefrin (1999), examines how cognitive and emotional factors influence financial decision-making and market behavior. This field scrutinizes the impact of mental errors and emotions on investor choices, stressing the necessity for financial planners to comprehend these psychological dynamics to devise effective asset allocation strategies. Similarly, Statman (1999) notes that investor psychology elucidates how individuals interpret and act upon information when making investment decisions, shedding light on the reasons behind buying and selling stocks based on psychological principles.

In the securities market, both institutional and individual investors play pivotal roles. Institutional investors aggregate financial resources from small savers to large industrial entities, while individual investors contribute to market liquidity and competitiveness. There is a growing trend of household savings being channelled into securities, with participation extending to unemployed individuals, housewives, retirees, and students. However, the Nepalese securities market offers limited investment options, predominantly encompassing equity and government securities (Shrestha, 2008). An efficient market trades financial instruments at their intrinsic value, ensuring robust liquidity. In such markets, investors can expect to earn normal returns commensurate with their preferences and risk appetites. Sharpe, Alexander, and Bailey (2002) emphasize that the suitability of securities depends on an investor's individual circumstances and risk preferences, with no universally incorrect investment choices in an efficiently functioning market. Decision-making in finance integrates personal attributes, technical financial models, situational factors, and insights from investor psychology. Understanding these dynamics is crucial for both individual investors and institutional stakeholders in navigating financial markets effectively and achieving optimal investment outcomes.

Research Objectives

The primary aim of this study is to identify the factors affecting the investment decisions of Nepalese investors.

The specific objectives are:

- To examine and evaluate the firm-specific factors that impact individual investors' decisions in the Nepalese secondary market.
- To identify and analyse the behavioural factors that influence individual investors' decisions in the Nepalese secondary market.

Literature Review

Firm Specific Factors and Investment Decision

The literature reviewed encompasses a wide spectrum of studies exploring various aspects of investment decisions, market efficiency, investor behaviours, and regulatory impacts across different contexts and time periods. Richardson (1972) contributed foundational evidence supporting the efficient market hypothesis by demonstrating how quickly and accurately stock prices adjust to dividend announcements on the New York Stock Exchange. His analysis of 625 dividend announcements between 1964 and 1968 concluded that market prices efficiently reflect this information, validating the hypothesis on both monthly and daily scales. Ahorny, Jones, and Swary (1980) extended this exploration by investigating whether quarterly dividend changes convey additional information beyond earnings announcements. Their study, covering 2,612 announcements from 1966 to 1976, supported the notion that dividend adjustments provide significant supplementary insights, bolstering the semi-strong form of market efficiency.

Shifting focus to investor preferences and corporate disclosures, Epstein (1984) explored shareholders' demand for social responsibility disclosures in annual reports. His findings underscored investors' emphasis on product safety, quality, and corporate ethics, driven by their desire to safeguard investments and uphold ethical business practices. Commings et al. (1992) highlighted the importance of transparent prospectus disclosures in maintaining investor confidence. They advocated for stricter disclosure standards to bridge gaps between prospectus promises and actual outcomes, thereby fostering trust and enhancing capital market development in Nepal. Studies by Karthikeyen (2001) and Hodge (2003) delved into investor awareness and perceptions. Karthikeyen revealed significant motivators for small investors in urban and semi-urban areas, emphasizing tax benefits and essential needs. Hodge, on the other hand, analyzed investor perceptions of earnings quality and auditor independence, noting a decline in both aspects over time, which impacts the reliability of financial information used in decision-making.

Hayat and Shanza (2012) examined mutual fund investments in Delhi, highlighting the influence of past performance and company reputation on investor decisions. Sultana (2012) and Obamuyi (2013) found

similar influential factors in their studies, including marketability, social responsibility, past performance, and corporate earnings, underscoring their critical roles in shaping investment choices in diverse markets. Ginani et al. (2016) explored the impact of accounting information and advocate recommendations on investor decisions, illustrating varying degrees of influence across different types of investors. Pandiyan (2018) emphasized the need for secure investment options for salaried individuals, advocating for government measures to promote saving habits and financial security. Ramprasath and Karthikeyan (2020) focused on safety concerns among investors in Kattumannar Kovil Taluk, highlighting safety as a primary determinant in investment decisions. Kadariya (2020) investigated factors influencing investment decisions specifically in Nepal, identifying media coverage, dividends, and governmental policies as significant drivers shaping investor behaviours in the Nepalese market.

H1: Firm-specific factors has significant impact on investment decisions of Nepalese individual investors.

Behavioural Factors and Investment Decision

The literature reviewed offers a comprehensive exploration of the factors influencing investor behaviours across various financial markets and contexts. Somil (2007) challenges the ideal of rational investor theory by highlighting the imperfections in real-world markets, where achieving fully rational decisions is often hindered by market inefficiencies. This perspective is echoed by Chandra (2008), who delves into investor psychology, emphasizing how cognitive biases and emotional factors diverge from the rational behaviours presumed in traditional finance theories. Al-Tamimi and Kalli (2009) extend this discussion to the UAE markets, identifying corporate earnings, market liquidity, and socio-economic influences as pivotal in shaping investor behaviours. Similarly, Abdel-Raheem, Fares, and Khamis (2011) find that demographic factors like age and education, alongside internet usage, significantly influence investor decisions at the Amman Stock Exchange, while distrust in brokers negatively impacts choices.
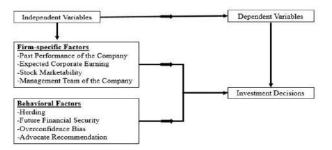
Aduda (2012) explores the dichotomy between rational and irrational investor behaviours, attributing deviations from rationality to emotional biases and simplified decision-making heuristics. Prinja et al. (2011) reveal that larger investments can lower investor confidence but increase risk-taking behaviours, influenced by psychological factors such as overconfidence and optimism. Dowlling and Lucy (2010) emphasize the impact of investor mood on equity investment decisions, underscoring the role of emotions in financial judgments. Shaikh and Kalkundrikar (2011) highlight demographic influences such as age, gender, and education on investment choices, while Aregbeyen and Mbadiugha (2011) identify socio-economic factors like financial security and broker recommendations as key determinants for Nigerian investors. Kengatharan and Kengatharan (2014) focus on behavioural factors at

the Colombo Stock Exchange, pinpointing heuristics and overconfidence as significant influences on investment performance. Jain and Mandot (2019) contribute insights into demographic impacts on investment behaviours in Rajasthan, noting variations in risk appetite and decision-making based on socio-economic characteristics. In summary, the literature underscores the complexity of investor decision-making, influenced by a combination of rational analysis, psychological factors, and demographic traits. Themes such as market efficiency, behavioural finance, and information disclosure emerge as critical in understanding how investors navigate financial markets globally.

H2: Behavioral factors has no significant impact on investment decisions of Nepalese individual investors.

Research Gap

This research aims to fill the gap in empirical studies on individual investor decisions in Nepal's capital market, NEPSE, by exploring both existing and new influencing factors. This leads to the following study framework.

Figure 1: Theoretical Framework

Research Method

The study focuses on elucidating how firm-specific and behavioural factors influence investment decisions within the Nepalese stock market, employing a survey research design. Data collected through investor surveys have been meticulously organized, tabulated, analysed, and interpreted to achieve the study's objectives. The population under investigation consists of investors affiliated with Arun Securities, from which valid responses were obtained from 106 participants. According to Adams and Schvaneveldt (2018), survey sample sizes in behavioural studies typically range from 100 to 500 respondents, depending on study complexity and the specificity of behaviours being studied. The sampling methodology employed in this study is non-probabilistic, specifically using purposive sampling. This approach involves selecting participants based on specific criteria rather than random chance, allowing researchers to choose individuals who are considered representative of the broader investor population. The questionnaire utilized in the survey is structured into two main sections. The first section gathers demographic data such as age, gender, occupation, and education level of the respondents. This information provides contextual background and helps to

profile the sample group. The second section of the questionnaire delves into various firm-specific and behavioural factors that are hypothesized to influence investment decisions. These factors include aspects such as past performance of companies, expected corporate earnings, stock market liquidity, and management quality, behavioral tendencies like herding behavior and overconfidence biases, and the influence of expert recommendations. Analysing these factors aims to uncover patterns and relationships that contribute to understanding how investors in Nepal make their investment decisions. In essence, the study's methodology and survey design are crafted to comprehensively explore the interplay between firm-specific metrics and behavioural traits in shaping investment decisions within the Nepalese stock market context. The structured approach ensures that the data collected are robust and suitable for deriving meaningful insights that contribute to both academic research and practical applications in investment decision-making.

Data Presentation and Analysis

Reliability Test

The reliability of a study is often assessed using Cronbach's alpha coefficient, which measures the internal consistency of scales or instruments. Generally, a Cronbach's alpha equal to or greater than 0.5 is considered acceptable and indicative of satisfactory construct reliability (Nunnally, 1976). Therefore, if the study presents Cronbach's alpha values exceeding 0.5, it suggests that the scales used in the research demonstrate reasonable reliability.

Table 1: Reliability Test

Factors	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
Past Performance of the Company	.870	.873
Expected Corporate Earning	.820	.841
Stock Marketability	.884	.889
Management Team of the Company	.818	.820
Herding	.878	.880
Future Financial Security	.828	.841
Overconfidence Bias	.738	.739
Advocate Recommendation	.897	.897

Table 2 from the study presents a comprehensive demographic profile of the respondents, shedding light on various characteristics that influence investment decisions among Nepalese individuals. Firstly, in terms of gender distribution, the majority of the respondents, accounting for 64.2% (68 individuals), are male, while 35.8% (38 individuals) are female. Secondly, the age distribution reveals that a significant portion of the respondents, totalling 73.6% (78 individuals), belong to the age group of 15-30 years, highlighting the predominance of younger adults in the study. Additionally, 15.1% (16 individuals) fall within the 30-45 years age bracket, and 11.3% (12 individuals) are aged between 45-60 years, with no respondents reported above 60 years old. Education-wise, the data shows that 1.9% (2 individuals) have completed high school or lower education levels, while a substantial 28.3% (30 individuals) hold bachelor's degrees. Moreover, the majority of respondents, totalling 62.3% (66 individuals), have attained master's degrees, indicating a highly educated sample. Additionally, 5.7% (6 individuals) hold PhDs, and another 1.9% (2 individuals) fall into other educational categories. In terms of occupation, the majority, representing 56.6% (60 individuals), are salaried employees, demonstrating a strong presence of employed individuals in the study. Professionals account for 11.3% (12 individuals), while 17% (18 individuals) are engaged in business activities. The remaining 15.1% (16 individuals) include respondents with various other occupations. Lastly, concerning investor types, the study identifies self-employed investors as the largest group, comprising 20.8% (22 individuals) of the respondents. Professional investors follow closely behind at 13.2% (14 individuals), while business person investors make up 11.3% (12 individuals).

Respondent's Profile

Table 2: Respondent's Profile

Respondent's character	No. of responses	Percentage
Gender		
Male	68	64.2
Female	38	35.8
Other	0	0
Total	106	100
Age		
16-30 years	78	73.6
30-45 years	16	15.1
45-60 years	12	11.3
60 years above	0	0
Total	106	100
Educational Background		
High School and Lower	2	1.9
Bachelor	30	28.3
Masters	66	62.3
PhD	6	5.7
Others	2	1.9
Total	106	100
Occupation		
Salaried	60	56.6
Professional	12	11.3
Business	18	17.0
Others	16	15.1
Total	106	100
Type of Investor		
Professional Investors	14	13.2
Self Employed Investors	22	20.8
Job Holder Investors	58	54.7
Business Person Investors	12	11.3
Total	**106**	**100**

Correlation Analysis

Table 3: Correlation analysis

	ID	PP	ECE	SM	MT	Herding	FFS	OB	AR
ID	1								
PP	.774**	1							
ECE	.725**	.810**	1						
SM	.800**	.744**	.737**	1					
MT	.695**	.532**	.568**	.628**	1				
Herding	.785**	.621**	.654**	.715**	.616**	1			
FFS	.726**	.621**	.596**	.729**	.587**	.694**	1		
OB	.586**	.474**	.571**	.533**	.729**	.615**	.555**	1	
AR	.813**	.687**	.685**	.780**	.684**	.778**	.697**	.591**	1
**. Correlation is significant at the 0.01 level (2-tailed).									

Based on the correlations presented in Table 3, several key insights emerge regarding the factors influencing investment decisions among Nepalese individual investors. Firstly, the strong correlation coefficients underscore the pivotal role of specific company-related metrics. For instance, the high correlation coefficient of 0.774 between past performance (PP) and investment decisions (ID) indicates that historical performance significantly influences investor choices. Similarly, the strong correlation of 0.725 for expected corporate earnings (ECE) underscores the importance of future earnings projections in guiding investment decisions. Furthermore, the substantial correlation coefficient of 0.800 for stock marketability (SM) highlights the critical role of liquidity in shaping investor behaviour, indicating that the ease of buying and selling stocks is a crucial consideration. Moreover, the strong correlation of 0.695 for the management team's quality (MT) emphasizes that investor's value effective leadership and management competence when assessing investment opportunities. Behavioural factors also play a significant role, as evidenced by the correlations with herding behaviour (0.785), future financial security concerns (0.726), and advocate recommendations (0.813). These correlations suggest that Nepalese investors are influenced by peer actions, long-term financial stability considerations, and expert advice, respectively, when making investment decisions. Overall, these findings underscore the multifaceted nature of factors shaping investment decisions in Nepal, combining both quantitative metrics and behavioural influences. Understanding these relationships is crucial for investors and financial analysts seeking to predict and explain investment behaviours in the Nepalese market.

Regression analysis

From the results shown in the Table 4, model summary reveals compelling insights into the relationship between firm-specific factors and investment decisions based on the regression model. Firstly, the correlation coefficient (R) of 0.860 indicates a robust positive relationship between firm-specific factors and investment decisions among Nepalese individual investors. This suggests that as firm-specific factors change, there is a corresponding change in the decisions made by investors regarding their investments. Secondly, the adjusted (R^2) value of 0.737 is noteworthy as it indicates that approximately 74% of the variability observed in investment decisions can be explained by the firm-specific factors included in the model. This high adjusted (R^2) value signifies strong predictive power of these factors in understanding and forecasting investment behaviour among Nepalese investors. In summary, these statistical metrics underscore the significant influence of firm-specific factors on investment decisions in Nepal, highlighting their importance as key determinants in shaping investment strategies and outcomes.

Table 4: Firm Specific Factors and Investment Decision

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.860a	.740	.737	.43123

a. Predictors: (Constant), Firm-Specific

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	55.038	1	55.038	295.974	.000b
Residual	19.339	104	.186		
Total	**74.377**	**105**			

a. Dependent Variable: ID
b. Predictors: (Constant), Firm-Specific

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.409	.164		2.489	.014
Firm-Specific	.842	.049	.860	17.204	.000

a. Dependent Variable: ID

Table 5: Regression analysis of particular Firm-Specific Factors and Investment Decision

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
PP	.703	.056	.774	12.468	.000
ECE	.539	.050	.725	10.744	.000
SM	.689	.051	.800	13.615	.000
MT	.638	.065	.695	9.853	.000

a. Dependent Variable: ID

The findings from the study reveal compelling positive relationships between several factors and investment decisions among Nepalese individual investors. Firstly, a coefficient (R) of 0.774 indicates a significant positive correlation between a company's past performance and the decisions made by investors. This suggests that investors in Nepal value historical performance metrics when evaluating investment opportunities. Secondly, an (R) coefficient of 0.725 highlights the strong positive impact of expected corporate earnings on investment decisions. This indicates that projections of future earnings play a crucial role in shaping investors' choices in Nepal. Thirdly, a coefficient (R) of 0.800 underscores the robust positive effect of stock market liquidity (marketability) on investment decisions. This suggests that the ease with which stocks can be bought or sold influences investors' decisions significantly. Lastly, a coefficient (R) of 0.695 demonstrates that the competence and effectiveness of a company's management team also strongly influence investment decisions among Nepalese investors. This finding emphasizes the importance of strong leadership and management in attracting investment interest. In conclusion, these results highlight the multifaceted nature of factors influencing investment decisions in Nepal,

where past performance, expected earnings, market liquidity, and management quality all play critical roles in shaping investor behaviour and decisions.

The coefficient (R) of 0.844 in Table 6 indicates a robust positive relationship between behavioural factors and investment decisions. This suggests that as behavioural factors increase or decrease, there is a corresponding change in the investment decisions made by individuals in Nepal. Moreover, the adjusted (R^2) value of 0.710 signifies that behavioural factors explain approximately 71% of the variability observed in investment decisions among Nepalese investors. This high adjusted (R^2) value indicates that behavioural factors are powerful predictors of how investors choose their investments. In summary, these statistical measures underscore the significant influence of behavioural factors on investment decisions in Nepal, highlighting their importance as key determinants in shaping investment strategies and outcomes.

Table 6: Behavioral Factors and Investment Decision

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.844a	.713	.710	.45320

a. Predictors: (Constant), Behavioural

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	53.017	1	53.017	258.130	.000b
Residual	21.360	104	.205		
Total	**74.377**	**105**			

a. Dependent Variable: ID
b. Predictors: (Constant), Behavioural

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.446	.173		2.574	.011
Behavioural	.883	.055	.844	16.066	.000

a. Dependent Variable: ID

Table 7: Regression analysis of particular Behavioral Factors and Investment Decision

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Herding	.722	.056	.785	12.937	.000
FFS	.573	.053	.726	10.756	.000
OB	.550	.075	.586	7.373	.000
AR	.794	.056	.813	14.238	.000

a. Dependent Variable: ID

The results in Table 7 demonstrate a strong and noteworthy positive impact of several key factors on investment decisions. Specifically, the analysis reveals that herding behaviour exerts a substantial influence, as evidenced by a coefficient of 0.785 (R). Similarly, considerations related to future financial security show a robust positive relationship, with a coefficient of 0.726 (R). Furthermore, the presence of overconfidence bias significantly impacts investment decisions, as indicated by a coefficient of 0.586 (R). Additionally, advocate recommendations play a pivotal role, with a coefficient of 0.813 (R), underscoring their influential effect on shaping investors' decisions. These findings underscore the multifaceted nature of factors that contribute to the decision-making process in investment contexts.

Conclusion and Discussion

Based on the conducted study, several key findings emerge regarding the factors influencing investment decisions among individual investors in Nepal. The research indicates that Nepalese investors consider a range of company-specific metrics when making investment choices. These metrics include current and historical performance indicators, projected corporate earnings, the quality of management teams, stock market liquidity, and other relevant factors. In addition to these quantitative considerations, behavioral aspects play a significant role in shaping investors' decisions. These include tendencies towards herding behavior, concerns about future financial stability, overconfidence biases, and recommendations from trusted sources. Nepalese investors tend to favor companies with strong financial fundamentals, such as high Earnings Per Share (EPS), Return on Equity (ROE), and attractive dividend yields.

Moreover, the study underscores the rational approach taken by Nepalese investors, who carefully analyze stock price movements before committing to investments. They rely heavily on information disseminated through media channels and expert opinions to inform their investment strategies. To make well-informed investment decisions, it is crucial for investors to conduct thorough analyses of all influencing factors and gain a comprehensive understanding of market dynamics. This involves considering a wide array of variables rather than focusing narrowly. Company-specific factors like historical performance, projected earnings, market positioning, and management competence significantly impact stock valuation and guide investors towards potentially profitable opportunities.

Furthermore, investors need to be mindful of behavioral influences such as herd mentality and concerns about long-term financial security. Managing emotions and overconfidence, especially during periods of market optimism, is critical for maintaining disciplined investment strategies. Seeking advice and recommendations from financial experts can provide valuable insights and help mitigate risks, thereby improving overall investment outcomes.

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Factors Affecting IPO Underpricing in Nepal

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Abstract

The study examines the factors affecting IPO underpricing in Nepal. Raw initial return and market adjusted initial return are selected as dependent variables. The selected independent variables are issue price, issue size, age of the firm, firm size and earning per share. The study is based on primary data of 105 respondents. To achieve the purpose of the study, a structured questionnaire is prepared. The correlation coefficients and regression models are estimated to test the significance and importance of issue price, issue size, age of the firm, firm size and earning per share on IPO underpricing in Nepal.

The study showed that issue price has a positive impact on raw initial return (RIR) and market adjusted initial return (MAIR). It implies that increase in issue price leads to increase in RIR and MAIR. Similarly, issue size has a positive effect on RIR and MAIR. It indicates that increase in issue size leads to increase in RIR and MAIR. The result also revealed age of the firm have a positive effect on RIR and MAIR. It indicates that older firms lead to increase in RIR and MAIR. Likewise, firm size and earning per share have a positive effect on RIR and MAIR. It indicates that increase in firm size leads to increase in RIR and MAIR. Further, earning per share has a positive effect on RIR and MAIR. It indicates that higher earning per share leads to higher RIR and MAIR.

KEYWORDS: IPO, underpricing, RIR, MAIR, issue price, issue size, age of the firm, firm size, earning per share

Introduction

Initial Public Offering (IPO) is one of the most important financial decisions which attract many researchers to focus on reasons and different aspects of going public. IPO is the first issuance of securities with the purpose of selling to the public (Bukh et al., 2005). IPO is exchanging securities with cash to raise the firms' capital. This exchange would happen in primary market, where issuers and investors meet each other. It means, firms that have issued security are unaffected by secondary market transactions (Booth, 2007).

An IPO is a company's activity in offering and selling its shares to the public. Determining the initial share price is difficult, because the company does not have experience in selling shares to the public. This causes the company to have the potential to get an initial offering price under underpricing which is a problem for companies conducting IPOs (Cucculelli et al., 2021). Underpricing could be a condition in which the batch value of stock within the primary market is lower than in the secondary market. While the opposite condition can be said to be overpricing (Syapril et al., 2019). Underpricing conditions cause losses to the company, because it does not get maximum public funds. In order to gain higher fees investment banks, tend purposefully underprice as well. All IPO issues are governed by the Securities and Exchange Commission of Sri Lanka(SEC) which is the regulating body of stock market activities. In the context of developing markets like Sri Lanka, events such as IPOs can significantly be affected market trends making it impossible to conclude investors on future prices. As a result, there are many research studies conducted in this area trying to interpret market behavior and its impacts on future performance (Wijethunga, 2016; Samarakoon, 2010).

Many studies regarding relationship between issue price, issue size, age of the firm, firm size, earning per share with first day raw initial return (RIR) and first day market adjusted initial return (MAIR) have been carried out in developed countries Katti and Phani (2016) studied the determinants of under-pricing of IPOs regarding financial & non-financial firms in Pakistan. The study found that ex-ante uncertainty, offer size, market capitalization and over-subscription are the only significant variables both in financial & non-financial firms in determining the level of underpricing. According to Wijayanto (2009), the EPS variable is a proxy for the company's earning per share which is expected to provide an overview for investors regarding the share of profits that can be obtained in a certain period by owning a share. In general, shareholders and potential investors will be interested in EPS, because EPS describes the amount of money earned for each share and large EPS is an indicator of the success of the issuer.

Mumtaz and Ahmed (2014) examined the sensitivity of variables in a set of regressions that are truly influential and robust in terms of their effect. The study employed the EBA method to examine the sensitivity and robustness of the explanatory variables of IPO underpricing. The study found that IPOs have been underpriced from the first to thirtieth-trading day indicating that Pakistani IPOs outperformed over the sample period. Furthermore, the study found that offer price has significant & negative impact on IPO underpricing. Wei and Marsidi (2019) examined the effect of issue-specific characteristics and company's attributes on the existence of underpricing of IPOs listed in Malaysia Stock Exchange. The empirical study revealed that offer size, market capitalization and issue price have significant impacts on the IPO underpricing level whereas company age is not statistically significant towards the degree of IPO underpricing. Similarly, Islam et al. (2010) analyzed the levels of underpricing in IPOs and its determinants of the Chittagong Stock Exchange (CSE). The study found out that age of the firm, and size of the company is positively related to the degree of underpricing. In addition, the study found out that the industry type and offer size are negatively related to the degree of underpricing while the timing of offer was found to have no significant influence on the degree of underpricing of IPOs in the Chittagong Stock Exchange.

Likewise, Iqbal and Mubarik (2019) investigated the short-term performance of 64 listed Initial Public Offerings (IPOs) in Pakistan's stock exchange. The study also found that on average IPOs are underpriced in Pakistan, and the degree of underpricing varied according to the number of trading days. Furthermore, the empirical results showed that on a listing day, underpricing is 45.6% and if the investor holds shares till the end of the 30th trading day, they can earn abnormal returns of 51.48% respectively. Likewise, Salfida et al. (2014) examined the influence of underwriter reputation, auditor reputation, company size and company age on underpricing IPO for companies listed in Indonesia stock exchange. The analysis showed that company size and company age significantly influence the underpricing of IPO with negative direction. The study also showed that underwriter's reputation and the reputation of the auditor has no significant effect on IPO underpricing. Wijaya and Kufepaksi (2023) analyzed the influence of profitability, company size, company age, and underwriter's reputation on the underpricing of stocks. The study found that profitability variable does not affect underpricing. Similarly, the study revealed that firm age variable does not affect underpricing.

Komariah et al. (2020) examined the factors affecting initial return in companies that conduct Initial Public Offering (IPO) on Indonesia Stock Exchange. The study used library technique and documentation technique by tracing historical data from the website and the study analyzed data using cross sections with multiple regression models. The empirical study revealed that leverage variables had

no effect on initial returns. Furthermore, the company size variable had an effect on the initial return with a negative relationship direction. Likewise, Suresha et al. (2023) examined the determinants of Book Built IPOs underpricing. The study considered a sample of 180 Book Built IPOs that went public in India between 2011 and 2020. The study revealed that the firm size, cash flows, subscription rate of QIBs and RIIs have a statistically significant influence on the listing day absolute return and the underpricing. In addition, the study also found a direct relationship between the issue size and the underpricing wherein a moderate to large issue size have more underpricing with an increased return. Furthermore, Miswanto and Abdullah (2020) examined the impact of firm size, profitability, and capital structure on underpricing in firms conducting IPOs. The study found that firm size and profitability as measured by ROA have a significant negative effect on underpricing. The study also found that profitability as represented by EPS was has a negative effect on underpricing. Similarly, Irawan (2024) investigated the factors affecting the underpricing of IPOs of manufacturing sectors on the Indonesian stock exchange. The study used multiple linear regression analysis as the method for data analysis. The empirical results indicated that EPS has a significant negative effect on underpricing. In addition, the study found that inflation rate has a significant positive effect on underpricing. Furthermore, the study concluded that ROA and DAR have no effect on underpricing.

In Nepalese context, Pradhan and Shrestha (2016) found that there is a positive impact of IPO factors (firm size, reputation of issue manager, subscription rate and market condition) on initial return. Similarly, the study found that there is a negative relationship between issue size and initial return. Likeswise, Subedi and Dangal (2022) revealed that the IPOs were underpriced to the extent of 3003 percent at the offer price. In addition, the study revealed that issue size, firm size and age of the firm do not explain the IPO returns in the context of Nepalese primary market. Furthermore, Paudel (2023) found that age of the firm has significant impact on the level of IPO returns.

The above discussion revealed that there is no consistency in the findings of various studies concerning the factors affecting IPO underpricing in Nepal. Therefore, to support one view or the order, this study has been conducted. Hence, this study focuses on examine factors affecting IPO underpricing in Nepal.

The main purpose of the study is to\examine the effect of issue price, issue size, age of the firm, firm size, earning per share on the IPO underpricing in Nepal. Specifically, it examines the relationship of are selected as dependent variables issue price, issue size, age of the firm, firm size and earning per share on raw initial return and market adjusted initial return in Nepal.

The remainder of this study is organized as follows. Section two describes the sample, data and methodology. Section three presents the empirical results and the final sections draws conclusion.

Methodological aspects
The study is based on primary data. The data were gathered from 105 respondents through a questionnaire. The respondents' views were collected on raw initial return and market adjusted initial return, issue price, issue size, age of the firm, firm size and earning per share.

The model
The model used in this study assumes that IPO underpricing depends on firm specific and issue specific factors. The independent variables selected for the study are issue price, issue size, age of the firm, firm size and earning per share. Similarly, the selected dependent variables in this study are raw initial return and market adjusted initial return.

$$RIR_{it} = \beta_0 + \beta_1\ IP_{it} + \beta_2\ IS_{it} + \beta_3\ AF_{it} + \beta_4\ FS_{it} + \beta_5\ EPS_{it} + e_{it}$$

$$MAIR_{it} = \beta_0 + \beta_1\ IP_{it} + \beta_2\ IS_{it} + \beta_3\ AF_{it} + \beta_4\ FS_{it} + \beta_5\ EPS_{it} + e_{it}$$

Where,
RIR = Raw initial return as measured by difference between the stock price on the first day of closing (closing price) on the secondary market divided by the initial offering price (offering price) multiplied by 100%
MAIR = Market adjusted initial return as measured by subtracting the return of a market index on the same day from the raw initial return i.e. MAIR = RIR–Market Return
IP = Issue price of IPO
IS = Issue size of IPO
AF = Age of firm as measured by number of year of establishment during IPO issue, in years.
EPS = Earning per share at the IPO issue time as measured by ratio of net earning and weighted average number of common shares outstanding of firm
eit = Error term
β_0 is the constant term and $\beta_1, \beta_2, \beta_3, \beta_4,$ & β_5 are the beta coefficients of variables.

The following section describes the independent variables used in this study along with hypothesis formulation.

Issue price
Issue price is the final offer price offered by the company determined after book building process or fixed price process to the public for subscription of the Initial Public Offer (IPO). According to Srilakshmi and Archana (2016), offer price positively and significantly influence the listing performance of IPOs. Likewise, Wei & Marsidi (2019) found that issue price has significant relationship with IPO underpricing level. Furthermore, Dias et al. (2023) found that issue price has a significant relationship with initial IPO return. Based on it, this study develops the following hypothesis:

H1: There is positive relationship between issue price and IPO underpricing.

Issue size

Offer/Issue size is the amount of shares multiplied by die number of shares issued. It is also in referred to as gross proceeds (Harvey, 2019). According to Ranjan and Madhusoodanan (2004), size has a significant negative impact on IPO underpricing. Similarly, Yazdani and Aris (2015) concluded that there is positive relationship between issue size and IPO underpricing. Likewise, Kavalenka (2018) stated that there is significant effect of issue size on IPO underpricing. Based on it, this study develops the following hypothesis:

H2: There is negative relationship between issue size and IPO underpricing.

Age of the firm

It is measured as the difference between the offer year (year the security was priced), and the year of incorporation of the firm (David, 2002). Ariyanto et al. (2020) found that company age does not have an effect on the level of Underpricing of shares. Similarly, Manu and Saini (2020) stated that age of firm has insignificant relationship with underpricing. Likewise, Ekadjaja et al. (2023) company age has a positive effect on underpriced initial shares. Based on it, this study develops the following hypothesis:

H3: There is positive relationship between age of the firm and IPO underpricing.

Firm size

According to Yasa (2008), company size can be seen from the total assets owned by the company. Likewise, Komariah et al. (2020) stated that company size has negative relationship direction with underpricing. Similarly,

Mahardika and Ismiyanti (2021) found that firm size has an effect on underpricing. Furthermore, Abbas et al. (2022) found that firm size has a significant negative impact on initial underpricing. Based on it, this study develops the following hypothesis:

H4: There is negative relationship between firm size and IPO underpricing.

Earning per share

Earning per share which is abbreviated as EPS is a form of profit sharing given to shareholders (Fahmi, 2016). Adiputra et al. (2023) EPS has a significant negative effect on stock underpricing. Likewise, Dwiningsih et al. (2024) found that there is no effect of earning per share (EPS) on the stock performance of companies conducting IPOs listed on the Indonesia Stock Exchange from 2018-2020. Lastly, Hanifitrianto et al. (2024) concluded that earning per share has a negative and significant influence on underpricing. Based on it, this study develops the following hypothesis:

H5: There is negative relationship between EPS and IPO underpricing.

Results and Discussion

Correlation analysis

On analysis of data, correlation analysis has been undertaken first and for this purpose, Kendall's Tau correlation coefficients along with means and standard deviations have been computed and the results are presented in Table 1.

Table 1: Kendall's Tau correlation coefficients matrix

This table presents Kendall's Tau coefficients between dependent variables and independent variables. The dependent variables are raw initial return (as measured by difference between the stock price on the first day of closing (closing price) on the secondary market divided by the initial offering price (offering price) multiplied by 100%) & market adjusted initial return (Market adjusted initial return as measured by subtracting the return of a market index on the same day from the raw initial return i.e. MAIR = RIR–Market Return). The independent variables are IP (Issue price of IPO), IS (Issue size of IPO), AF (Age of firm as measured by number of year of establishment during IPO issue, in years), EPS (Earning per share at the IPO issue time as measured by ratio of net earning and weighted average number of common shares outstanding of firm, Rs.).

Variables	Mean	S.D.	RIR	MAIR	IP	IS	AF	FS	EPS
RIR	3.411	0.778	1						
MAIR	3.505	0.749	0.590**	1					
IP	3.558	0.710	0.451**	0.510**	1				
IS	3.442	0.736	0.552**	0.545**	0.552**	1			
AF	3.491	0.773	0.543**	0.522**	0.495**	0.635**	1		
FS	3.413	0.855	0.532**	0.540**	0.501**	0.535**	0.677**	1	
EPS	3.408	0.810	0.562**	0.548**	0.460**	0.587**	0.650**	0.650**	1

Notes: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.

Table 1 shows that issue price has a positive relationship with raw initial return. It indicates that higher the issue price of IPO, higher would be the raw initial return. Similarly, issue size has a positive relationship with raw initial return. It indicates that bigger the issue size, bigger would be the raw initial return. Likewise, age of the firm has a positive relationship with raw initial return. It indicates that older firms would yield higher raw initial return. Further, firm size has a positive relationship with raw initial return. It indicates that higher the size of the firm, higher would be the raw initial return. In addition, earning per share has a positive relationship with raw initial return. It indicates that higher earning per share of IPO issuing company, higher would be the raw initial return. Similarly, issue price has a positive relationship with market adjusted initial return. It indicates that higher the issue price, higher would be the market adjusted initial return. Similarly, issue size has a positive relationship with market adjusted initial return. It indicates that higher the issue size of IPO offerings, higher would be the market adjusted initial return. Likewise, age of the firm has a positive relationship with market adjusted initial return. It indicates that higher the age of the firms, higher would be the market adjusted initial return. Further, firm size has a positive relationship with market adjusted initial return. It indicates that higher the firm size, higher would be the market adjusted initial return. In addition, earning per share has a positive relationship with market adjusted initial return. It indicates that higher the earning per share, higher would be the market adjusted initial return.

Regression analysis

Having analyzed the Kendall's Tau correlation coefficients matrix, the regression analysis has been carried out and the results are presented in Table 2. More specifically, it presents the regression results of issue price, issue size, age of the firm, firm size and earning per share on raw initial return in context of Nepal.

Table 2: Estimated regression results of issue price, issue size, age of the firm, firm size and earning per share on raw initial return

The results are based on 105 observations using linear regression model. The model is $RIR_{it} = \beta_0 + \beta_1 IP_{it} + \beta_2 IS_{it} + \beta_3 AF_{it} + \beta_4 FS_{it} + \beta_5 EPS_{it} + e_{it}$ where the dependent variable is RIR (Raw initial return by difference between the stock price on the first day of closing (closing price) on the secondary market divided by the initial offering price (offering price) multiplied by 100%). The independent variables are IP (Issue price), IS (Issue size), AF (Age of the firm), FS (Firm size), and EPS (Earning per share).

Models	Intercepts	Regression coefficients of					Adj. R_bar2	SEE	F-value
		IP	IS	AF	FS	EPS			
1	0.924 (3.059)**	0.699 (8.391)**					0.400	0.603	70.409
2	0.942 (3.493)**		0.717 (9.363)**				0.455	0.575	87.661
3	1.103 (4.118)**			0.661 (8.827)**			0.425	0.590	77.914
4	1.230 (5.472)**				0.639 (10.001)**		0.488	0.557	100.012
5	1.064 (4.596)**					0.689 (10.420)**	0.508	0.546	108.580
6	0.506 (1.749)	0.351 (3.317)**	0.481 (4.716)**				0.503	0.549	53.587
7	0.365 (1.276)	0.286 (2.704)**	0.309 (2.604)**	0.277 (2.660)**			0.531	0.533	40.212
8	0.386 (1.423)	0.190 (1.833)	0.302 (2.685)**	0.039 (0.329)*	0.343 (3.514)**		0.578	0.506	36.633
9	0.371 (1.396)	0.191 (1.877)	0.222 (1.931)	0.058 (0.465)	0.258 (2.514)**	0.270 (2.315)	0.596	0.495	31.655

Notes:
i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Raw initial return is the dependent variable.

Table 2 shows that the beta coefficients for issue price are positive with raw initial return. It indicates that issue price has a positive impact on raw initial return. This finding is consistent with the findings of Archana and Srilaskhmi (2019). Similarly, the beta coefficients for issue size are positive with raw initial return. It indicates that issue size has a positive impact on raw initial return. This finding is consistent with the findings of Yazdani and Aris (2015). Likewise, the beta coefficients for age of the firm are positive with raw initial return. It indicates that age of the firm has a positive impact on raw initial return. This finding is consistent with the findings of Ekadjaja et al. (2023). Simialarly, the beta coefficients for firm size are positive with raw initial return. It indicates that firm size has a positive impact on raw initial return. This finding is consistent with the findings of Syaifuddin and Rizkianto (2024). Furthermore, the beta coefficients for earning per share are positive with raw initial return. It indicates that earning per share has a positive impact on raw initial return. This finding is not consistent with the findings of Irawan (2024).

Table 3 shows the regression results of issue price, issue size, age of the firm, firm size and earning per share on market adjusted initial return

Table 3: Estimated regression results of issue price, issue size, age of the firm, firm size and earning per share on market adjusted initial return

The results are based on 105 observations using linear regression model. The model is $RIR_{it} = \beta_0 + \beta_1 IP_{it} + \beta_2 IS_{it} + \beta_3 AF_{it} + \beta_4 FS_{it} + \beta_5 EPS_{it} + e_{it}$ where the dependent variable is RIR (Raw initial return by difference between the stock price on the first day of closing (closing price) on the secondary market divided by the initial offering price (offering price) multiplied by 100%). The independent variables are IP (Issue price), IS (Issue size), AF (Age of the firm), FS (Firm size), and EPS (Earning per share).

Models	Intercepts	Regression coefficients of					Adj. R_bar2	SEE	F-value
		IP	IS	AF	FS	EPS			
1	1.115 (3.828)**	0.672 (8.366)**					0.399	0.581	69.990
2	1.112 (4.330)**		0.692 (9.406)**				0.457	0.552	88.479
3	1.373 (5.170)**			0.611 (8.225)**			0.391	0.585	67.652
4	1.505 (6.660)**				0.586 (9.118)**		0.441	0.560	83.138
5	1.389 (5.863)**					0.621 (9.177)**	0.444	0.559	84.216
6	0.707 (2.544)**	0.333 (3.273)**	0.468 (4.771)**				0.504	0.528	53.767
7	0.604 (2.165)*	0.285 (2.766)**	0.341 (2.951)**	0.204 (2.005)*			0.581	0.520	38.247
8	0.621 (2.313)*	0.205 (1.991)*	0.336 (3.012)**	0.004 (0.032)	0.289 (2.984)**		0.553	0.501	33.157
9	0.612	0.205	0.286	0.058	0.235	0.170	0.558	0.498	27.235

Notes:
i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Market adjusted initial return is the dependent variable.

Table 3 shows that the beta coefficients for issue price are positive with market adjusted initial return. It indicates that issue price has a positive impact on market adjusted initial return. This finding is consistent with the findings of Archana and Srilaskhmi (2019). Similarly, the beta coefficients for issue size are positive with market adjusted initial return. It indicates that issue size has a positive impact on market adjusted initial return. This finding is consistent with the findings of Yazdani and Aris (2015). Likewise, the beta coefficients for age of the firm are positive with market adjusted initial return. It indicates that age of the firm has a positive impact on market adjusted initial return. This finding is consistent with the findings of Ekadjaja et al. (2023). Simialarly, the beta coefficients for firm size are positive with market adjusted initial return. It indicates that firm size has a positive impact on market adjusted initial return. This finding is consistent with the findings of Syaifuddin and Rizkianto (2024). Furthermore, the beta coefficients for earning per share are positive with market adjusted initial return. It indicates that earning per share has a positive impact on market adjusted initial return. This finding is not consistent with the findings of Mandayani and Yulianti (2024).

Summary and Conclusion

Initial Public Offering (IPO) is one of the most important financial decisions which attract many researchers to focus on reasons and different aspects of going public. Underpricing becomes a global phenomenon in the capital market when companies conduct IPOs and companies planning to go public should strategically set their issue price to reflect market value and growth potential, while optimizing the size of their offering to balance capital raising. Older firms can instill investor confidence. Strong financial performance, particularly in earning per share, should be highlighted to showcase potential and drive investor interest, leading to a successful IPO.

This study attempts to determine the impact of issue price, issue size, age of the firm, firm size and earning per share on the raw initial return and market adjusted initial return. The study is based on primary data of 105 observations.

The major conclusion of the study is several factors including issue price, issue size, age of the firm, firm size, and earning per share exhibit a positive relationship with both raw initial returns and market-adjusted initial returns of IPO. This indicates that higher values in each of these variables are associated with higher initial returns, both in absolute terms and when adjusted for market performance. Specifically, the study finds that higher issue prices contribute positively to the initial returns of IPOs, as evidenced by the positive beta coefficients. Similarly, larger issue sizes are linked to higher initial returns, underscoring the significance of the scale of the offering in determining its initial market performance. The age of the firm also plays a crucial role, with older firms tending to achieve higher initial returns, which may reflect investor confidence in more established companies. Moreover, the size of the firm is positively correlated with initial returns, suggesting that larger firms are likely to experience better initial market performance due to their perceived stability and lower risk. Additionally, higher earning per share are positively correlated with both raw and market-adjusted initial returns, demonstrating that firms with stronger earning potential are rewarded with better initial performance in the market.

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Effects of Interest Rate, Exchange Rate and their Volatilities on Stock Price of Nepalese Commercial Banks

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Abstract

This study examines the effects of interest rate, exchange rate and their volatilities on stock price of Nepalese commercial banks. Stock price and stock return are the selected dependent variables. The selected independent variables are bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate. The study is based on secondary data of 14 commercial banks with 140 observations for the study period from 2013/14 to 2022/23. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank, reports published by Ministry of Finance and annual report of respective commercial banks and NEPSE. The correlation coefficients and regression models are estimated to test the significance and importance of bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate on stock price of Nepalese commercial banks.

The result showed that bank rate has a positive effect on stock price and stock return. It means that increase in bank rate leads to increase in stock price and stock return. Likewise, deposit interest rate has a negative effect on stock price and stock return. It means that increase in deposit interest rate leads to decrease in stock price and stock return. Similarly, lending interest rate has a negative impact on stock price and stock return. It shows that higher the lending interest rate, lower would be the stock price and stock return. Additionally, base rate has a negative effect on stock price and stock return. It indicates that increase in base rate leads to decrease in stock price and stock return. However, volatility of interest rate has a negative effect on stock price and stock return. It indicates that increase in volatility of interest rate leads to decrease in stock price and

stock return. Further, this study showed that exchange rate has a negative effect on stock price and stock return. It means that higher the exchange rate, lower would be the stock price and stock return.

Introduction

A country's economy is typically measured using the stock market index. The stock market in any nation is essential for economic prosperity. However, there are numerous factors that do affect the stock market. These elements could improve or worsen performance. The stock market index is always a cause for alarm, even when it rises quickly. The relationships between stock market capitalization rate and interest rate have preoccupied the minds of economists since they both play important roles in influencing a country's economic development (Aydemir and Demirhan, 2009). Stock exchanges are entities that provide dealing amenities for stock negotiators and dealers, to buy and sell stock and other securities (Ali, 2014). Growth in the stock index is typically viewed as a positive indicator because it shows that investors are optimistic about the economy's prospects going forward. Stock market plays a significant role in the economy of a country and important role in the allocation of resources, both directly as a source of funds and as a determinant of firms' value and its borrowing capacity. Stocks have always been a hot topic of discussion in the financial realm, but the difficulty in understanding the real meaning of stocks still persists.

Amollo and Ndede (2023) investigated the relationship between central bank announcements of changes in rates and stock market returns of selected firms listed at the Nairobi Securities Exchange. The study showed that fixed central bank rate has no significant impact on stock returns. The study concluded that upward revision of central bank rate negatively impacted the stock returns of firms listed at NSE. The fixed central bank rate has no significant impact on stock returns. Majid and Yusof (2009) determined the extent to which macroeconomic variables influence the Islamic stock market in Malaysia. Using the autoregressive distributed lag (ARDL) approach, the study found a positive relationship between interest rates and Islamic stock prices. Uddin and Alam (2010) explored the impact of interest rates on the stock market of Dhaka Stock Exchange. The results showed that the current interest rate and stock price have a negative connection is not refuted. The study also showed that Dhaka Stock Exchange will greatly benefit if interest rates are significantly managed in Bangladesh through supply and demand, pulling more investors into the stock market and corporations into expanding their investments. Cheah et al. (2017) examined the relation between stock prices and

exchange rates in Malaysia using monthly observations from 1993 to 2015. The estimated NARDL models suggest that exchange rate movements have significant short-run and long-run effects on stock prices in Malaysia. Similarly, the stock market responds asymmetrically against currency appreciation and depreciation. In addition, Singh (2015) investigated the relationships between the exchange rate and stock price over the period January 2007 to March 2014. The analysis revealed that exchange rate and stock price are co-integrated and, hence, a long-run equilibrium relationship exists between them. The exchange rate is found to be significant in determining stock price and stock price significantly affects exchange rate.

Interest rate has a more direct effect on financial market. An increase in interest rate leads investing decisions to make a change in the structure of investment, generally from capital market to fixed income securities. Variability in interest rates directly generates a momentum to the money market from capital market. The stocks are sensitive to interest rates, as the changes in interest rates are inversely related to stocks (Alam and Uddin, 2009). Theoretically, the relation between exchange rate and stocks can be postulated as either positive (currency depreciation makes local firms more competitive, leading to an increase in exports as a result stocks prices increase), or negative (if the production is dependent on imported input, cost of production would rise as a result of currency depreciation, thus reducing profitability and a resulting decline in stocks returns), and a weak or no relation (an export oriented firm's prices rises with currency depreciation, since the input cost is also affected by this currency depreciation than the effect would be nullified to some extent because of increased cost of production). Beirne et al. (2009) analyzed the relationship between macroeconomic variables and stock returns in three financial sectors i.e., banking, financial services and insurance in 16 different countries. The results showed a negative significant effect of interest rate, while exchange rate showed a mixed significant effect with stock prices. Alam (2020) found that money supply has a positive association with stock market return. According to Bhattacharjee and Das (2021), there is a positive and significant relationship between money supply and stock return. Jawaid and Ul Haq (2012) investigated the effects of exchange rate, interest rates, and their volatilities on stock prices of banking industry of Pakistan. Cointegration results suggested the existence of significant negative long run relationship between exchange rate and short-term interest rate with stock prices. On the other hand, positive and significant relationship exists between volatilities of exchange rate and interest rate with stock prices. Similarly, causality analysis confirmed bidirectional causality between exchange rate and stock prices. However, unidirectional causality runs from short term interest rate to stock prices. Sensitivity analysis confirmed that the results are robust. The result also supported the view that exchange rate and interest rate can be used as an indicator for investment decision making in banking sector stocks.

Sururi et al. (2021) revealed that there is a significant positive association between firm size and stock prices. Hyde (2007) explored the sensitivity of stock returns of 33 industry portfolios of four European economies to exchange rate, interest rate and market risk. The results revealed that both exchange rate and market risks are significant and positive for all four economies, while interest rate risk is positively significant for France and Germany. Further, decomposition of the risks showed that news relating to future dividends, real interest rates and excess returns are the main determinants. Vardar et al. (2008) analyzed the impact of interest rates and exchange rate on volatility of different sectors (financial, industrial, services and technology) and composite indices in Istanbul stock exchange. The results showed strong power of prediction of the two variables on the volatility of the composite index. Specifically, exchange rate changes are strongly predictive for all the indices except technology index. Moreover, interest rate volatility showed significant positive relationship with all indices except services sector, which shows a negative relationship. The study suggested that investors should follow the monetary policies in order to effectively manage risk while taking investment decision in these sectors. Vaz et al. (2008) examined the changes in interest rates on stocks returns of major Australian banks during the period from 1990 to 2005. The results showed no negative impact on Australian banks stock returns after announced increased in interest rates, in comparison to banks in US, where a negative impact is observed with an increase interest rate. Moreover, there is a net positive abnormal return in the event of cash rate increase. The study also concluded that Australian banks working in less competitive and concentrated environment are able to advantageously. Lobo (2002) examined the impact of unexpected changes in the federal funds target on stock prices. The study analyzed the data and changed in the federal funds rate target of Bonser-Neal from January 1988 to January 2001 on the conditional mean and variance of stock prices. the study revealed that stock values are affected by interest rate surprises on the day of the announcement. In addition, assessments of the effect of target changes on stock prices are more precisely produced by surprises that are built from survey replies.

In the context of Nepal, Khatri (2019) investigated the dynamic relationship among the stock market and macroeconomic factors like inflation, interest rate, money supply, GDP, exchange rate and foreign direct investment in Nepal. The findings revealed that the stock price was positively and significantly related to money supply. Real economic activity and interest rates have an insignificant and negative relationship with stock price. Lamichhane and Kulshrestha (2022) examined the factors influencing the performance of Nepalese stock market. The study demonstrated that remittances and money supply positively affect the stock markets, whereas interest rate and exchange rate negatively affect stock market performance. Acharya and Pradhan (2019) assessed the effect of firm specific and macro-economic variable on share price determination of commercial banks in Nepal. The result showed that beta coefficients for earning per share, dividend per share, gross domestic product, and inflation on market price of share whereas, negative for firm size, return on assets and interest rate. Gautam and Bista (2019) examined the factors affecting the share price of Nepalese insurance companies. The result showed that firm specific variables like earnings per share, divided per share, price earnings ratio, book value per share, return on assets and size are the major determining stock price in context of insurance companies in Nepal. Among the variables, size is found to be the most important determining variable that affects the share price. Among the macro-economic variables such as gross domestic product, inflation and money supply, gross domestic product is a major variable that affect the share price.

The above discussion shows that empirical evidences vary greatly across the studies on the effects of interest rate, exchange rate and their volatilities on stock price. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The main purpose of the study is to determine the effects of interest rate, exchange rate and their volatilities on stock price of Nepalese commercial banks. Specifically, it examines the relationship of bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate on the stock price and stock return of Nepalese commercial banks.

The study of the effects of interest rates, exchange rates, and their volatilities on the stock prices of Nepalese commercial banks adds significant value by providing critical insights for various stakeholders. For investors, it offers a deeper understanding of how macroeconomic factors influence stock performance, enabling better-informed investment decisions and risk management strategies. Policymakers benefit by gaining knowledge that aids in the formulation of effective monetary and exchange rate policies. Bank managers can use the findings for strategic planning and risk mitigation. Academically, the study enriches the literature on financial markets, particularly within the context of Nepal, and facilitates comparative analysis with other markets. Additionally, the insights contribute to market efficiency, economic stability, and the overall development of the financial sector in Nepal by attracting more informed and risk-aware investors, ultimately supporting the growth and competitiveness of Nepalese commercial banks.

The remainder of this study is organized as follows. Section two describes the sample, data and methodology. Section three presents the empirical results and the final sections draws conclusion.

Methodological Aspects

The study is based on the secondary data which were gathered from 14 commercial banks for the study period from the 2013/14 to 2022/23, leading to a total of 140 observations. The study employed stratified random sampling method. The main sources of data include Banking and Financial Statistics published by Nepal Rastra Bank, reports published by Ministry of Finance and annual report of respective commercial banks and NEPSE. This study is based on descriptive as well as causal comparative research designs. Table 1 shows the list of commercial banks selected for the study along with the study period and number of observations.

Table 1: List of Nepalese commercial banks selected for the study along with the study period and number of observations

S.N.	Name of the commercial banks	Study period	Observations
1	Nabil Bank Limited	2013/14 - 2022/23	10
2	Standard Chartered Bank Nepal Limited	2013/14 - 2022/23	10
3	Himalayan Bank Limited	2013/14 - 2022/23	10
4	Nepal SBI Bank Limited	2013/14 - 2022/23	10
5	Everest Bank Limited	2013/14 - 2022/23	10
6	NIC Asia Bank Limited	2013/14 - 2022/23	10
7	Machhapuchchhre Bank Limited	2013/14 - 2022/23	10
8	Laxmi Sunrise Bank Limited	2013/14 - 2022/23	10
9	Siddharth Bank Limited	2013/14 - 2022/23	10
10	Citizens Bank International Limited	2013/14 - 2022/23	10
11	Prime Commercial Bank Limited	2013/14 - 2022/23	10
12	NMB Bank Limited	2013/14 - 2022/23	10
13	Prabhu Bank Limited	2013/14 - 2022/23	10
14	Sanima Bank Limited	2013/14 - 2022/23	10
Total number of observations		**140**	

Thus, the study is based on the 140 observations.

The model

The model used in this study assumes that stock price and stock return depend on interest rate and exchange rate volatilities. The dependent variables selected for the study are stock price and stock return. Similarly, the selected independent variables in this study are bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate. Therefore, the models take the following forms:

$$SP = \beta_0 + \beta_1 BR + \beta_2 DIR + \beta_3 LIR + \beta_4 BSR + \beta_5 VIR + \beta_6 EXR + e_{it}$$
$$SR = \beta_0 + \beta_1 BR + \beta_2 DIR + \beta_3 LIR + \beta_4 BSR + \beta_5 VIR + \beta_6 EXR + e_{it}$$

Where,
SP = Stock price as measured by the closing price of the stock, in Rs.
SR = Stock return as measured by the capital gain yield, in percentage.
BR = Bank rate as measured by the cost of return as a percentage of the amount by bank, in percentage.
DIR = Deposit interest rate as measured by the rate paid by banks to the customers, in percentage.
LIR = Lending interest rate as measured by 2.5% addition in base rate, in percentage.
BSR = Base rate as measured by the minimum interest rate set by the central bank below which banks are not permitted to lend, in percentage.
VIR= Volatility of interest rate as measured by the current interest rate minus previous interest rate divided previous interest rate, in percentage.
EXR = Exchange rate, Rs to US Dollar.

The following section describes the independent variables used in this study along with hypothesis formulation.

Bank rate
The interest rate that a central bank assesses on its loans and advances to a commercial bank is known as the bank rate. It is often known as the discount rate. Arango et al. (2002) displayed evidence of a nonlinear and negative relationship between share prices on the Bogota stock exchange and bank rate. Vaz et al. (2008) examined the effect of interest rates on the stock returns. The study showed that there is a negative relationship between bank rate and stock returns. When central banks raise interest rates (bank rate), borrowing becomes more expensive for businesses and consumers. This can lead to decreased corporate earnings as companies face higher costs for servicing debt. Consequently, investors may perceive these companies as less valuable, leading to a decrease in their stock prices. Al-Shubiri (2010) demonstrated that a tightening of interest rates driven by monetary policy has a negative effect on stock prices. Madura and Schnusenberg (2000) examined the interaction between the bank stock return and the US Federal Reserve discount rate. The study found that bank stock returns and the US Federal Reserve discount rate were negatively related. Based on it, this study develops the following hypothesis:

H1: There is a negative relationship of bank rate with stock price and stock return.

Deposit interest rate
The average interest rate on retail deposits at each bank is referred to as the deposit interest rate. When deposit interest rates are high, individuals may find it more attractive to save their money in interest-bearing accounts rather than investing in stocks. This can reduce the amount of money flowing into the stock market, leading to lower demand for stocks and potentially lower stock prices. Ben-David et al. (2017) examined that bank deposit rates are determined by the supply of deposits by households and firms and the demand for deposits by banks. Individuals migrate their capital from the stock market to the bank as the interest rate given by banks to depositors rises. This will lead to a decline in share demand and a decrease in share price, as well as a negative influence on the stock market and deposit interest rates (Uddin and Alam, 2009). Sun and Wang (2018) found that the interest rate on bank deposits has a negative impact on the stock price. Smith (1984) argued that bank competition for deposits would bid up deposit rates of interest and it has negative relationship with stock price and stock return. Based on it, this study develops the following hypothesis:

H2: There is a negative relationship of deposit interest rate with stock price and stock return.

Lending interest rate
Commercial banks are self-contained businesses that establish their own lending rates. When banks lend money to consumers, they charge interest for a variety of reasons, including value preservation, risk compensation, and profit among others (Sheriff and Amoako, 2014). Beck et al. (2015) explained that an increase in lending interest rates typically raises the cost of borrowing for businesses. This can lead to higher expenses for companies, reducing their profitability and potentially lowering stock prices. Conversely, a decrease in lending rates can lower borrowing costs for businesses, potentially improving their profitability and supporting higher stock prices. Lashkary et al. (2013) examined the correlation between exchange rate volatility, stock price and lending behavior of banking system in Maskan bank during 1991-2011. The study found that lending interest rate of Maskan bank negatively influence the stock price. Huy et al. (2020) examined using econometric model of selected factors that have an impact on stock price. The study found that lending rates has negative impact on Sacom Bank's (STB) stock price. Al-Qenac et al. (2002) found that lending interest rate affects stock prices significantly and negatively. Changes in bank lending are significant in affecting stock and housing prices. Based on it, this study develops the following hypothesis:

H3: There is a negative relationship of lending interest rate with stock price and stock return.

Base rate
The minimum interest rate that the central bank of a country sets will not allow banks for lending to their customers. Depending on the credit risk premium, a base rate and an appropriate spread are added to determine the loan pricing. Because commercial banks modify their interest rates in reaction to any changes announced by central banks, the base rate has an impact on the interest rate that clients receive. Commercial banks hike their interest rates in response to a central bank's increase in the base rate, which increases the cost of borrowing. Commercial banks' interest rates will decrease and expenses would probably increase if the base rate declines. Diasakos et al. (2015) presented those changes in the European Central Bank's base rate have a significant impact on the profitability and stock price of commercial banks in Greece. Sari and Ergul (2017) assessed the effect of change in the base rate on stock market returns in case of Turkey. The study found that the changes in the base rate had a significant negative impact on the returns of the Turkish stock market. Erten and Ozturk (2018) found that changes in interest rates have a significant impact on stock market returns in OECD countries. The study found a negative relationship between changes in short-term interest rates and stock market returns. The study also found evidence of a significant lag effect between changes in interest rates and stock market returns. Elsharnouby and Alexandridis (2020) found that changes in the base interest rate have a significant negative impact on stock market returns in the United Kingdom. The study suggested that investors should consider the impact of changes in base interest rate when making investment decisions in the UK stock

market. Alqahtani et al. (2021) found that changes in the base interest rate have a significant impact on stock market returns in emerging markets. The study analyzed data from six emerging markets and found evidence of a negative relationship between changes in the base interest rate and stock market returns. Based on it, this study develops the following hypothesis:

H4: There is a negative relationship of base rate with stock price and stock return.

Volatility of interest rate

The volatility of interest rates in commercial banks refers to the degree of variation or fluctuation in interest rates over a specific period. Interest rates play a crucial role in the banking sector, influencing the cost of funds, profitability, and the overall financial stability of banks. Ali (2014) revealed that interest rate has a negative impact on stock market, higher the interest rate lowers the efficiency of stock market. Hajilee and Nasser (2017) showed that the relationship between rates of interest volatility and commercial banks financial performance was negative and insignificant. Ryan and Worthington (2004) found that the risk is an important determinant of bank stock returns, along with short- and medium-term interest rate levels and their volatility. However, long-term interest rates and the foreign exchange rate do not appear to be significant factors in the Australian bank return generating process over the period considered. Kasman et al. (2011) found that the interest rate has a negative and significant impact on the conditional bank stock return. Similarly, bank stock return sensitivities are found to be stronger for market return than interest rates implying that market return plays an important role in determining the dynamics of conditional return of bank stocks. Nouman et al. (2022) revealed that paradoxical as it may seem, the financing of Islamic banks operating within a dual banking system is subject to interest rate risk, mainly due to benchmarking interest rate, the relationship between interest rate and stock returns has negative. Based on it, this study develops the following hypothesis:

H5: There is a negative relationship of volatility of interest rate with stock price and stock return.

Exchange rate

Commercial banks play a crucial role in facilitating currency exchange for their customers, including individuals, businesses, and other financial institutions. Adjasi et al. (2008) found that there is negative relationship between exchange rate volatility and stock market returns - a depreciation in the local currency leads to an increase in stock market returns in the long run. Singh (2015) revealed that exchange rate and stock price are co-integrated and, hence, a long-run equilibrium relationship exists between them. The exchange rate is found to be significant in determining stock price and stock price significantly affects exchange rate. According to Tran et al. (2016), foreign exchange rate has an indirect impact on stock price. The fluctuation in foreign exchange rate led to a fluctuation in stock price. Mougoue (1996) showed that there is negative relationship between foreign exchange rate and stock price, means depreciation in currency leads to a decline in stock prices. Bandara et al. (2020) indicated that there is significant exposure of Sri Lankan commercial banks to exchange rate movements of US Dollars, Japanese Yen and Market Rate of Return. All banking institutions from the selected sample banking firms are sensitive to the US Dollar exchange rate movements. As per the results, depreciation of domestic currency value against US Dollar delineates negative as well as significant impact on stock returns of the selected banking institutions. Based on it, this study develops the following hypothesis:

H6: There is a negative relationship of exchange rate with stock price and stock return.

Results and Discussion

Descriptive statistics

Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2013/14 to 2022/23.

Table 2: Descriptive statistics

This table shows the descriptive statistics of dependent and independent variables of 14 commercial banks for the study period from 2013/14 to 2022/23. The dependent variables are SP (Stock price as measured by the closing price of the stock, in Rs) and SR (Stock return as measured by the capital gain yield, in percentage). The independent variables are BR (Bank rate as measured by the cost of return as a percentage of the amount by bank, in percentage), DIR (Deposit interest rate as measured by the rate paid by banks to the customers, in percentage), LIR (Lending interest rate as measured by 2.5% addition in base rate, in percentage), BSR (Base rate as measured by the minimum interest rate set by the central bank below which banks are not permitted to lend, in percentage), VIR (Volatility of interest rate as measured by the current interest rate minus previous interest rate divided previous interest rate, in percentage) and (Exchange rate, Rs to US Dollar).

Variables	Minimum	Maximum	Mean	Std. Deviation
SP	166	3600	658.66	616.32
SR	5.11	8.19	6.22	0.69
BR	5	8	6.70	1.01
DIP	1.02	9.08	4.94	1.66

Variables	Minimum	Maximum	Mean	Std. Deviation
LIR	6.67	14.28	10.96	1.72
BSR	4.17	11.78	8.46	1.72
VIR	-0.30	0.84	0.05	0.26
EXR	101.00	134.00	114.78	10.68

Source: SPSS output

Correlation analysis

Having indicated the descriptive statistics, Pearson's correlation coefficients are computed and results are presented in Table 3.

Table 3: Pearson's correlation coefficients matrix

This table shows the bivariate Pearson's correlation coefficients of dependent and independent variables of 14 commercial banks for the study period from 2013/14 to 2022/23. The dependent variables are SP (Stock price as measured by the closing price of the stock, in Rs) and SR (Stock return as measured by the capital gain yield, in percentage). The independent variables are BR (Bank rate as measured by the cost of return as a percentage of the amount by bank, in percentage), DIR (Deposit interest rate as measured by the rate paid by banks to the customers, in percentage), LIR (Lending interest rate as measured by 2.5% addition in base rate, in percentage), BSR (Base rate as measured by the minimum interest rate set by the central bank below which banks are not permitted to lend, in percentage), VIR (Volatility of interest rate as measured by the current interest rate minus previous interest rate divided previous interest rate, in percentage) and (Exchange rate, Rs to US Dollar).

Variables	SP	SR	BR	DIP	LIR	BSR	VIR	EXR
SP	1							
SR	0.904**	1						
BR	0.432**	0.472**	1					
DIP	-0.650**	-0.690**	-0.414**	1				
LIR	-0.669**	-0.731**	-0.274**	0.590**	1			
BSR	-0.669**	-0.731**	-0.274**	0.590**	1.000**	1		
VIR	-0.150	-0.154	-0.033	0.024	0.502**	0.509**	1	
EXR	-0.385**	-0.508**	-0.700**	0.271**	0.332**	0.332**	0.090	1

Note: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

Table 3 shows that bank rate has a positive relationship with stock price. It means that increase in bank rate leads to increase in stock price. Likewise, there is a negative relationship between deposit interest rate and stock price. It means that increase in deposit interest rate leads to decrease in stock price. Similarly, lending interest rate has a negative relationship with stock price. It shows that higher the lending interest rate, lower would be the stock price. Additionally, there is a negative relationship between base rate and stock price. It indicates that increase in base rate leads to decrease in stock price. However, volatility of interest rate has a negative relationship with stock price. It indicates that increase in volatility of interest rate leads to decrease in stock price. Further, this study shows that there is a negative relationship between exchange rate and stock price. It means that higher the exchange rate, lower would be the stock price.

Similarly, the result also shows that bank rate has a positive relationship with stock return. It means that increase in bank rate leads to increase in stock return. However, there is a negative relationship between deposit interest rate and stock return. It means that decrease in deposit interest rate leads to increase in stock return. Likewise, lending interest rate also has a negative relationship with stock return. It shows that lower the lending interest rate, higher would be the stock return. Moreover, there is also a negative relationship between base rate and stock return. It indicates that increase in base rate leads to decrease in stock return. However, volatility of interest rate has a negative relationship with stock return. It indicates that increase in volatility of interest rate leads to decrease in stock return. Further, this study shows that there is a negative relationship between exchange rate and stock return. It means that higher the exchange rate, lower would be the stock return.

Regression analysis

Having indicated the Pearson's correlation coefficients, the regression analysis has been carried out and the results are presented in Table 4 and Table 5. More specifically, Table 4 shows the regression results of bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate on stock price of Nepalese commercial banks.

Table 4: Estimated regression results of bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate with stock price

The results are based on panel data of 14 commercial banks with 140 observations for the period from 2013/14 to 2022/23 by using the linear regression model and the model is SP = β0+ β1 BR + β2 DIR + β3 LIR + β4 BSR + β5 VIR + β6 EXR + eit where, the dependent variable is SP (Stock price as measured by the closing price of the stock, in Rs). The independent variables are BR (Bank rate as measured by the cost of return as a percentage of the amount by bank, in percentage), DIR (Deposit interest rate as measured by the rate paid by banks to the customers, in percentage), LIR (Lending interest rate as measured by 2.5% addition in base rate, in percentage), BSR (Base rate as measured by the minimum interest rate set by the central bank below which banks are not permitted to lend, in percentage), VIR (Volatility of interest rate as measured by the current interest rate minus previous interest rate divided previous interest rate, in percentage) and (Exchange rate, Rs to US Dollar).

Model	Intercept	Regression coefficients of						Adj. R bar2	SEE	F-value
		BR	DIR	LIR	BSR	VIR	EXR			
1	4.084 (11.838)**	0.319 (6.260)**						0.216	0.605	39.186
2	7.627 (57.801)**		-0.285 (11.243)**					0.474	0.495	126.407
3	9.403 (36.757)**			-0.291 (12.595)**				0.531	0.468	158.634
4	8.677 (43.593)**				-0.292 (12.415)**			0.514	0.497	149.278
5	6.239 (106.774)**					-0.38 (1.701)		0.013	0.679	2.893
6	9.92 (18.271)**						-0.032 (6.844)**	0.248	0.592	46.843
7	6.431 (17.249)**	0.154 (3.41)**	-0.247 (9.208)**					0.512	0.477	73.887
8	8.061 (21.815)**	0.139 (3.793)**	-0.132 (4.982)**	-0.193 (8.010)**				0.666	0.395	93.356
9	10.037 (12.842)**	0.104 (2.218)*		-0.304 (12.692)**		-0.69 (4.56)**	-0.011 (2.364)*	0.668	0.394	70.821
10	8.473 (22.039)**	0.138 (3.899)**	-0.123 (3.613)**	-0.247 (8.373)**		-0.478 (3.001)**		0.684	0.384	76.388
11	10.04 (13.475)**	0.034 (0.734)	-0.117 (4.293)**	-0.222 (7.519)**	-0.434 (2.814)**	-0.014 (3.275)**	0.706	0.3709	67.657	

Notes:
i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Stock price is the dependent variable.

Table 4 shows that the beta coefficients for bank rate are positive with stock price. It indicates that bank rate has a positive impact on stock price. This finding is similar to the findings of Madura and Schnusenberg (2000). Likewise, the beta coefficients for deposit interest rate are negative with stock price. It indicates that deposit interest rate has a negative impact on stock price. This finding is consistent with the findings of Sun and Wang (2018). Similarly, the beta coefficients for lending interest rates are negative with stock price. It indicates that lending interest rate has a negative impact on stock price. This finding is similar to the findings of Lashkary et al. (2013). Likewise, the beta coefficients for base rate are negative with stock price. It indicates that base rate has a negative impact on stock price. This finding is consistent with the findings of Diasakos et al. (2015). Similarly, the beta coefficients for volatility of interest rate are negative with stock price. It indicates that volatility of interest rate has a negative impact on stock price. This finding is consistent with the findings of Nouman et al. (2022).

Likewise, the beta coefficients for exchange rate are negative with stock price. It indicates that capital exchange rate has negative impact on stock price. This finding is similar to the findings of Adjasi et al. (2008).

Table 5 shows the estimated regression results of bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate with stock return of Nepalese commercial banks.

Table 5: Estimated regression results of bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate with stock return

The results are based on panel data of 14 commercial banks with 140 observations for the period from 2013/14 to 2022/23 by using the linear regression model and the model is SR = β0+ β1 BR + β2 DIR + β3 LIR + β4 BSR + β5 VIR + β6 EXR + eit where, the dependent variable is SR (Stock return as measured by the capital gain yield, in percentage). The independent variables are BR (Bank rate as measured by the cost of return as a percentage of the amount by bank, in percentage), DIR (Deposit interest rate as measured by the rate paid by banks to the customers, in percentage), LIR (Lending interest rate as measured by 2.5% addition in base rate, in percentage), BSR (Base rate as measured by the minimum interest rate set by the central bank below which banks are not permitted to lend, in percentage), VIR (Volatility of interest rate as measured by the current interest rate minus previous interest rate divided previous interest rate, in percentage) and (Exchange rate, Rs to US Dollar).

Model	Intercept	Regression coefficients of						Adj. R bar2	SEE	F-value
		BR	DIR	LIR	BSR	VIR	EXR			
1	4.067 (11.756)**	0.321 (6.286)**						0.217	0.607	39.516
2	7.628 (57.521)**		-0.286 (11.213)**					0.473	0.492	125.734
3	9.413 (36.658)**			-0.292 (12.595)**				0.531	0.469	158.653
4	8.684 (43.465)**				-0.218 (11.925)**			0.491	0.497	141.634
5	6.237 (106.382)**					-0.387 (1.728)		0.014	0.683	2.987
6	9.966 (18.342)**						-0.033 (6.927)**	0.253	0.593	47.981
7	6.416 (17.134)**	0.153 (3.444)**	-0.247 (9.174)**					0.511	0.479	73.745
8	8.054 (21.715)**	0.141 (3.835)**	-0.131 (4.945)**	-0.194 (8.023)**				0.666	14.688	93.357
9	10.101 (12.892)**	0.102 (2.181)*		-0.304 (12.651)**		-0.683 (4.505)**	-0.011 (2.467)*	0.669	0.391	71.081
10	7.842 (22.743)**	0.141 (3.939)**	-0.154 (3.593)**		-0.248 (8.341)**	-0.472 (2.948)**		0.684	0.385	76.158
11	10.108 (13.534)**	0.032 (0.691)	-0.118 (4.304)**		-0.222 (7.483)**	-0.426 (2.758)**	-0.015 (3.389)	0.707	0.371	67.967

Notes:
i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Stock return is the dependent variable.

Table 5 shows that the beta coefficients for bank rate are positive with stock return. It indicates that bank rate has a positive impact on stock return. This finding is similar to the findings of Vaz et al. (2008). Likewise, the beta coefficients for deposit interest rate are negative with stock return. It indicates that deposit interest rate has a negative impact on stock return. This finding is consistent with the findings of Uddin and Alam (2009). Similarly, the beta coefficients for lending interest rates are negative with stock return. It indicates that lending interest rate has a negative impact on stock return. This finding is similar to the findings of Al-Qenac et al. (2002). Likewise, the beta coefficients for base rate are negative with stock return. It indicates that base rate has a negative impact on stock return. This finding is consistent with the findings of Alqahtani et al. (2021). Similarly, the beta coefficients for volatility of interest rate are negative with stock return. It indicates that volatility

of interest rate has a negative impact on stock return. This finding is consistent with the findings of Hajilee and Nasser (2017). Likewise, the beta coefficients for exchange rate are negative with stock return. It indicates that exchange rate has negative impact on stock return. This finding is similar to the findings of Bandara et al. (2020).

Limitations & Identification of Scope for Further Studies

The effect of interest rates, exchange rate and their volatilities on stock price of Nepalese commercial banks is one of the contentious research topics that this study attempts to investigate. Despite ongoing efforts to find out useful findings from studies, every study has limitations due to a variety of factors such as institutions, study periods, the dependability of statistical data, tools, procedures, and variances. The following are the major limitations of the study:

a) The effect of interest rates, exchange rate on stock of Nepalese commercial bank is also influenced by a number of other significant variables. This study only examined a small number of variables, and it did not take into account other factors that may have an influence on the Nepalese stock market, such as political considerations, natural disasters, liquidity, profitability, etc.

b) In this study, no primary data have been used; only secondary data were employed. The trustworthiness and validity of the results depend on the veracity of the secondary data and information provided by the sources.

c) Only ten years of data from 14 banks out of 20 commercial banks from the years 2013/14 to 2022/23 have been included in this analysis. Due to the limited number of observations and sample size, the result may not accurately reflect the influence of interest rates, exchange rate on stock price of Nepalese commercial banks.

d) This study analyzed the effects of interest rate, exchange rate and their volatilities on stock price of Nepalese commercial banks based on the regression and correlation analysis only.

e) Non-linearity biases, which restrict the study's scope, have not been taken into in this study. The study does not do testing for multi-collinearity, autocorrelation, or heteroscedasticity.

f) Stock price and stock return are the only dependent variables considered in this study. Future studies can use other related measures such as book value per share, earning price per share, market index, etc.

Summary and Conclusion

The common stock volatility is a benchmark for measuring risk. It indicates the changing pace in the stock price over a determined period; the more considerable volatility implies that the possibility of gain or loss is higher in short-term. Stock price volatility refers to the degree of variation in a trading price series over time. It is a key aspect of financial markets and is influenced by a variety of factors. Indicators such as bank rate, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate can impact market volatility. Unexpected economic data releases may lead to sudden market movements. This study attempts to examine the effects of interest rate, exchange rate and their volatilities on stock price of Nepalese commercial banks. The study is based on secondary data of 14 commercial banks with 140 observations for the study period from 2013/14 to 2022/23.

The findings on the effects of interest rates, exchange rates, and their volatilities on the stock prices of Nepalese commercial banks may exhibit both similarities and differences compared to universal trends observed in the literature. While general trends such as the negative impact of rising interest rates on stock prices or the effect of exchange rate fluctuations on banks engaged in foreign trade are consistent globally, the Nepalese market exhibits unique behaviors due to its smaller size, less liquid market, distinct regulatory environment, and specific economic conditions. These factors can lead to greater volatility and different sensitivities compared to more developed markets.

The study showed that the deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate have a negative impact on stock price of Nepalese commercial banks. However, bank rate has a positive impact on stock price and stock return. Furthermore, deposit interest rate, lending interest rate, base rate, volatility of interest rate and exchange rate have a negative impact on stock return. Banks often use deposit funds to provide loans to businesses. When deposit interest rates rise, banks may increase the cost of borrowing for businesses, leading to higher borrowing costs and potentially lower corporate profits. Lower profits can negatively impact stock prices as investors adjust their expectations for future earnings. The major conclusion of the study is that changes in lending rates can affect the discount rate used to value future cash flows in stock valuation models. Higher lending rates increase the discount rate, reducing the present value of future cash flows and potentially lowering stock prices. Similarly, the study also concluded that lending interest rate, followed by base rate is the most influencing factor that explains the fluctuation in the stock price and stock return of Nepalese commercial banks.

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Financial Crime Control Efforts- Global Perspectives in terms of Cost Applied

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Abstract

Today's most emerging issue in the global financial arena is about the detection of financial crimes so that they can be controlled through the adoption and development of the appropriate mechanism. For the purpose of identifying and controlling financial crimes, a huge amount has been invested in technology, intelligence and human capitals globally, since years and years. It seriously poses significant threats, resulting on the far reaching consequences which are not only limited to any particular individual, but also to the organization, society, country and the global economy as well. Keeping in view the consequences worldwide, international bodies, national governments, and financial institutions have implemented a wide ranges of control measures in an effort to combat with financial crimes either in unilateral way, bilaterally or in a multilateral basis. But the coin has other side too. As the technologies are developed, efforts are enhanced and preventive measures are adopted to control the financial crimes, so the criminals have also developed and used sophisticated and newly developed technologies to commit the crimes. Such

tendencies have made criminal activities more complicated and complex to identify and control beforehand. Such complexity and sophistication of technologies used in financial crimes have been resisting the capabilities of regulatory frameworks, enforcement agencies and also that of technology used. Further, the existing complexity and adaptability of financial crimes, the challenges of international cooperation, the conflicting priorities within financial institutions, and the inadequacies in data sharing and proactive measures collectively contribute to the lower impact of current control effort. Because of these so many reasons, in comparison to the amount invested for the control programs to prevent financial crimes and amount expend as penalties worldwide, outcome has not yielded as expected and the efficacy of global financial crime control efforts worldwide remains a subject of debate. This article discusses the literature related to global crimes and control measures, analyze the trend of total financial crime amounts globally vis a vis amount expended in terms of compliance as well as non-compliance cost globally.

KEY WORDS: **Financial Crimes, Typologies, Compliance Cost, Non Compliance Cost, Global Standards**

Introduction

Financial crimes always possess multi- dimensional consequences not only for the individual but also to the organization, society, nation and to the world as a whole. They can lead to financial losses, have a negative impact on the economy, result in legal consequences, damage reputations, and have broader social implications (Bhandari, 2023). Financial crimes are changing the shape of global financial sectors Directly they are hampered with the technical cost and human cost and in another hand, indirect cost associated with the fear of regulatory penalties and penalties itself is also very crucial.

Above discussed challenges faced by the world regarding financial crimes is dragging all the concerned stakeholders at a platform for enhanced investment on the control measure. This is the main reason that the financial crime control programs are implemented globally and also dragging them for enhanced investment on the control measure. Based on the outcome of the cost associated with financial crime control effort worldwide, discussion has been started about the need of modification in existing control programs.

In this regard, this article discusses about the outcome of both compliance and non-compliance cost associated

with financial crime control efforts undertaken, keeping in view the amount of financial crimes around the globe.

Limitation

This study has been carried out based on the secondary data available in open source. For the purpose of this study, total amount of financial crimes around the globe and cost involved during the period of 7 years (2017-2023) have been considered.

This study has taken into consideration and discussed the amount of financial crimes specially money laundering and cost invested globally for human resource, technology and legal aspects plus the penalties paid for being ineffective or non- compliance of the programs around the globe in comparison to the crime amount for the period under study. Only the financial cost that can be accounted have been referred. Other intangible and indirect cost is beyond the scope of this paper. So, the findings are to be generalized with due considerations.

Methodology

This study is a review based descriptive study as it has been carried out based on the literature, reports and other data available in different sources. For the purpose of this study, total amount of financial crimes around the globe and cost involved for the implementation of control programs have been taken for the period 2017 to 2023 along with the analysis of the literature and reports. Comparative analysis of total cost implied year-wise have been done on the basis of trend analysis in terms of global amount of financial crimes during the period.

For this purpose, correlation analysis between the crime amount and cost implied have been calculated showing the status and result in tabular and graphical forms.

Review of literature

Different studies have been carried out by different researchers at different span of time. Gilmore (2011), has discussed in detail about the development and substance of the international standard of AML programs in European region only and lack the relevance in international levels. A study by KPMG (2021), examines the trends and challenges in financial crime control programs. The study finds that financial crime is becoming more sophisticated and complex. The study highlights the importance of technology in financial crime prevention. The study recommends that the financial institutions should invest in technology to enhance their financial crime control programs.

Deloittee (2024), has also indicated in its white paper that the efforts of financial crime control have not been

proven effective globally. Four areas are detected where continued reform could result on the good work and progress and this is already on underway to improve the effectiveness of the anti-financial crime framework which are 1. the use of financial intelligence; 2. risk prioritization; 3. technology and innovation; and 4. international cooperation and capacity building. In one of the study conducted by Pol (2020), financial crime control policies have been presented as most ineffective policy trial around the world. It states that the modern anti-money laundering movement is fundamentally ineffective, with evidence of policy failure obscured by idiosyncratic "effectiveness" evaluations poorly connected with policy design principles. Despite trillions of dollars poured into the global 30-year "war" against money laundering, the anti-money laundering movement remains unable to show policy success.

Global report by Fenergo (2022, 2023), highlights the most challenging AML hurdles being faced by financial institutions today. It discusses the ongoing shortage of qualified financial crime professionals, macroeconomic trends such as interest rate rises and how they're affecting the industry but does not discuss in detail about the effectiveness of cost applied for financial crime control compliance. Some of the studies have identified the probable reasons of low level of effectiveness in financial crime control efforts worldwide. Experts generally agree that FIU performance in countering financial crime committed through traditional methods via banks, credit unions, brokerage houses, insurance companies etc. has been good. However, FIU performance in 131 countering financial crime committed through non-traditional means like the informal banking system (Hawalas) and international trade has been poor (D'Souza, 2008).

For the successful and effective crime control programs, regulator's role is also vital. A study by Bruschi and Paleari (2020), examines the role of regulatory bodies in preventing money laundering in the European Union. The study finds that regulatory bodies play a significant role in preventing money laundering in the European Union. The study highlights the importance of collaboration between financial institutions and regulatory bodies in preventing financial crimes. Hence, from the perspective of controlling financial crimes, it is becoming more sophisticated and complex (KPMG 2021). Financial crime control programs worldwide are attracting huge amount of money basically for the enhancement of controlling tools, e.g. the use of financial intelligence, risk prioritization, technology and innovation and international cooperation and capacity building (Deloitte 2021).

Talking about such study in Nepalese perspectives, one of the study concluded that the training and development of employees regarding AML, ethical behavior of banks, change in technology, control over business sophistication, and auditing and reporting standard are equally beneficial for the effective implementation of AML practices in banking sector of Nepal. Among the

different recommended dimensions of control, control over business sophistication is found to be the most important component. (Bishwokarma and Koirala 2021, Bishwokarma and Bhushal 2023). This research also is limited to employees of Nepalese banking sector only and lacks overall implementation status. Further, this study has not taken into consideration the total cost applied for the implementation and the outcome achieved from that cost.

Another study which is undertaken by Thapa, has indicated the weak implementation status by concluding that 'membership of relevant international organisations, ratification of the major UN conventions, enactments of instrumental legislation, implementation of national strategy and establishment of major institutional infrastructure indicates Nepal's commitment towards a robust AML/CFT regime. It now needs to strive for outcome-based effective implementation of these fundamentals (Thapa, 2015). However, the author has not considered cost verses outcome analysis in the study.

Joshi and Shah (2020), have concluded that the bank customers of Nepal have a comparatively higher understanding of ML, TF, AML and KYC than that of AML legislation and investigating agencies. Thus, the concerned authorities are advised for undertaking public awareness campaigns in related areas where the awareness lacks (Joshi Shah, 2020). This study has also excluded the cost verses outcome analysis not only in Nepalese perspectives but also in global perspectives as well. So, study regarding the global cost and its outcome in relation to financial crime control programs is required and hence this study has tried to add little value to bridge this gap by reviewing the available literature and analyzing the trend.

Financial crimes and its components

Financial crime is any activity that allows an individual or group to unlawfully gain financial assets (including money, securities, or other property). It typically involves either directly stealing from a person or institution, or illegally changing or obscuring who owns an asset.

As per Financial Conduct Authority of UK, it is
(a) fraud or dishonesty; or
(b) misconduct in, or misuse of information relating to, a financial market; or
(c) handling the proceeds of crime; or
(d) the financing of terrorism;
   (section 1H of the FCA Act 2021)

Financial crime is sometimes referred to as "white-collar crime" because it targets assets rather than people themselves, and so tends to be non-violent (but not always). In any event, it can still be extremely damaging to individuals' financial situations, and even regional or global markets. The term "white-collar crime" was coined in the 1930s by sociologist and criminologist Edwin Sutherland. According to the Interpol, 'Financial crime ranges from basic theft or fraud committed by any individual with

ill-intention to large-scale operations masterminded by organized criminals with a foot on every continent. These are serious criminal activities which are not to be overlooked as they are often closely linked to violent crime and even terrorism beyond their social and economic impact. Thus based on the definition adopted by different bodies as discussed above, we can conclude that financial crime covers wide range of illegal activities committed while conducting financial transactions.

In this aspect it is necessary to discuss the motives behind such crimes.

Motives behind financial crimes

There is some psychological aspect associated with criminals in regards to financial crimes and those aspects are highlighted in some of the popular theories which are discussed here.

An individual engages in financial crimes perceiving that the benefits of the crime outweigh the risks associated with that crime i.e. financial criminals make rational decisions to engage in illegal activities based on the potential gains and the likelihood of getting caught according to Smith (1776), which is addressed under the rational choice theory. Likewise, various forms of strain cause individuals to experience negative emotional states such as anger, depression, and fear.

Crime occurs when persons sought criminal means to cope with their negative emotions as discussed under strain theory by Agnew (1992).

Another motive behind any kind of financial crimes has been highlighted by social learning theory. This theory propounded by Bandura (1977), proposes that people may be more likely to commit financial crimes if they are surrounded by others who engage in these activities, or if they are exposed to media portrayals of financial crimes as glamorous or profitable.

Developed by Nye (1958), in his book 'family relationships and delinquent behavior', social control theory suggests that individuals who lack social bonds or connections to society are more likely to engage in financial crimes. People who feel disconnected from society may be less likely to feel a sense of responsibility towards others, which can lead to a willingness to engage in illegal activities.

Another important motivational aspect of financial crime has been theorized by Sutherland in 1939 through differential association theory. This theory explains that people learn to become offenders from their environment. Through interactions with others, individuals learn the values, attitudes, methods and motives for criminal behavior. This theory proposes that individuals are more likely to engage in financial crimes if they are exposed to values and beliefs that support these activities. For example, someone who grows up in a family that values

financial success above all, else may be more likely to engage in financial crimes to achieve that success.

Types of Financial Crimes

Financial crimes can be classified in major four types of crimes as corruption, fraud, theft and manipulation (Gottschalk, 2010). Financial crimes consist of ML, fraud in bets, credit cards and other instruments, tax evasion, sale of fictitious assets, embezzlement, tax avoidance, insurance policies and others (Boorman and Ingves 2001).

AML dictionary has defined financial crimes in two categories. The first category is an entity generating financial benefits for themselves or others through deceptive or illicit practices. This can include a business employee using privileged information regarding company's funds for their own use inappropriately. Another example would be a criminal taking money or other assets from someone in exchange for a financial instrument (such as a check or money order) that turns out to be fake. The second category is an entity committing a crime that sets them to commit another crime where they illegitimately gain a financial advantage or protect their financial benefits through dishonest or illegal methods. The most recognizable form of the latter is money laundering, putting the proceeds of crime through a series of complex transactions to make them appear as if they are derived from a legitimate source. Another example is people using shell corporations or shell banks to store their money, obscuring who owns it and therefore helping them avoid paying taxes on it (AML dictionary).

Based on above discussions, major types of financial crimes are discussed as follows: -

Money laundering

This is one of the most highlighted financial crime around the world and has created a myriad of problems for the economic system, further giving rise to terrorism as well. "Money laundering" can be defined as "the processing of criminal proceeds to disguise their illegal origin" in order to "legitimize" the ill-gotten gains of crime (FATF 2022). According to the world bank, it is estimated that every year 3 % to 5% of global GDP is laundered which stands around USD 2 Trillion.

Terrorist financing

This is about providing financial assets to terrorists' groups and individuals for the purpose of helping terrorists to purchase weapons, supplies, and anything else they need to carry out attacks on innocent civilians.

Proliferation financing

Proliferation financing is financial services for the transfer and export of nuclear, chemical or biological weapons; their means of delivery and related materials. It involves, in particular, the financing of trade in proliferation sensitive goods, but could also include other financial support to individuals or entities engaged in proliferation (FATF 2008).

Identity fraud

This is another type of financial crime in vogue globally. In this type of crime, the goal for a criminal is to steal someone's private identity or account access credentials, then use them to forge the person's authorization for transactions. This allows the criminal to make profit illegally while the victim bears the costs. The criminal further uses the stolen identities to carry out multiple scams, particularly fake bank account openings, credit card scams, and money laundering, while the real user remains uninformed about any such activity.

A criminal can use different methods for identity theft. A common one is phishing where they trick victims into revealing their credentials with an enticing and/or urgent request, often appearing as if it came from a legitimate and authoritative source. Cases of identify fraud in the financial sector increased by 100% in 2021 as compared to the previous year (Payment Intelligence Report, 2022).

Credit card scams

Credit card fraud is among the leading scams which are highly frequent in financial organizations. Criminals steal the credit card details of users and further abuse these details to carry out financial transactions. In 2021 alone, the companies around the globe lost 32 Billion USD on this type of fraud and the same is projected to be 38 Billion USD by 2027 (Shufti Pro, 2022).

Fraud

Financial fraud crimes encompass any activities intended to gain or protect financial benefits through deceitful and unethical means. Fraud is a wide category that can include many of the other crimes and it is considered as fastest growing financial crime.

Embezzlement

It is in general occurs within organizations and can range from petty theft to multi-million dollar schemes.

Corruption and bribery

Corruption occurs when an entity or a person in a position of power acts outside of its mandate in order to unlawfully gain advantages, including financial ones, for themselves or others. Corruption can actually involve embezzlement, and it can also involve bribery.
Bribery is the other side of corruption. It's when an entity illegally gives financial benefits to authorities in exchange for receiving preferential treatment in decisions affecting the public(UNODC)

Tax evasion

An entity intentionally not paying their taxes, or paying less tax than they owe, is also a financial crime. It is either done deliberately by being fail to report the taxable income or purposely claiming more tax deduction. An entity may also commit tax evasion by storing or investing their assets in banks or companies in tax havens countries through shell companies.

Insider trading and market abuse

In this type of financial crime, entity or any stakeholders of the entity may cheat the stock market by buying or selling securities based on proprietary information regarding a company's financial situation.

Forgery and counterfeiting

Forgery is illicitly altering a genuine financial asset to create an unintended benefit. Meanwhile, counterfeiting creates imitations or unauthorized copies of legitimate financial assets. The criminal's intention is to spend these fakes as if they were genuine, hoping the other transaction party doesn't notice the difference.

Cybercrime

As more financial activity moves online, so too does financial crime. Fraudsters are turning to digital channels for stealing money and authorization credentials, exposing sensitive information, forging and counterfeiting financial assets, manipulating markets, and committing many different types of fraud (AML Dictionary).

Based on the discussion above, major 12 types of financial crimes as identified by financial crime academy is illustrated in Table I.

Table 1: Main Types of Financial Crimes

Money Laundering	Embezzlement
Terrorist Financing	Bribery and Corruption
Proliferation Financing	Tax Evasion
Identity Fraud	Insider Dealing and Market Abuse
Credit Card Scam	Forgery and Counterfeiting
Fraud	Cyber crime

Source: Financial Crime Academy

Rising cost for financial crime control efforts and crime trends

Fight against financial crime has been passed a long march in global arena. Basically from 1989, the effort has been started in more formal and an organized way. International standard setters for financial crime control programs like Basel Committee on Banking Supervision(BCBS), the Committee on Payments and Market Infrastructures(CPMI), Financial Action Task Force (FATF) are continuously developing the tools as per the emergence of the crime threats in financial sectors and accordingly the stake holders have to tap up with the new requirements prescribed by these standard setters.

All initiatives have significantly contributed for the escalated cost for financial crime control programs globally (Bhandari, 2023)

Table 2: Major Milestones on Financial Crime Control Programs

Time Period	Key Events and Standards
1989-1999	
1989	Establishment of the Financial Action Task Force (FATF)
1990	FATF releases its first report titled "Money Laundering".
1991	FATF expands its mandate to include the financing of terrorism.
1996	United Nations General Assembly adopts the Vienna Convention
1998	The Basel Committee on Banking Supervision issues "Customer Due Diligence for Banks" paper, which sets out the basic principles of customer identification and verification.
1999	FATF releases the "Revised 40 Recommendations"
2000-2009	
2000	FATF expands its mandate to include non-cooperative countries and territories (NCCTs).
2001	The 9/11 terrorist attacks in the US lead to the creation of the USA PATRIOT Act
2003	FATF releases the "Special Recommendations on Terrorist Financing"
2004	The Third EU Money Laundering Directive adopted
2005	The Wolfsberg Group, publishes "Anti-Money Laundering Principles for Correspondent Banking".
2006	FATF updates the Forty Recommendations and the Nine Special Recommendations
2010-2019	
2010	FATF releases the "Revised Forty Recommendations" and the "Revised Nine Special Recommendations.
2012	The Fourth EU Money Laundering Directive adopted
2013	FATF releases guidance on the risk-based approach
2014	The Financial Stability Board (FSB) publishes its "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture".
2016	The Fifth EU Money Laundering Directive adopted
2019	FATF releases guidance on virtual assets and virtual asset service providers.
2020 on-wards	
2020	FATF releases guidance on the implementation of its standards in the context of the COVID-19 pandemic.
2020	The European Commission proposes a new EU Anti-Money Laundering Action Plan
2021	The United States Congress passes the Anti-Money Laundering Act of 2020
2021	FATF updates its guidance on virtual assets and virtual asset service providers
2023	FATF updates its Recommendations in Nov 2023

Money laundering is not an open transaction and actual amount of such crimes in any particular year can't be estimated, making it difficult to figure out its true value worldwide. However, the amount of financial crimes worldwide is estimated to exceed 2 trillion USD annually(UNODC).

According to the Global Economic Crime and Fraud Survey 2024, about 46% of organizations worldwide encountered some kind of financial crime in 2022.

Table 3: Global Volume of Financial Crimes

Years/Region	Global (Figure in USD)	Source
2017	2.2T	https://gfintegrity.org/report/transnational-crime-and-the-developing-world/
2018	3T	https://diro.io/money-laundering-stats-and-data/
2019	3T	https://thefinancialcrimenews.com/wp-content/uploads/2019/11/FCN-GTA.2019.Pub-Final.pdf#:~:text=URL%3A%2 https%3A%2F%2Fthefinancialcrimenews.com%2Fwp
2020	2T	https://www.nasdaq.com/global-financial-crime-report
2021	3T	https://complyadvantage.com/insights/financial-crime-in-2021-year-in-review/
2022`	2T	https://www.napier.ai/post/financial-crime-statistics-2022
2023	3.1T	https://www.nasdaq.com/global-financial-crime-report2024

Taking the amount of global financial crime from 2017 on-wards, it is all time high with 3.1 trillion USD in 2023 and low in 2020 whereas 2 Trillion USD in 2022. Average of these 7 years stands as2.61 Trillion USD which is less than the total volume of crime conducted in 2023 alone.

Table 4: Trend of Financial Crime Volume

Year	Amount (Trillion in USD)	Increment in Amount	Increment %
2017	2.2		
2018	3	0.8	36.36
2019	3	0	0.00
2020	2	-1	-33.33
2021	3	1	50.00
2022	2	-1	-33.33
2023	3.1	1.1	55.00
Total	**18.3**		
Average	2.61		

Global cost associated with financial crime control efforts has been found varied in different years under study.

Compared to the total amount of financial crime globally in 2017, it was increased by 36.36% in the year 2018. In the year 2019, it was remained as in 2018 and in 2020 it was decreased by 33.33% in comparison to 2019 or 2018. This happened due to worldwide pandemic effect of Covid-19 which significantly contributed for the shrink of financial activities globally during 2020.

But in the year 2021, again world experienced the increment of 50% volume of financial crimes in comparison to 2020 and in 2022 again, there was 33.33% decrease in the global figure of financial crime. Year 2023 happened to be the most vulnerable year in terms of financial crimes with the increment of 55% in comparison to that of last year. Though, the trend line shows ups and down trend in different years, overall trend of financial crimes is not in downward trend but in around the average volume of 7 years.

Effectiveness of FCC programs (cost vs outcome)

Table No. V shows the overall cost of financial crime control efforts. This cost consists of both compliance and non-compliance cost. Compliance cost covers technology related cost as well as the cost associated with human capital development and deployment whereas non-compliance cost represents the fine and penalties imposed by different regulators globally.

Table No. V shows both compliance and non-compliance global cost incurred for global financial crimes control effort.

Table 5: Compliance Cost Analysis of Financial Crime Control Effort

Year	Compliance cost (Billion in USD)	Non- compliance cost (Billion in USD)	Sources
2017	83.5	2.5	https://www.globalscape.com/blog/3-factors-driving-compliance-costs-financial-services https://www.debevoise.com/~/media/files/insights publications/2018/01/2017_anti_money_laundering_review_and_outlook.pdf
2018	110.85	4.27	https://www.tandfonline.com/doi/full/10.1080/25741292.2020.1725366 https://thefintechtimes.com/institutions-fined-26-billion-non-compliance-since-2008/
2019	214	8.14	https://www.napier.ai/post/cost-of-aml-compliance https://www.encompasscorporation.com/blog encompass-aml-penalty-analysis-2019/
2020	180.9	11.5	https://risk.lexisnexis.com/global/en/about-us/press-room/press-release/20210609-tcoc-global-study https://www.forbes.com/sites/forbestechcouncil/2022/01/12/the-pandemic-drove-up-compliance-costs-heres-how-to-get-back-on-track/
2021	213.9	5.35	https://www.fenergo.com/aml-fines-report https://www.forbes.com/sites/forbestechcouncil/2022/01/12/the-
2022	274	4.17	https://www.fenergo.com/aml-fines-report
2023	206.1	6.6	https://risk.lexisnexis.com/global/en/insights-resources research/true-cost-of-financial-crime-compliance-study-global-report https://www.fenergo.com/aml-report

Over all compliance cost of financial institutions globally topped 274 billion USD in 2022 compared to USD 213 Billion in 2020. On the other hand, up to 5% of global GDP (USD 105 Trillion in 2023) is laundered each year(UNODC). Despite of the fact, that compliance cost has increased significantly, portion of non- compliance cost is also alarming. It was increased by 50% globally compared to that of 2020. The average global money laundering risk score has also been increased from 5.22 previous year to 5.23 in 2021(Basel AML Index 2022).

Compared to the financial crime control cost of 2022, 98 percent of the financial institutions are claiming that the cost for this efforts has been increased significantly (LexisNexis report, 2023). Out of these increment, major portion is used for the highly skilled compliance professionals which covers 41 percent of total compliance cost involved in comparison to 32 percent used for the technological enhancement. Though the cost has been escalated for the enhanced technology and skilled human resources, the outcome of the financial crime control programs has not been seen as effective as expected. There is the same story in the case of developed world as well (LexisNexis report, 2023).

Although, such compliance and non- compliance cost has been skied, it is found that the anti-money laundering policy intervention is less than 0.1 percent of this cost. Compliance costs exceeds more than a hundred times over recovered criminal funds whereas banks, taxpayers and ordinary citizens are penalized more than criminal enterprises (Pol, 2018). The same was revealed in 2011, mentioning that 'much less than one percent of the proceeds of crime laundered via the global financial system are seized and frozen (UNODC, 2011). This discussion shows that, over 99 percent criminal proceeds are kept by the financial criminal themselves, proving the inefficient control measures in application worldwide. It has been proved as the world's lease effective policy experiment. So, in such condition, we all need to take more risks and stoop just ticking the

boxes (David Lewis, 2020). It is estimated that globally institutions spent more than 213B USD for crime control initiatives and despite this high volume of expense, it is said that more than 99% of crime proceeds remains in the hands of criminal gangs itself (LexisNexis, 2023).

Table 6: Global Crime Volume and Compliance Cost Analysis of Financial Crime Control Effort

Year	Global crime (Billion in USD)	Compliance cost (Billion in USD)	Non- compliance cost (Billion in USD)	Total cost (Billion in USD)
2017	2200	83.5	2.5	86.0
2018	3000	110.85	4.27	115.0
2019	3000	214	8.14	222.0
2020	2000	180.9	11.5	192.0
2021	3000	213.9	5.35	219.0
2022	2000	274	4.17	278.0
2023	3100	206.1	6.6	213.0

Analysis of the data

Table No. VI shows that amount of global crime between 2017 to 2023 is between 2000 to 3100 billion whereas the cost to control the global crime is very small in comparison to global crime which ranges from 86 billion to 278 billion. From the table VI, it can be analyzed that non-compliance cost is negligible ranging from 2.5 billion to 11.5 billion, in comparison to compliance cost.

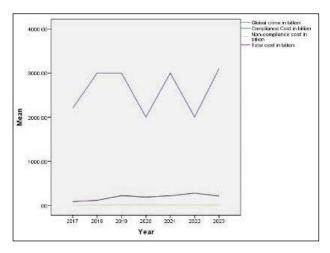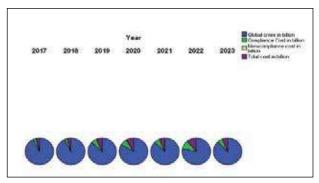**Fig No. 1: Trend Analysis of Cost and Crime**

Fig No.1 shows the trend of global crime and cost incurred to fight the financial crime globally. Trend analysis shows the high gap between the amount of global crime and cost incurred to stop the global crime. Total investment amount seems to be in increasing trend as well as the compliance cost but no significant increasing trend has been observed in the case of non-compliance cost.

Fig 2: Pie chart showing the shares of Global crime and Cost

Pie chart shown in Fig. No. 2 also depicts that the share of cost incurred through compliance and non-compliance activities are very low in comparison to the amount of global crime. Cost share seems to be increasing up to the year 2022 but it has been decreased in the year 2023.

Table 7: Correlation Table

	Compliance cost in billion	Non-compliance cost in billion	Total cost in billion
Global crime in billion	-.030 (.890)	(.949) -.031	-.065 (.947)
Compliance cost in billion		.300 (.513)	.999** (.000)
Non-Compliance cost in billion			.340 (.456)

Correlation table No. VII shows that compliance cost as well as non-compliance cost including total cost has the negative relation with the global crime and the relationships are found to be insignificant.

Findings

Result has also shown that the contribution of compliance cost is significant in the total cost but the contribution of non-compliance cost seems to be insignificant. This could be analyzed in the way that the cost incurred as compliance cost and non-compliance cost are negligible in maintaining the negative relation with the global crime volume. Hence, all the stakeholders should be aware about the fact.

It may not be relevant to run the regression to predict the global crime as the correlation effect are not significant. Compliance cost as well as non-compliance cost would not be able to predict the trend of the global crime. The reason may be due to the low limited periodicity (7 years) of study causing insufficiency of data required to make the prediction as well the volume of compliance cost and non-compliance cost is minimal in comparison to volume of global crime. The result is also supported by the findings of Basel AML Index. As per Basel Governance 'The average global ML/TF risk level increased from 5.25 in 2022 to 5.31 in 2023, where 10 is the maximum risk.

Analysis of data from the Financial Action Task Force (FATF) shows a continued decline in the effectiveness of AML/CFT systems globally. Effectiveness scores dropped from the already low level of 30 percent to 28 percent over the last two years. Among the least effective areas are those that are key to AML/CFT: the misuse of non-profit organisations for terrorist financing, transparency of beneficial ownership, supervision, prosecution, confiscation and measures to prevent the proliferation of weapons of mass destruction. Many of these areas are also problematic in terms of compliance, together with new technologies and the regulation and supervision of so-called "enablers" designated non-financial businesses and professionals' (Basel AML Index 2023).

Discussion

There are many factors playing roles for such ineffective crime control programs which often can be described as hindrance of finance crime control programs. Some of them are discussed here.

Priority on technicalities rather than effectiveness
This problem has also been properly sighted by wolfsberg group, a non-governmental association of 13 big global

banks, that also sets international standard specially on correspondent relationship, has emphasized in its 'statement of effectiveness'. It has further elaborated that national supervisors are mainly focusing on technical process rather than in effectiveness of process and measures undertaken. FATF has also keeping in mind the existence of lack of effectiveness has issued 'guidance on effective outcomes' that focuses on effective mechanism for financial crime control programs rather than just technical implementation.

Diversity in regulation across industry and markets
World-wide standard for financial crime control programs is very difficult to implement in an identical way across the world. FATF standards and risk based approach is somewhat different in Fincen's definition. Actually risk may be posed by in large guided by geo political situations and that is why FATF and Fincen's approach may not be implemented in an identical way in all the regions. That might be another important reason of low outcome of financial crime control programs globally.

Over reliance and drawback of risk based approach
A risk-based approach means that countries, competent authorities, and banks identify, assess, and understand the financial crime risk to which they are exposed, and take the appropriate mitigation measures in accordance with the level of risk (FATF 2014). In line with this guidance, organizations are required to focus their efforts and take stringent measures in the products and customers who poses high risk. Review of higher risk products and customers may take long time whereas, by the time of due diligence complete, the real risk might not be identified and managed. That is also one of the most important factor for not yielding the expected outcome of the financial crime control programs.

Lack of information and data
Wolfsberg standard on correspondent banking comprises of many challenges for its effective implementation. Though due diligence is done by the counterpart, it is merely technical and not effective as anticipated as there is the lack of full access of information on customers and customer's customers. These types of weaknesses have been experienced in recent past examples of compliance problems faced by big banks across the world.

Conclusion

Financial crimes are increasing highly in a global basis and the concerned stakeholders have taken the initiations for stopping or lowering these crimes via the compliance or non-compliance cost. However, these costs are found to be insignificant in showing any impact on the global crimes.

It can be now concluded that regular assessment of financial crime risk, formulating and developing policies on the basis of such assessment and then adopting the process blended with enhanced AI based technology is inevitable for the effective outcome of crime control efforts being undertaken. Regulators are also required to proactively collaborate with all the stakeholders and identify the robust mechanism that effectively yield the outcomes as desired. So the technology backed public private effort is the main path to follow globally in coming days for the more effective outcome of financial crime control efforts.

Recommendation and the way forward

To make the global effort for financial crime control more effective, transformation from current Legacy approach to modern forensic Inquiry approaches is eminent in today's complex nature of business transactions.

Legacy approach are based on the principles of following certain procedures like identity verification, screening, transaction monitoring and detecting suspicious activities and transactions, etc. With the legacy approach, there may exist the gap between stakeholders in terms of communication and information sharing. That may contribute for the weak flexibility and obstacles for efficiency of control mechanism. In contrary, modern forensic inquiry approach emphasizes on effective information sharing amongst the stakeholders including regulators and supervisors. So, it is recommended to follow modern forensic inquiry approach for the effective outcome of financial crime control efforts.

As a way forward in relation to enhanced effectiveness of financial crime control programs a robust, coordinated, outcomes-focused, and efficient global anti-financial crime framework is ultimately of undisputed benefit across countries and across populations. Establishing fundamental building blocks; addressing leadership, prioritization, and mandates at a system level; ensuring supervisory coherence in relation to those priorities and mandates; and focusing on outcomes over technical compliance needs to be clearly articulated and adopted in a uniform manner internationally.

Country based comparative analysis could be done in the future for the development of the appropriate conceptual framework applicable for that particular country.

Likewise, different variables could be assessed being focused in sector wise analysis for the sectoral outcome analysis of financial crime control efforts and more research could be done taking into consideration the data of longer period, i.e, for more than 20 years.

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Nepal Recovers Strong, but Risks Remain

MEHUL PANDYA
MANAGING DIRECTOR & GROUP CEO

CareEdge, India

Mr. Mehul Pandya is a Non-Executive Director on the Board of CARE Ratings Nepal Ltd. Associated with CareEdge since 2000, Mr. Mehul Pandya took over as Managing Director & Group CEO of CareEdge, India on March 19, 2024, after serving as an MD & CEO since July 29, 2022. Over the years, Mr. Pandya has successfully incubated and nurtured the company's business in India and overseas markets. He is a member of the Board of Directors for all subsidiaries of CARE Ratings while also serving on the Board of the Association of Credit Rating Agencies in Asia (ACRAA). A technocrat with a management background, Mr. Pandya is the Chairman of the Special Projects and Publications Committee and Co-Chairman of the Training and Programs Committee of ACRAA.

He is a CFA charter holder from CFA Institute, USA. Over the years, he has attended various leadership programs at IIMA and the High Potentials Leadership Program at Harvard Business School as well. Prior to joining CARE Ratings, he worked with a state-level financial institution in Gujarat for about four years and was instrumental in setting up an in-house credit rating cell for the screening of lending proposals. He has worked as a Consultant for the Asian Development Bank and conducted various training programs on credit risk analysis in India and abroad.

In the bustling markets of Nepal, the optimism of a revitalised economy is palpable. This renewed confidence is not without basis. According to the International Monetary Fund (IMF), Nepal's economic growth has rebounded impressively from 1.9% in FY23 to an estimated 3.1% in FY24. The driving forces behind this recovery are robust remittance inflows, a notable increase in tourist arrivals, and significant expansion in the financial and insurance sectors. Additionally, higher production in agriculture and hydroelectricity has provided further support. The moderation in inflation has allowed the central bank to adopt a more accommodative policy, which has been instrumental in pushing economic growth. FY24 also marked record-high foreign exchange reserves, highlighting an enhancement in economic resilience. Looking ahead, the IMF projects that Nepal's economic growth will remain strong, reaching 5.2% in FY25.

Consumer price inflation has eased over recent months, averaging around 5.8% year-on-year in the first ten months of FY24. This is well below the central bank's target of 6.5% and a significant drop from the 7.9% recorded during the same period last fiscal year. This decline is mainly attributed to a decrease in non-food and services inflation. However, higher food prices, averaging 6.8% in the first ten months of FY24, pose a risk to the overall inflation outlook.

In response to moderating inflation, the Nepal Rastra Bank (NRB) cut the repo rate by 100 basis points in its December monetary policy review. Consequently, market rates have also decreased, albeit with a lagged monetary policy transmission. The weighted average deposit rate stood at 6.4% in May, down from 7.6% in December, while the weighted average lending rate fell to 10.3% from 11.9% in the same period. The NRB anticipates that the decline in interest rates and increased liquidity will spur credit growth, thus supporting the ongoing economic recovery.

Nepal's external position strengthened in FY24, with the current account balance recording a surplus driven by rising remittances and a shrinking trade deficit. In the first ten months of the fiscal year, the current account registered a surplus of Rs 193.3 billion, a significant turnaround from the Rs 63.7 billion deficit during the same period last year. This improvement was driven by an improving trade balance and high net transfers, supported by strong remittance inflows. Remittance inflows have grown significantly, aided by increased transfers from migrant workers and currency depreciation. Moreover, the trade deficit narrowed in FY24. The World Bank anticipates that imports will increase in FY25 and FY26 with the ongoing recovery in domestic demand. Merchandise exports are also projected to rise as the economic outlook of major trading partners improves, while a revival in tourism will continue to bolster services exports.

Nepal's tourism sector is experiencing a revival, highlighted by a significant increase in foreign tourist arrivals. In FY24, tourist arrivals peaked in March, marking the highest monthly influx in the past four years. In the first ten months of FY24, Nepal welcomed a total of 990,000 tourists, compared to 730,000 in the same period last year.

On the investment front, foreign direct investment has increased, reaching Rs 7 billion in the first ten months of FY24, compared to Rs 6.2 billion in the corresponding period last year. The balance of payments showed a surplus of Rs 392.6 billion, rising from the Rs 209.5 billion surplus recorded in the same period of the previous year. Foreign exchange reserves continued to grow throughout FY24, reaching a record high of USD 14.5 billion in May. These reserves can cover more than 12 months of anticipated merchandise and services imports, providing a cushion against external risks.

Nepal's fiscal deficit is projected to decrease significantly from its record high of approximately 6% of GDP in FY23, stabilising around 3% of GDP in the medium term. In February 2024, the government projected a fiscal deficit of 2.5% of GDP for FY24. This overall improvement is attributed to reduced spending. The National Project Bank's integrated guidelines, issued in March 2023, are expected to streamline project development, selection, and prioritisation, leading to better capital spending by FY25.
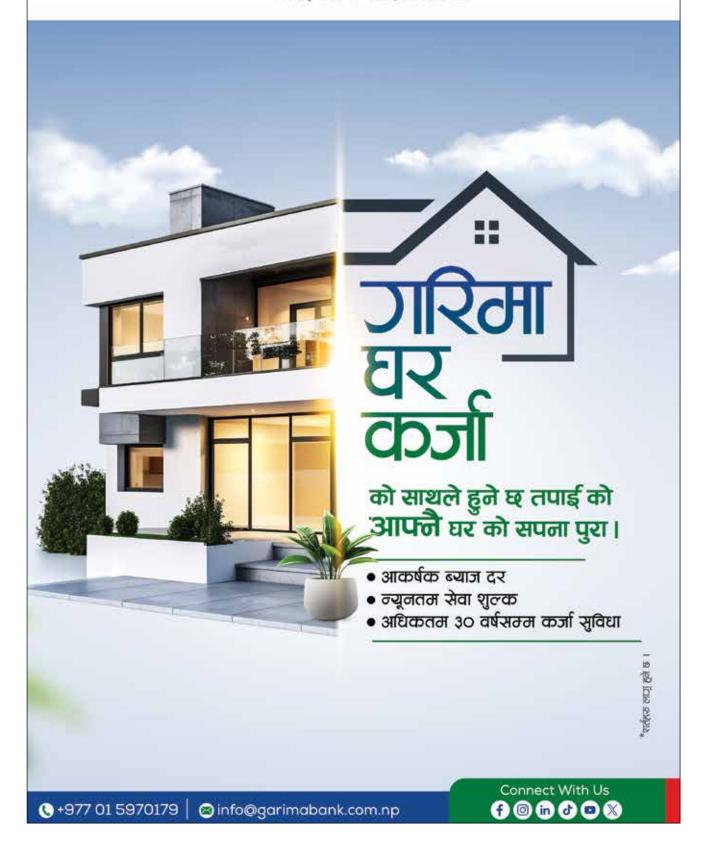
To enhance fiscal discipline, the National Natural Resources and Fiscal Commission has set annual ceilings for domestic borrowing for all three tiers of government. The fiscal deficit is likely to be financed through external concessional borrowing and domestic sources. However, public debt is projected to decline to 40.8% of GDP by FY26 due to higher economic growth. Public debt is expected to remain at sustainable levels due to a largely concessional external debt stock and prudent fiscal management.
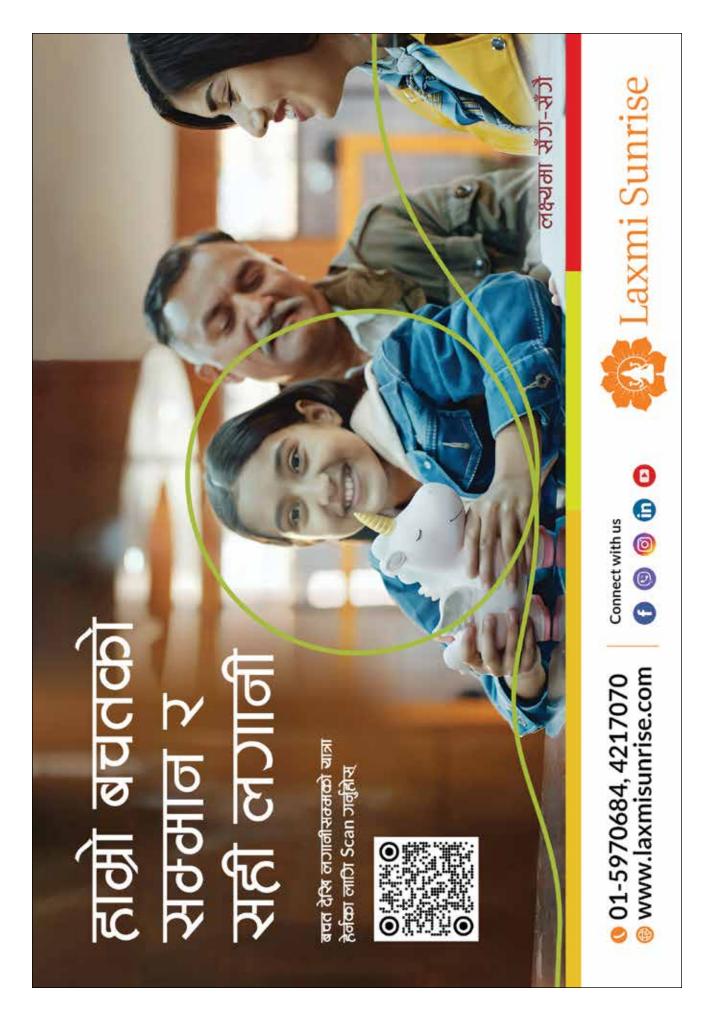
Despite these positive developments, key risks remain. These include geopolitical uncertainties, potential slowdowns in partner economies, persistent inflation, and political changes. Nepal's dependence on imports makes it vulnerable to external shocks from higher global commodity and energy prices. Additionally, financial sector stability and investment inflows could be at risk due to the possibility of being grey-listed by the Financial Action Task Force (FATF), the global money laundering and terrorist financing watchdog. In November 2023, the FATF warned Nepal to avoid the grey list by improving existing laws and punishing those involved in money laundering and other significant financial crimes.

Addressing these challenges will require reforms that promote transparency and strengthen anti-corruption institutions. Continued efforts to enhance the business environment, implement efficient capital expenditure, and boost international competitiveness will be essential for sustaining economic growth. The government's proactive measures and the resilience of key sectors indicate a positive outlook for Nepal's steady economic improvement in the coming years.

ANALYTICAL EXCELLENCE

About CareEdge Group

CareEdge is a knowledge-based analytical group offering services in Credit Ratings, Analytics, Consulting and Sustainability. Established in 1993, the parent company CARE Ratings Ltd (CareEdge Ratings) is India's second-largest rating agency, with a credible track record of rating companies across diverse sectors and holding leadership positions in high-growth sectors such as BFSI and Infra. The wholly-owned subsidiaries of CareEdge Ratings are (I) CARE Analytics & Advisory Private Ltd previously known as CARE Risk Solutions Pvt Ltd, (II) CARE ESG Ratings Ltd, previously known as CARE Advisory Research and Training Ltd and (III) CareEdge Global IFSC Ltd. CareEdge Ratings' other international subsidiary entities include CARE Ratings (Africa) Private Ltd in Mauritius, CARE Ratings South Africa (Pty) Ltd, and CARE Ratings Nepal Ltd.

CareEdge Global Footprints

- **Mexico** - Provided technical assistance
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- **Nepal** - Subsidiary in Nepal operating as CRA
- **Malaysia** - Shareholding in Malaysian Rating Corporation Berhad (MARC)
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- **Sri Lanka** - CareEdge Analytics provides Risk solutions and Rating models to various banks

▲ CARE Ratings Ltd is one of the founding partners in an international credit rating agency named ARC Ratings, SA, based at London. Other partners are from Portugal, Brazil, South Africa and Malaysia.

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Bank Loan Ratings:
Bank Loan Rating (BLR) is facility specific assessment of credit risk. Companies/ borrowers avail different types of loan facilities from banks to meet their funds requirements. The same can be in the form of Funded (where actual cash is disbursed by the bank) or non-funded (where cash disbursement is not done till devolvement of these credits). The bank loans are availed to meet short term fund requirements (working capital loans, overdrafts, revolving cash credit, Import credit, Export credit etc.) and also long-term loans for project funding. The non-funded loans are generally in the form of guarantees or documentary credits.

Debt Instruments:
The primary focus of the rating exercise is to assess future cash generation capability and the adequacy to meet debt obligations in adverse conditions. The analysis therefore attempts to determine the fundamentals and the probabilities of change in these fundamentals, which could affect the creditworthiness of the issuer. Debt rating can be done for Bonds, Debentures, Commercial Papers, Certificate of Deposits, Subordinated Debt, Fixed Deposits, Bank loan ratings and other such debt obligations.
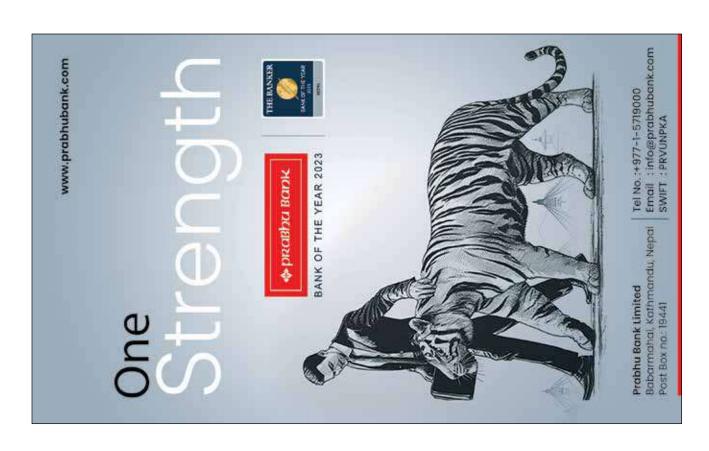
Issuer Rating:
Issuer Rating is an issuer-specific assessment of the credit risk. It is similar to long-term instrument ratings except for the fact that they are specific to an issuer and not specific to any of the issuer's instruments. Issuer Rating factors in the expected performance of the entity over an intermediate time horizon of around three years and reflects the capability of the entity as regards to servicing of its financial obligations. Issuer Rating would help lenders/investors to evaluate credit quality of the issuer and would facilitate an informed lending/investment decision.

SME:
SME Ratings indicate the relative level of creditworthiness of an SME entity, adjudged in relation to other SMEs. It is an issuer specific rating reflecting overall general creditworthiness. It is a onetime assessment of credit risk. The rating exercise would take into account the industry dynamics, operational performance, financial risk characteristics, management capability and the future prospects of the entity for arriving at the overall risk profile of the SME unit.

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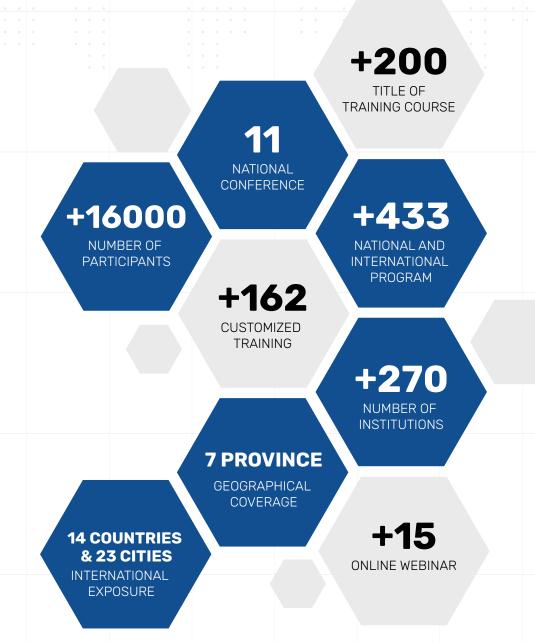
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Glimpses of Conference

Glimpses of International Programs

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DOMESTIC TRAINING

Date	Name of the Program	Venue
22 July 2023	AML/CFT Compliance	Kawasoti
27 July 2023	Knowledge Sharing Program on Corporate Governance, Regulatory Compliance & AML/CFT	Kathmandu
29 July 2023	Operation Risk Management	Kathmandu
29 July 2023	Collateral Valuation and Survey	Bharatpur
05 Aug 2023	Basel III – Core Principles	Kathmandu
04 - 05 Aug 2023	Managing Credit Administration	Kathmandu
11 Aug 2023	Corporate Governance & Regulatory Compliance	Kathmandu
12 Aug 2023	Managing Foreign Exchange Business & Associated Risk	Kathmandu
12 Aug 2023	Prudent Lending Practices, Recoveries Strategies and NPL Management	Kathmandu
19 Aug 2023	Operation Risk Management	Rupandehi
19 Aug 2023	Financial Statement Analysis	Kathmandu
26 Aug 2023	Operation Risk Management	Kailali
02 Sep 2023	Digital/Electronic Banking/Alternative Delivery Channel	Kathmandu
09 Sep 2023	Operation Risk Management	Bardibas
09 Sep 2023	Basel III – Core Principles	Kathmandu
09 Sep 2023	Prudent Lending Practices, Recoveries Strategies & NPL Management	Bardibas
16 Sep 2023	Branch Operation Risk Managment	Kailali
22 - 23 Sep 2023	Working Capital loan Management	Kathmandu
23 Sep 2023	Applied Trade Finance and Operations	Kathmandu
29 - 30 Sep 2023	Operation Risk Management	Kathmandu
30 Sep 2023	Collateral Valuation and Secured Loan	Pokhara
30 Sep 2023	Branch Operation Risk Mangement	Rajbiraj
31 Oct - 04 Nov 2023	Comprehenshive Banking Course	Kathmandu
03 Nov 2023	Credit Risk and Bad Dabt (NPA) Management (Banking Fraud)	Kathmandu
03 - 04 Nov 2023	Basic Credit Course On Credit Management	Kathmandu
04 Nov 2023	Effective Risk Management	Nepalgunj
25 Nov 2023	Financial Statement Analysis	Birgunj
24 - 25 Nov 2023	Advance Excel	Pokhara
25 Nov 2023	Effective Risk Management	Dadeldhura
03 - 04 Dec 2023	Basic Credit Course On Credit Management	Kathmandu
08 - 09 Dec 2023	Advance Excel	Kathmandu
17 Dec 2023	Customer Service Excellence	Nagarkot
23 Dec 2023	Customer Service Excellence	Kathmandu
30 Dec 2023	Corporate Governance,Risk, AML/CFT and Regulatory Compliance	Lalitpur
19 - 20 Jan 2024	Customer Service and Sales Excelllence	Pokhara
20 Jan 2024	Applied Trade Finance	Birgunj
19 - 20 Jan 2024	Microfinance Operation Management	Pokhara
26 - 27 Jan 2024	Counterfeit Notes, Signature Verefication and Clean Note Policy	Biratnagar
26 - 27 Jan 2024	MFIs CEOs and Board of Directors Meet 2024	Pokhara
27 Jan 2024	Procurement and Negotiation Skills	Kathmandu
27 Jan 2024	Counterfeit Notes, Signature Verification and Clean Note Policy	Kohalpur
29 Jan 2024	Corporate Governance & Regulatory Compliance	Kathmandu
02 - 03 Feb 2024	Managing Credit Administration	Butwal
03 Feb 2024	Designing Yourself For a Better You	Kathmandu
03 Feb 2024	Trade Based Money Laundering	Kathmandu
09 -10 Feb 2024	Client Protection Policy, Customer Service & Sales Excellence	Janakpurdham
10 Feb 2024	Designing Yourself for a Better You	Kathmandu
10 Feb 2024	Branch Operation Risk Management	Palpa
17 Feb 2024	Desigining Yourself for a Better You	Kathmandu
24 Feb 2024	Counterfeit Notes, Signature Verification and Clean Note Policy	Kailali
02 Mar 2024	Counterfeit Notes, Sighature Verification and Clean Note Policy	Itahari
02 Mar 2024	Branch Operation Risk Management	Rajbiraj

Continue: National Programs

Date	Name of the Program	Venue
02 Mar 2024	Collateral Valuation and Secured Loan	Kohalpur
02 Mar 2024	Excellence in Branch Service Operations	Jhapa
10 Mar 2024	Directors Education Program	Kathmandu
22 - 23 Mar 2024	Customer Service and Sales Excellence	Bhairahawa
23 Mar 2024	Branch Operation Risk Management	Simara
30 Mar 2024	Effective Risk Management	Chitwan
30 Mar 2024	Designing Yourself for a Better You	Kathmandu
05 - 06 Apr 2024	Customer Service and Sales Excellence	Bhairahawa
20 Apr 2024	Customer Service and Sales Excellence	Tanahun
27 Apr 2024	Enhancing Secretarial and Administrative	Kathmandu
09 May 2024	Workshop on Compliance and Governance	Kathmandu
10 May 2024	Director's Refeshment Program	Bhaktapur
11 May 2024	Desigining Yourself for a Better You	Kathmandu
11 May 2024	Comprehensive Course on Operation Management	Butwal
17 - 18 May 2024	Credit Risk Management	Bharatpur
18 May 2024	Counterfeit Note, Signature Verification & Clean Note Policy	Pokhara
25 May 2024	Comprehensive Course On Operation Management	Kohalpur
25 May 2024	AML/CFT & Compliance	Dedeldhura
25 May 2024	AML/CFT & Compliance	Pokhara
25 May 2024	Comprehensive Course on Operation Management	Bardibas
25 May 2024	Regulatory Compliance	Chitwan
31 May 2024	AML/CFT and Compliance	Butwal
31 May 2024	AML/CFT and Compliance	Itahari
01 June 2024	Enhancing Workplace Etiquette	Kathmandu
31 May - 01 Jun 2024	Transforming Hydropower Porjects in Nepal Into Viable Investments	Kathmandu
08 Jun 2024	Managing Credit Administration	Kathmandu
15 Jun 2024	Customer Service Excellence and Deposit Marketing	Nuwakot
15 Jun 2024	Excellence In Branch Service Operations	Kathmandu
21 - 22 Jun 2024	Nepalese Tax Changes Scenario 2081-82	Kathmandu
21 - 22 Jun 2024	Effective Risk and Recovery Management Training For MFIs	Dhulikhel

CONFERENCE

Date	Name of the Program	Venue
14 Aug 2023	Annual Conference on "Leaders for Next-Generation: Expect the Unexpected"	Kathmandu
22 Dec 2023	Nepal BFSI Summit, 2023	Kathmandu

TRAINING BY INTERNATIONAL RESOURCE PERSON

Date	Name of Training	Venue	Name of Resource Person
17 - 18 May 2024	Workshop on ECL and IFRS 9 Essentials	Kathmandu	Ernst & Young and Commercial Bank of Ceylon
18 - 19 Mar 2024	Expected Credit Loss (ECL) in Line with NFRS 9 Financial Instruments	Kathmandu	Mr. Nidhish Singh, FCCA,CISI, M.IoD, Dip-IFRS, Research Scholar
07 - 08 Jun 2024	Trade Facilitation Using Letter of Credit and the Associated Risk Management	Kathmandu	Professor Shah Md. Ahsan Habib, PhD., BIBM
06 Jun 2024	Trade Facilitation Using Letter of Credit and the Associated Risk Management	Kathmandu	Professor Shah Md. Ahsan Habib, PhD., BIBM

INTERNATIONAL TRAINING

Date	Name of Program	In Collaboration with	Venue
17 - 18 Sep 2023	Exposure Visit to City Bank of Bangladesh	City Bank Bangladesh	Dhaka, Bangladesh
19 - 22 Sep 2023	Internal Audit and Financing For Bankers	Southern India Banks' Staff Training College (SIBSTC)	Bangalore, India
23 - 26 Sep 2023	Sars Switzerland symposium 2023 Eyes on 2024/25 - Expect the Unexpected	Michael Sars Centre	Schaffhausen, Switzerland
02 - 06 Oct 2023	Leadership Develpment Program	Victoria University	Melbourne, Australia
17 - 20 Oct 2023	2023 Annual London Global Convention Corporate Governance & Sustainability	Institute of Directors (IOD)	United Kingdom
06 - 10 Nov 2023	HR as a Business Partner	Centurion University of Technology and Management (CUTM)	Odisha, India
27 Nov - 01 Dec 2023	Artificial Intelligence (AI) In Banking	Universal AI University	Mumbai, India
27 Nov - 01 Dec 2023	Understanding The Financial Infrastructure in Maldives & Sirlanka	Maldives Capacity Development and Governance Institute (MCDGI) and Commercial Bank of Cylon	Male, Maldives
29 Jan - 02 Feb 2024	Advanced Credit Appraisal Course College (SIBSTC)	Southern India Banks' Staff Training	Bangalore, India
29 Jan - 02 Feb 2024	RBBL's Exploratory Visit to Centurion University & Sighing of Agreement	Centurion University of Technology and Management (CUTM)	Odisha, India
03 - 05 Mar 2024	Exposure Visit: Bank and Finance Institute of Maldives	Maldives Capacity Development and Governance Institute (MCDGI)	Male, Maldives
05 - 08 Mar 2024	2024 UAE Global Convention	Institute of Directors (IOD)	Abu Dabi, UAE
12 - 16 Mar 2024	Digital Transformation in Banking: Navigating Disruption and Driving Sustainable Growth	Symbiosis Skills & Professional University (SSPU)	Pune, India
01 - 05 Apr 2024	Marketing and Selling Skills for High Performance	Centurion University of Technology and Management (CUTM)	Odisha, India
15 - 19 Apr 2024	Leadership Development Program	Victoria University	Melbourne, Australia
28 - 30 Apr 2024	Exposure Visit: Bank and Financial Institutions of Bangladesh	Bangladesh Institute of Bank Management (BIBM)	Dhaka, Bangladesh
29 Apr - 03 May 2024	Management Development Progaram	Colombo Plan Staff College (CPSC)	Manila, Philippines
29 Apr - 03 May 2024	HR Innovation: The Digital Transformation	Birla Institute of Management Technology (BIMTECH)	BIMTECH, Delhi, India
20 May - 24 India	Advanced Credit Appraisal Course May 2024	Southern India Banks' Staff Training College (SIBSTC)	SIBSTC, Banglore,
29 May - 01 Jun 2024	Exposure Visit: Understanding the Financial Infrastructure in Sir Lanka	Institute of Professional Bankers of Sri Lanka	Colombo, Sir Lanka

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