Food and Agriculture Organization of the United Nations

Bhutan rural and digital finance ecosystem assessment 2024

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Contents

Acknowledgements v
Abbreviations vi
Executive summary vii
Key findings vii
Key recommendations vii

1. Introduction 1
   1.1. Background 1
   1.2. Country context 1
   1.3. Objectives and scope of the assessment 1
   1.4. Methodology 2
   1.5. Limitations of the assessment 2

2. The structure of financial markets in Bhutan 3
   2.1. The structure of financial institutions 3
   2.2. Banking infrastructure and their roles 3
   2.3. Sectoral exposure and non-performing loan (NPL) in Bhutanese banks 5
   2.4. Non-Bank financial institutions and their roles 6
   2.5. Microfinance institutions in Bhutan 7
   2.6. Bhutan stock exchange 9

3. Financial regulations and regulatory framework 10
   3.1 Regulatory role of RMA 10

4. Financial products and instruments 12
   4.1. Savings, deposits, loan and equity products 12
   4.2. National credit guarantee scheme (NCGS) and economic stimulus programme (ESP) fund 13
   4.3. General insurance 14
   4.4. Bonds market 14
   4.5. Commodity market 14
   4.6. Climate finance 14

5. Country level scenario on inclusive rural finance 16
   5.1. Financial inclusion in Bhutan 16
   5.2. Key challenges to access finance by smallholders 16
   5.3. Support system to improve access to finance 16

6. Gender and social inclusion to promote rural finance 17
   6.1. Gender inclusion in access to finance 17
   6.2. Inclusion of youth in access to finance 17

7. Overview of digital financial services (DFS) landscape 19
   7.1. Definition of digital financial services (DFS) 19
   7.2. Historical background of DFS 19
   7.3. Regulatory framework for DFS Ecosystem 21

7.4. Key Players in DFS Ecosystem 24
7.5. Financial instruments used by the DFS 24
7.6. Current scenario of DFS in agriculture and rural sector 25

8. On-going initiatives to enhance digital financial services 28
8.1. Policy support and regulatory framework 28
8.2. Infrastructure development and technological advancements 28
8.3. Financial products and services innovation 29
8.4. Financial literacy and consumer engagement 30

9. Constraints, challenges and business opportunities 31
9.1. Regulatory and enabling policies 31
9.2. Geographical and infrastructural challenges 31
9.3. Adoption of digital financial products and services 32
9.4. Impact of financial literacy and opportunities 33
9.5. Digital services to agriculture 34

10. Conclusions and recommendations 36
10.1. Recommendations for an inclusive and effective rural and digital finance ecosystem in Bhutan 36
10.2. Conclusion and way forward 37

Annexes 39
References 44

Figures

Figure 1. Bhutan's Financial System 4
Figure 2. Number of Bank offices in Bhutan in 2022 5
Figure 3: Loan Products of Bhutan Development Bank Limited (BDBL) 12
Figure 4. Evolution of Bhutan payment system, RMA 20
Figure 5. Bhutan's domestic payment ecosystem 23
Figure 6. Mobile-banking transactions. 26

Tables

Table 1. Performance of Bhutan's financial system 2019 – September 2022 6
Table 2. Agricultural credit by banks and insurance companies 2019–2023 6
Table 3. Life and general insurance business, 2021–2022 7
Table 4. Profile of Bhutan's MFIs as of April 2024 8
Table 5. Loan and non-performing loans of MFIs 9
Table 6. Highlights of Bhutan stock exchange performance 9
Table 7. Financial regulators in Bhutan 10
Table 8. Microfinance Loans for Agriculture and Microenterprise by MBPL 13
Table 9. Climate Co-benefits Related Allocation during FY 2023–24 42
Table 10. Projects Approved/Ongoing under GEF Climate Change Portfolio (USD million) 43

Box

Box 1. Bhutan Association of Women Entrepreneurs 8

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Abbreviations

ADB	Asian Development Bank
AI	artificial intelligence
API	Application Programming Interface
APRACA	Asia-Pacific Rural and Agricultural Credit Association
ATM	automated teller machine
BAOWE	Bhutan Association of Women Entrepreneurs
BDBL	Bhutan Development Bank Limited
BFS	Bhutan Financial Switch
BoB	Bank of Bhutan
BIPS	Bhutan Immediate Payment Service
C2G	consumer to government
CBDC	central bank digital currency
CF	crowd funding
CSE	cottage and small enterprise
DAMC	Department of Agricultural Marketing and Co-operatives
DFS	digital financial services
E-KYC	electronic know your customer
FAO	Food and Agriculture Organization of the United Nations
FLT	financial literacy training
G2G	government to government
G2C	government to consumer
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IMF	International Monetary Fund
MoAL	Ministry of Agriculture and Livestock
MoICE	Ministry of Industry, Commerce and Employment
MoIT	Ministry of Infrastructure and Transport
MoENR	Ministry of Environment and Natural Resources
MSMEs	micro, small and medium enterprises
MFI	micro finance institutions
NDI	National Digital Identity
NGOs	non-government organizations
NPL	non-performing loan
P2P	person to person
PA	payment aggregators
PG	payment gateway
PSPs	payment service providers
RGoB	Royal Government of Bhutan
RMA	Royal Monetary Authority
RSEB	Royal Securities Exchange of Bhutan
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Exchange rate USD 1 to Bhutan NU

2019	2020	2021	2022	2023	2024
69.6	**71.75**	**73.43**	**74.37**	**82.57**	**83.42**

Source: https://www.exchangerates.org.uk/historical/USD

Executive summary

The Food and Agriculture Organization of the United Nations (FAO) and the Bhutan Development Bank Limited (BDBL) under FAO's Hand-in- Hand Initiative jointly conducted the Bhutan Rural and Digital Finance Ecosystem Assessment 2024. The assessment is part of a regional project to improve inclusive rural financial systems in five Asia-Pacific countries.

It responds to challenges in rural Bhutan, including poverty, limited access to finance and markets, gender and digital gaps, and climate vulnerability. The report examines the current rural and digital financial services landscape, identifies key constraints, and offers strategies for a more inclusive system aligned with Bhutan's 13th Five-Year Plan.

The assessment was led by APRACA (Asia-Pacific Rural and Agricultural Credit Association) with BAAC (Bank for Agriculture and Agricultural Cooperatives) Thailand, following a 2023 field mission. It included stakeholder consultations and a literature review, and its findings were pr esented during an investment roundtable in October 2024.

Key findings

- Bhutan's financial market includes six banks, four insurers, and five microfinance institutions, regulated by the RMA.
- Agriculture loans make up just 2.45 percent of total lending, with high interest rates and strict requirements limiting access.
- Microfinance serves nearly 14 000 clients with a stable loan performance but limited impact on rural livelihoods.
- Bhutan's digital finance is expanding, yet adoption remains low in rural areas despite high mobile and internet coverage.
- The insurance sector has limited reach in agriculture, and the bond market remains small but growing.
- Climate-responsive budgeting is in place, with USD 51 million allocated to mitigation and adaptation in FY 2023–24.
- Financial inclusion remains a national priority, but barriers persist, especially for women, youth, and small farmers.

Key recommendations

1. Establish a sustainable agriculture fund with low-interest loans and green finance options.
2. Adopt value chain financing to improve access and coordination.
3. Build institutional capacity for agribusiness and climate finance.
4. Prioritize high-value crops through public-private partnerships.
5. Expand digital financial services across the agri-food value chain.
6. Develop inclusive digital products, such as micro-loans and insurance.
7. Strengthen financial literacy, especially in rural areas.
8. Create enabling policies through flexible regulation and innovation platforms like RMA's FinTech sandbox.
9. Ensure strong consumer protection and grievance systems.

With targeted reforms and digital innovation, Bhutan can strengthen its rural finance ecosystem, improve farm incomes, reduce imports, and promote sustainable development.

1. Introduction

1.1. Background

This assessment report aims to provide a comprehensive analysis of the current state of inclusive rural finance in Bhutan, in alignment with the Food and Agriculture Organization's (FAO) Hand-in-Hand Initiative (HIHII). This initiative supports the United Nations' Sustainable Development Goals (SDGs), particularly focusing on eradicating poverty (SDG 1), ending hunger (SDG 2), and addressing inequality (SDG 10).

Conducted in collaboration with the Asia-Pacific Rural and Agricultural Credit Association (APRACA) and the Bank of Agriculture and Agricultural Cooperatives (BAAC) of Thailand, this assessment forms an integral part of a regional Technical Cooperation Project (TCP). This project seeks to establish effective rural financial services systems across five countries in the Asia- Pacific region, including Bhutan, thereby promoting sustainable development and enhancing financial inclusivity in rural communities. The report consists of four sections. The first provides an introduction with background, objectives, methodology, and limitations. The second addresses rural finance, highlighting regulatory, infrastructural, and product gaps. The third discusses digital finance findings and strategies for inclusive solutions. The final section offers recommendations and conclusions for both rural and digital finance.

1.2. Country context

The development of an inclusive financial system is important to address the growing gap between the rural and urban areas. For example, poverty in rural Bhutan is four times higher at 17.5 percent compared to urban areas (National Statistics Bereau, Bhutan, 2023). The Bhutan Living Standard survey, 2022. revealed that 1.5 percent of the population faces food scarcity or hunger, with rural areas experiencing higher rates. It further illustrated higher access to financial services in urban areas, with 40.33 percent compared to 32.97 percent in rural areas, despite nationwide internet access and mobile usage over 96 percent (National Statistics Bureau, 2022).

Agriculture in Bhutan, primarily subsistence-based, is gradually shifting towards commercial production. In 2022, agriculture contributed 14.67 percent to the Gross Domestic Product (GDP), prompting the government to prioritize it in the ongoing 13 Five-Year Plan. The GDP contribution is projected to grow by an additional 8 percent, creating employment for 60 percent of the population.

1.3. Objectives and scope of the assessment

The primary objective this report is to provide a comprehensive understanding of Bhutan's rural and digital financial services landscape, aiming to transform agrifood systems by enhancing accessibility and affordability of inclusive financial services in rural areas.

The assessment specifically seeks to:

- **Explore Infrastructure:** Analyze the ecosystem of rural and digital financial services, focusing on key stakeholders and their accessibility to rural populations.
- **Examine Barriers:** Identify socio-economic challenges, including digital literacy, gender disparities, and infrastructural issues, affecting access to financial services.

- **Evaluate Policies:** Review existing policies to identify strategies and reforms that strengthen the rural financial system and promote inclusion for vulnerable groups.

1.4. Methodology

An assessment mission was conducted in Bhutan from 27 November to 1 December 2023, to compile the country assessment report. The mission was led by the FAO Regional Policy Officer and included a rural finance consultant and a digital finance consultant from APRACA, two rural finance experts from Thailand's Bank for Agriculture and Agricultural Cooperatives (BAAC), and two national consultants from FAO Bhutan.

Prior to the field mission, the team conducte d a thorough review of secondary literature related to rural finance, microfinance, and governance in Bhutan. The sources comprised documents from the Central Bank, the Ministry of Finance, and the Ministry of Agriculture, as well as publications from multilateral agencies such as the World Bank, International Finance Corporation (IFC), International Monetary Fund (IMF), and Asian Development Bank (ADB). This comprehensive review helped the team to develop a nuanced understanding of the current financial landscape, identify key stakeholders for consultations, and formulate critical questions for the mission.

During the mission, the team engaged with various stakeholders, including representatives from the Bhutan Central Bank, the Ministry of Finance, the Ministry of Agriculture, Bhutan Development Bank Limited (BDBL), private banking institutions, civil society organizations, microfinance institutions, insurance companies, and farmer and trader groups, among others. These consultations encompassed policymakers, regulatory authorities, and rural finance service providers from public, private, and civil society sectors, as well as beneficiaries.

Following the consultations, a debriefing meeting was held with key stakeholders to gather additional insights and validate key findings. Several institutions contributed supplementary information, including comments, suggestions, and relevant data. The main findings of the report were subsequently presented at a workshop in October 2024, where participants provided further insights that were incorporated into the final report.

1.5. Limitations of the assessment

The assessment faced certain constraints. Time and resource constraints restricted the ability to engage fully with all key institutions involved in policy and regulatory frameworks, rural finance service providers, digital service providers, and most importantly, beneficiaries or demand-side stakeholders. A more comprehensive assessment would have required primary data collection, extensive consultations, and deeper analysis, all of which were beyond the scope of this evaluation.

The assessment drew heavily on discussions and secondary data from a range of stakeholders, including government bodies, regulatory authorities, banks, microfinance institutions, fintech companies, and cooperative organizations. These entities provided essential insights that informed the assessment process. While these stakeholders provided valuable insights, the team had limited opportunities for direct interactions with prospective clients or end beneficiaries.

Additionally, the implementation of digital financial services (DFS) is still in its nascent stages, without adequate reference documents.

2. The structure of financial markets in Bhutan

This section outlines the existing structure of the Bhutanese financial market, emphasizing its significance in shaping the interactions of individuals and institutions with financial services. It also addresses the challenges faced by the rural population, particularly those engaged in agricultural enterprises.

2.1. The structure of financial institutions

Rural finance in Bhutan is facilitated by both banking and non-banking sectors. The financial landscape comprises six banks, four non-bank institutions, and five microfinance institutions (MFIs), all of which are licensed and regulated by the RMA. Additionally, the Ministry of Agriculture and Livestock (MoAL) oversee cooperatives with support from the RMA. Figure 1 presents the main financial institutions currently operating in Bhutan.

The banking sector includes the Bank of Bhutan Limited (BOBL), Bhutan National Bank (BNBL), Bhutan Development Bank (BDBL), Druk PNB Bank, T- Bank, and DK Limited (DKL). BOBL holds the distinction of being the largest and oldest bank in the country, while DK Limited, licensed in August 2021, is recognized as Bhutan's first and only digital bank. DK aims to provide innovative and secure digital financial services, emphasizing the enhancement of financial inclusion. All banks offer a comprehensive range of banking services, with BDBL and BOBL particularly focused on agricultural finance, while BNBL and Druk PNB have a strong presence in SME and trade finance.

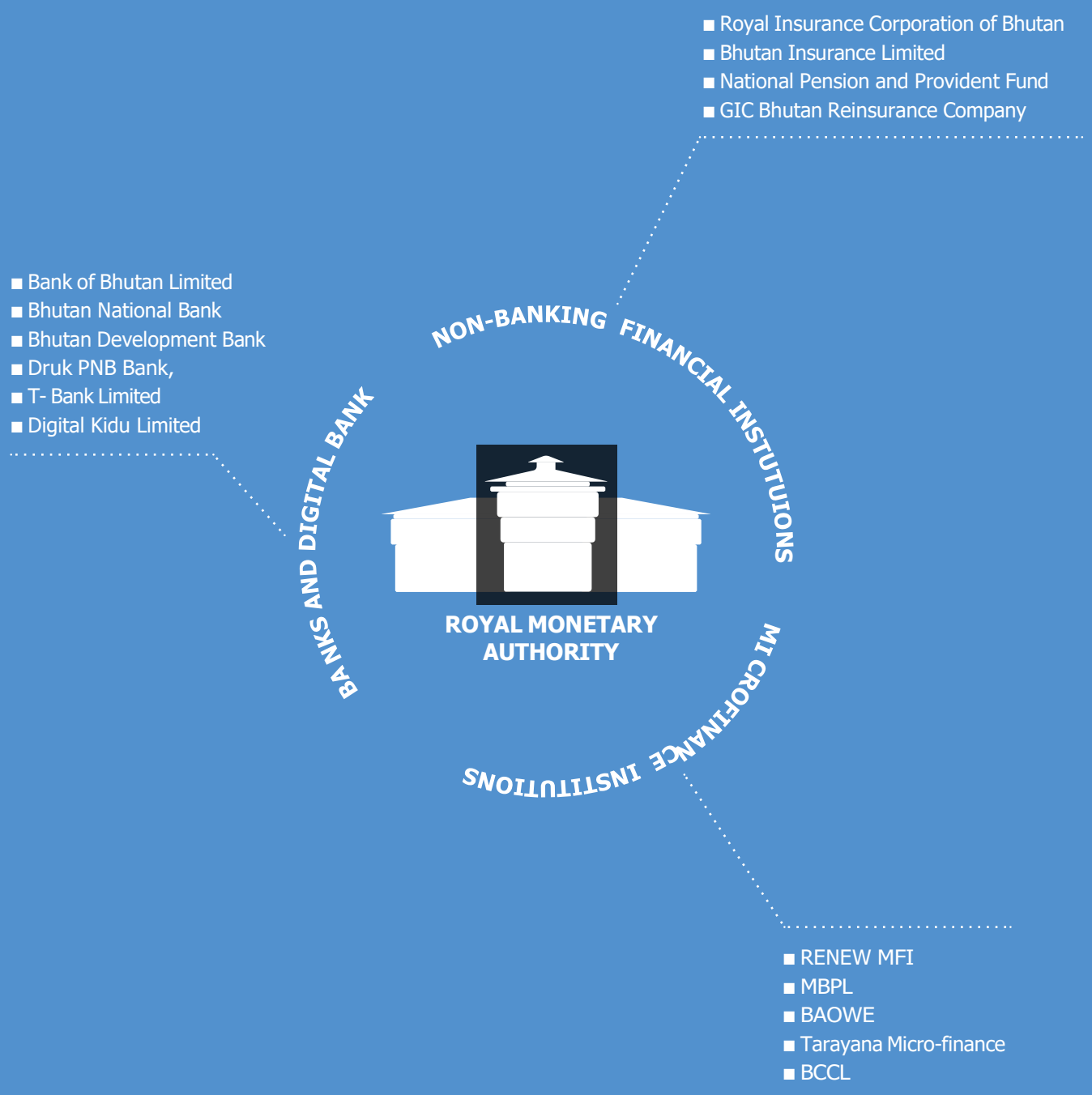
2.2. Banking infrastructure and their roles

The banking sector dominates Bhutan's financial system, accounting for 75 percent of total financial sector assets as of September 2022. The non-banking financial institutions (NBFIs) include three insurance companies (Royal Insurance Corporation of Bhutan, Bhutan Insurance Limited, and the National Pension and Provident Fund) and one general reinsurance company (GIC Bhutan Reinsurance Company). The traditional banking institutions in Bhutan, including BOBL, BNBL, BDBL, T-Bank, and Druk PNBL, primarily operate through brick-and-mortar branch offices, extension offices in Geogs (administrative blocks), and ATMs. BOBL and BDBL account for a significant portion of the country's banking infrastructure, comprising 70 percent of branch offices, 58 percent of extension offices, and 52 percent of ATMs.

This extensive branch network provides BOBL and BDBL an advantage in serving the rural population across Bhutan. In contrast, the capital district of Thimphu, despite its relatively small geographic size, accounts for a disproportionate share of the country's banking infrastructure - 11 percent of all branches, 13 percent of all extension offices, and 34 percent of all ATMs.

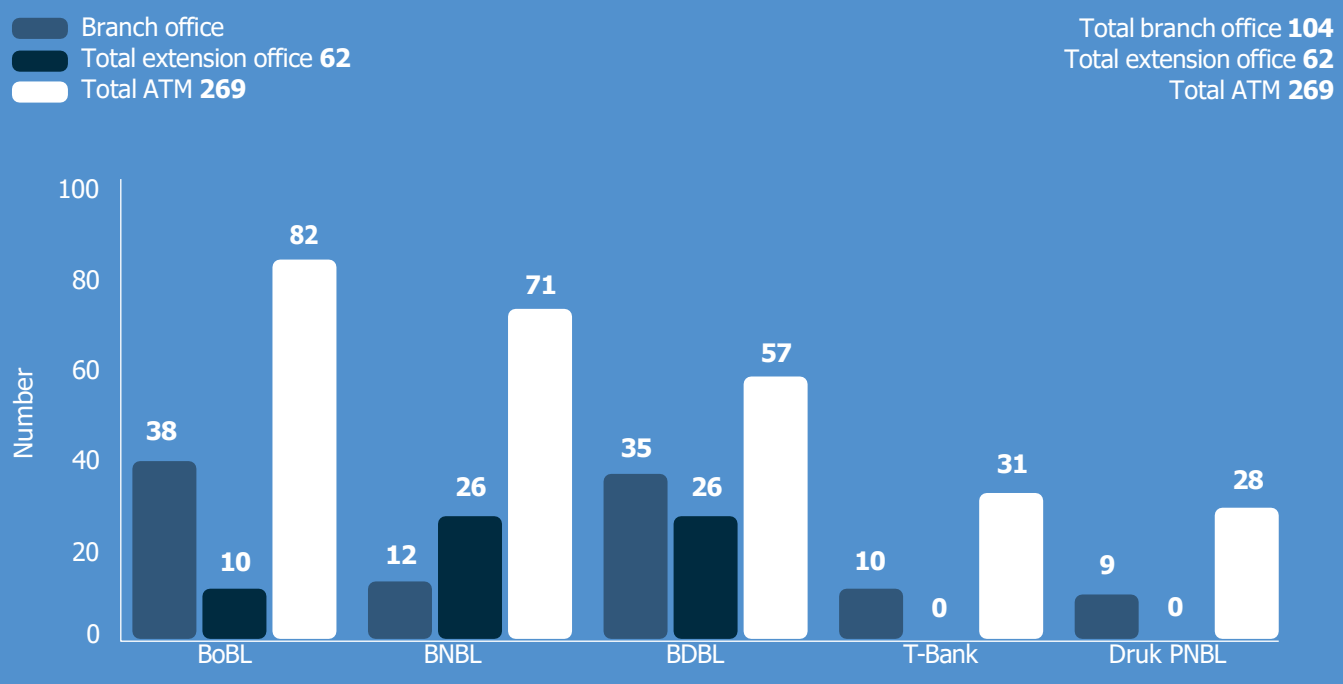
Figure 2 presents the detailed banking infrastructure in Bhutan, including the number of branch offices, extension offices, and ATMs operated by the main financial institutions.

Figure 1. Bhutan's Financial System



Source: (Royal Monetary Authority, 2023) and (Department of Agricultural Marketing Cooperatives, 2021). Information on banks, non-banks and microfinance Institutions.

Figure 2. Number of Bank offices in Bhutan in 2022



Source: Royal Monetary Authority, 2022, pp. 218.

2.3. Sectoral exposure and non-performing loan (NPL) in Bhutanese banks

The Bhutanese banking industry has successfully navigated the credit risk challenges posed by the COVID-19 pandemic. The capital adequacy ratio, a key measure of financial stability, recovered to 14.67 percent in 2022, after declining to 15.48 percent in 2021. This improvement can be attributed to the industry's success in loan recovery, reflected in the sharp decline of the Non-Performing Loan[1] (NPL) ratio from 14.61 percent in 2020 to 7.81 percent in 2022 as shown in Table 1. The service and tourism sector holds the highest NPL share at 42 percent, followed by housing at 14 percent, trade and commerce at 13 percent, transport at 11 percent, and production and manufacturing at 9 percent. The agriculture and animal husbandry sector accounts for just 4 percent of NPLs.

Furthermore, the banking industry's liquidity ratio stands at 29.64 percent, well above the required ratio of 20 percent, reflecting strong liquidity. The persisting high non-performing loans (NPLs), thin capital buffers, and low appetite for large borrowing may continue to limit credit expansion and hurt the profitability of Bhutan's banking sector. In 2023, the sector disbursed a total of Nu210 586 million (USD 2 550 million) across 13 sectors, with building and construction at 28 percent and service and tourism at 12 percent holding the largest shares at 40 percent collectively. The agriculture and forestry sectorreceived Nu5 194 million (USD 63 million) in 2023, a 22 percent decrease from the previous year, with its share of total credit falling from 5 percent in 2020 to 2 percent in 2023 (Table 2). Notably, 97 percent of agricultural credit are provided by two banks: Bhutan Development Bank (80 percent) and Bank of Bhutan (17 percent).

1 NPL is the ratio of debts that are past due, usually by 90 days to gross loan portfolio. Lenders manage NPL in a variety of ways including taking possession of the loan collateral, restructure the debt, enforce a third–party guarantee, or sell the loan at a discount.

The Bhutan Development Bank Limited (BDBL), established in January 1988 by Royal Charter, focuses on providing financial services to small-scale farmers. It leads in offering seasonal, small and medium-term loans to rural agricultural communities through its network of 35 branches, 26 gewog field offices, 45 ATMs, and 180 outreach posts. The Royal Government of Bhutan (RGoB) holds a 96 percent ownership stake, highlighting the bank's strategic role in supporting rural and agricultural development.

Table 1. Performance of Bhutan's financial system 2019 – September 2022

Item	2019	2020	2021	2022
Risk weighed capital adequacy (percent)	14.22	13.62	15.48	14.67
NPL Ratio (percent)	10.86	14.61	8.89	7.81
Bank Liquidity (SLR) (percent)	24.67	31.75	32.64	29.64
Total financial sector assets (Nu billion)	124.4	260.7	281.8	318.01
Total financial sector assets (USD billion)	**1.79**	**3.63**	**3.84**	**4.28**
Total credit (Nu billion)	154.33	166.89	175.79	191.96
Total credit (USD billion)	**2.22**	**2.33**	**2.39**	**2.58**

Source: (Royal Monetary Authority, 2023) and (Royal Security Exchange of Bhutan, 2022).

Table 2. Agricultural credit by banks and insurance companies 2019–2023

Economic Sector/source	2019	2020	2021	2022	2023
				Nu million (USD million)	
Agriculture, Animal husbandry	6 247 (80.08)	6 630 (83.92)	6 603 (82.53)	6 324 (78.07)	5 194 (63.34)
Institutional exposures					
Bank of Bhutan	197 (2.52)	213 (2.65)	223 (2.78)	279 (3.44)	879 (10.71)
Bhutan National Bank	65 (0.83)	84 (1.06)	81 (1.01)	74 (0.91)	85 (1.03)
Bhutan Development Bank	5 970 (76.53)	6 252 (79.13)	6 220 (77.75)	5 891 (72.72)	4 177 (50.93)
T Bank Limited	2 (NA)	2 (NA)	2 (NA)	2 (NA)	4 (NA)
Druk PNB Bank Ltd	8 (0.10)	24 (0.30)	21 (0.26)	18 (0.22)	22 (0.26)
Royal Insurance Corp Ltd	2 (NA)	53 (0.67)	56 (0.70)	59 (0.72)	28 (0.34)
Bhutan Insurance Ltd.	3 (NA)	2 (NA)	2 (NA)	1 (NA)	NA

Source: Royal Monetary Authority, 2023, pp. 104–108.

2.4. Non-Bank financial institutions and their roles

The four non-banking financial institutions (NBFIs) primarily focus on insurance services. The Royal Insurance Corporation of Bhutan Limited (RICBL) is the dominant player, offering life insurance, general insurance, reinsurance, credit, and securities products, while Bhutan Insurance Limited (BIL) caters to individuals and MSMEs with its general insurance products. RICBL holds a 100 percent market share in life insurance and dominates the general insurance market with a 73 percent share, leaving BIL with only 27 percent. Motor and fire insurance are the most commonly sold policies. Due to the COVID-19 pandemic and economic slowdown, the insurance business declined in 2022. Table 3 presents general insurance conducted by RICBL and BIL, and life insurance by RICBL.

Table 3. Life and general insurance business, 2021–2022

Items	RICBL		BIL	
	2021	2022	2021	2022
General insurance premium (Nu million)	1 174	1 080	412	400
General insurance premium (USD million)	**16**	**15**	**73**	**5**
Life insurance gross premium collected(Nu million)	1 403	1 333	NA	NA
Life insurance gross premium collected (USD million)	**NA**	**18**	**NA**	**NA**
Reinsurance premium (Nu millionn)	148.14	78	234.07	213
Reinsurance premium (USD million)	**0.2**	**1.1**	**3.2**	**2.9**
Claims ratio (life and general)	39%	46%	36%	40%
General Insurance penetration in % (2022)	0.64	0.59	0.22	0.18

Source: (Royal Insurnace Corporation of Bhutan Limited, 2022), (Bhutan Insurance Limited , 2022), and (National Statistics Bereau , 2023, pp. 258)
Note: Insurance penetration is calculated as the ratio of total insurance Premiums to gross domestic product each year.

The insurance market in Bhutan is projected to grow at a compound annual growth rate (CAGR) of over 7 percent during the forecast period from 2020 to 2025. Industry experts believe that agricultural insurance is poised to become a key growth sector. With the anticipated regulatory improvements, weather- indexed or parametric insurance is expected to experience significant expansion in the next five years.

The National Pension and Provident Fund (NPPF) was established as an autonomous agency responsible for managing pension and provident fund schemes for civil servants, employees of state-owned corporations, and members of the armed forces. Currently, GIC-Bhutan Reinsurance Company Limited provides coverage for all classes of business, with the exception of specialized areas such as credit and agriculture.

2.5. Microfinance institutions in Bhutan

The microfinance institutions (MFIs) in Bhutan hold a modest loan portfolio of slightly over one percent compared to banks and other non-banking financial institutions (NBFIs). They play a pivotal role in providing small-scale credit at moderate interest rates, supporting wealth-generating activities.

The development of the microfinance sector in Bhutan has been gradual, primarily due to high operational costs, limited competition, and the prevalence of a subsistence-oriented economy. Table 4 provides key information about the main MFIs in the country. Notably, RENEW Microfinance Private Limited (RENEW) and Microfinance Bhutan Private Limited (MBPL) have established substantial loan portfolios. Additionally, two NGO microfinance providers, the Bhutan Association of Women Entrepreneurs (BAOWE) and Tarayana Microfinance (a branch of the Tarayana Foundation), focus exclusively on supporting women. Bhutan Care Credit Limited (BCCL) primarily caters to members of the armed forces, veterans, and their families.

The MFIs in Bhutan offer both group-based and individual lending models. BAOWE and Tarayana Microfinance utilize a self-help group approach, while MBPL and BCCL implement individual lending methods tailored to their specific client demographics. The RMA has granted deposit-taking microfinance institution (DTMFI) status to the Bhutan Association of Women Entrepreneurs (BAOWE), further enhancing its capacity to serve its clients.

According to the Royal Monetary Authority's 2022 report, Bhutan's microfinance institutions served 13,890 loan accounts, with the non-performing loan (NPL) ratio improving from around 10 percent in 2021 to 7.6 percent in 2022. The average loan size stood at Nu 187 911 (USD 2 384), reflecting the sector's expanding reach and improving portfolio quality in advancing financial inclusion across the country.

According to the study on bank lending to SME sector in Bhutan, the primary sources of finance for MFIs are client savings and deposits, which constitute 31.5 percent, their own profits (27.8 percent), concessional loans from apex microfinance (30.7 percent), and donor funds/grants (10 percent) (Wangmo, 2017, pp. 43-51). However, the NPL ratio of nearly 8 percent is higher than the generally accepted international standard of 5 percent. Both BAOWE and Tarayana view microfinance as a means to advance the welfare of women members, particularly those in subsistence farming and handicrafts, and they rely on grant funding to broaden their economic and social development for their clientele.

Box 1. Bhutan Association of Women Entrepreneurs

Ms. Damchae Dem is a successful Bhutanese entrepreneur who founded the BAOWE. The Association assist single mothers and unemployed youth in urban and rural areas. BAOWE introduced the concept of rural entrepreneurs among its women members. The association is now seeking to help its members connect with the global market and increase their revenue through branding and IP. The BAOWE Microfinance program organises women into self-help groups. The members are supporter through the provision of affordable finances and savings accounts, complementing the government's initiative of financial inclusion. BAOWE provides market links for their members, and train them in financial literacy.

Table 4. Profile of Bhutan's MFIs as of April 2024

Particulars	RENEW	MBPL	BAOWE	Tarayana	BCCL
Legal status	Private Company	Private Company	NGO	NGO	Public Company
Lending model	Group/ individual	Grameen	Group	Group/ individual	Individual
Target group	Women- led mic- business	Farmers and micro- business	Women	Women	Army men, youth, women
Total savings clients/household s	28 482	1 109	NA	NA	NA
Loans disbursed (Nu million)	257	82.3	NA	37	NA
Loans disbursed (USD million)	**3**	**1**	**NA**	**0.4**	**NA**
Total deposits (Nu million)	266	121	NA	NA	NA
Total deposits (USD million)	**3**	**1**	**NA**	**NA**	**NA**
Total paid up Capital	102	50	NA	NA	NA
T. Paid up capital (USD million	1	0.6	NA	NA	NA
No. of branch offices	11	3	0	0	0

Source: Annual Reports and Websites of the MFIs.

Table 5. Loan and non-performing loans of MFIs

S.N	Particulars	Sep-21	Sep–22
1	Total Loan Sanctioned (Nu million)	2 427.53	3 260.85
	Total Loan Sanctioned (USD million)	**33.06**	**43.85**
2	Total Loan Outstanding (Nu millionn)	1 938.98	2 610.08
	Total Loan Outstanding (USD million)	**26.41**	**35.10**
3	Total no. of Loan accounts	9 548	13 890
4	NPL to loan ratio	9.98%	7.56%

Source: (Royal Monetary Authority, 2022, pp. 8)

2.6. Bhutan stock exchange

The Royal Securities Exchange of Bhutan (RSEB) was established to democratize share ownership, mobilize savings, provide a convenient capital-raising platform for businesses, and offer liquidity to all shareholders. RSEB is one of the smallest securities exchanges in the world. As of December 2022, the market capitalization of the 17 companies listed by the RSEB totalled Nu 55.83 million (USD 0.75 million), indicating the exchange's progress in facilitating private sector capital mobilization and share trading in Bhutan (Refer Table 6).

Table 6. Highlights of Bhutan stock exchange performance

Source	2019	2020	2021	2022
No. of companies listed	20	18	17	17
Market capitalisation (Nu in billion)	51.67	47.45	52.79	53.83
Market capitalisation (USD in billion)	**0.74**	**0.66**	**0.72**	**0.72**
Traded volume (Nu in billion)	20.27	21.15	14.19	30.63
Traded volume (USD in billion)	**0.29**	**0.29**	**0.19**	**0.41**
No. of stockholders	70 129	72 017	1 000 360	100 422
No. of brokerage firms	7	7	8	9

Source: (Royal Security Exchange of Bhutan, 2022)

3. Financial regulations and regulatory framework

This section outlines the financial regulations that govern banks, microfinance institutions, stock exchanges, investment firms, and insurance companies. These regulations are designed to reduce the risks that financial institutions can assume with investors' funds and to ensure that they operate within the framework of existing laws. By establishing clear guidelines, these regulations promote transparency, protect consumers, and maintain the overall stability of the financial system.

3.1 Regulatory role of RMA

The RMA is the country's central banking and financial regulatory institution. Established in 1982 through an act of Parliament, the RMA's mandate and powers were further codified and refined through the RMA Act of 2010 and the Financial Services Act of Bhutan 2011. RMA has the responsibility to regulate the entire financial sector, including the licensing of financial service providers, management of the payments system, and oversight of foreign exchange operations. The Act also streamlines the governance structure of the RMA, with a Board of Directors comprising a royally appointed Governor as the Chairperson, two Deputy Governors (one serving as the Secretary), and four other members appointed by the government, including a representative from the Ministry of Finance. Table 7 below summarises the function of various regulators in Bhutan's financial market.

Table 7. Financial regulators in Bhutan

Regulator	Financial market
Royal Monetary Authority	Money Market, commercial banks, MFIs, foreign exchange management, payment system. RSEB also acts as the regulatory authority of the country's monetary policy and the only provider of notes and coins in circulation.
	Insurance market
The Royal Securities Exchange	Overall Securities C Commodities Market
Royal Monetary Authority and MoAL	Cooperatives

The financial sector in Bhutan operates under a comprehensive regulatory framework. The Rules and Regulations for Establishment of Commercial Banks in Bhutan 2018, Prudential Regulation 2017, and Macro-Prudential Rules and Regulations 2018, ensuring a well-capitalized and professionally managed banking system under the oversight of the RMA, govern the establishment of commercial banks.

Non-banking financial institutions (NBFIs), specifically the four insurance companies, follow the Rules and Regulations for Licensing of Insurance Companies 2018.

Microfinance institutions (MFIs) are governed by several regulations including the Regulation for Microloan Institution (2014) and Agent Banking Rules and Regulations (2016), with the aim of integrating microfinance into mainstream banking services. Currently, there are five licensed microfinance institutions in Bhutan.

The Credit Information Bureau (CIB) plays a pivotal role by centralizing credit data and promoting responsible lending. The current membership includes 5 banks, 3 insurance companies, 4 microfinance institutions, 2 telecom companies, and 1 power utility.

The cooperative sector is regulated under the Cooperative (Amendment) Act of Bhutan 2009, with the Department of Agricultural Marketing and Cooperatives (DAMC) serving as the registrar. As of 2019, there were 509 Farmers Groups and 71 Cooperatives in Bhutan (Department of Agriculture and Marketing Cooperatives, 2021).

The capital market is regulated by the Royal Securities Exchange of Bhutan (RSEB), which, alongside RMA, oversees initiatives like the crowdfunding platform "Kuen-phen" to support start-ups and young entrepreneurs. The RSEB also facilitates online trading of agricultural commodities, such as potatoes, in partnership with the Food Corporation of Bhutan (FCB).

Further details on the regulatory framework and conditions governing these financial institutions are available under Annex 1: Conditions governing banking and non-banking financial institutions in Bhutan.

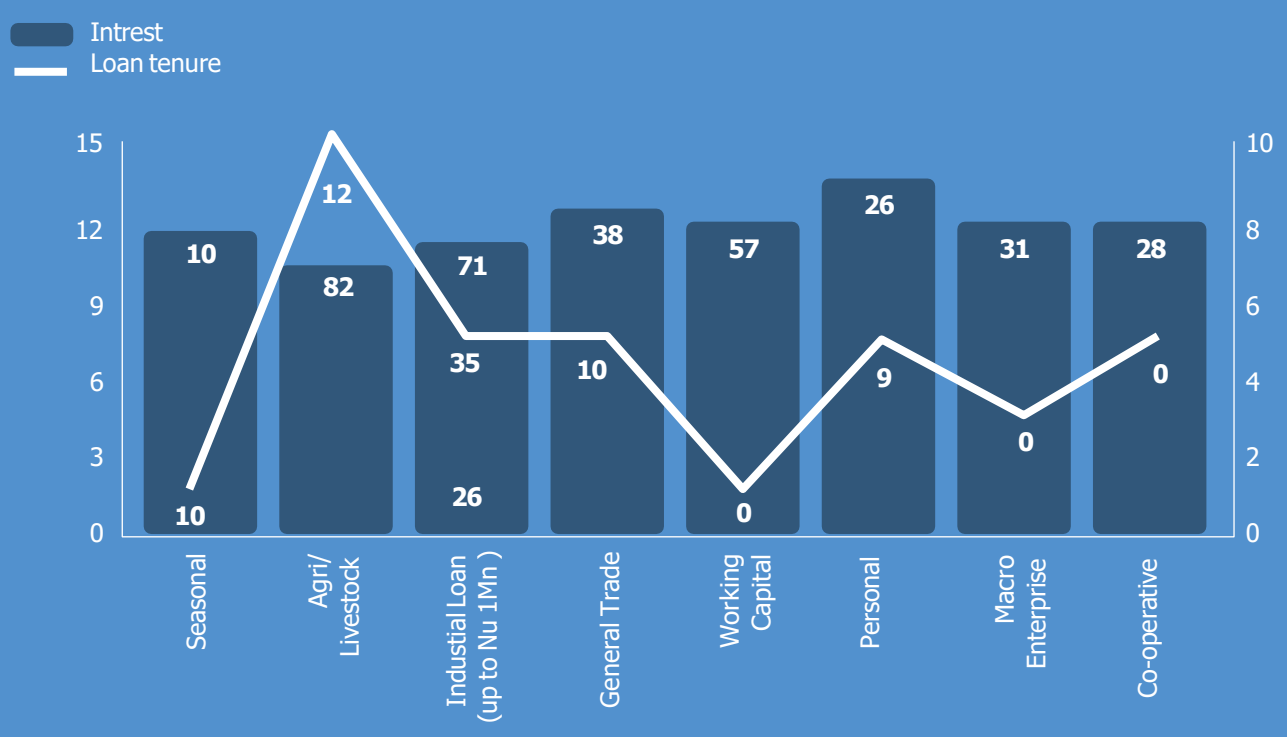
4. Financial products and instruments

This section focuses on the financial instruments available to fund rural enterprises, including farmers, agricultural value chains, and climate-smart initiatives in rural settings. The financial instruments commonly utilized by rural population in Bhutan can be categorized into three main groups: cash instruments, derivatives, and innovative new instruments. Each category plays a distinct role in facilitating access to capital and supporting sustainable development in rural areas.

4.1. Savings, deposits, loan and equity products

Savings, bank deposits, and certificates of deposit are common contractual arrangements between financial institutions and rural clients in Bhutan. There is a strong propensity, even among the poorest households, to save for purposes such as children's education, marriage, and medical emergencies. In 2021, Bhutan's Gross Savings Rate was measured at 25.2 percent, compared to Nepal at 35.6 percent, Bangladesh at 30.4 percent, Lao at 18.4 percent, and India at 30.2 percent. Bhutanese households

Figure 3: Loan Products of Bhutan Development Bank Limited (BDBL)



Source: Bhutan Development Bank, 2024

utilize a combination of formal and informal financial institutions, including banks, microfinance institutions, and informal savings groups, to meet their diverse financial needs.

4.1.1. Savings account and term deposits

BoB offers a variety of savings options to its customers. The savings deposits can be classified into four main types: fixed deposits, recurring deposits, standard savings accounts, and flexi deposit accounts, which aim to cater to customer exigencies. The interest rates on these savings products vary. For standard savings accounts, the interest rate is 4.5 percent per annum. For recurring deposits, the rates range from 4.75 percent for a 91-day term to 7.25 percent for a term of 2 years or more. Fixed deposits earn 4.5 percent for terms less than 1 year, and 8.25 percent for 7-year terms.

4.1.2. Loans

Banks provide numerous credit products. The main loan types and associated loan tenure and interest rates offered by the Bhutan Development Bank is presented in Figure 3.

4.1.3. Microfinance products

MFIs provide savings, credit, remittance and insurance products. For illustrative purposes, the main features of selected products of MBPL, the second largest MFI in Bhutan, is presented in Table 8.

Table 8. Microfinance Loans for Agriculture and Microenterprise by MBPL

Item	Agricultural loans	Microenterprises
Eligibility	Any Bhutanese citizen, groups of individuals belonging to a cooperative or SHG.	Any individual with valid Trade Business License.
Purpose	Purchase of land, orchards, farm equipment, livestock, setting up of greenhouse or cold storage etc.	Purchase of stocks, Expansion of working facilities; Modernizing a plant; Overdraft facilities, Setting up new ventures
Rate of interest	18.5%	19.5%
Tenor	5 years	5 years
Loan size	Nu 0.5million	Nu 0.5million
Repayment schedule	Monthly/Quarterly/Semi-Annually/Annually	
Other services	Financial literacy	

Source: Microfinance Bhutan Private Limited, 2024.

4.2. National credit guarantee scheme (NCGS) and economic stimulus programme (ESP) fund

The national credit guarantee scheme (NCGS) is a government initiative launched in October 2020 to stimulate investment and business growth. This financial program is specially designed to address the challenges of accessing credit. The Guarantee shall cover loans not exceeding Nu 30 million extended by participating banks, significantly reducing the risk for these institutions and making them more inclined to lend to cottage and small industries (CSIs), medium enterprises, and large enterprises that are qualified to apply for loans under the NCGS program. A total of 24 applications worth Nu 65.59 million (USD 0.89 million) were approved by January 2021.

Similarly, the government on 19 May 2024 launched the Economic Stimulus Programme (ESP) as a means to support economic recovery from the impact of the COVID–19 pandemic. The Nu 15 billion (USD 180 million) ESP fund offers collateral–free loan at 4 percent interest. Out of which, the first phase of Nu 5.3 billion USD 63 million) was made available for consumption through the existing financial institutions. The total allocation for agriculture and

livestock sector is about Nu 500 million (USD six million) with a ceiling up to about Nu One million (USD 12 000.00) (Royal Monetary Authority, 2024).

4.3. General insurance

The Bhutan Comprehensive Motor Insurance provides coverage for any loss or damage to the policyholder's vehicle or its accessories due to natural calamities, man–made calamities, personal accident, and third–party legal liability. However, the policy does not cover mechanical breakdowns, loss or damage caused by intoxicated driving, or deliberate accidental loss.

4.4. Bonds market

The government has taken significant steps to strengthen its financial landscape, particularly through the development of the sovereign bond market. As of the current year, there are 15 outstanding bonds worth Nu8 357 million (USD 112 million) in the country, with the bonds being issued by various financial institutions, including banks, insurance companies, and the RGOB itself. The average size of these bonds is Nu 51 million (USD 0.69 million), with an average coupon rate of 7 percent and an average tenure of a little over 9 years (Royal Securities Exchange of Bhutan, 2024).

In 2020, the government issued two sovereign bonds worth Nu 3.7 billion (USD 49.9 million) in total to ease the financial strain caused by COVID–19. Both bonds were oversubscribed, attracting participation from a wide range of investors, including financial institutions, pension and insurance companies, civil society organizations, and high net worth individuals. The success of sovereign bond issuance was welcomed as a positive step by the government, to create a diversified financial market and attract foreign investment. To this end, the RGOB is collaborating with UNESCAP to attract insurance companies and pension funds from the region to invest in the country's future sovereign bond offerings.

4.5. Commodity market

The Commodity Market Initiative is a collaborative effort between the RSEB and the Food Corporation of Bhutan (FCBL), aimed at enhancing the commodity margins for Bhutanese farmers. The primary objectives of this initiative are to provide farmers with direct market access, increase the number of buyers, reduce collusion, and ensure transparent pricing. Since 2017, the RSEB has been providing trading facilities for the commodities market, while the FCBL acts as an intermediary, receiving and processing buy and sell orders from clients. Additionally, the FCBL is responsible for providing warehouse facilities to the farmers, connecting them to warehouses located in Samdrup Jongkhar, Phobjikha, and Bumthang.

Furthermore, the RSEB has launched the Agricultural Commodities Market Initiative (ACMI), an online marketplace that enables farmers, producers, traders, and consumers to buy and sell agricultural products, livestock, and non–wood forest products. Currently, the platform has 480 registered users trading in 25 commodities, including honey, cardamom, potato, green tea, apple, and garlic chili. The ACMI e-platform is designed to build an efficient marketing channel for agricultural goods by improving quality, implementing standardized grading mechanisms, and facilitating price discovery. This initiative aims to enhance financial inclusion through the warehouse receipt system, providing farmers with increased access to the market and better opportunities to maximize their commodity margins.

4.6. Climate finance

Bhutan faces significant climatic risks, including glacial lakes outburst floods, floods, heavy winds, erratic precipitation and landslides, which severely impact its economy. The country's reliance on hydropower (accounting for 40 percent of exports) and rain-fed agriculture (employing nearly 60 percent of the population), makes it vulnerable to erratic rainfall patterns. In its commitment to the Paris Agreement, Bhutan aims to remain carbon

neutral, limiting its CO2 emissions to 2.2 million tons, balanced by its forest, and potentially offsetting 22.4 million tons through hydropower exports by 2025.

Recognizing the importance of addressing climate change, Bhutan has pioneered an innovative approach since fiscal year 2022-23 by implementing climate budget tagging in four key sectoral ministries: the Ministry of Agriculture and Livestock (MoAL), the Ministry of Infrastructure and Transport (MoIT), the Ministry of Industry, Commerce and Employment (MoICE), and the Ministry of Energy and Natural Resources (MoENR). The budget tagging assessment for fiscal year 2023–24 shows that 75 percent of the budget was allocated to mitigation, adaptation, and creating an enabling environment. For 2023–24, USD 33 million was allocated for mitigation projects and USD 18 million for adaptation, demonstrating Bhutan's commitment to climate resilience. The country has also successfully mobilized USD 193 million in ongoing climate initiatives from the Global Environment Facility (GEF). Refer Annex 2: Climate budget allocation and projects for more details.

Bhutan continues to explore opportunities to access climate finance, with promising prospects in areas such as water management, organic agriculture, forestry, and other related sectors.

5. Country level scenario on inclusive rural finance

An inclusive financial market guarantees equitable and affordable access to financial products for rural households and businesses, particularly benefiting women and marginalized groups. By unlocking a diverse array of economic opportunities, inclusive rural finance serves as a catalyst for sustainable economic growth, enabling communities to thrive and contributing to the overall development of the country.

5.1. Financial inclusion in Bhutan

Financial inclusion is a key priority for Bhutan, regarded as essential for achieving equitable and sustainable socio-economic development—a foundational element of the country's guiding philosophy of Gross National Happiness (GNH). This indigenous concept emphasizes measuring the collective happiness and well-being of Bhutan's citizens while promoting self- sufficiency, reducing wealth disparity, ensuring good governance, and empowering the populace. Bhutan aims for an ambitious target of 85 percent financial inclusion by 2023, up from a baseline of 64 percent in 2017. Four key pillars support this goal: enhancing appropriate financial products and services, strengthening financial accessibility and proximity, financing priority sector growth, and improving financial capability and consumer protection.

According to the latest data, over 76 percent of Bhutan's adult population (aged 18 and older) holds a bank account with a formal financial institution, including microfinance options. Nearly 22 percent have accessed credit facilities, more than 25 percent possess an insurance policy, but only about 20.5 percent utilize e-money services.

5.2. Key challenges to access finance by smallholders

Limited access to finance is one of the key constraints in Bhutan. It is caused by both supply-side and demand-side barriers, but with greater emphasis often placed on the former (banks and other service providers). Therefore, policy interventions need to focus on addressing or mitigating these barriers, such as reducing information asymmetry, managing transaction and operational costs. Access to finance remains a top concern for smallholders, particularly in rural areas.

5.3. Support system to improve access to finance

The RMA launched the priority sector lending scheme in 2017 and economic stimulus programme (ESP) in 2024 by government aimed at promoting targeted lending and better coordinating government support for cottage and small industries. Additionally, regulations for the CIB were introduced to enable more comprehensive credit assessments that extend beyond traditional collateral and guarantees.

The range of interventions is well defined and includes mechanisms such as guarantee schemes, credit scoring, quota systems, conditionalities, and targeted funding or liquidity facilities. These measures aim to create more smallholder-friendly financial instruments and mitigate collateral constraints. However, it is important to note that while these interventions effectively address the financing gap, they primarily serve as stopgap solutions rather than addressing the underlying issues within the financial system.

6. Gender and social inclusion to promote rural finance

This sub-section examines the legislation, institutional framework, and programs related to women's entrepreneurship in Bhutan. The Constitution of the Kingdom of Bhutan establishes a foundational framework that enshrines gender equality. It provides a legal basis for women's empowerment, ensuring that fundamental rights are equally granted to both women and men. Additionally, the Constitution guides state policies aimed at eliminating discrimination against women and children, promoting an environment conducive to women's entrepreneurship and empowerment.

6.1. Gender inclusion in access to finance

In terms of gender-based access to financial services, there are no significant gender gaps in terms of savings account holding. However, the gender gap is higher for credit (3.81 percent higher for men) and ownership of insurance (6.85 percent higher for men) signifying more property and business ownership for men are higher than women in Bhutan. Since men are more likely to own property rather than women, banks have an inherent bias against prospective women borrower who cannot produce suitable collateral.

According to the National Statistics Bureau's research (Dorji, Jamtsho, Norbu, C Dorji, 2018), the most significant challenge facing rural business women is the limited access to capital from formal institutions. The collateral requirement in financial institutions and group lending schemes in microfinance institutions women entrepreneurs from availing commercial loans, preferring to use their own money, or lend from family and friends. Women are generally risk-averse and very mindful about their ability to pay back from the low returns of their businesses, resulting in lack of demand for credit (Bedarkar, Brahmankar, Rabgay, C Yangdon, 2023). Rural women tend to congregate around retail enterprises (vegetable, garment, handicraft, or grocery shop) that offer low barriers to entry, require minimal investment, and offer assured returns. Most of the women offer similar products and services in saturated markets that impact sales and lower returns. With little or no education, most women start their businesses out of necessity to support families, keeping their businesses at a subsistence level.

6.2. Inclusion of youth in access to finance

The findings from the 2022 Demand-Side Survey indicate that both older adults (aged 80 years and above) and youth (aged 18 to 24 years) face barriers to financial access, leaving them excluded from formal financial services. This exclusion restricts their economic integration and financial freedom. Older adults, particularly those aged 86 and above, experience the highest financial exclusion rate at 82.8 percent, while youth face an exclusion rate of 27.4 percent.

During Bhutan's 109th National Day celebration on 17th December 2016, His Majesty highlighted the transformative power of the financial sector in creating opportunities and improving financial access for youth and rural communities. In line with this vision, and in response to increasing youth unemployment rate and the potential of entrepreneurship, financial inclusion has been recognised as a crucial national financial strategy. To advance this goal, the government is actively encouraging youth and women to pursue entrepreneurship, additionally supported

By civil society organizations dedicated to empowering these groups of financial accessibility (Rinzin, 2020). The establishment of the Financial Inclusion Secretariat (FIS) and subsequent creation of the National Financial Inclusion (NFIS) Development Fund and National Financial Literacy Strategy (2018–2023) have singular vision of strengthening financial capabilities and empower all Bhutanese towards greater financial inclusion. Some of the key target groups include youth (under 25 years), adults (seniors, farmers), women and cooperatives.

With the help of ADB, they have sought to remove the structural barriers for the creation of new businesses and growth of existing ones, such as streamlining registration and licensing procedures, credit extensions, and building capacity of banks to appraise MSME loan applications. The World Bank and several UN agencies also support projects aimed at promoting access to finance by youth and female run businesses. The Priority Sector Lending (PSL) guidelines of the RMA recognise cottage and small industries being critical for addressing challenges facing the agriculture sector and stemming from rural-urban migration. Farmers, small businesses and young entrepreneurs are the target groups of PSL lending. As of March 2024 thanks to PSL, the financial institutions injected a total of Nu 5 010 million (USD 60 million) for primary agriculture and livestock production.

7. Overview of digital financial services (DFS) landscape

7.1. Definition of digital financial services (DFS)

DFS refer to the delivery of financial products and services through electronic channels. This includes transactions such as payments, savings, credit, remittances, and insurance, performed using mobile phones, computers, the internet, or cards. DFS does not rely on traditional brick-and-mortar banking models, enabling remote access, convenience, and cost-efficiency.

According to the Royal Monetary Authority (2018, p. 9), digital financial services in Bhutan operate through three main channels: (i) digital transaction platforms that allow customers to make payments, receive funds, and store value electronically using digital devices; (ii) retail agents equipped with network-connected devices to help customers cash-in (convert cash into electronic value) and cash-out (convert electronic value into cash); and (iii) access devices such as mobile phones, tablets, or point-of-sale (POS) terminals that transmit payment information using payment cards.

DFS play a pivotal role in achieving financial inclusion, providing accessibility, affordability, and convenience for individuals and businesses. They have the potential to reach the underserved and extend financial services to remote or excluded populations, reduce transaction costs compared to traditional brick- and-mortar banking; increase efficiency through fast, secure, and transparent transactions and promote economic growth via entrepreneurship and innovation, empowering micro enterprises and small businesses throughout Bhutan.

7.2. Historical background of DFS

Figure 4. presents the evolution of DFS in Bhutan. Each stage of the development is briefly outlined below.

Early beginnings and foundation (pre-2000s)

- Bhutan's financial landscape began to shape with the establishment of the Bank of Bhutan (BOB) in 1968, marking the initiation of formal banking in the country.
- The RMA was formed in 1983, taking over central banking responsibilities and initiating regulatory frameworks conducive to financial growth and stability.
- The journey towards digital transformation in Bhutan commenced with the introduction of the internet in 1999, enabling enhanced service delivery through digital means.

Key Infrastructure for digital banking and digital payment (2000–mid 2010s)

- RMA established a dedicated payment system department in April 2009 to expand financial services and payment systems leveraging digital technologies. The RMA also initiated Electronic Fund Transfer and Clearing System (EFTCS) project to strengthen its payment systems with technical assistance from RBI, India.
- The RMA operationalized Bhutan Financial Switch (BFS) from December, 2011 enabling interoperability of ATMs of the banks and their Point of Sales (POS) terminals. With the implementation of BFS, customers could avail

ATM facility of any bank as per the convenience. Introduction of BFS not only improved the payment systems, it also provide banking facility more accessible thereby promoting financial inclusion.

- The introduction of mobile banking by Bank of Bhutan in 2015 marked a major milestone, facilitating greater financial inclusion and accessibility. The wider adoption of mobile banking applications enabled customers to perform various banking activities such as balance inquiries, fund transfers, bill payments, and mobile top-ups, bringing banking services to the fingertips of customers.

- Bhutan Immediate Payment Service (BIPS) and Integration of Payment Systems (Mid–2010s–2020)

- BIPS, initiated by the RMA in 2017, connected all member banks facilitating diverse and instant digital transactions, including utility bills, taxes, and e- commerce.

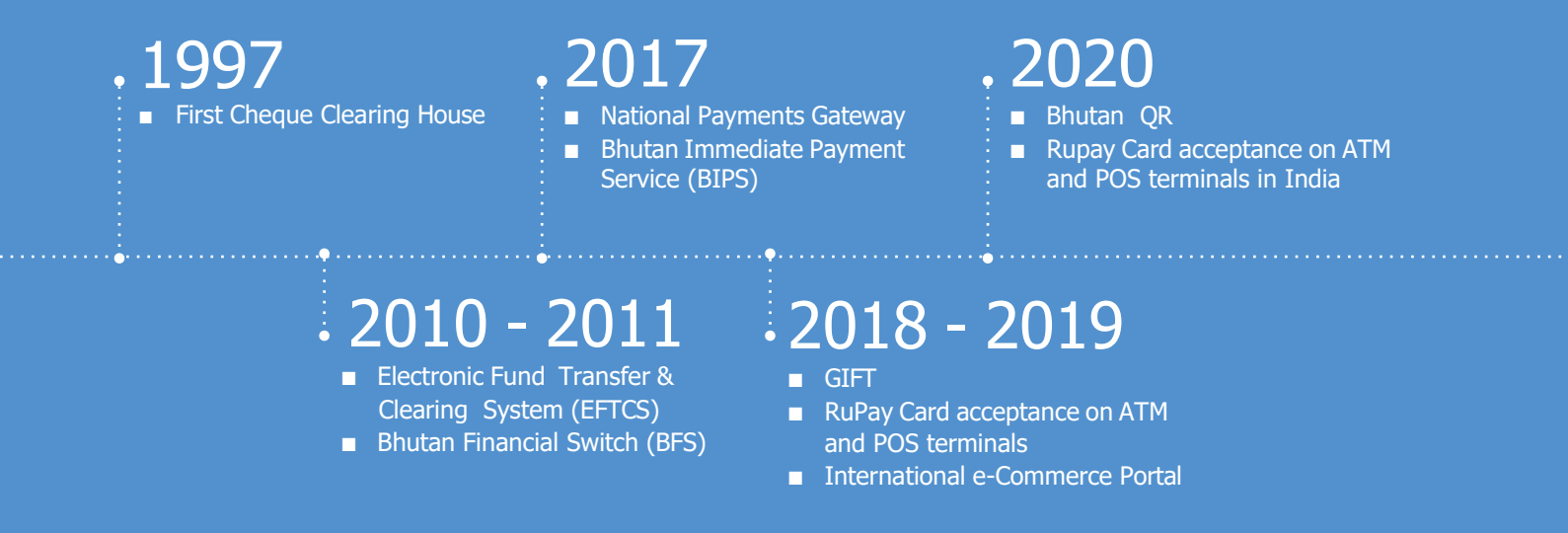
- The system underpinned the shift from traditional cash/cheque transactions to electronic, real-time processing, promoting digital payments across the country. The establishment of the payment gateway facilitated secure, real-time fund transfers and payments, bolstering G2C, B2B, and C2G transactions in the domestic market.

- Furthermore, collaborations with international payment systems like RuPay which was launched in August, 2019 through interconnectivity of the Bhutan Financial Switch (BFS) with India's National Financial Switch (NFS), operated by the National Payment Corporation of India (NPCI) has expanded the digital payment ecosystem, easing transactions for visitors between Bhutan and India, and supporting international commerce.

Bhutan QR System and Financial Inclusion (2020–Present)

- The Bhutan QR system, a part of Bhutan's smart digital banking initiatives and operationalized by the RMA, came into operation in Oct. 2020. The system enabled interoperable QR code

Figure 4. Evolution of Bhutan payment system, RMA



payments across different banks, boosting the ease and spread of digital payments. This system aimed at promoting financial inclusion by lowering the costs of digital transactions and making them accessible to a broader segment of the population. The cross-border interoperable QR code payment linkage between Bhutan and India was operationalized on July 2021. The implementation of the financial inclusion national action plan (FINAP) 2018-2023 has been instrumental in paving the way for DFS adoption, aiming to bridge the digital divide and ensure access to financial services for all segments of the population.

- The National Digital Identity System in Bhutan launched in October 2023 is another key milestone ushering Bhutan into a new era of digital transformation, which is expected to revolutionize various sectors, including financial sector. By enabling secure and seamless digital transactions and interactions between citizens, businesses and government agencies, the system could foster innovation, efficiency and empowerment.

- The RMA in collaboration with Ripple Labs, Inc. (Ripple) of USA, the leading provider of enterprise blockchain and crypto solutions for cross-border payments is also piloting a project on central bank digital currency (CBDC) in Bhutan.

7.3. Regulatory framework for DFS Ecosystem

The regulatory framework for DFS in Bhutan is primarily overseen by the RMA, which functions as the autonomous central banking authority following the mandate given by RMA Act, 2010. Advancing innovative financial services and technology is RMA's one of the missions. One of its key objectives is to "Promote, supervise and, if necessary, operate national and international payment and settlement system including electronic transfer of funds by financial institutions, other entities and individuals". In pursuant to the objectives, RMA also make "regulations covering any payment and settlement system or a component thereof including electronic transfer of funds". The regulatory landscape is structured in a way to ensure that DFS operates efficiently, securely, and inclusively within the financial system (Royal Monetary Authority of Bhutan, 2010).

The foundation of Bhutan's DFS regulatory framework is rooted in various legislations and policies that aim to promote financial inclusion, ensure the stability of the financial system, and protect consumers. Some of the key elements of the regulatory framework include;

- **Payment and Settlement Systems Rules and Regulations 2018:** The key objectives include i) effectively regulating, supervising and overseeing payment services providers and payment systems in promoting their safety and efficiency, thus facilitating the overall stability of the financial system in Bhutan; ii) Preventing and mitigating systemic risk; and iii) Promoting financial inclusion and consumer protection.

- **Procedural Guideline for Bhutan Inter-Bank Real Time (BIRT) - Fund Transfer System 2022:** The objective of this guideline is to facilitate an efficient, secure, and seamless interbank fund transfer via commercial banks and any other RMA approved and licenced FIs.

- **Bhutan Financial Switch Operating Procedural Guideline, 2018:** It defines the operating and settlement guidelines for the members of the BFS network to follow. It mandates all the members on the BFS network to follow certain standard procedures to ensure smooth, secure, and effective operation of the network.

- **Bhutan Immediate Payment Service (BIPS) and Payment Gateway (PG) Procedural Guideline:** Bhutan Immediate Payment Service and Payment Gateway is an instant interbank electronic funds transfer system through the internet banking, mobile and ATM channels by leveraging the use of the Bhutan financial switch and bank application

programming interface (API) platform. The main objective of the BIPS and PG procedural guideline is to govern the day-to-day operation of the systems by its members which comprise of the RMA, member banks and merchants

- **Data Residency Policy for Payment Systems Data 2021:** The primary objective of this policy is to: i) Ensure that a payment service provider licensed/approved by the authority store its payment data on Premise in Bhutan or on Cloud; ii) To provide necessary checks and balances to ensure security and sovereignty of the payment system data; iii) For effective monitoring and supervisory access to data stored with Payment Service Providers in Bhutan which include payment systems, payment systems operators and payment system participants licensed by the RMA; and iv) To safeguard the integrity, authenticity, and confidentiality of data and operating processes while promoting growth in digital payments.

- **Guideline for Trade Receivables Discounting System (TReDS):** The purpose of this guideline is to outline the procedure for setting up and operating the institutional mechanism for facilitating the financing of trade receivables of CSIs (cottage and small industries) from buyers (includes private, corporate and government organizations) through multiple financiers.

- **Guideline for Bhutan QR Payments 2020:** The purpose of this Guideline is to streamline the procedure for the operation of mobile payments in the country via Bhutan QR.

- **Guideline for Automated Teller Machine (AMT) and Point of Sales (POS) 2020:** The primary purpose of this Guideline is to set certain minimum standard and procedures to ensure smooth, secure and effective operation of ATM and POS.

- **Payment Aggregator and PG Guideline 2020:** The primary purpose of this guideline is to set certain minimum standard and procedures to ensure smooth, secure and effective operation and functioning of payment aggregators (entities that facilitate e-commerce sites and merchants to accept various payment instruments from the customers for completion of their payment obligations without the need for merchants to create a separate payment integration system of their own) and payment gateways (PGs are entities that provide technology infrastructure to route and facilitate processing of an online payment transaction without any involvement in handling of funds) in the country.

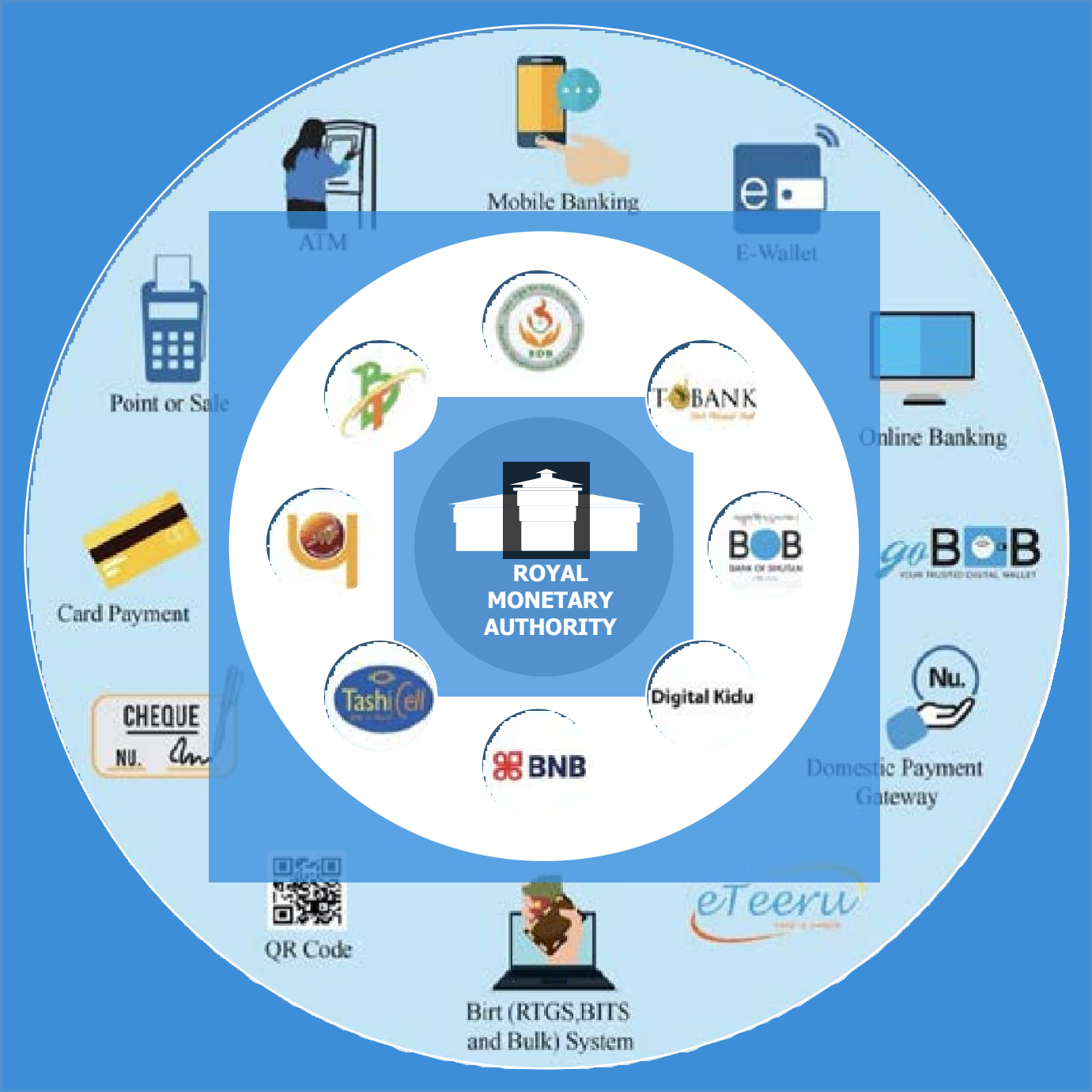
- **Payment System Oversight Framework:** The key objective of the payment system oversight is to ensure the smooth and efficient functioning of the payment systems operations in Bhutan. The scope of oversight will cover the entire payment and clearing settlement system infrastructure and its underlying legal framework.

- **E-Money Issuer Rules and Regulations 2019**: It is applicable to all e-Money institutions, banks, deposit taking micro finance Institutions and mobile network operators licensed by the RMA for issuing e-Money. Its key objective is to regulate, supervise and oversee e-Money Issuer for the issuance of e-Money in Bhutan and promote the safety and soundness of e-Money schemes, and therefore enhance users' confidence in the usage.

- **Agent Banking Rules and Regulations, 2016:** The regulation intends i) to increase financial services outreach and to promote financial inclusion to the un-banked and under-served population without undermining the safety and soundness of the banking system; and ii) to encourage the banks to use agents in the provision of banking services so as to reduce the cost of financial services.

- **Crowd Funding Rules and Regulations, 2019:** It primarily governs the operation of donation-based, reward-based and equity-based crowdfunding (CF) and applies to a crowd-funding portal, issuers and investors who participate in crowd funding activities.

Figure 5. Bhutan's domestic payment ecosystem



7.4. Key Players in DFS Ecosystem

The DFS ecosystem in Bhutan is in its nascent stage, primarily characterized by payment systems. However, it is a rapidly evolving landscape, propelled by collaborative efforts among various stakeholders. Key actors in this ecosystem include regulatory bodies, financial institutions, technology providers, non- governmental organizations (NGOs), and international development agencies. Collectively, these entities work to enhance financial inclusion, promote digital literacy, and foster an enabling environment for the adoption and growth of DFS in Bhutan as depicted in figure 5.

The RMA, Bhutan's central bank, leads the financial sector's regulation, including overseeing the Digital Financial Services (DFS) ecosystem. It promotes financial inclusion, stability, consumer protection, and innovation through its policies. The Ministry of Finance also plays a crucial role, working alongside the RMA to ensure that national financial strategies support DFS growth and economic development. Six licensed banks serve as Payment Service Providers (PSPs) — including Bank of Bhutan and Digital Kidu, the country's first digital bank — by offering mobile and online banking services, expanding reach to both rural and urban areas. Telecommunications companies like Bhutan Telecom and fintech start-ups such as Druk Holding and Investments (DHI) provide the digital infrastructure and solutions essential to DFS.

Non-governmental organizations (NGOs) and Community-Based Organizations (CBOs) promote financial literacy, especially in rural areas, helping drive DFS adoption. International agencies such as the IMF and World Bank offer financial and technical support for these initiatives. The growing demand for DFS is driven by end-users like individuals and businesses, with a focus on rural and underserved communities. DFS programs target these groups, aiming to reduce the digital divide and foster inclusive economic growth across Bhutan, especially among small rural enterprises and the agricultural sector.

7.5. Financial instruments used by the DFS

The financial instruments utilized within Bhutan's DFS landscape encompass a variety of tools and mechanisms that facilitate financial transactions. These instruments are crucial for promoting financial inclusion, enhancing access to financial services, and fostering economic development, particularly in rural and underserved areas. Key financial instruments in Bhutan (Department of Payment and Settlement System, Royal Monetary Authority, 2022) include:

- **Online banking services:** Banks and financial institutions in Bhutan provide online banking services through internet banking platforms, enabling customers to access their accounts, check balances, view transaction histories, and initiate fund transfers. Currently, five financial institutions offer online banking services, with 29 766 subscribers.

- **Mobile banking services:** Financial institutions have launched mobile banking applications that allow customers to perform various banking activities using their smartphones. These apps offer features such as balance inquiries, intra- and inter-bank fund transfers, merchant bill payments, and mobile top-ups. There are 625 905 subscribers to mobile banking apps in Bhutan, associated with six financial institutions.

- **E-Wallet:** E-wallets are digital wallets that enable users to store funds, make payments, and transfer money electronically. They provide a secure and convenient means for individuals to engage in financial transactions without relying on physical cash. E-wallets play a significant role in promoting cashless transactions and expanding financial services to a wider population. Currently, two telecommunications companies, Tashi Cell and Bhutan Telecom, along with a commercial bank (Bank of Bhutan), offer e-wallet services in Bhutan. The e-wallet ecosystem comprises 339 526 subscribers, 58 273 merchants, and 343 agents.

- **Point-of-Sale (POS) terminals:** The proliferation of POS terminals across Bhutan allows businesses to accept debit and credit card payments. These terminals are essential for merchants and businesses, facilitating card transactions and enhancing the digitization of payments. As of 2022, five financial institutions have deployed 543 POS terminals throughout the country.

- **ATMs and cards:** Debit cards are the most commonly used bankcards, with 33 percent of the total banked population using them. However, 64.9 percent of account holders do not use any type of bankcard. Credit card usage is particularly low, with only 2.1 percent of the banked population using them, reflecting significantly lower penetration compared to countries where credit cards are more popular. Other cards, such as INR prepaid card and fuels cards also show minimal usage. In rural areas, 72.3 percent of the banked population do not use any bankcards, compared to a lower 53.7 percent in urban areas. Similarly, card non-usage is higher amongst women, with 70.3 percent of banked women not using any cards, compared to 57.7 percent of banked males.

- **Bhutan QR:** The introduction of QR code payment systems, such as Bhutan QR, has transformed the DFS ecosystem in Bhutan. Launched in 2020, Bhutan QR gained significant traction, particularly during the pandemic, as it enabled touchless transactions, reducing the risk of COVID-19 transmission. QR payments have become popular in merchant stores, restaurants, cafes, and even for parking fee collections. Additionally, mobile banking apps now offer self-generating features that allow individuals and merchants to create their QR codes for instant payment receipt. As of 2022, five financial institutions provide Bhutan QR services through a network of 63 786 QR merchants across the country.

7.6. Current scenario of DFS in agriculture and rural sector

- **Rural focus:** The country has over 60 percent of households residing in rural areas. This demographic underscores the critical need for financial services tailored to meet this specific needs.

- **Literacy and financial inclusion:** While overall literacy rates are improving, notable disparities exist between urban and rural areas (82.1 vs. 62.9) percent, as well as between genders, particularly in rural regions (71 percent male vs. 55.6 percent female). Individuals with higher educational attainment are significantly more likely to have access to formal financial services (99.1percent for those with tertiary education) compared to those with lower educational levels (69.7 percent for those with no formal education). These disparities hinder financial access, particularly for those in the agricultural and rural sectors, as individuals with lower educational backgrounds and women often face inadequate access to financial services.

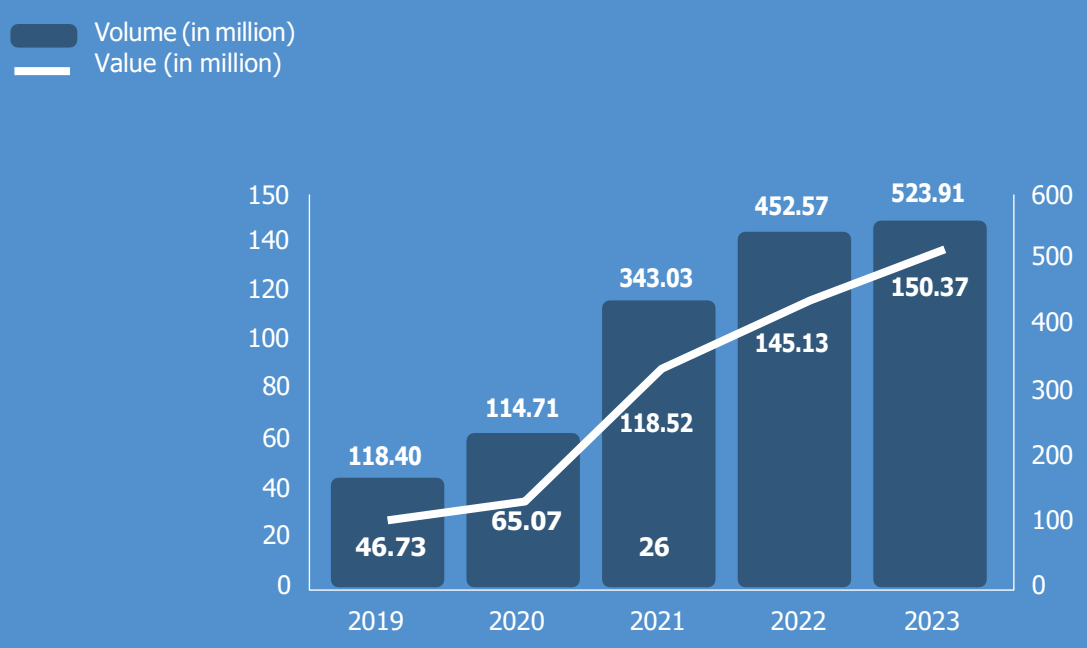
- **Agriculture income sources are critical in rural areas:** Agriculture remains the most significant livelihood in rural Bhutan, with the sale of produce—such as cereals, fruits, and vegetables—serving as the primary income source for 24 percent of households, alongside meat and dairy for 11percent. This sector stands to benefit substantially from the implementation of DFS.

- **Improving banking access but rural-urban divide exists:** The most widely utilized banking product in Bhutan is the savings account, with approximately 92 percent of households maintaining such an account. Access to savings accounts is nearly universal in urban areas (97.5 percent) but notably lower in rural areas (87 percent). Expanding DFS beyond basic savings products is essential for enhancing financial inclusion.

- **Credit access and usage:** Credit access in Bhutan is moderate, with 45.1 percent of banked adults utilizing formal sources such as banks. However, disparities persist along gender (male 51.7 percent vs. female 40.1 percent) and rural-urban lines (rural 50.3 percent vs. urban 37 percent). The Bhutan Development Bank (BDB) is the primary lender, preferred by 59.5 percent of banked adults, particularly in rural areas, while urban-banked males are more likely to favour the BoB and BNB for loan purposes. The primary drivers of credit demand include household needs (29.2 percent) and vehicle purchases (19 percent), while informal channels, such as loans from friends and family (6.5 percent), serve those facing barriers to formal access. Insufficient income (63.8 percent of rejections), documentation challenges in rural areas, and low collateral availability in urban settings further hinder access to formal credit.

- **Growing adoption of digital financial services:** While physical bank visits remain prevalent (70 percent), mobile banking has seen significant uptake (52.2 percent), and ATMs continue to play a role (30 percent). Figure 6 shows an increasing trend of mobile transections, both in value and volume, sharply after the pandemic and increased digital services. This trend indicates a shift toward digital channels, although adoption remains low for point-of-sale systems, internet banking, sales representatives, and e-Money, highlighting opportunities for further expansion. Gender disparities are particularly pronounced in mobile banking usage (56 percent male vs. 49.4 percent female) and ATM access (36.1 percent male vs. 25 percent female), necessitating tailored strategies to address these gaps.

Figure 6. Mobile-banking transactions.



Source: (Department of Payment and Settlement System , 2023)

Education levels strongly correlate with service preferences; individuals with tertiary education show high mobile banking (97.2 percent) and ATM usage (50.1 percent), while those with no formal education predominantly rely on bank branches, facing limited access to mobile banking and ATMs. Targeted financial literacy initiatives could enhance DFS inclusion among specific demographics. The popularity of mobile banking (70.2 percent daily usage) emphasizes convenience as a major driver, warranting a focus on promoting mobile solutions for greater efficiency.

Digital financial services have significant potential to transform Bhutan's agricultural sector. By addressing existing challenges and strategically expanding service offerings, financial inclusion can be enhanced, efficiency improved, farmers empowered, and overall rural development advanced.

8. On-going initiatives to enhance digital financial services

8.1. Policy support and regulatory framework

Government initiatives have been crucial in fostering the growth of DFS. These initiatives have created an enabling environment for the development and adoption of DFS, significantly enhancing financial inclusion and promoting digital transactions. Key ways in which government initiatives have contributed to the growth of DFS include:

- **Policy framework:** The government has established a robust policy framework that supports the implementation and advancement of DFS. Through initiatives like the National Financial Inclusion Strategy 2018–2023 and the National Financial Literacy Strategy, the government has outlined clear objectives and strategies to enhance access to quality and affordable financial services for all citizens, particularly those in underserved areas. This strategic approach provides a roadmap for developing digital financial solutions and ensures alignment with national development goals.

- **Regulatory support:** The RMA, as Bhutan's financial regulator, is continuing to play a crucial role in facilitating the transition to DFS by introducing supportive policies and regulatory frameworks. Key strategic initiatives include the payment system oversight framework, rules and guidelines for electronic money, agent banking, guidelines for crowdfunding, and regulatory sandboxing guidelines. These regulations are designed to ensure the security, reliability, and inclusiveness of digital financial services while promoting innovation and competition among financial and digital service providers. Thereby, boosting confidence in digital financial services among both providers and users. These regulatory frameworks help mitigate risks, ensure compliance with international standards, and foster a secure and transparent financial ecosystem, which is essential for the growth of DFS.

- **Market development support:** Government initiatives have also focused on stimulating market development by introducing programs such as priority sector lending targeting youth and rural communities, as well as green insurance products designed to protect vulnerable populations from the impacts of climate change. By supporting initiatives that cater to specific segments of society and address their financial needs, the government contributes to the overall growth and sustainability of DFS in Bhutan.

8.2. Infrastructure development and technological advancements

The development of digital infrastructure, including the expansion of mobile networks and broadband coverage, has been fundamental to the transition to DFS. According to the Bhutan Living Standards Survey (BLSS) 2022, nearly all households in Bhutan (99.6 percent) have internet access, with 96 percent having mobile internet connectivity. The survey also indicated that 98 percent of households use mobile phones. Furthermore, 90 percent of the population is active on at least one form of social media, reflecting widespread smartphone ownership and internet connectivity. The digital readiness index 2023 (DRI) from the International Telecommunication Union (ITU) categorizes Bhutan as 'emerging,' a marked improvement from its previous classification as 'low.' The introduction of national identity cards and

biometric systems has further enhanced secure and efficient customer authentication processes, forming a critical infrastructure for DFS.

Such infrastructural coverage enabled the introduction and adoption of digital payments systems (payment networks and solutions) such as the Bhutan financial switch (BFS) and Bhutan immediate payment service (BIPS). Which facilitated real-time fund transfers and payments through multiple delivery channels, including the internet, mobile devices, and ATMs. This has improved the efficiency of financial transactions and reduced reliance on physical cash, thereby promoting digital transactions and enhancing financial inclusion.

8.3. Financial products and services innovation

Financial institutions and fintech companies in Bhutan have been actively innovating and diversifying their digital financial products and services. This includes mobile banking applications, online payment gateways, e-wallets, digital identity solutions, blockchain technology, and QR code-based payment systems. These innovations offer convenience, reduce transaction costs, and enable real-time financial transactions, catering to the evolving needs of consumers and businesses.

8.3.1. Druk Gyalpo's kidu initiative

The COVID-19 pandemic accelerated the shift toward digital platforms globally, including Bhutan. With social distancing measures and lockdowns in place, many consumers turned to DFS as a necessity rather than a choice.

Under the command of His Majesty, the Druk Gyalpo's kidu initiative provided relief to households and businesses affected by the COVID-19 pandemic. Direct cash transfers to eligible households via banking channels (such as bank accounts or Digital Kidu) boosted financial access and strengthened social safety nets, facilitating greater engagement with digital financial services.

8.3.2. Mobile financial services

Mobile banking applications have been pivotal in enhancing access to financial services across Bhutan. With a high mobile penetration rate, the country has leveraged mobile technology to provide various financial services, including balance inquiries, fund transfers, bill payments, and mobile top-ups. Similarly, e-wallets and mobile money services have increased access to a large segment of the population. This promotes financial inclusion and digital transactions while decreasing reliance on cash.

8.3.3. National digital identity (NDI)

NDI - a mobile wallet based digital identity solution was launched in October 2023 as the foundation for Bhutan's digital economy, to facilitate verified and trusted interactions between individuals and organizations. It holds immense potential to facilitate easy and convenient access to financial services especially for population living in rural areas (The Bhutanese, 2024).

8.3.4. Collaboration between banks and fintech companies.

The partnerships between banks and fintech companies has been crucial in enabling the advancement of DFS in Bhutan.

- **Enhanced cross-border payments:** By leveraging financial technologies, Bhutan and India have collaborated to integrate financial services through cross-border payments. The RMA has implemented a project to interconnect the Bhutan Financial Switch, operated by the RMA, with the RuPay network of India, managed by the National Payments Corporation of India. This initiative, carried out in a phased manner, has facilitated cross- border remittances between the two nations and improved the interoperability of payment systems. This collaboration enhances financial connectivity, making transactions between Bhutan and India more efficient. The use of fintech solutions in this context has provided opportunities to improve the efficiency and

accessibility of cross-border payments, reducing reliance on physical cash and promoting digital financial transactions.

- **Piloting Central Bank Digital Currency (CBDC):** The RMA has partnered with Ripple, a cross-border crypto payment firm, to pilot a Central Bank Digital Currency (CBDC) in the region. This collaboration allows the central bank to explore various use cases for a digital Ngultrum, including retail, wholesale, and cross-border payments. By working with Ripple and embracing innovative fintech solutions, the RMA aims to enhance financial inclusion in the country and drive the adoption of digital payments. This aligns with the RMA's mission to improve financial accessibility for the Bhutanese population, positioning the country at the forefront of digital financial innovation.

8.4. Financial literacy and consumer engagement

Technological advancements supplemented by increasing financial literacy programs by the government has shaped consumer behaviour and their willingness to engage in digital financial transactions has increased. The integration of financial products, services, insurance and consumer protection topics into the national education curriculum have all contributed to this increased digital literacy, making consumers more comfortable and confident in using digital financial services. These efforts are increasing the adoption of digital financial services, empowering individuals to make informed financial decisions, and fostering a culture of financial inclusion.

9. Constraints, challenges and business opportunities

The transition towards DFS in Bhutan presents unique constraints and challenges that affect their adoption and effectiveness (Friedrich Naumann Foundation for Freedom , 2024). Understanding these is essential to identify opportunities and subsequently develop strategies to enhance the outreach and utility of DFS across the country.

9.1. Regulatory and enabling policies

The RMA's proactive approach and recognition of DFS's potential to enhance financial inclusion have led to significant growth in access to and usage of DFS, particularly in the payments sector. However, as the digital landscape evolves rapidly and often requires collaboration across various government and non-government agencies, there is a pressing need for timely reviews and updates of enabling policies. Improved coordination with key DFS stakeholders is essential to support the growth and adoption of DFS in Bhutan. The recent launch of the national digital identity (NDI) system in October 2023 is a significant step in this direction, as it can enhance customer due diligence and electronic know-your-customer (e-KYC) processes. Nevertheless, challenges remain, particularly regarding the judiciary's reluctance to accept digital documents in legal proceedings.

The RMA has also developed guidelines for Fintech regulatory sandbox and crowdfunding initiatives. However, there is limited updated information regarding the progress of these initiatives, and there are concerns about the viability of crowdfunding as a capital generation tool for potential entrepreneurs. Moreover, the finance accessibility survey reveals that 69 percent of the adult banked population is unaware of the rules and regulations that protect consumer rights when accessing financial products and services. This lack of awareness is particularly pronounced among women and rural adults. Additionally, 66.7 percent of the adult banked population is unaware of the procedures for filing complaints with banks. This indicates that the RMA needs to enhance its database of financial inclusion and literacy initiatives to better track progress and identify areas for improvement in the implementation of its policies and strategies.

9.2. Geographical and infrastructural challenges

Approximately 61 percent of Bhutan's population resides in rural areas, highlighting the need to ensure access to DFS in these regions. However, Bhutan's unique geographical landscape, characterized by mountainous terrain, presents significant infrastructural challenges to the widespread deployment of DFS. Rural and remote areas often suffer from inadequate telecommunications and unreliable power infrastructure, resulting in sporadic access to digital services. This geographical isolation exacerbates the digital divide, limiting the reach and impact of DFS initiatives. Addressing these challenges will necessitate substantial investments in infrastructure development, including the expansion of internet connectivity and electricity access, to ensure that the benefits of DFS can be realized across the entire country.

9.3. Adoption of digital financial products and services

While there has been a marked improvement in access to and usage of DFS due to the rise of digital infrastructure and a variety of products, gaps remain in terms of access and usage of different DFS instruments, particularly in rural areas. The finance accessibility survey 2022 indicates that, although many Bhutanese adults are aware of financial products, their ownership and access to these products—beyond basic savings accounts—are relatively low. Specifically, while 80.8 percent of the adult population owns a savings account, only 31.4 percent possess a mobile phone-based payment account. Furthermore, urban adults are more likely to hold savings accounts (79.3 percent) compared to their rural counterparts (71.2 percent). This gap is also evident in mobile payment account ownership, where 53.5 percent of urban adults possess such accounts, compared to only 19.4 percent of rural adults (Royal Monetary Authority of Bhutan, 2022) (Alliance for Financial Inclusion, 2024).

9.3.1. Mobile financial services (MFS)

MFS encompass a wide range of financial activities conducted via mobile devices, offering a compelling business case in regions characterized by high mobile penetration but limited banking infrastructure. Key features of MFS in Bhutan include:

- **Person-to-Person (P2P) transfers:** A fundamental aspect of MFS is the facilitation of simple, secure, and low-cost person-to-person transfers, both domestically and across borders, providing users with an easy way to send and receive money.

- **Bill Payment and airtime services:** The integration of bill payment options (for shops, government taxes, utilities, etc.) and airtime recharge into MFS offerings enhances user engagement and familiarity with digital transactions. These value-added services encourage users to rely more on mobile platforms for their financial needs.

- **Government disbursements:** Government-to-Person (G2P) initiatives, such as Digital Kidu, subsidies, and social welfare payments, are channelled through MFS. These services act as powerful drivers for financial inclusion and help build trust, especially within rural segments of the population.

- **Merchant payments:** The standardization and uniformity of Bhutan's QR code system, known as 'Bhutan QR,' promote the use of MFS for everyday payments in shops. This expansion beyond person-to-person transactions enhances the overall utility of MFS, making them an integral part of daily financial interactions.

These features not only facilitate financial transactions but also play a critical role in promoting financial inclusion and enhancing the overall digital economy.

9.3.2. Digital wallets and payment platforms

Digital wallets, such as eTeeru from Tashi Cell and goBOB from the BoB, along with payment platforms like the Bhutan Financial Switch (BFS) and the Bhutan Instant Remittance Transfer (BIRT), facilitate easy, secure, and fast transactions. The business case for these services lies in their ability to streamline payment processes, reduce handling and processing costs associated with cash transactions, and minimize fraud risk. For businesses, digital wallets can enhance checkout efficiency, improve customer experience, and provide valuable insights into consumer spending habits. They also empower small and micro-merchants to accept payments digitally, thereby expanding their customer base.

- **Telco-led e-Wallets:** In Bhutan, telco-led e-wallets, including those from Tashi- Cell and Bhutan Telecom, alongside the go-BOB, and e-Wallet offered by banks are currently operational. These e-wallets serve as primary gateways for broader DFS, leveraging existing customer bases and regulatory familiarity to facilitate digital transactions.

- **Partnerships:** e-Wallets are being integrated with MFS providers; government agencies can potentially be linked with cross-border remittance platforms to offer greater functionality.

- **Data as an untapped asset:** e-wallets are likely to be used for a range of payments in their initial phases, analysing anonymized customer spending patterns can provide rich insights (with privacy safeguards) for service providers. This data can help tailor financial products and services to better meet consumer needs in the future, enhancing the overall effectiveness and appeal of digital wallets in Bhutan.

9.3.3. Fintech services

FinTech services encompass innovative financial solutions powered by technology, and while they are still in the early stages in Bhutan, they primarily focus on payment systems. However, operating in a small market like Bhutan presents challenges, particularly concerning economies of scale, which are often crucial for sustainable operations. Despite these challenges, there are promising business cases for FinTech services in areas such as lending, investment platforms, financial planning, and cryptocurrency services. Potential business case for FinTech services include:

- **Micro lending focused on gaps:** FinTech can serve the underbanked, including micro-enterprises and farmers, by utilizing alternative credit scoring models. These models can leverage data from mobile usage, social profiles, and supply chain participation to assess creditworthiness and provide access to loans.

- **Remittance disruptors:** In a remittance-reliant economy like Bhutan, leveraging technology for lower-cost international transfers is critical. FinTech companies that can compete with traditional players have the potential to transform the remittance landscape, making it more accessible and affordable for consumers.

- **Investment and micro-insurance:** As DFS mature, there is likely to be a rise in simplified financial products tailored to specific user segments, such as women and youth. These products can enable greater financial protection and offer wealth-building options, encouraging more individuals to engage with formal financial systems.

By focusing on these areas, FinTech services can play a transformative role in enhancing financial inclusion and fostering economic development in Bhutan.

9.4. Impact of financial literacy and opportunities

The Bhutan Living Standards Survey 2022 shows that Bhutan's literacy rate is approximately 70.2 percent, with urban areas at 82.1 percent faring better than rural areas at 62.9 percent, and males at 77.1 percent having higher rates than females at 63.6 percent. While the youth population (15-24) has a literacy rate of 97.7 percent, older individuals aged above 65 show a lower rate of about 65 percent (National Statistics Bureau, 2022). The RMA's financial accessibility survey 2022 revealed that 69 percent of adult banked individuals are unaware of consumer protection regulations, and nearly 68 percent do not know where to file complaints or seek redress. This also include low awareness on existence of financial establishments such as stock exchange, microfinance institutions and insurance.

These findings emphasize the challenges of financial literacy, among rural populations, women, and those in agriculture. A lack of understanding of digital financial services can deter potential users. The RGOB and RMA have been implementing the national financial literacy strategy 2018-2023 to address these gaps, focusing on educating citizens on financial concepts and safe use of digital tools. Overcoming these challenges requires joint efforts from government, financial institutions, and NGOs through targeted education and awareness initiatives.

- **Demand for convenience and efficiency:** Consumers, particularly within the younger demographic, demonstrate a strong preference for convenience and efficiency. The ability to conduct financial operations from anywhere at any time, without the need to visit physical bank branches, aligns with the modern consumer's lifestyle, serving as a significant enabler of DFS.

- **Trust and security concerns:** While there is enthusiasm for digital services, trust and security remain paramount in consumer preferences. Bhutanese customers are more likely to adopt and continue using DFS solutions that they perceive as secure and reliable. Consequently, financial institutions that invest in robust cybersecurity measures and maintain transparent operations are more likely to gain and retain consumer trust, facilitating greater adoption of DFS.

- **Social and peer influences:** Social and peer influences play a crucial role in shaping consumer behaviour toward DFS. As individuals observe their peers and community members benefiting from such services, they become more inclined to adopt similar behaviours. Word-of-mouth and social media platforms—where many Bhutanese are active—serve as significant channels for spreading awareness and fostering positive perceptions of DFS, encouraging more consumers to transition to digital platforms.

- **Customized and culturally sensitive solutions**: The preferences of consumers also lean towards DFS solutions that are tailored to their specific needs and cultural context. Services that respect local traditions, address the unique challenges of rural living, and are available in local dzongkha languages are more likely to be embraced by the wider population. Customization and cultural sensitivity in DFS offerings can significantly drive consumer adoption.

9.5. Digital services to agriculture

The integration into the agriculture sector, commonly referred to as 'Agri- Tech,' has the potential to transform traditional and subsistence-oriented agricultural practices. These services can include access to precision farming tools, agricultural financial services (such as tailored loans, insurance, and savings products), market information platforms, and supply chain finance solutions. The business case for Agri-Tech centres on increasing agricultural productivity, reducing farming losses and inefficiencies, and improving market access for farmers.

Recently, the government unveiled a comprehensive Agri-Tech strategy aimed at harnessing technology to boost high-value agriculture and livestock production, enhance food security, and improve the livelihoods of farmers. Key components of this strategy include:

- **Vertical farms:** Utilizing advanced hydroponic and aeroponic techniques to maximize space and resource efficiency.

- **Automated systems and IoT solutions:** Implementing technology-driven systems to enhance operational efficiency and monitoring.

- **Deployment of drones:** Using drones for crop monitoring and management to optimize yields.

- **Agri-food digital platforms:** Providing farmer advisory services to improve decision-making and market engagement.

- **Private sector engagement:** Fostering partnerships to promote high-value agricultural initiatives.

Agri-Tech presents substantial opportunities for financial institutions and service providers to tap into the agricultural sector by offering tailored financial products aligned to agricultural practices. This can help minimize risks, subsidize operational efforts, build long-term customer relationships, and broaden market presence.

- **RMA focus signals importance:** The emphasis on rural inclusion highlights a significant opportunity in this area, suggesting that fintech companies specializing in agribusiness solutions could serve as valuable collaborators in enhancing agricultural productivity and sustainability.

- **Beyond subsidies and market linkage:** Digital platforms can facilitate access to input financing, price discovery for produce, weather-linked insurance, and connections to buyers, thereby improving outcomes and opportunities, especially for smallholders and rural farmers.

- **Value chain integration:** Linking agri-financing with warehouse receipts, quality grading systems, and participation in digital marketplaces can streamline the agricultural value chain. This integration empowers producers and other stakeholders engaged in the value chain, fostering a more efficient and resilient agricultural sector.

10. Conclusions and recommendations

To enhance Bhutan's rural financial services and develop a robust digital financial services (DFS) ecosystem, the following integrated recommendations are proposed:

10.1. Recommendations for an inclusive and effective rural and digital finance ecosystem in Bhutan

1. Strengthen policy and regulatory framework

- **Adaptive regulation:** Establish a flexible regulatory environment that supports innovation while ensuring consumer protection. The ongoing operation of the RMA's FinTech regulatory sandbox should facilitate the testing of new products in a controlled environment.

- **International collaboration:** Actively participate in international forums to align Bhutan's data protection regulations with global standards such as GDPR. This will enhance regulatory knowledge and address cross-border challenges like money laundering and cybersecurity threats.

- **E-KYC and digital ID frameworks:** Implement digital onboarding processes to streamline customer verification, particularly for rural households. The national digital identity program can support the establishment of e-KYC and digital signature solutions to improve onboarding efficiency.

2. Promote technological innovations

- **Support for fintech start-ups:** Continue to foster a supportive ecosystem for fintech innovations through funding opportunities, mentorship programs, and innovation hubs that facilitate knowledge sharing.

- **Adoption of emerging technologies:** Encourage the exploration and integration of blockchain, artificial intelligence, and big data analytics in financial services to improve service delivery, enhance security, and provide personalized financial solutions.

3. Enhance market development

- **Infrastructure improvements:** Prioritize enhancements to mobile networks, internet coverage, and electricity access in rural areas. Collaborate with telecommunications providers to explore off-grid solutions for sustainable access.

- **Leverage agent networks:** Expand banking agent networks in underserved regions, utilizing local businesses as cash-in/cash-out agents for e-wallet providers. Training these agents as financial advisors can facilitate the adoption of a broader range of financial products.

- **Product innovation for agriculture:** Develop DFS solutions that specifically address agricultural needs, such as:

  - **Digitized public support disbursement:** Streamline government payments to enhance efficiency and transparency.

  - **Agri-input and post-harvest financing:** Offer digital loans for purchasing seeds, fertilizers, and equipment, including short-term financing products that allow producers to wait for better market prices.

  - **Crop insurance and micro-insurance:** Create mobile-based micro- insurance products to protect farmers against various risks.

- **Market linkage platforms:** Establish e-commerce platforms that enable farmers to sell directly to consumers, integrating financing channels that leverage e-commerce data for informed lending decisions.

4. Consumer protection and grievance redressal

- **Robust consumer protection mechanisms:** Establish comprehensive consumer protection frameworks and efficient grievance redressal systems to build trust in DFS. This includes developing a consumer bill of rights and creating a clear process for addressing complaints.

- **Harmonized regulatory coordination:** Ensure cohesive policymaking among finance, telecommunications, and data protection sectors. Regular reporting on complaint metrics will aid in transparency and accountability.

5. Promote digital adoption through financial literacy

- **Tailored educational programs:** Launch nationwide financial literacy campaigns targeting rural households and agricultural sectors. Utilize mobile applications and gamified learning to emphasize the benefits, security, and usability of digital financial services.

- **Integration into education:** Embed financial literacy within school curricula, particularly focusing on digital finance concepts to prepare future generations for the financial landscape.

- **Partnerships:** Foster collaborations among government entities, educational institutions, financial institutions, and community organizations to implement targeted digital financial literacy initiatives.

6. Establish a sustainable agriculture fund

Create a sustainable agriculture fund to support production, processing, packaging, marketing, and distribution in the agricultural sector. Leverage the Economic Stimulus Programme (ESP) to provide collateral-free, low-interest loans, stimulating demand for green financial instruments like green bonds and carbon credits.

7. Adopt a value chain approach in agri-financing

- Implement value chain financing to address service and information asymmetries among agricultural stakeholders. This targeted approach provides tailored financial services, enhancing coordination and efficiency across the supply chain.

- Expanding agri-processing to strengthen export. The government can actively foster public-private partnership (PPP) to attract foreign direct investments, accelerating commercialization and boosting export potential.

8. Capacity building for financial institutions

- Enhance the capabilities of microfinance institutions and small banks to finance secondary and tertiary processing activities in agribusiness. Focus on developing specialized agribusiness products, including climate finance options tailored to the needs of women, youth, and entrepreneurs.

By implementing these comprehensive recommendations, Bhutan can significantly enhance its rural and digital finance ecosystems, fostering greater financial inclusion and sustainable economic growth.

10.2. Conclusion and way forward

Enhancing access to affordable finance is crucial for empowering farmers and rural entrepreneurs in Bhutan. This access enables them to adopt modern technologies and invest in high-value crops, thereby increasing efficiency and productivity. Furthermore, it supports income diversification through value-added processing, storage, and distribution, fostering stronger linkages between rural producers

and urban markets. Such transformations are essential for evolving and modernizing Bhutan's agrifood systems.

However, the assessment of Bhutan's rural and digital finance ecosystem reveals significant shortcomings. Current financial systems inadequately meet the needs of farmers and rural populations due to limited access to formal banking and digital services, high borrowing costs, and perceived risks associated with lending to these communities.

To effectively address these challenges, several key measures are recommended:

- **Establishment of a Sustainable Agriculture Fund:** This fund would focus on supporting value chain financing, providing targeted financial resources to enhance productivity and sustainability in agriculture. By ensuring that financial support is accessible, the fund can catalyze investments in modern agricultural practices.

- **Capacity Building for Financial Institutions:** Enhancing the financial and agri-technical skills of banking officials and microfinance institutions is vital. Training programs should be implemented to equip these institutions with the knowledge and tools needed to better serve underserved communities, thereby improving the overall effectiveness of financial services.

- **Integration of Digital Identity with Financial Services:** Leveraging the national digital identity platform can significantly improve the security and efficiency of financial transactions. This integration would streamline application processes and enable faster service delivery, making it easier for rural populations to access financial products.

- **Targeted Financial Education:** Comprehensive financial literacy programs should be developed to educate rural communities about available financial services, risk management, and the benefits of adopting digital finance solutions. This education will empower farmers and entrepreneurs to make informed financial decisions.

By implementing these recommendations, Bhutan can strengthen its rural and digital finance ecosystem, boost agricultural productivity and exports, and contribute to the achievement of the Sustainable Development Goals (SDGs) outlined in the country's 13th five-year plan for agricultural transformation. In doing so, Bhutan will not only enhance the livelihoods of its rural populations but also foster a more resilient and sustainable agricultural sector.

Annexes

Annex I. Conditions governing banking and non-banking financial institutions in Bhutan

1. Regulations for banks

Rules and Regulations for Establishment of Commercial Banks in Bhutan 2018; Prudential Regulation 2017 and Macro-Prudential Rules and Regulations 2018 govern the establishment and regulation of commercial banks in Bhutan. Any entity seeking a banking license in Bhutan must fulfil the following minimum requirements:

- Minimum paid-up capital of Nu 600 million (USD 7.6 million)
- The promoters' initial capital contribution must be locked in for 5 years from the date of licensing
- The bank must be registered as a public company under the Companies Act of Bhutan 2016
- The bank must float at least 40 percent of its shares to the public through an initial public offering
- Foreign direct investment in the bank cannot exceed 51 percent of the paid- up capital

Additionally, RMA will only grant a license if it is satisfied that the applicant has:

- Adequate managerial capacity to conduct the proposed banking operations
- Ability to conduct business in a sound and prudent manner
- Adequate accounting and control systems in place

These regulations aim to ensure a well-capitalized, professionally-managed, and publicly-held banking system in Bhutan, with appropriate oversight by the RMA.

2. Regulations for non-banking financial institutions

The four insurance companies are the NBFIs. The insurance sector in Bhutan is regulated by RMA under the Rules and Regulations for Licensing of Insurance Companies in Bhutan 2018. Some of the key highlights of these regulations are

Minimum paid-up capital

- Minimum paid-up capital for each line of direct insurance business is Nu300 million (USD 3.8 million).
- Insurance companies are required to deposit and maintain 10 percent of the minimum paid-up capital as a statutory deposit with the RMA.

Promoters' contribution

- The promoters' initial capital contribution has a lock-in period of 5 years from the date of licensing.

Shareholding restrictions

- Maximum permissible shareholding is 20 percent for an individual, 30 percent for a company (not a financial institution), and 5 percent for a financial institution.
- Insurance companies must float at least 40 percent of their shares to the public through an initial public offering within one year of receiving the license.
- Foreign investment in an insurance company (joint venture) is capped at 26 percent of the paid-up capital.

Insurance business structure

- The insurance law in Bhutan is divided into two main categories: life insurance and non-life insurance.
- RICBL is the only composite insurer, while BIL, the other insurance company, has faced restrictions in entering the life insurance business due to the restrictions on composite insurance.

Taxation

- There is no sales tax imposed on insurance premiums in Bhutan.

The above-mentioned regulations aim to promote a well capitalized, publicly held, and professionally managed insurance industry in Bhutan, with appropriate oversight by the RMA.

3. Regulations for microfinance institutions

The microfinance sector in Bhutan is governed by a comprehensive regulatory framework, which includes The Regulation for Microloan Institution in Bhutan (2014); Agent Banking Rules and Regulations (2016); The Rules and Regulations for Deposit Taking Microfinance Institutions (2016), and The Private Money Lending Rules and Regulations of Bhutan (2016). These regulations are overseen and enforced by RMA. The regulatory landscape comprises five licensed microfinance institutions (MFIs) in Bhutan:

- Two Deposit Taking Microfinance Institutions (DTMFIs): RENEW and MBPL
- One deposit-taking foundation: BAOWE
- Two non-deposit taking MFIs: Tarayana Microfinance and Bhutan Care Credit Ltd. (BCCL)

The primary objective of the microloan regulations is to integrate the microfinance business into the mainstream banking services and cater to the unserved and underserved segments of the population.

Under the Regulation for Microloan Institution in Bhutan (2014):

- MFIs are granted licenses to provide "Microloans" not exceeding Nu 500 000 (USD 6 300) to microfinance clients, with the stipulation that the loans cannot be used for personal purposes.
- MFIs are required to maintain a minimum paid-up capital of not less than Nu2 million (USD 25 000) or any other higher amount as specified by the regulatory authority.
- MFIs must obtain credit information reports from the Credit Information Bureau (CIB) before granting loans and report the credit information on a monthly basis.
- MFIs are required to charge reasonable microloan rates and commissions in accordance with market mechanisms.

Furthermore, the regulations allow all MFIs in Bhutan to collect "Compulsory Savings" from borrowers as a condition for receiving a loan, either as a percentage of the loan or a nominal amount. These compulsory savings are immediately returned to the borrower upon full repayment of the loan.

The Rules and Regulations for Deposit Taking Microfinance Institutions (2016) impose specific requirements on DTMFIs:

- DTMFIs must maintain a minimum capital adequacy ratio of at least 15 percent.
- The ownership structure of DTMFIs allows both national and foreign individuals and companies to hold shares, provided that the ownership does not exceed 49 percent of the paid-up capital.
- No DTMFI can have ownership in another DTMFI exceeding 5 percent of the paid-up capital of the other DTMFI.
- The appointment of members to the Board of Directors and the Chief Executive Officer of a DTMFI requires prior approval from the RMA.

The DTMFI regulations further establish an ascending minimum paid-up capital requirement based on the number of borrowers served by the institution:

- Less than 10 000 borrowers: Nu 5 million (USD 63 000)
- 10 000 to 20 000 borrowers: Nu 10 million (USD 126 000)
- Above 20 000 borrowers: Nu 20 million (USD 252 000)

4. Credit information bureau (CIB)

The Credit Iinformation Bureau (CIB) is the sole central repository of credit data in Bhutan, with the aim of minimizing information asymmetry between lenders and borrowers in the banking and credit market. The CIB's membership includes 5 banks, 3 insurance companies, 4 microfinance institutions, 2 telecom companies, and 1 power utility. The CIB maintains records of 135 037 consumers and businesses. By centralizing credit information, the CIB enables lenders to make more informed decisions about borrowers' creditworthiness, promoting responsible lending practices and protecting the interests of both lenders and borrowers in Bhutan's financial system. The diverse membership of the CIB ensures comprehensive coverage of credit data across sectors, supporting the development of a well-functioning and inclusive financial system in the country.

5. Regulations for cooperatives

The Cooperative (Amendment) Act of Bhutan, 2009 provides the legal framework for the regulation and oversight of cooperatives in the country. The Co-operatives Rules and Regulation of Bhutan, 2010 designate the Head of the Department of Agricultural Marketing and Cooperatives (DAMC) within the Ministry of Agriculture and Livestock (MoAL) as the Registrar of Cooperatives. Accordingly, the Registrar is vested with the authority to grant ccertificates of rregistration to all cooperatives formed under the Act.

As of June 2019, there were 509 registered Farmers Groups and 71 registered Cooperatives in Bhutan (Department of Agriculture and Marketing Cooperatives, 2021). Furthermore, RMA in consultation with the MoAL and the Cooperative Sector, is responsible for issuing and implementing the rules governing the banking operations of cooperative banks.

6. Regulations for capital market

The Royal Securities Exchange of Bhutan (RSEB) is the regulator of the capital market in Bhutan. The Asian Development Bank (ADB) provided technical assistance to design the institution, which was established in 1993. The RSEB was later incorporated under the Companies Act of the Kingdom of Bhutan, 2016 and is regulated by the Financial Services Act 2011.

In addition to its role as the capital market regulator, the RSEB has also developed a market platform for agricultural commodities in partnership with the Food Corporation of Bhutan (FCB). This platform has facilitated active online trading of potatoes.

To support start-ups and young entrepreneurs, the RSEB established a crowdfunding platform called "Kuen-phen" in 2021. This platform is spearheaded by RMA, in collaboration with the RSEB and Bhutan Care Credit Ltd., a microfinance institution acting as the financial service provider. The RSEB's crowdfunding platform offers an interest free maximum loan of Nu 500 000 (USD 6 250) for a tenure of 5 years. There is no collateral or guarantor required for the loan.

Annex II. Climate budget allocation and projects

Bhutan, a landlocked country with a rugged terrain, is vulnerable to significant climate risks such as glacial lakes outburst floods, floods, heavy winds, erratic precipitation and landslides. The country's economy, which relies heavily on hydropower (40 percent of exports) and rain-fed agriculture (employing nearly 60 percent of the population), faces threats from erratic rainfall patterns.

Bhutan's Nationally Determined Contribution (NDC) to the Paris Agreement on climate change reflects its commitment to remain carbon neutral. This implies that its estimated carbon emissions of 2.2 Mn tons of CO2 will not exceed the total carbon sequestration by its forests, as mandated by the Constitution, which requires a minimum of 60 percent of the total land to remain under forest cover. Bhutan's NDC also indicates the possibility of offsetting 22.4 Mn tonnes of CO2 through the export of hydroelectricity by 2025.

Recognizing the importance of addressing climate change, Bhutan has pioneered an innovative approach since fiscal year 2022–23 by implementing climate budget tagging in four key economic sectors: the Ministry of Agriculture and Livestock (MoAL), the Ministry of Infrastructure and Transport (MoIT), the Ministry of Industry, Commerce and Employment (MoICE), and the Ministry of Energy and Natural Resources (MoENR). The allocated budget for these ministries has been assessed for its relevance to creating an enabling environment for climate change mitigation and adaptation. Activities or programs designed to reduce the negative impact of climate change are categorized under the mitigation category, while those aimed at building resilience and strengthening the ability to adapt or absorb the negative impacts/stresses of climate change are classified under the adaptation category. The third category comprises activities intended to enhance the knowledge, skills, and technologies of stakeholders to deliver reports on adaptation and mitigation actions. The activities that do not have any direct or indirect relevance to the domains of climate change actions are categorized as "No Relevance." Consequently, 75 percent of the budget allocated for these agencies in fiscal year 2023–24 is related to mitigation, adaptation, and creating an enabling environment. Table 9 below presents the budget allocated for mitigation and adaptation by various government ministries in Bhutan.

Table 9. Climate Co-benefits Related Allocation during FY 2023–24

Agency	Capital allocation in Nu million (USD million)	Climate Related Tagging			Not relevant
		Mitigation	Adaptation	Enabling Environment	
MoAL	878 (10.68)	39 (0.47)	276 (3.35)	10 (0.12)	552 (6.71)
MoICE	1 617 (19.67)	254 (3.09)	278 (3.38)	832 (10.12)	253 (3.07)
MoIT	3 237 (39.37)	1 445 (17.57)	812 (9.87)	123 (1.49)	857 (10.42)
MoENR	1 338 (16.27)	1 007 (12.25)	99 (1.20)	95 (1.15)	137 (1.66)
Total in Nu million	7 070	2 746	1 465	1 060	1 800
Total in USD million	**86**	**33**	**18**	**13**	**22**
As of total allocation	100%	39%	21%	15%	25%

Source: Ministry of Finance, 2024, pp. 53

The RGoB has partnered with several international organizations to receive technical assistance, execute specific projects, and establish trust funds. The Green Climate Fund (GCF), and the Government of Japan has supported Bhutan for climate change adaptation. Bhutan has also mobilised GEF projects worth USD 193 million for five ongoing climate change projects. The Global Environment Facility (GEF) is providing USD 39.6 million while USD 154 million is from co-financing by other international agencies. The FAO and the United Nations Development Programme (UNDP) are implementing the GEF projects. Bhutan has completed three projects for which it had received USD 6.4 million from GEF and 14.35 million through co-financing by international donors. Table 10 presents GEF grants and co-financing received by Bhutan for ongoing and approved projects.

Table 10. Projects Approved/Ongoing under GEF Climate Change Portfolio (USD million)

S/N	Title	Agency	GEF Grant	Co-financing
1	Enabling the Kingdom of Bhutan to prepare its Fourth National Communication (4NC) and First and Second Biennial Transparency Report (BTR1-2) to the UNFCCC	FAO	1.23	
2	Productive and Sustainable Food Systems in Bhutan for Environmental Benefits and Gross National Happiness	FAO	9.59	49.54
3	Enhancing the Climate Resilience of Urban Landscapes and Communities in Thimphu-Paro region of Bhutan (ECRUL)	UNDP	18.05	60.42
4	Advancing Climate Resilience of Water Sector in Bhutan (ACREWAS)	UNDP	8.93	25.13
5	Strengthening institutional and technical capacities for enhanced transparency in implementation and monitoring of Bhutan's Nationally Determined Contribution (NDC)	FAO	1.78	18.96
	Total		**39.58**	**154.05**

Source: Global Environment Facility, 2024

Bhutan has several opportunities to tap into climate finance. Immediate possibilities include redesigning policy frameworks to capture CO2 in the forestry sector, attracting funds in water and organic agriculture, building technical and human capacity, supporting plans and policies, and leveraging digitalization and technologies. The country's private sector could potentially access considerable resources through concessional long-term project debts, impact bonds, lines of credit to domestic banks and financial institutions for expanding green portfolios, and the use of risk mitigators such as guarantees, first-loss protection, and grant-based capacity-building programme.

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