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NEPAL

TECHNICAL ASSISTANCE REPORT – FINANCIAL SECTOR STABILITY REVIEW

October 2023

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TECHNICAL ASSISTANCE REPORT

NEPAL

Financial Sector Stability Review

July 2023

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FSSR

Financial Sector Stability Review

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Acronyms and Abbreviations

BCM	Business Continuity Management
BCP	Business Continuity Planning
BFI	Bank and Financial Institution
BPM	Balance of Payments and International Investment Position Manual
BSA	Balance Sheet Approach
CBDC	Central Bank Digital Currency
CC	Coordination Committee
CIB	Credit Information Bureau
CISO	Chief Information Security Officer
CPSS	Committee on Payments and Settlement Systems
CRE	Commercial Real Estate
CSP	Customer Security Program of SWIFT
DCGF	Deposit and Credit Guarantee Fund
DF	Disclosure Framework
DoC	Department of Co-operatives
DOMS	Debt Operations Management System
DR	Disaster Recovery
DT	Deposit-Takers
ECC	Electronic Cheque Clearing
ECF	Extended Credit Facility
ED	Executive Director
ELA	Emergency Liquidity Assistance
FCP	Financial Consumer Protection
FMI	Financial Market Infrastructure
FSAP	Financial Sector Assessment Program
FSI	Financial Soundness Indicator
FSP	Financial Service Provider
FSSR	Financial Sector Stability Review
GFS	Government Financial Balance Sheet
GL	General Ledger

HH	Households
HR	Human Resource
IFRS	International Financial Reporting Standards
IIP	International Investment Position
ILF	Intraday Liquidity Facilities
IOSCO	International Organization of Securities Commissions
ITD	Information Technology Department (of the NRB)
KA	FSB's Key Attributes of Effective Resolution Regimes
LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
LTV	Loan-to-Value
MCM	Monetary and Capital Markets Department (of the IMF)
MCR	Minimum Capital Ratio
MFI	Microfinance Institution
MFS	Monetary and Financial Statistics
MoLCP	Ministry of Land Management, Co-operative, & Poverty Alleviation
MOF	Ministry of Finance
MSME	Micro, small and medium enterprise
NBFI	Nonbank Financial Institution
NCHL	National Clearing House Limited
NCWO	No-Creditor-Worse-Off
NEPSE	Nepal Stock Exchange
NFC	Nonfinancial Corporation
NFRS	Nepal Financial Reporting Standards
NGO	Non-Governmental Organization
NLA	Net Liquid Assets
NPL	Non-performing Loan
NRB	Nepal Rastra Bank
ODC	Other Depository Corporation
OFC	Other Financial Corporation
P&A	Purchase and Assumption
PCA	Prompt Corrective Action
PD	Probabilities of Default
PDMO	Public Debt Management Office

PFMI	CPSS/IOSCO Principles for Financial Market Infrastructures
PS Act	Payment and Settlement Act
PSD	Payment Systems Department (of the NRB)
PSO	Payment System Operator
PSP	Payment Service Provider
RTGS	Real-Time Gross Settlement
RTO	Recovery Time Objective
RWA	Risk-Weighted Assets
SACCO	Savings and Credit Cooperative
SARTTAC	South Asia Regional Training and Technical Assistance Center
SEBON	Securities Board of Nepal
SIS	Supervisory Information System
SREP	Supervisory Review and Evaluation Process
SRF	Standardized Report Forms (of the IMF)
STA	Statistics Department (of the IMF)
TA	Technical Assistance
TARM	Technical Assistance Road Map

Preface

At the request of the Nepal Rastra Bank (NRB), an International Monetary Fund (IMF) Financial Sector Stability Review (FSSR) mission was conducted remotely and in-person between September 20–November 18, 2022. The mission visited Kathmandu, Nepal during the period November 1–14, 2022. The mission was led by Mr. Tanai Khiaonarong of the Monetary and Capital Markets Department (MCM), and included Ms. Bidisha Das (Statistics Department, STA), Chloe Zhang (MCM), as well as Ms. Laura Newbury, and Messrs. Adam Gersl, Terry Goh, Peter Lohmus, and Christopher Wilson (all MCM short-term experts).

Mr. Miguel Savastano, Deputy Director (MCM) joined the mission for the closing meeting. Ms. Teresa Daban Sanchez, Resident Representative, and Ms. Sudha Dulal, Local Economist, from the IMF Resident Representative Office in Kathmandu, provided support to the FSSR mission.

The scope of the mission, which was agreed with the NRB during the discussions that were held remotely in May 2022, comprised banking supervision and regulation, stress testing, crisis management, payment systems, financial inclusion, and financial sector statistics.

The mission met with Mr. Maha Prasad Adhikari (Governor of the NRB) and Mr. Ramesh Kumar Hamal (Executive Chairman of the Securities Board of Nepal -SEBON-). It also met with NRB senior management and staff, and representatives from the Ministry of Finance (MOF), Deposit and Credit Guarantee Fund (DCGF), Credit Information Bureau (CIB), Department of Co-operatives (DoC), Nepal Federation of Savings & Credit Cooperative Unions Ltd, Nepal Microfinance Banker's Association, and Nepal Bankers' Association; as well as with senior executives from public and private sector financial institutions and companies; and it liaised with the World Bank.

The mission wishes to thank the staff of the NRB for their excellent collaboration, productive discussions, and warm hospitality.

Executive Summary

The mission conducted a diagnostic review of the financial sector oversight capacity and proposed a Technical Assistance Roadmap (TARM) to support the authorities' efforts to strengthen the identification, analysis, and mitigation of risks to financial stability in Nepal. Two modules were undertaken: (i) the financial stability module, focused on areas agreed with the NRB during the scoping stage: banking supervision and regulation, stress testing, crisis management, payment systems, and financial inclusion; and (ii) the financial sector statistics module, focused on key data gaps hampering financial stability analysis, as well as statistical reporting to the IMF's STA.

The NRB has developed its approach to supervision and continuing to strengthen its capacity will help improve the resilience of the banking sector. Regulations are largely rules-based and use limits/caps (e.g., interest ceilings and fee caps). While there are examples of conservatism in the regulations (e.g., low loan-to-value -LTV- and high risk-weighted assets -RWA-), the use of limits/caps impact banks' strategic decision-making and could impair the effectiveness of other regulations. The NRB has a heightened focus on credit risk and recent guidance was issued on working capital loans to address the evergreening of loan obligations. The supervisory cycle sees supervisors onsite on an annual basis, and considerable effort has been put into developing an automated system for offsite data. Nonetheless, limited progress has been made on several recommendations from the 2014 Financial Sector Assessment Program (FSAP)–e.g., an absence of a framework for consolidated supervision. These gaps need to be filled to ensure the effective supervision of banks. Development of offsite analytical tools will optimize supervisory data and help identify early emerging risks. Risk specialization is needed in banking supervision to keep pace with the size, scale, and sophistication of the banking sector, and will help with the implementation of several planned regulatory changes (e.g., liquidity coverage ratio (LCR), International Financial Reporting Standards (IFRS) 9, and the new Working Capital Guidelines).

Micro stress tests of solvency and liquidity have been conducted since 2012, but the current methodology remains overly simplified. The exercise contributed to establishing a stress testing culture in the individual banks but needs to be improved to provide more plausible results to facilitate regular risk monitoring and calibration of prudential policies. In addition, top-down macro stress tests should be developed, based on alternative macroeconomic scenarios, credit risk satellite models, and explicit projections of banks' balance sheet and profit and loss items over a longer horizon in line with best practices. Such macro stress tests, complemented by analyses of interconnectedness and contagion risk in the financial sector, as well as additional risk monitoring tools, should support the existing financial stability unit in enhancing the level of the macro-financial surveillance, and improving the quality of the annual Financial Stability Report.

The NRB, as a de facto resolution authority, has relatively strong powers for early interventions and recent changes in the legislative framework provided it also with additional resolution tools. Nevertheless, the new tools need further legal underpinnings, and various laws and regulations need to be better aligned. The NRB should introduce recovery planning requirements for banks as soon as feasible and start developing an approach to resolution planning. Deposit guarantee scheme should be significantly strengthened to ensure rapid payouts, and to operationalize its recently provided powers to fund resolution. The NRB also needs to further refine its emergency liquidity assistance (ELA) policies and procedures, including by increasing the supervisory reach and intrusion in banks in receipt of ELA. Domestic coordination should be significantly improved for effective crisis management.

Payment systems modernization efforts have gained momentum, but further progress is needed to improve the safety and efficiency of payment systems to support monetary policy and financial stability. Key reforms include the passing of the Payment and Settlement Act (PS Act) and its bylaws, and the implementation of the real-time gross settlement (RTGS) system in 2019. Developments in retail payment systems have included instant payments and explorations into central bank digital currency (CBDC). However, gaps remain, including: (i) the legal certainty of finality and netting for payment systems is unclear and oversight needs strengthening; (ii) systemically important payment systems have not been formally identified and designated, and international risk management standards have not been adopted or applied; (iii) the RTGS system needs enhancement to support the growing banking and capital market sectors; (iv) cyber risk and business continuity management (BCM) need improvements; and (v) further protection is required for e-money from the insolvency of payment service providers (PSP) or settlement bank.

Access to formal financial services has more than doubled over the past 10 years, from 25 percent of adults in 2011 to 54 percent in 2021. This progress reflects significant efforts by the NRB to reach the unbanked through a variety of programs. However, nearly half of Nepalese remain excluded, and women are less likely to have an account than men. Usage of accounts is also low. Microfinance institutions (MFIs) and savings and credit cooperatives (SACCOs) are important providers of financial services to low-income people, especially women. The MFI sector is consolidating, and some are struggling due to the current interest rate ceiling. Some SACCOs exceed the size of smaller banks and risks appear to be increasing in the absence of effective supervision, an issue noted by the 2014 FSAP. A CIB provides data for banks and MFIs on separate platforms, and excludes most SACCOs, creating blind spots in credit risk and over-indebtedness monitoring. The newly formed financial consumer protection (FCP) division will be an important enhancement to build trust and confidence in formal financial services.

Financial sector statistics in Nepal have scope for improvement. Currently, the monetary and financial statistics (MFS) cover the central bank, and other depository corporations (ODCs) comprising of commercial banks, development banks, and finance companies, which accept deposits. The other financial corporations (OFCs) sector which represents around 12 percent of total financial system assets is not currently covered in MFS. Given the importance of OFCs, as key input for a more complete Balance Sheet Analysis, compiling OFCs data in IMF's standardized report forms (SRFs) should be a priority for the NRB. As for the Financial Soundness Indicators (FSIs), core and additional FSIs for the deposit-takers (DTs) are compiled and disseminated by the NRB with a quarterly frequency. But there is scope to include new indicators for DTs and expand the compilation of FSIs to the nonbank financial institutions (NBFI). The collaboration of the NRB with other financial regulators will be key to improving Nepal's financial sector statistics.

The mission's diagnostic review supports a TA plan. The main recommendations are summarized in Table 1, and the comprehensive TARM is provided in Section III. The mission recommended that authorities should ensure the close alignment between the FSSR recommendations and the measures on improving financial sector regulation and supervision under the Extended Credit Facility (ECF).[1] This pertains to the prioritization and timelines for the implementation of the recommendations. Going forward, the mission views that the continuing efforts to improve asset quality and banking supervision, which are consistent with the proposed structural benchmarks under the ECF program, should warrant the highest priority from authorities.

[1] See IMF (2022) Nepal: Request for an Arrangement Under the Extended Credit Facility, Country Report No. 2022/024, January 27. Available at: https://www.imf.org/en/Publications/CR/Issues/2022/01/27/Nepal-Request-for-an-Arrangement-Under-the-Extended-Credit-Facility-Press-Release-Staff-512283

Table 1. Nepal: Table of Main Recommendations

Recommendation	Time Frame[1]
Banking Supervision and Regulation	
Develop risk specialists in banking supervision to keep pace with planned regulatory changes and developments in the sector (e.g., liquidity, credit, information technology, IFRS, etc.).	MT
Develop analytical tools for offsite surveillance to support forward-looking analysis and maximize use of data from the Supervisory Information System (SIS).	ST
Assess liquidity regulations and supervisory processes, including contingency funding plans, and undertake a quantitative impact study to prepare for the introduction of the LCR.	MT
Assess credit risk supervision processes, regulations for problem loans, undertaking a targeted review of the NRB's Working Capital Guideline and restructured loans to ensure a consistent application.	ST
Undertake a comprehensive review of the capital management framework, including definition of capital, buffer regime, application of pillar 2, and the supervisory review process.	MT
Reconsider phasing-out directed lending programs where banks have not built expertise in risk management for this type of lending (e.g. agriculture sector).	ST
Stress Testing	
Revise existing micro stress testing of solvency and liquidity to make the projections more realistic and useful in guiding supervisory and prudential policies.	MT
Build a top-down macro stress testing framework for solvency based on explicit macroeconomic scenarios, credit risk satellite model(s), and consistent projection of banks' balance sheets and P&L items over a 3-year horizon.	MT
Strengthen regular macro-financial and systemic risk surveillance and raise the analytical quality of the annual Financial Stability Report.	MT
Crisis Management	
Introduce recovery planning requirements and start with resolution planning.	MT
Operationalize resolution framework and align associated laws, by-laws, and regulations.	ST
Strengthen the role of the DCGF as a safety net.	ST
Improve inter-agency cooperation on crisis preparedness.	MT
Strengthen the emergency liquidity assistance (ELA) framework to turn it into an instrument for solvent banks in exceptional cases.	ST
Payment Systems	
Strengthen the legal framework and oversight function to provide a high degree of legal certainty of transactions and sound payment oversight.	MT
Identify and designate systemically important payment systems, formally adopt the Principles for FMIs in regulations and apply them to designated payment systems.	ST
Enhance the RTGS system, increase utilization and fully automate intraday liquidity facility to achieve Delivery Versus Payment.	LT
Improve the cyber and operational resilience of major payment systems, including the RTGS system, and their participants, as well as of the NRB.	MT
Consider activity-based risk-focused payment legislation to keep pace with innovation, protect e-money funds, and make fully informed decision on whether to issue CBDC.	LT

Financial Inclusion	
Implement a formal information sharing agreement with cooperative authorities to ensure a timely flow of data on SACCOs.	MT
Work with the Ministry of Land Management, Co-operative, & Poverty Alleviation (MoLCP) to develop a coordinated supervision program for SACCOs with cooperative authorities, with the goal of minimizing risks to the wider financial sector.	MT
Replace the required interest rate ceiling for Class D MFIs with a base rate plus premium used for banks, supported by risk-based supervisory procedures and experienced staff.	ST
Develop and implement a robust FCP function, including dedicated law, subordinate regulations, and supervisory tools and resources.	LT
[1] Time Frame: Short-Term (ST): < 6 months; Medium Term (MT): around 18 months; Long Term (LT): around 30 months.	

Note: This table summarizes recommendations from the Technical Assistance Roadmap which were assigned a high priority, among others. Within each area, recommendations are further ordered by priority of implementation.

Introduction

A. SCOPE OF WORK

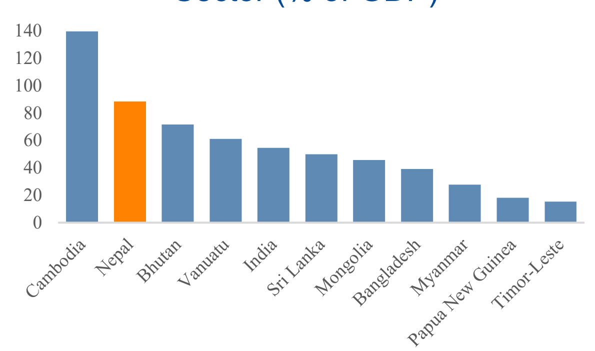
1. **This report was prepared as part of the FSSR mission which was conducted remotely and in-person between September 20–November 18, 2022.** The mission held scoping discussions with the NRB remotely in May 2022. Based on this agreed scope of work, the FSSR mission conducted a broad diagnostic of some key segments of the financial system, and proposed a TARM to support the efforts of the authorities to address key gaps and vulnerabilities in the Nepalese financial system. The topics covered in the diagnostic review are banking supervision and regulation, stress testing, crisis management, payment systems, financial inclusion, and financial sector statistics.

2. **The diagnostic review is based on existing standards and methodologies and was targeted to specific circumstances in Nepal.** The evaluation of bank supervision was guided by the Basel Core Principles for banks. The authorities' stress testing capacity was evaluated against the Basel Committee for Banking Supervision 2018 Stress Testing Principles and best international practices. The Key Attributes of Effective Resolution Regimes (KA) and the Revised Core Principles for Effective Deposit Insurance formed the basis for the evaluation of the financial crisis management frameworks. The Principles for Financial Market Infrastructures (PFMI) guided the review of the payment systems. The review of financial inclusion was guided inter alia by the Basel Committee Guidance on the application of the Core Principles for Effective Banking Supervision to the regulation and supervision of institutions relevant to financial inclusion, World Bank/Committee on Payments and Market Infrastructures Payments Aspects of Financial Inclusion, and the World Bank Good Practices for FCP.

B. OVERVIEW OF THE FINANCIAL SYSTEM

3. **Nepal's financial sector is large relative to other peer countries.** As of 2020, the domestic private sector credit stood at 88 percent of GDP (Figure 1). Since 2021–2022, the Nepalese economy and financial sector were in a recovery phase from the COVID-19 pandemic.

Figure 1. Domestic Credit to Private Sector (% of GDP)

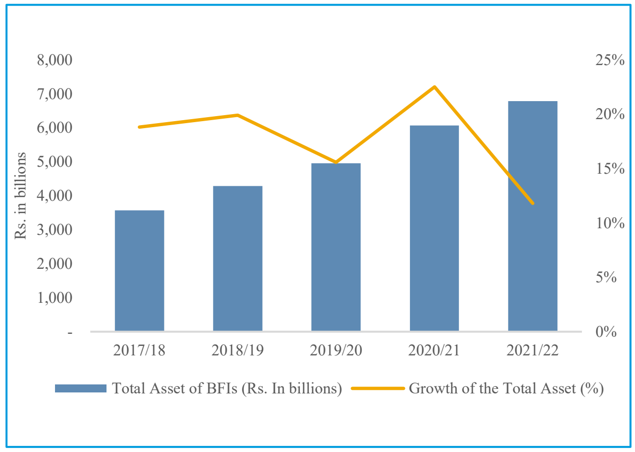


Source: World Bank, World Development Indicator, data as of 2020

4. **Banks and Financial Institutions (BFIs) represent approximately 80 percent of the total financial system assets in Nepal.** Commercial banks are by far the largest asset holders, followed by development banks. After the introduction of the Merger and Acquisition Bylaw 2073 (B.S.), the NRB proactively consolidated BFIs through mergers and acquisitions to promote financial stability and strengthen the financial system. The share of overall system assets by development banks and finance companies contracted, whereas the share of MFIs increased.

5. **Although the number of BFIs decreased through mergers and acquisitions over the past years (Table 2), the value of bank assets continuously increased, despite some fluctuations (Figure 2).** The differentiation among the four classes of financial institutions has been blurred other than their capital requirements. As of July 2022, there were 26 commercial banks (Class A), 17 development banks (Class B), 17 finance companies (Class C), 64 MFIs (Class D), and one Infrastructure Development Bank. Other financial institutions include 19 life insurance companies, 19 non-life insurance companies, 2 reinsurance companies, and several other financial institutions, such as the Employees Provident Fund (EPF), the Citizen Investment Trust (CIT), Social Security Fund (SSC), Hydroelectricity Investment and Development Company Ltd. (HIDCL), 10 hire purchase companies, and a postal saving bank. In addition, there is an estimated number of 30,879 cooperatives, which includes 14,484 Saving and Credit Co-operatives (SACCO). They are regulated at the local, provincial, and federal levels, depending on the respective territory.

Figure 2. Total Assets and Growth on BFIs



Source: Nepali Authorities

Table 2. Number of Financial Institutions in Nepal

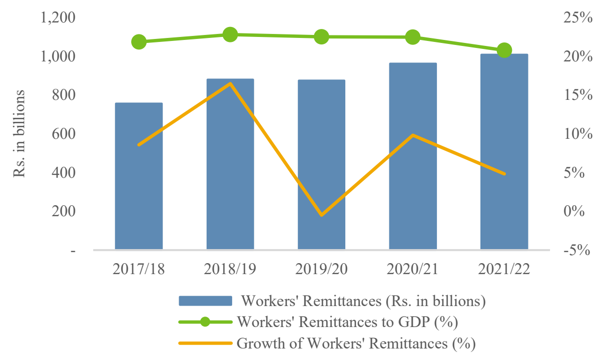
	2018	2019	2020	2021	2022
Commercial Banks (class A)	28	28	27	27	26
Development Banks (class B)	33	29	20	18	17
Finance Companies (class C)	25	23	22	17	17
Microfinance Financial Institutions (class D)	65	90	85	70	65
Infrastructure Development Bank				1	1
Hydroelectricity Investment and Development Company Ltd.	1	1	1	1	1
Sub-total	152	171	155	134	127
Life Insurance Companies	18	19	19	19	19
Non-Life Insurance Companies	20	20	20	20	19
Reinsurance Company	1	1	1	2	2
Sub-total	39	40	40	41	40
Employees Provident Fund	1	1	1	1	1
Citizen Investment Trust	1	1	1	1	1
Postal Saving Bank	1	1	1	1	1
Deposit and Credit Guarantee Fund	1	1	1	1	1
Credit Information Center Limited	1	1	1	1	1
Social Security Fund			1	1	1
Sub-total	5	5	6	6	6

Source: Nepali Authorities

C. MACROFINANCIAL VULNERABILITIES

6. **The financial sector demonstrated its resilience during COVID due in part to central bank support, but the external sector came under pressure**. As of 2022, imports increased to 40 percent of GDP, compared to 36 percent a year ago. Additionally, due to the disruption of the tourism sector and sluggish remittance growth (Figure 3), the increasing risks in the external sector may have implications for the overall financial sector stability in the medium term, leading to tight liquidity conditions, and upward pressure on interest rates. The current account deficit widened significantly from 7.8 percent of GDP to 12.8 percent of GDP from 2021–2022, resulting in increased pressure on the overall balance of payments, and declines in foreign exchange reserves.

Figure 3. Growth of Remittances



Source: Nepali Authorities

7. **As part of contractionary monetary policy, the NRB increased the bank rate, the statutory liquidity ratio, and the cash reserve ratio, which put pressure on interest rates and bank funding**. At the same time, deposit growth slowed (Figure 4). The total credit to deposit ratio reached over 90 percent as of 2022, which exerted pressure on banks' balance sheets, as banks are required to limit their lending to 90 percent of deposits and other stable sources of funding. Even though commercial banks are also obligatorily issuing debentures (long-term bonds) as an alternative source of funds, their amount is limited by regulation, so the banking sector remains dependent on traditional deposit mobilization. Combined with a lack of liquidity in bond markets and existing limits for interbank lending, it adds to the funding challenge amongst banks. Two months into the fiscal year 2022/23, the total BFI deposits decreased by 0.9 percent. With soaring inflation and depleting foreign reserves, the lending rates increased, from 8.5 percent in August 2020 to 12.1 percent in September 2022, mirroring a strong increase in deposit rates offered to customers to attract funding (Figure 5).

Figure 4. Total Credit and Deposit

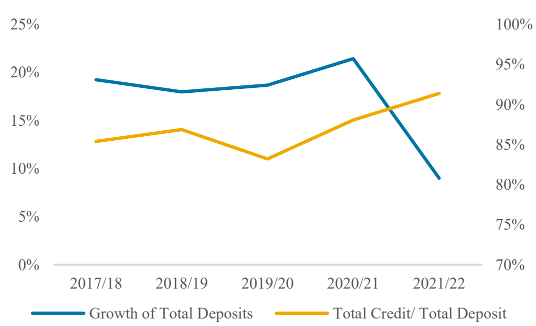
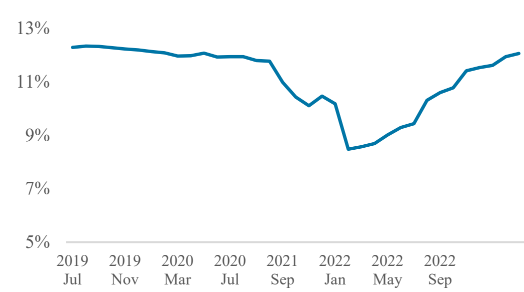


Figure 5. Weighted Average Lending Rate (Commercial Banks)

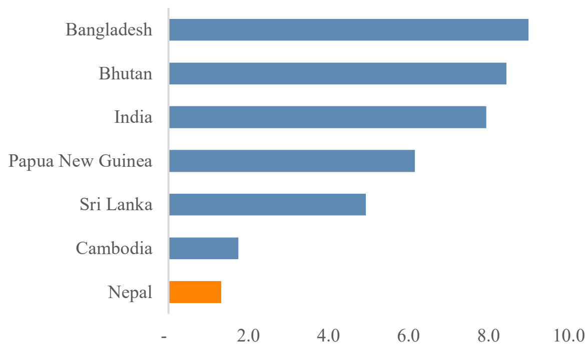


Source: Nepali Authorities

8. **Multiple challenges remain in addressing financial sector risks and vulnerabilities, especially in the credit risk area.** These were identified through the 2014 FSAP, TA, Article IV Consultations, and the FSSR Scoping Mission. Although non-performing loans (NPLs) were low, stress was building on asset quality and regulatory capital. As of July 2022, Nepal had an NPL of

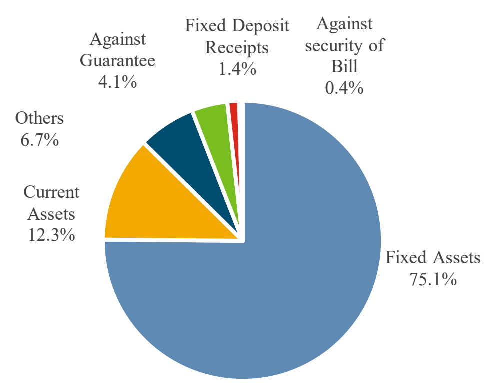
only 1.31 percent for class A, B and C banks—the lowest among its peer countries (Figure 6). The COVID-19-related restructuring, forbearance, and rescheduling facility helped contain the reported BFI NPL ratio, compared to 1.48 percent in mid-July 2021. The disciplining effect of a strict collateral regime, mostly in real estate (Figure 7), widespread use of additional guarantees by family members, and the blacklisting practices especially in retail lending, contribute to the low NPL ratio. However, it is still likely underreported due to a certain degree of evergreening mostly in the corporate sector given the long-term practice of using revolving working capital loans. In addition, banks' NPLs are slowly rising due to higher interest rates in recent months. Due to conservative provisioning rules, which don't take into account collateral, banks' capital position might be vulnerable to large credit shocks.

Figure 6. NPL/Total Loans (%) Country Comparison



Source: World Bank, World Development Indicators
Note: For countries where data in 2022 is not available, the most recent data is used.

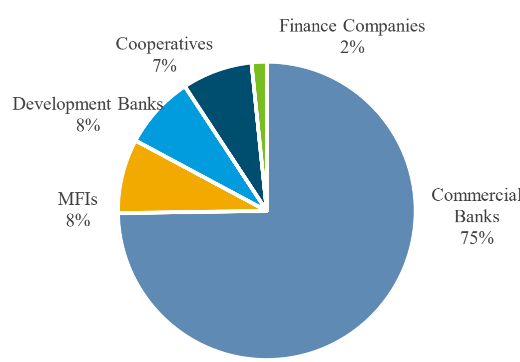
Figure 7. Loans and Advances of BFIs by Collateral Type



Sources: NRB (Bank and Financial Institutions Monthly Statistics)
Note: Fixed assets include assets that can not be converted into cash easily such as property, plant, and equipment. Others include gold & silver, securities, and credit cards.

9. **Oversight of MFIs and SACCOs, which collectively represent 15 percent of financial sector lending, needs to be strengthened.** Supervision of MFIs is compliance-based rather than risk-based. SACCOs are relatively large providers of financial services (Figure 8) in terms of customers and number of institutions but are mostly supervised at the local level by inexperienced authorities. The largest SACCOs exceed the size of some of the Class B and C banks. A lack of good data on these institutions makes it difficult to assess the level and severity of risk they pose to overall financial stability due to their linkages to banks and financial institutions. There is evidence of serious governance and liquidity issues, as well.

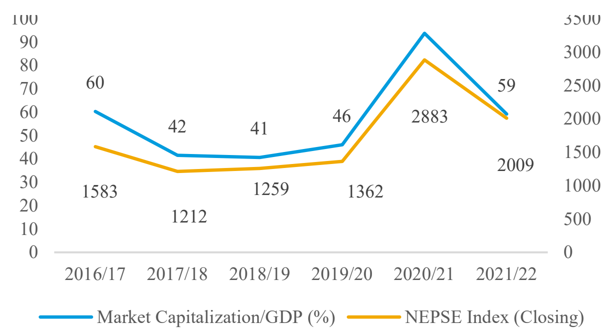
Figure 8. Loans and Advances by Type of Financial Institutions



Sources: NRB (Bank and Financial Institutions Monthly Statistics), and Department of Cooperatives, data as of July 2022.

10. **The capital market has grown larger and more complex.** As of 2022, Nepal has one stock exchange, the Nepal Stock Exchange (NEPSE). Due to the increasing interest from the public and the growing size of the capital market, the SEBON has called for applications to establish a second stock exchange focusing more on SMEs and MFIs. The NEPSE trading system, Online Trading System, became fully automated in 2021, and experienced growth in trading during the pandemic. However, the capital market became very volatile (Figure 9). The large fluctuation may have implications for both financial stability and overall macroeconomic activity. The brokerage system is not well-regulated and not fully transparent. Corporate paper and bond markets are largely absent. Mutual fund issuance is making progress, but government securities are still not actively traded. Daily market turnover amounts to nearly 3.8 percent of market capitalization, and trading is highly concentrated on a handful of banks and financial institutions, representing 83.5 percent of market traded value. As of 2021/22, 30 percent of total market capitalization consists of the largest ten companies. SEBON's supervisory capacity remained limited to keep up with rapid changes in the market.

Figure 9. Capital Market Historical Trend



Source: Nepali Authorities

D. STOCKTAKING OF PAST TECHNICAL ASSISTANCE

11. **The Nepalese authorities have received considerable technical assistance (TA) from the IMF (notably MCM).** Since the 2014 FSAP, the focus of TA missions was on strengthening financial supervision and regulation, liquidity management, and monetary policy operations (Table 3 summarizes the TA missions during 2014–2022). The World Bank Group (WBG) has also been working with the Nepalese authorities through a series of operations to address structural obstacles that currently hinder the financial sector in fulfilling its potential. These include financial stability challenges, underdeveloped non-bank financial institutions, gaps in payment systems, credit infrastructure, and financial inclusion.

12. **The FSSR takes account of the authorities' experience with implementing past TA, while also reflecting the broad assessment of future needs undertaken by the mission.** Recommendations cover outstanding issues from previous IMF TA on financial sector stability issues, and the recommendations reflect a stock-take of progress on a wide range of issues in recent years and identify priority areas for further development.

Table 3. IMF MCM Technical Assistance Since 2014

Lead Division	Start Date	End Date	Title
MCMCO	03/14/2022	04/15/2022	Interest Rate Corridor Under an Exchange Rate Peg
MCMCO	01/31/2022	02/04/2022	Central Bank Risk Management
MCMFR	12/20/2021	12/23/2021	Credit Risk Supervision
MCMFR	09/12/2021	09/16/2021	Off-Site Supervisory Capacity
SARTTAC	04/07/2021	04/07/2021	Bank Supervision for SARTTAC Countries
SARTTAC	03/15/2021	03/26/2021	Monetary Policy Operations
SARTTAC	11/04/2020	11/04/2020	Bank Supervision
MCMDM	09/21/2020	10/01/2020	Public Debt Management

SARTTAC	11/24/2019	12/06/2019	Supervisory Capacity at the NRB
SARTTAC	07/28/2019	08/06/2019	Liquidity Monitoring Tools
MCMCO	02/20/2019	03/05/2019	Internal Audit Function
SARTTAC	12/03/2018	12/06/2018	Monetary Policy Framework
SARTTAC	09/30/2018	10/19/2018	Supervisory Capacity at the NRB
MCMFR	02/05/2018	02/16/2018	Cyber Security
SARTTAC	01/30/2018	02/13/2018	Banking Supervision and Regulation
SARTTAC	10/08/2017	10/18/2017	Technical Assistance Mission
SARTTAC	08/27/2017	09/07/2017	Liquidity Forecasting and Management
MCMCO	06/25/2017	07/07/2017	Payment System Oversight
SARTTAC	06/11/2017	06/16/2017	Liquidity Management
MCMFR	02/12/2017	02/17/2017	Off-Site Supervision to Risk-Based Supervision
MCMFR	07/31/2016	08/04/2016	Licensing Procedures
MCMCO	03/30/2016	04/11/2016	Liquidity Management
MCMFR	01/11/2014	05/10/2014	Banking Supervision

Source: IMF

1. Diagnostic Review and Main Recommendations

A. BANKING SUPERVISION AND REGULATION

Baselines Diagnostics

13. **The NRB has enhanced its approach to supervision and planned future regulatory changes will strengthen the resilience of the banking sector.** The NRB has made progress toward implementing risk-based supervision complemented with stronger regulations, including implementing calculation of regulatory capital using approaches under Basel II. Recently the NRB also implemented new guidelines on working capital loans to address potential evergreening of borrower facilities. The NRB also acted swiftly during the pandemic to implement special measures designed to support the banking system and financial stability. The NRB has a strong focus on credit risk management with an annual onsite examination cycle for all Class A banks.

14. **There remain vulnerabilities and challenges for the NRB in implementing its framework.** Regulations are largely rules-based with significant conservatism (e.g., low LTVs and high RWAs) and limits/caps (e.g., interest ceilings and fee caps). Nonetheless, limited progress has been made on several recommendations from the last FSAP (e.g., an absent of a framework for consolidated supervision). These gaps need to be filled to ensure the NRB is able to effectively supervise the banks. Transition to principles-based regulations over time would help support development in bank risk management. There is also a need to evaluate the use of limits on bank activities that may unnecessarily encumber the ability for banks to implement longer-term plans. The existence of directed lending is causing distortions in the sector leading to unintended consequences and should be reviewed.

15. **Development of offsite analytical tools and training will help strengthen offsite analysis and help supervisors identify early emerging risks.** The NRB has invested in a new software platform—the SIS—which is designed to automate the capture of regulatory returns. Together with a revised offsite supervision manual, the SIS should lead to greater efficiencies and more robust analysis. Further TA is needed to support the development of offsite reports that allow supervisors to perform benchmark analysis of key performance indicators for all major risks. Training is also needed to fully implement the revised supervisory manual to assist supervisors to improve their analytical skills using new statistical reports, financial ratios, and peer group analysis. This type of training will help support supervisors to identify early emerging risks and underpin the Pillar II process where weaknesses are identified.

16. **Risk specialists are needed to keep pace with the size, scale and complexity of banks and banking groups.** The NRB's Human Resource (HR) policy typically rotates staff periodically with the goal of promoting knowledge across central bank functions. While new skills are brought into the supervision department, supervision expertise and risk management are lost, and institutional knowledge is taken away from the department. As banks become larger and more complex, experience and expertise in supervision is needed. Development of risk specialists will help strengthen onsite and offsite supervision. Moreover, supervisors with specialist knowledge will also help support planned changes in regulations such as implementation of the LCR and introduction of IFRS9.

17. **Intense competition in the deposit market is driving up interest rates and creating funding and liquidity stress for banks.** Banks are predominantly deposit funded and slower deposit growth is creating intense competition driving up rates which have experienced rapid growth in a short period of time. Access to term funding is problematic as Nepal's capital markets are at an early stage of development. Corporate paper and bond markets are largely absent, and government securities are not traded. The stock market is dominated by listings of financial institutions, with thin liquidity and low turnover. The capacity for banks to lengthen the maturity profile and diversify the source of funding remains a challenge adding to the inherent risk profile of banks.

18. **The NRB plans to implement the Basel III LCR Framework, which will help to strengthen risk management, but further work is needed to address liquidity pressure**. Plans to implement LCR should help improve risk management and monitoring with a forward-looking view of stressed liquidity. Nonetheless, action is needed to address liquidity concerns of banks, and better manage maturity mismatch. Analysis highlights high dependence on institutional deposits, with a majority of banks being severely affected in the event of deposits withdrawal by several of the largest institutional depositors. Contingency funding plans should be developed to assess the readiness of alternative sources of funding. Development of the secondary market for securities and liquid assets will offer a longer-term solution. A quantitative assessment study will need to be undertaken to assess the readiness of the sector to implement the LCR and help identify areas for additional guidance and calibration. While progress has been made to develop the NRB's monetary operations, further work is needed, so that the NRB is able to assist banks to manage their liquidity positions effectively.

19. **Banks calculate regulatory capital using the Basel II framework, which contains significant conservatism in the risk-weighting for certain asset classes.** All Class A banks meet the minimum capital ratio (MCR) of 8.5 percent. A capital conservation buffer of 2.5 percent is applied in addition to the MCR (effectively raising the MCR to 11.0 percent), and the NRB plans to implement a countercyclical buffer in 2023. Banks are required to meet a minimum leverage ratio of 4 percent. Credit risk is approximately 93 percent of system RWAs, followed by operational risk ranging between 3–6 percent followed by market risk which is typically 1 percent or below (reflecting limits on bank speculation in traded market products).

20. **The supervisory review is undertaken annually to assess the adequacy of capital (the 'Supervisory Review and Evaluation Process' -SREP-) and adjustments to RWAs are applied if deficiencies are identified.** Banks issue debentures, which are treated as tier 2, however, the instruments appear to be more bond like rather than consisting of a permanent commitment of capital. Banks disclose their MCR on a monthly basis and published by the NRB on their website. Bank Pillar 3 disclosures are disclosed on their respective websites.

21. **While banks have historically generated high returns adding to Common Equity Tier 1, banks report relatively thin margins above the MCR.** With the planned implementation of the countercyclical buffer, further analysis of pillar 2 processes is needed in addition to an assessment of banks' quality of capital to ensure longer-term stability.

22. **Banks have typically reported low NPL ratios by cross country comparisons.** The industry NPL ratio decreased to 1.20 percent in mid-July 2022 as compared to 1.41 percent in mid-July 2021. Asset quality across the sector deteriorated only marginally during the COVID-19 period, principally due to a suite of special measures implemented by the NRB helped support the sector which alleviated pressure on NPL ratios. Discussions with banks suggest asset quality is deteriorating owing to a confluence of factors including higher interest rates negatively impacting loan serviceability. New guidelines have been implemented by the NRB on working capital loans

in an effort to reduce potential for evergreening of bank exposures. The new guidelines will likely require a change in borrower behavior whereby facilities covered by the guidelines will need to align with new limits and amortized to zero over a specific timeline. Consistent application of the guidelines into bank policies and risk management systems will need to be closely monitored for effective implementation.

23. **Revision to regulations for problem loans and provisioning is underway and the transition to IFRS9 is planned for 2023/24**. Banks calculate provisions using the Nepal Financial Reporting Standards (NFRS) as well as regulatory provisions based on a prescribed set of rates as per loan classifications (Pass, watchlist, substandard, doubtful, and loss). The NRB has adjusted the provisioning methodology including the 'watchlist' classification, and increasing provisioning for 'Pass' loans from 1 percent to 1.3 percent. Onsite examinations have a strong focus on loan classification and provisioning where files are sampled and evaluated. The NRB requires adjustments to loan classifications as part of the process, and incorporates the outcome of asset quality into the SREP. The transition to IFRS9 will involve expertise in estimating probabilities of default (PD) and expected loss given default (LGD) for asset classes that may require additional focus on systems, data, and expert knowledge of statistical modelling. A comprehensive review of loan classifications, treatment of restructured loans and the loan loss methodology, alongside the planned transition to IFRS9 is warranted to ensure provisioning is accurate and conservative.

24. **Credit risk is the largest risk in the system, yet some dimensions of the risk profile remain opaque.** Credit risk is overwhelmingly the largest share of RWAs followed by operational risk and market risk. Credit risk from the real estate sector including owner-occupied mortgages, investment-led mortgages, and commercial real estate (CRE) is evaluated by the NRB as moderate. Most of the real estate sector loan is on an amortizing basis. Key risks related with housing finance are fluctuation in price and changes in government policies (approval of plot separation, classification of land, etc.).

25. **Credit risk data submitted to the NRB does not capture credit risk by all dimensions.** Credit exposures are not reported by type (e.g., margin loan), by vintage (e.g., 2021), by LTV, by debt-to income ratio, or by purpose (e.g., investment). Reporting is often based on stock rather than flow. For example, there was high growth in margin lending during the first half of 2021, however, credit data reported to the NRB was not able to breakdown aggregate data to a granular view of underlying risk profile of that lending (e.g., volume of margin loans extended by a single bank during a quarter at LTV, debt-to-service ratio and with collateral). The new SIS should help develop reporting. However, at the time of the mission, more effort was needed to capture risk information.

26. **While banks have relatively simple structure**s, **the absence of a consolidated supervision framework constrains the full exercise of the NRB's powers.** Banks typically have limited group-wide activities, and legal and ownership structures are not overly complex. The gaps in the current regulatory framework, however, need to be filled by having explicit mention of consolidated supervision in the regulations. A revision of the regulations should be accompanied with an update of supervisory reporting requirements and supervisory manuals as well as staff training.

27. **The main operational risks faced by banks are related to misuse of technology and fraudulent activities**. Banks are increasingly adopting new technologies to deliver financial services. In some instances, close to half of all transactions are delivered outside of the branch channel (although significant geographical difference exists). Robust approaches to operational risk management are needed, including contingency and disaster planning. Currently there are

only general requirements for operational risk including for business continuity planning and disaster recovery (DR). Greater prescriptiveness in the requirements will help build overall risk management and ensure larger more systemic banks are resilient to operational disruptions.

28. **Nepal is highly vulnerable to climate-related financial risks**. The country is subject to significant and growing climate related shocks including landslides, floods, and storms.[2]

Main Recommendations

29. **The NRB is encouraged to enhance training programs to strengthen supervisory skills, with a focus on adding risk specialists to banking supervision.** Development of risk specialists is needed to keep pace with the size, scale and complexity of banks and the banking system. Specialist knowledge in the following areas are priorities: credit risk, liquidity risk, IT, and provisioning. Examples of methods to strengthen supervisory skills include: (i) short-term secondments to industry; (ii) short-term secondments with regional supervisors; (iii) supervisory training manuals; (iv) succession planning; and (v) review rotation policy for banking supervision.

30. **The NRB is recommended to develop analytical tools to enhance offsite surveillance and forward-looking assessments of risk.** Analytical tools will help optimize the data contained in the SIS and support a focus on forward-looking assessments of risk and risk profile.

31. **An assessment of liquidity regulations and supervisory processes is needed.** The mission recognizes that the NRB has made significant progress to strengthen the implementation of monetary operations in a modernized framework. Nonetheless, if the arrangements for monetary operation are not functioning appropriately, this may exacerbate liquidity risks for banks. Further work to refine monetary operations is needed to alleviate liquidity risks. A focus on the liquidity regulations and supervision processes include: (i) develop bank contingency funding plans; (ii) undertake a quantitative assessment of the introduction of the LCR; and (iii) longer-term plans to diversify bank sources of funding.

32. **An assessment of the credit risk supervisory processes should target the following:** (i) a targeted review of bank credit policies and processes to support the consistent implementation of the Working Capital Guideline; (ii) assess bank policies and processes and reporting of connected lending exposures and lending to shareholders; and (iii) large exposures and risk concentrations.

33. **An assessment of regulations for problem assets and loan loss provisioning should include: (i) loan classifications;** (ii) treatment of restructured loans; (iii) engagement with industry to identify challenges in implementing IFRS9; and (iv) undertake sensitivity analysis on potential credit deterioration of revolving working capital loans to capture risks stemming from evergreening practices and to ensure sufficient level of provisioning.

34. **The NRB is recommended to implement a comprehensive framework for consolidated supervision.** Powers for the NRB to supervise on a consolidated basis will need to be integrated into the primary legislation. The NRB is recommended to adopt a holistic approach to implementing consolidated supervision that sequences the implementation of the new framework which includes the following: (i) amend regulations with industry consultation and agreed implementation timeline; (ii) training of Banking Supervision Department staff; (iii) update and

[2] See IMF (2023) Nepal: Staff Report for the 2023 Article IV Consultation, IMF Country Report No. 23/158, May 4. Available at: https://www.imf.org/en/Publications/CR/Issues/2023/05/04/Nepal-Staff-Report-for-the-2023-Article-IV-Consultation-First-and-Second-Reviews-Under-the-533075

revision of supervisory manuals; (iv) review of reporting requirements to align with new regulations; and (v) assessment of group structures to fully identify ultimate beneficial owners and group-wide affiliates.

35. **An assessment of the regulatory framework and supervisory processes for continuity planning should revise the existing requirements for BCP and DR planning with a greater level of prescription, especially for larger more systemic banks.**

36. **The NRB is encouraged to reconsider phasing out directed lending programs.** It is acknowledged the broader economic benefits of lending programs. Nonetheless, the primary role of banking supervision should be the safety and soundness of banks and banking systems. The setting of lending targets could cause unintended consequences. The NRB is encouraged to work with stakeholders to consider alternative schemes to achieve the intended outcomes of the programs.

37. **The NRB should consider integrating climate-related financial risks into banking supervision processes and bank stress testing.**

B. STRESS TESTING

Baseline Diagnostics

38. **Stress testing is a key analytical tool used in financial supervision and macro-financial surveillance.** Financial supervisors and central banks conduct stress tests to assess resilience of financial institutions against severe but plausible shocks. The tests are typically run using both the bottom-up approach, with banks calculating the impact of pre-defined shocks (micro stress tests), and the top-down approach (macro stress test), where exposure data available at the authority would be used and the authority would perform all the calculations.

39. **The NRB conducts simple micro solvency and liquidity stress tests of banks at a quarterly frequency since 2012, and MFIs are currently not stress tested.** All three types of banks (commercial banks, development banks, and finance companies) are included in this exercise, which is run as single factor sensitivity analyses with a high number of simple prescribed scenarios (in total about 30, most of them single factor scenarios), capturing credit risk (various degrees of deterioration of loan quality leading to additional loan loss provisions), interest rate risk (decrease in loan rates or increase in deposit rates impacting the net interest income), FX risk (appreciation and depreciation of domestic currency against USD), equity price risk (revaluation of stocks held by banks), and liquidity risk based on deposit withdrawals. The NRB has been revising the stress tests over the past years, imposing additional shocks and scenarios, and plans to bring on board additional small improvements in the near future (such as adding a reverse stress test).

40. **Results of the quarterly micro stress tests are used by the NRB, as well as by the participating banks.** In the NRB, the results are reflected in monitoring the risk profiles of the individual banks, complementing the risk analysis by the traditional capital adequacy, assets, management capability, earnings, liquidity, and sensitivity indicators. Once a year, the results are included in the annual Financial Stability Report and discussed at the Financial Stability Oversight Committee. The participating banks need to discuss their results at a quarterly frequency at their own risk committees and the bank board. They also include the NRB stress tests in their annual Internal Capital Adequacy Assessment Process exercise, sometimes complementing them with

additional stress test scenarios. As such, the exercise has contributed to establishing a stress testing culture in the banking sector.

41. **Credit risk calculation in the stress tests is based on valid prudential provisioning rules for individual loan classes specified by the NRB.** But not all possible migrations among the loan classes are included in the exercise, and restructured loans are not explicitly captured. Also, per NRB rules, the value of collateral behind the defaulted loans is not taken into account when creating provisions. However, given the dominance of fully collateralized lending by commercial banks, development banks, and finance companies, mostly against real estate, the institutions are typically able to recover almost all defaulted exposures from seizing and foreclosing the collateral ex post. Banks also calculate accounting provisions per NFRS, currently following the IAS 39 incurred loss approach, but the current micro stress tests do not require banks to report the results based on accounting provisions, as the NRB regulation specifies that the higher of the prudential provisions and accounting provisions needs to be taken for the P&L and the regulatory capital calculation (prudential provisions are higher). The credit risk scenarios also include the concentration risk by assuming the top 2 borrowers to default and be moved directly to the worst (loss) loan category. This is in line with best practices and presents a conservative approach.

42. **Only the net interest income effect of changes in interest rates is captured in the current micro stress tests.** Government bonds and bills are held by banks till maturity in the amortized cost category, without the need to reprice them. Secondary market for government bonds is virtually non-existent, so it would be anyway very difficult for banks to mark to market as there is no yield curve. Trading portfolios including additional (non-government) bonds and bills, and potentially other instruments such as shares, mutual fund units, or derivatives are very small (the size is limited by NRB rules).

43. **Direct FX risk (FX revaluations) and equity price risk complement the market risk part of the micro stress tests.** Impact of both risks is typically small given the NRB regulations on net FX open position (30 percent of capital), FX lending (which is allowed only to hedged borrowers), and accepting FX retail and wholesale deposits. There is very little risk of the materialization of the so-called "indirect FX risk", i.e., FX-induced credit risk, in which borrowers with FX loans would face a significant increase in debt service costs if the local currency depreciates against US dollar. However, depreciation of local currency would have an indirect effect on the domestic-currency value of the FX-denominated assets (such as nostro accounts abroad) included in the calculation of RWAs, which is currently not included in the micro stress tests. Equity holdings are relatively small, mostly composed of shares of microfinance companies (which are majority or minority owned by some A-class banks to facilitate the NRB requirement to direct at least 5 percent of loan portfolios to lending to deprived sectors), insurance companies, and hydropower firms. The stocks are typically part of the banking book (rather than trading book), but are marked to market given the active trading at the country's stock exchange.

44. **Liquidity stress tests are based on various scenarios of deposit withdrawals.** In most cases, banks are impacted in terms of seeing their Net Liquid Assets (NLA) ratio declining below the regulatory limit of 20 percent, but not becoming totally illiquid (i.e., with zero or negative NLA). There is also one scenario that combines solvency and liquidity shock, assuming that top 2 interbank lending of each bank goes from performing to non-performing (loss) status, impacting both solvency (credit losses) and liquidity (drop in NLA, as interbank loans are part of them).

45. **While the current sensitivity-based micro stress tests are a good starting point, they should be revised and enhanced to be more realistic and in line with best practices.** First, there are too many credit risk scenarios with shocks calibrated somewhat randomly, without a clear ordering by the level of stress. It is very difficult to judge ex ante the stress level of the credit

risk scenarios, as currently there is no data that would enable comparing the assumed migration rates with the observed migration rates. Second, the solvency stress tests are lacking an explicit horizon over which the shocks materialize, and pre-provision income is not taken into account as a first line of defense against shocks, muting their impact on regulatory capital. Third, for interest rate shocks, the way the impact is calculated is not realistic in terms of the effects on banks' net interest income as most loans are provided at variable interest rates linked to the bank's base rates and thus banks can pass the increase in deposit rates almost fully onto the borrowers. On the other hand, an increase in interest rate would typically bring some borrowers into default, decreasing the interest-bearing assets and thus, indirectly (with the same net interest margin) reducing the net interest income, which is not captured. Fourth, there is no haircut assumed for the bonds and bills in the liquid assets, which is not realistic as the only way to get liquidity against the bonds and bills is to repo them with the NRB or pledge them within the NRB marginal lending facility, which applies a 10 percent haircut. Also, the funding shocks could be richer, with various withdrawals by type of funding (different type of deposits such as retail versus wholesale, current versus fixed deposits, and other funding such as debentures or interbank loans).

46. **There are no macro (top-down) solvency, or liquidity stress tests conducted at the NRB.** So far, the NRB relies only on the quarterly micro stress tests to assess resilience of the financial institutions and the banking system as a whole. While options were discussed during the last two years to create a top-down solvency stress tests based on macroeconomic scenarios and a satellite model for NPLs, no concrete steps have been taken yet.

47. **No detailed intra-financial sector interconnectedness analyses and domino-type contagion simulations are conducted at the NRB.** Often, simulations of interbank contagion are an integral component of macro stress tests, allowing the central bank to investigate second-round effects of potential failures in the banking sector due to interbank exposures. Even if the NRB restricts the interbank lending (the maturity can only be up to seven days, no long-term deposits between banks are allowed), these short-term uncollateralized interbank loans do exist and the NRB has the data about them at its disposal. Also, there are additional interlinkages with non-bank financial institutions such as MFIs, insurance companies, purchase and hire companies, or SACCOs that should be analyzed and the risk of contagion across the various segments of the financial system assessed.

48. **Top-down macro stress tests and interconnectedness analyses form part of macro-financial surveillance that would be typically conducted at a regular frequency by a dedicated financial stability unit.** The central banks in most peer countries in the region have already formed such units (India, Sri Lanka, Vietnam, Cambodia) charged with the responsibility to (i) regularly monitor the development of systemic risk, financial sector trends, emerging risks and vulnerabilities, and macro-financial imbalances, (ii) report to the higher management, and (iii) provide policy recommendations, especially in the area of (macro-) prudential policy. They would also publish an external Financial Stability Report, informing the public about the macro-financial risk outlook and policy responses.

49. **The NRB has a small financial stability unit within its Regulation Department that is charged with preparing the annual Financial Stability Report, but a systematic and regular system-wide monitoring of risks and vulnerabilities is missing.** Also, the Financial Stability Report currently serves more as a backward-looking summary of recent developments, with data and inputs collected from various departments and agencies. It lacks a clearer up-to-date risk outlook and forward-looking projections to help the policymakers and the public understand the emerging risks that are building up in the financial system.

Main Recommendations

50. **The NRB micro stress testing methodology and templates should be revised and made more realistic in line with best practices.** In the solvency part, the stress tests should turn into a more realistic "projection exercise", with a horizon of one year, where the banks consistently project selected balance sheet, P&L, and capital adequacy items under stress. The exercise should only use a limited number of scenarios (say 3 to 5) that would all combine credit risk (deterioration of loan quality via migrations) and market risk (an increase in interest rate, exchange rate depreciation, and drop in stock prices), and could be easily ordered by the level of stress (e.g., mild/moderate/severe). This combination of shocks typically represents a consistent adverse scenario for emerging markets.

51. **Credit risk shock in all scenarios should be defined as a simultaneous deterioration of loan quality across all loan classes.** This is a more realistic representation of the development of the loan portfolios during distress, rather than testing the isolated impact of individual transitions. Working with the whole migration matrix would have a positive side-effect in moving banks to use such an approach in their own analyses and stress tests, helping them understand the dynamics of credit risk materialization in the loan portfolios, and prepare for the transition to the IFRS 9 expected credit loss modelling. At the same time, micro stress tests would continue using the prudential provisioning rules, even after the introduction of IFRS 9 in 2024/25 as the NRB plans to keep them. The calibration of stressed credit migration matrices would need to be based on the analysis of observed migration rates, which requires historical data on loan migrations. These could be received from the CIB or collected ad-hoc from banks. Also, banks would start reporting in each stress test round their last own migration rates on pre-specified portfolios over the past year or two, providing the individual banks with comparison of the stressed values and their own observed values and the NRB with additional information not available in regular reporting.

52. **The calculation of the impact on net interest income would need to be more realistic.** The estimates of the effect would need to consider the base rate mechanism, and the usual risk premia charged for the borrowers, but it should also reflect the existing time lag between the increase in funding costs and the base rate/loan rate changes. Also, for consistency, the new NPLs would lower the interest-bearing assets, decreasing the net interest income even when the net interest margin (spread between funding costs and loan rates) remains the same.

53. **The impact of credit risk, interest rate, FX and equity price shocks would impact regulatory capital though projections of net income.** Loan loss provisions, net interest income, FX revaluation, and losses from equity holdings would need to be complemented by projections of other key P&L items such as non-interest income (fees & commissions, etc.) and other operating expenses (administrative costs, etc.) to arrive at the final gross and net (after tax) income. These additional projections would be guided by pre-set parameters (e.g., the administrative costs could be equal to the last year, non-interest income could be slightly decreased in the stress scenarios). As net income is a part of core regulatory capital, the net income projections would automatically impact the capital. This approach is more realistic than the current approach of a simple deduction of the impact of the shock from capital.

54. **The end-horizon risk weighted assets would be calculated consistently with the existing NRB rules.** The credit portfolios would be split into the performing and non-performing parts, whereby the non-performing exposures net of provisions would be assigned the elevated risk weights (150 percent for real-estate loans and other loans). In many cases, this would lead to an increase in RWAs or a smaller decrease in RWAs compared to the current approach, especially if the portfolios are also split by the starting risk weight capturing whether they are real estate loans

or not. In addition, the depreciation of local currency would increase the part of RWAs denominated in FX, putting additional pressure on the final capital adequacy ratio.

55. **The revised and more realistic projection-oriented supervisory stress tests would enhance the quality of the supervisory review process and have a positive knock-on effect on banks' own stress tests.** The projection-oriented stress tests results could be discussed jointly with the banks' business plans, comparing the outcomes under most probable developments (business plan) and stressed conditions (the various stress scenarios). Banks should be explicitly encouraged to not only use the revised NRB micro stress test scenarios, but also build their own additional scenarios, implementing them in the NRB methodology and templates, or even going beyond the NRB approach in terms of complexity.

56. **The NRB could use the micro stress test results to calibrate additional capital charges for banks within the Pillar 2.** Many countries opt for using the estimated losses as information to guide the calibration for additional capital on top of the minimum capital adequacy. The NRB could, for example, require that banks are able to survive the mild or even the moderate stress scenarios and set Pillar 2 buffers accordingly.

57. **The micro stress tests of liquidity would benefit from a few small adjustments.** First, adding a haircut on government bills and bonds would be desirable to reflect the current rules for liquidity provision by the NRB within its facilities. Second, adding an explicit time horizon for the deposit withdrawal scenarios would provide for additional information about banks' liquidity risk. In particular, these scenarios could be specified as deposit withdrawal rate per day, which would allow the construction of additional metrics of a survival horizon. Third, differentiating between different types of deposits (current versus fixed, retail versus wholesale), stressing other sources of funding (maturing debentures, interbank loans), and adding the shock from off-balance sheet (commitments turning into loans), can be also included. Additional adjustment might be desirable in the medium term after the implementation of the LCR, which will bring a much richer data environment for assessing the liquidity risk and resilience of banks against liquidity and funding shocks.

58. **MFIs should be also included in the micro stress tests of solvency and liquidity on a proportionate basis.** The sector of MFIs is as large as the sector of development banks (both account for about 8 percent of total loans of all financial institutions involved in lending; see Introduction). Solvency stress tests for MFIs should be based on the consistent projections approach (projecting provisions, net income, RWAs and capital over a 1-year horizon) and use the same scenarios as banks, but the methodology and templates could be simplified to reflect specifics and the regulatory framework of this segment. A sequential approach would be the best strategy of implementation, starting with the largest MFIs first and extending it to more (or even all) MFIs at a later stage as a part of the planned move to the risk-based supervision in this financial sector segment.

59. **In addition to revising the micro stress tests, the NRB should develop its own top-down macro solvency stress test.** A state-of-the-art solvency framework based on alternative macroeconomic scenarios, credit risk satellite models, explicit assumptions about the pre-provision income, and consistent projection of banks' balance sheet and profit & loss items ideally over a 3-year horizon should be built. The exercise would offer value added over the micro stress tests in linking the macroeconomic developments with the credit risk parameters and in providing projections for a longer horizon, allowing for lagged and cumulative effects of adverse macro-financial developments on banks' profitability and solvency. As such, it would help to calibrate prudential policies and enhance macro-financial surveillance. All supervised banks and financial institutions including MFIs should be included in the macro stress tests.

60. **The NRB Research Department should be involved in the calibration of the macroeconomic scenarios**. The modelling team is upgrading its macroeconomic projection models and will be over time able to provide projections of key macro-financial variables and help with estimating the satellite credit risk models. In contrast to the micro stress tests, the top-down macro stress tests would also use a "baseline" macroeconomic scenario capturing probable macro-financial developments alongside several calibrated stress (adverse) scenarios, providing for a risk outlook and facilitating a discussion about expected developments.

61. **A longer projection horizon of macro stress tests allows for additional analyses not available in the micro stress tests.** In particular, the realization of collateral behind the defaulted loans could be explicitly captured, as banks are typically able to recover their credit losses by selling collateral within the next 1–2 years. The macro scenarios could include assumptions about the real estate market, capturing a potential property market correction that would decrease the value of land and buildings and thus the recovery rates.

62. **The implementation of IFRS 9/NFRS 9 in Nepal in the fiscal year 2024/25 offers an opportunity for the NRB to collect relevant credit risk parameters to be used in the top-down stress tests.** Once the NFRS 9 is introduced, the NRB should start compiling historically consistent time series of PD and LGD from all banks, by loan categories, to facilitate future advancement to a fully-fledged macro-scenario-based top-down stress test where the PDs and LGDs—rather than NPL ratios—are modeled as a function of macro-financial variables.

63. **The macro stress test should include a block to analyze interconnectedness among financial institutions and allow for domino-type contagion effects.** This will allow the investigation of the second-round impact of potential failures in the financial or banking sector due to inter-institutions exposures. While the contagion block would in the first version focus on interbank exposures only, over time, additional interlinkages with non-bank financial institutions such as micro-finance institutions, insurance companies, purchase and hire companies, or credit cooperatives should be added.

64. **Macro stress test of liquidity can be developed after the implementation of the LCR.** Currently, given the data available at the NRB, running a top-down liquidity stress test in parallel to the micro stress tests would not bring any additional value added. Once the LCR is implemented though, a new top-down liquidity stress test could be developed with a cash-flow based approach using the very granular LCR-reported exposure and cash flow data. However, the value added of such exercise needs to be discussed, especially if the micro stress tests of liquidity will also be further revised to be based on LCR data.

65. **To enhance the macro-financial surveillance of risks and vulnerabilities in the Nepali financial sector, of which the macro stress testing and interconnectedness analyses are an important component, the role, staffing and capacity of the existing financial stability unit should be strengthened.** The unit should be newly charged with regular monitoring of the development of systemic risk, financial sector trends, and macro-financial vulnerabilities, reporting internally in quarterly frequency and being involved in proposing and discussing prudential policies. It would continue to be responsible for writing the annual Financial Stability Report but would aim at improving the level of the analysis from the current backward-looking summary of recent developments towards a risk-oriented forward-looking projections to help the policymakers and the general public understand the evolving risks and policy responses.

C. CRISIS MANAGEMENT

Baseline Diagnostics

66. **The review focused on effective banking resolution and crisis management, and early intervention procedures.** It reviewed the plans for establishing recovery planning requirements and enhancing resolution options against the existing frameworks, and applicable provisions of the Financial Stability Board's (FSB) KA for Financial Institutions as appropriate for developing countries. The review also included an assessment of financial safety nets, particularly ELA by the NRB, and arrangements for depositor protection. The mission's review also looked at the arrangements in place for resolving a failing bank, together with domestic coordination arrangements. Although the mission did not formally assess compliance using the approved assessment methodology, the framework still has significant gaps vis-à-vis the FSB's KAs and the International Association of Deposit Insurers Core Principles for Effective Deposit Insurance Systems.

67. **The recent legislative amendments to the Nepal Rastra Bank Act (NRB Act) have contributed to the broadening of the resolution toolkit, but significant gaps remain.** There is, in general, a lack of sufficiently detailed operational plans for implementation of resolution and some of the laws, by-laws, and regulations need stronger alignment. For example, the liquidation triggers and processes (including the appointment of liquidators) in the recently amended NRB Act need better alignment with the Banking and Financial Institutions Act. The Problem Bank Resolution Framework, made available by the World Bank TA, is also not synchronized with existing legislation. No resolution simulation exercise has been undertaken to test authorities' preparedness and inter-agency cooperation.

68. **The laws do not assign a clear mandate to the NRB as resolution authority, although it is clear in substance that this is one of the NRB's responsibilities.** The resolution powers in Nepal are provided to the NRB under the same legislation as for their respective broader functions and the supervisory responsibilities for problem banks are operationally not separated from day-to-day supervision. The NRB Act provides reasonably comprehensive powers for resolution, but there are numerous gaps, including a lack of clear resolution objectives, no group resolution powers, and no explicit powers for bail-in. The lack of "no-creditor-worse-off" (NCWO) safeguards and uncertain creditor hierarchy may complicate resolution further. Legal protection for the NRB, its directors and staff, and any agents engaged by it for resolution purposes are missing.

69. **Legislation grants the NRB relatively strong powers to direct banks to take corrective actions.** Such powers could be used to facilitate the resolution of a bank while it is under private control. The NRB Act allows, inter alia, to order a recapitalization or to remove or replace directors and officers. The NRB may appoint an "officer" to any problematic bank or take over the management by itself. However, as already pointed out in the 2014 FSAP[3], the effectiveness of the existing framework for restructuring a bank under official controls is not ensured. In particular, the NRB Act has complicated procedural requirements for each step of the official controls, including the requirements to hold hearings before placing an official or 30-day notice for reducing capital.

70. **The current resolution framework in Nepal is based on resolving a going concern bank under a special administration regime providing the NRB with relatively broad powers.** It

[3] Technical Note on Bank Resolution and Crisis Management, unpublished.

provides for a broad range of resolution tools, including the newly established bridge bank tool. Bank liquidation tool (court-based) is described in the Bank and Financial Institution Act.

71. **The financial sector safety net is still largely undeveloped.** The DCGF in Nepal provides both deposit insurance coverage and credit guarantee services to member banks, although the two funds are kept separately. While the very recent Deposit and Credit Guarantee Regulation Act provides additional functions to the DCGF, the new framework remains largely underdeveloped and inoperative. The NRB also needs to further refine its ELA policies and procedures.

72. **Nepal has a high-level Coordination Committee (CC) to discuss matters related to economic developments.** The CC is led by the Minister of Finance and has the NRB Deputy Governor, the Heads of the Securities Exchange and the Insurance Board as members. However, it meets on an ad hoc basis and has no supporting legislation or other formalized rules. The CC has not discussed crisis management related issues. Also, the MOF has so far been absent from formulating crisis preparedness matters, and there is no guidance prepared for the government's potential role in bank resolution and providing backstop for the DCGF or indemnities for ELA.

73. **Nepal has seen two failures of licensed financial institutions in the last ten years, which were contained to category 'C' banks.** 12 licensed financial institutions have been declared problematic (including 10 category 'C' banks and 2 category 'B' banks), but most of them have recovered. Only 1 bank failure has led to deposit payouts by the DCGF. In addition, the NRB has encouraged consolidation and mergers through a moratorium on category A, B, and C licenses and moral suasion. The same approach has been taken vis-a-vis the problematic financial institutions, most of which have been kept operating as "problem banks" while the NRB was looking for new investors.

Main Recommendations

74. **The Key Attributes stress the importance of a clearly defined mandate for a resolution authority and legal protection**. In line with international best practice, the FSSR recommends the inclusion of more tangible and granular objectives and principles into the NRB Act. These should include, but not be limited to: (i) maintaining continuity of critical functions in the case of resolving systemically important banks; (ii) the use of public (government) support as a last resort; and (iii) the principle of private loss absorption and the lesser cost than liquidation test. Explicit mention of resolution objectives will help the NRB to guide and justify actions taken in the individual case, including with a view to limit potential litigation risk and provide justification for the review by the court.

75. **The NRB would gain from an enhancement of the current risk assessment framework.** The risk assessment should be more forward-looking than is currently the case, with a more structured link between the assessed risk of a bank and the scale of supervisory attention it receives. There is a need to ensure the availability of adequate and timely supervisory data, updating the regulatory framework to better capture various risks. The off-site monitoring of banks should rely on a more comprehensive set of data and early warning indicators for risk assessment purposes. Stress testing, although improved and institutionalized, is still at an early stage of development, relies on single factor sensitivity analyses, and has not progressed to the point where it is a useful mechanism for informing supervisors of emerging risks, potential vulnerabilities, or for calibration of prudential requirements.

76. **In addition to the earlier detection of bank stress, the NRB internal processes should also allow timely intervention measures.** The Prompt Corrective Action (PCA) framework should

provide for more specific and structured guidance via clear escalation processes under and between various states of distress and early interventions (in addition to those provided for capital shortfall). In order for PCAs to be effective, they should be carried out in a fast and efficient manner, but several provisions in the NRB Act may lead to significant delays in addressing deficiencies which may aggravate the underlying problems, cause additional costs to the creditors and, in the worst case, endanger the stability of the entire system. It is also advised to use the temporary administrator tools sparingly and keep the mandate short, preferably expiring within six months (or one year with an extension). It is also important to clearly distinguish between the banks which have failed or are likely to fail, from institutions still at various stages of distress which could be addressed and mitigated.

77. **The NRB should start working on establishing recovery planning requirements**. Although the recovery plans are to be prepared by the banks, the requirements should be based on guidance developed by the NRB. The recovery planning requirement should be initially introduced for systemically relevant banks. Over time, the recovery plans should be made mandatory for all banks and other institutions supervised by the NRB. The regulations for recovery planning should specify the minimum trigger points for invoking the plan and for specific actions in the plan while recognizing that recovery triggers and options are to be tailored to the banks' specificities and determined by the banks. The guidance should require banks to prepare recovery plans for two categories of scenarios: idiosyncratic shocks (in which just the bank in question has sustained impacts to its capital and liquidity, and the banking system is sound); and systemic shocks.

78. **It is necessary for the NRB to develop comprehensive policies and processes (resolution plans) for how it would seek to resolve a bank, starting with larger institutions**. A resolution plan is a comprehensive document that details the characteristics of an institution and describes the preferred resolution strategy for that institution, including which resolution tools to apply. It runs parallel with a resolvability assessment of the institution. The purpose of the resolvability assessment is to identify and address any impediments to the resolution of the institution, and to ensure that it has a sufficient level of loss-absorbing capacity in place. The recovery and resolution framework should eventually provide the NRB with powers to pre-position the supervised institutions, in order to improve their resolvability and to speed up the resolution process. The recovery and resolution planning should form part of an iterative process by which resolvability assessments can inform resolution plans and test their feasibility.

79. **While the revised NRB Act provides broader options for bank resolution, the provided tools and procedures should be substantially streamlined and clarified.** Most importantly, the new powers to create a bridge bank or conducting a purchase and assumption (P&A) transaction lack in-depth coverage in the current legal framework. The banks under resolution are prohibited to accept deposits and extend credit, which may undercut the bank's ability to generate further revenues, undermining its financial standing as a going concern institution. The purpose of discussing creditor's hierarchy and compensation (e.g., sequencing priority payments) under resolution (before liquidation) is also unclear. The current resolution toolkit could also benefit from strengthening the good-bad asset separation power as transfer of non-core assets to a special asset management company may be an adequate tool in extraordinary circumstances. The NRB should use its broad resolution powers to trigger the special administration at a sufficiently early stage to restructure a bank in going concern under public controls.

80. **The NRB should invest more resources in preparing resolution manuals for all available resolution tools.** As the new resolution tools are now instituted, they need to be operationalized given the legal complexities involved. The resolution authority should also carefully consider applying multiple resolution options. Bridge banks should be considered during the time of

systemic crisis, but it could be also relevant for small bank resolution, especially in case of the failure of several smaller banks. The modalities for funding resolutions by the deposit guarantee fund and the government (in the case of a bridge bank) should be also prepared. Over longer time, it will be important to build into the system features that will ensure that banks bear the costs of their own failures through an increase in the loss absorbing capacity (in the form of contractual bail-in instruments).

81. **The current resolution framework would benefit from a single, more elaborated creditors' hierarchy for different types of bank creditors to provide for clear and efficient resolution rules.** This would, inter alia, also facilitate applying certain resolution options, e.g., bridge bank or P&A transactions. In particular, there is a need to introduce the NCWO principle. An explicit pari passu provision in treating creditors is also strongly recommended to strengthen property rights. As creditors (after shareholders), should be first to face a loss in bank resolution in accordance with the liquidation hierarchy and before any formal support, the NCWO principle should be introduced as a legal safeguard in any future legislative amendments. The NCWO principle ensures that no shareholder or creditor faces higher losses than under the hypothetical liquidation counterfactual; or if they do, they will have the right to compensation.

82. **Although the adoption of NRB regulations on Lender of Last Resort was a significant improvement, further progress is needed.** Most importantly, central banks should provide ELA only to solvent institutions which are expected to remain adequately capitalized in the foreseeable future. Therefore, ELA procedures in Nepal should better incorporate reliable solvency, viability and capital assessments processes and the language in the NRB Act and in the regulation should be made clearer in this regard. It is therefore critical for the NRB to have up-to-date bank financial granular data in the shortest time-frame possible to assess the basis for granting ELA. It is also recommended that the ELA policies and processes create a separation within the NRB between those responsible for making an assessment of bank capital, liquidity and viability, on the one hand, and those responsible for advising the NRB board on whether to provide ELA and, if so, the terms on which it should be provided, on the other. As to the latter, the law should be clearer that ELA is provided at a penalty rate, preferably reflected as a margin above the main lending rate. There is also room to expand the collateral list for ELA.

83. **The authorities should consider an option where banks in resolution may also be considered eligible for ELA, when experiencing temporary liquidity problems.** A bank that is going to be resolved and recapitalized (via bail-in instituted by the authorities, and/or, as a very last resort, public support) will most probably satisfy the criterion of forward-looking solvency. This consideration should be based on time-criticality of a resolution process, but it is also important to maintain the legal requirement to grant liquidity only to solvent banks. In this context, the NRB may consider bank solvency at the moment a decision is made to recapitalize and restore the bank's solvency. However, ELA should not be given to the (insolvent) entity in liquidation as currently foreseen in regulations.

84. **The DCGF is still at a very nascent stage.** Although the recently introduced new law provides the option to use DCGF resources for funding P&A, the modalities in the law are very vague and insufficient for these purposes. There is also no clear view in terms of deposit coverage; for instance, regarding the share of deposits fully covered by the current coverage limit (NPR 500,000 or about USD 8,000). The eligibility of a depositor and of each deposit product for deposit insurance protection is still assessed manually, impeding the efforts for a timely and efficient payout. The authorities should also consider separating institutionally the deposit guarantee functions from those of credit guarantee given the minimal overlap of the respective mandates, and to strengthen the focus on systemically important functions.

85. **More needs to be done to ensure that the authorities, including the MOF and DCGF, are well positioned to resolve a systemically important bank or to address a systemic banking crisis.** The current resolution framework and interagency cooperation modalities are not suitable for addressing a failure of a large bank with systemic implications.

86. **The high-level CC should be formalized.** The mission recommends that a subcommittee be established under the CC to focus solely on systemic financial crises related matters. The subcommittee could be led by a high-level NRB official and would provide support for CC work on crisis management, including by preparing nation-wide contingency planning based on agency-wide contingency plans. The CC sub-committee should also include the representatives of the DCGF. Based on the subcommittee recommendations, the CC could decide, for instance, whether a particular event represents a systemic crisis, and only then should the exceptional provisions, related only to systemic events, be applied by the respective institutions under the terms and conditions prescribed by the legislation.

87. **It is essential that there be close coordination between the NRB and MOF in responding to a bank distress or failure situation.** MOF involvement is critical at all stages of systemic financial crisis. The absence of dialogue on financial stability and crisis management, including through structured cooperation processes, constrains the ability of the two agencies to effectively coordinate either the promotion of financial stability in normal times or manage a financial crisis in periods of instability. It is suggested that the NRB and MOF establish a Memorandum of Understanding that sets out their respective responsibilities in responding to a banking distress or failure situation. Although the MOF will take the lead, NRB regulations and internal procedures are needed to specify how the powers will be used. In particular, strong safeguards are needed before public funds are used, including ensuring that existing shareholders bear the first loss.

88. **The NRB should consider reinstituting a Problem Bank Resolution Unit.** A small, cross-departmental unit consisting of some (two or three) legal and financial sector experts could benefit the NRB in operationalizing the relevant laws and guidelines. A small, specialized unit could also serve as an operational nucleus which could be expanded as needed in case of an emerging systemic threat.

89. **Also, legal protection for resolution purposes should be enshrined in the NRB Act.** Legal protection should extend to the NRB, members of the NRB Board, NRB staff, and persons or entities engaged by the NRB for matters relating to resolution, such that they are immunized from liability and indemnified for legal costs, provided that any actions taken were in accordance with the powers conferred upon them by the NRB Act, and they acted in good faith.

D. PAYMENT SYSTEMS

Strengthen legal framework and oversight function

Baseline Diagnostics

90. **Nepal has made significant progress in modernizing its payment systems since formulating its Payment System Development Strategy in 2014.** Today, the NRB performs the role of an overseer, operator, and catalyst of payment systems. The legal basis for the oversight and development of national payment systems in the country is provided by the Payment and Settlement (PS) Act 2019, Payment and Settlement Bylaw 2020, Payment Systems Inspection and Supervision Bylaw 2021, and Licensing Policy for Payment Related Institutions 2016. The NRB has also implemented a RTGS system in 2019, instead of relying on semi-

automated entries to the General Ledger (GL) system for settling inter-bank payments. The retail payment landscape has undergone significant transformation in the last few years, including the introduction of instant payment systems (connectIPS, IPS), Mobile Banking, Internet Banking, Wallets, and QR Code among others. The National Clearing House Limited (NCHL) operates key retail payment systems including check clearing and IPS. A national blueprint Digital Nepal Framework (2019) also serves as a reference for the NRB's policies, regulations, and strategies for payment systems.

91. **Notwithstanding the reforms, there are critical gaps in the legal framework and oversight function.** Provisions for finality and netting enforceability of transactions in the Payment Systems and Settlement Act, appear not to be given precedence over insolvency laws, or address zero-hour rules. This creates legal uncertainty of settlement and risks systemic disruption to the payment system if a participant becomes insolvent.

92. **The Payment Systems Department (PSD) is understaffed, and the organizational arrangement creates opportunities for conflicts of interest in the oversight and operations, as well as the NRB's role in NCHL.** PSD's oversight unit is responsible for the supervision of 37 payment system operators (PSO) and PSPs, but there are inadequate skilled resources, with the most experienced staff having less than 3 years in payment systems oversight. The NRB has a rotation policy where staff gets rotated out every 2–3 years, except for the IT Department. As a result, at the department level, PSD is understaffed, with 5 unfilled positions. While the oversight and RTGS operator functions are performed by different units in PSD, the separation would not sufficiently address conflicts of interest. The working arrangements among the PSD and other operational departments for the RTGS system have also not been formalized and documented. This could lead to ambiguity in roles and responsibilities, and gaps in complying with international standards and the NRB's oversight obligations. The NRB noted that a RTGS User Manual and a document describing work division and responsibilities have been in place. Further, the NRB is a 10 percent shareholder, and its Executive Director (ED, Banking Department) is the chairman of NCHL which operates retail payment systems that competes with commercial payment systems operators.[4] While the objective of its involvement in NCHL is to ensure safe and efficient payment systems at low costs, it puts the NRB in a potential conflict-of-interest position as overseer of payment systems.

Main Recommendations

93. **The NRB should strengthen its legal framework and oversight function. It is recommended to:**

- **Review the legal framework to identify and address gaps in the provisions, including those related to the finality and irrevocability of transactions settled through payment systems.** The assessment should try to determine whether the Act gives a high degree of legal certainty of finality and irrevocability of transactions settled through payment systems (e.g., investigate whether when a court orders for the bankruptcy or winding up of a participant, its payment or netting obligations would be disregarded). It should also address zero-hour rules and netting should be enforceable, among others. The assessment should fully consider the relevant principles of the Committee on Payments and Settlement Systems- International

[4] According to NRB Act 2022, Section 7 (2)(a), NRB can provide loan to and invest in the shares of the institutions which carry out the functions helpful in carrying out the function of the NRB or in attaining its objectives, not exceeding ten percent of the total capital of such institutions.

Organization of Securities Commissions (IOSCO) Principles for Financial Market Infrastructure (PFMI).

- **Fill the five vacancies in PSD immediately, either by rotation or external hiring or their combination.** Existing and new staff should be sent for training on the PFMI. In the longer term, PSD should work with HR Department to limit the number and frequency of rotation of specialist staff in payment systems, and plan for succession before rotating staff out, to ensure continuity.
- **Publish English versions of all key laws, regulations, and directives even though some are already in English.** This will promote accurate understanding of the rules, procedures, and risks of participating in the payment systems, among BFIs and potential investors.
- **Separate the oversight and operator function at the ED level or higher and formalize internal arrangements for RTGS.** The separation will deconflict PSD in its oversight and operator roles. Internal working arrangement for RTGS should be formalized and should include reporting requirements for Operations Unit, supervision by Oversight Unit and roles of internal audit, risk management and any other relevant departments in the RTGS system should be defined.
- **Consider divesting the shareholding and relinquishing chairmanship in NCHL.** The NRB could instead use moral suasion, or its oversight powers vested by the PS Act to achieve the desired policy outcome.

Designate systemically important payment systems and adopt PFMI

Baseline Diagnostics

94. **The NRB has been supervising payment systems and guided them to observe the PFMI but have not formally identified and designated systemically important payment systems in Nepal.** As a result, these payment systems are not subject to the higher international risk-management standards, PFMI. Self-assessments for payment systems have not been conducted nor disclosure frameworks (DF) been published for any payment systems. The NRB intends to develop a framework for the designation of systemically important payment systems by the fiscal year ending July 2023. While the NRB intends to designate the RTGS system, Electronic Cheque Clearing (ECC), and connectIPS, it is unsure about FonePay (an instant payment system) or credit and debit card systems. The NRB has also not established whether its RTGS foreign currency settlement should be subject to cooperative oversight.

Main Recommendations

95. **The NRB should formally adopt and apply the PFMI to systemically important payment systems.**[5] It is recommended to:

- **Develop Financial Market Infrastructure (FMI) designation framework.** The criteria used for identifying systemically important payment systems should be consistent with the definition in PFMI. Designation of the systems should follow immediately.
- **Formally adopt PFMI.** This should be done through regulations or directives that apply all the principles to designated systems.
- **Conduct self-assessments against PFMI and publish DF.** These should be done for the NRB's RTGS Operations Unit, and all designated payment systems, such as ECC and

[5] The NRB PSD has included these items in the action plan of FY 2022/23.

connectIPS operated by NCHL. The oversight unit should review these self-assessments, and ensure the DF is published at least once every two years. In addition, it should assess itself against the authorities' responsibilities in the PFMI.

- **Establish whether there is a need for cooperative oversight with other payment system regulator for the foreign currencies settled through RTGS system.** The NRB should start by informing the relevant authorities in line with Responsibility E Key Consideration 2 for its multi-currency RTGS.

Enhance RTGS system and increase utilization

Baseline Diagnostics

96. **The RTGS system currently does not support fully automated Intraday Liquidity Facilities (ILF), and is not fully utilized to support the growth of the banking and capital market sectors.** While the RTGS system has operated since 2019, the NRB continues to settle payments between banks for high-value checks (above NPR 300 million) via the GL system, suggesting that settlement risks remain. The main reason for this is that many government agencies prefer to use checks, and do not have processes and mechanisms to use RTGS services, nor do they have direct RTGS access. Also, some BFIs who are not direct participants prefer to continue the practice of using checks for settlement via GL transfers at the central bank, instead of investing in new processes or mechanism to utilize RTGS services. At the time of the mission, the figures of GL transfers appeared relatively large, but could not be confirmed by the NRB. While the RTGS supports automated ILF, it has not been utilized yet because of the absence of an automated and dematerialized collateral management system. Full automation of the ILF can be implemented only when government securities needed as collateral for liquidity provision has been dematerialized. The Public Debt Management Office (PDMO) of the MOF, responsible for management of government securities is embarking on a Debt Operations Management System (DOMS) that will make securities electronic. This could take up to two years.

97. **The NRB has published the RTGS System Rules describing the design and procedures of the system, but gaps remain.** The RTGS system settles Nepalese rupee, US dollar, euro, British pound, and yen payments transactions.[6] While some of the settlement rules for the foreign currencies can be implied from the rules for Nepalese rupee, they may not have clearly and adequately addressed foreign currencies settlement. For example, it can be inferred that ILF does not apply to foreign currencies, whose accounts need pre-funding. But there is no description of how participants should manage intraday liquidity if they face a shortage of foreign currencies for settlement. As a result, participants may not be comprehensively informed of the design, operation, and risk of foreign currency settlement in the RTGS system.

Main Recommendations

98. **The NRB should enhance RTGS system and increase its utilization by banks.** It is recommended to:

- **Increase utilization of the RTGS for interbank payments.** The NRB should consider measures that discourage the use of the GL system for transfers between banks as it increases operational, liquidity and settlement risks. Measures could include mandating that high-value

[6] The NRB noted that there is no cross-border settlement of foreign currency in the RTGS system. RTGS settlement for foreign currency only takes place among domestic BFIs.

payments must be settled through RTGS instead of via checks and GL transfer, with the goal of eliminating them.

- **Expedite the dematerialization of government securities to facilitate the full automation of the intraday liquidity facility available to participants.** The NRB should work with PDMO to accelerate the de-materialization of government securities and complete the DOMS project as soon as possible. It should also start to plan and design to integrate or interface with DOMS to achieve delivery-vs-payment to reduce lead time.
- **The NRB should review the RTGS Rules document and enhance the description of the design and operations of the RTGS for foreign currencies.** The scope should include specific details on the settlement process, queuing, gridlock resolution, liquidity facilities, operational timings, among others, that may apply to foreign currencies or otherwise. The NRB should continue to monitor growth in foreign currency and have plans for intraday liquidity risk management.

Improve operational and cyber resilience

Baseline Diagnostics

99. **The NRB issues the IT Security directive to PSP and PSOs and updates them on a regular basis.** The latest directive was issued in 2022 and contain cyber security and resilience. However, it does not sufficiently cover specific cyber resilience requirements, such as the need for cyber resilience framework, governance, cyber response, and recovery plans to meet the 2-hour recovery time objective (RTO), specific cyber testing with key service providers, among others. The NRB plans to issue a specific cyber resilience directive that is aligned with the Guidance on Cyber Resilience for FMI by the fiscal year ending July 2023.

100. **The NRB has cyber security policies in place and has issued strategies related to cyber-security for the Central Bank.** It will implement Cybersecurity Info Sharing platform in the fiscal year 2022/23, Financial section CERT in 2022/23 and securities operations sector in 2024/25. A Chief Information Security Officer (CISO) has been appointed in July 2022 to oversee the NRB's information, cyber and technology security, but he does not have a dedicated team. Instead, he taps on Info-security Unit of the Information Technology Department (ITD), who do not have direct reporting to him. Furthermore, the CISO is also heading the new Financial Inclusion unit of the NRB formed also around July 2022.

101. **The NRB is temporarily occupying annex buildings as the main central bank building is undergoing repair following the 2015 earthquake.** The mission team conducted its meetings with the NRB in these buildings, which have security officers in the premises. However, an IT asset was seen to be installed and operating in open areas of one of these buildings. This exposes the network and systems of the NRB to the risk of sabotage and unauthorized access.

102. **In its supervision, PSD relies on ITD staff to assess the PSP/PSOs' cybersecurity and IT risk management against the NRB's security-related directives.** The ITD staff assigned for inspections usually have limited or no IT audit experience, and may have conflicting ITD duties at the same time, raising concerns that assessments are not competently conducted. With no professional qualification or experience relating to IT risk management, the ITD staff may be challenged by the PSOs/PSPs, and the NRB may suffer supervisory reputation damage for not being able to assert authority in this specialized area.

103. **Cybersecurity incidents are increasing in Nepal, and there had been recent successful attacks on a bank's SWIFT system and a payment switch.** Banks are now required to comply with the SWIFT Customer Security Program (CSP), an attestation of

compliance to a security controls framework. The NRB's RTGS system does not rely on SWIFT network, instead the RTGS communication is based on VPN using a CA/PKI security infrastructure. However, there is no requirement for participants of the RTGS system to comply with an equivalent CSP. The NRB has also not conducted any assessment on the risk of wholesale payments fraud related to endpoint security for its RTGS system.

104. **While DR arrangements are in place for RTGS system, there are no BCM and plans.** Bank participants are subject to business continuity requirements and have conducted drills for their RTGS front-end systems. However, the RTGS system itself has not conducted any drills. At the enterprise-level, the NRB's BCM Committee is overseeing the development of a BCM framework and expects its completion in fiscal year ending July 2023.

Main Recommendations

105. **The NRB should improve the cybersecurity and operational resilience of key payment systems, including RTGS system, the NRB and participants.** It is recommended to:

- **Ensure cyber resilience guidelines being drafted are aligned with the CPMI-IOSCO Guidance on Cyber Resilience for FMI before issuing them.** The guidelines should also be issued by other supervisory departments to their regulated entities.
- **Have a dedicated team of information and cyber security officers with direct reporting to CISO.** This will assist the CISO in executing the NRB's cyber strategy and completing the major cyber initiatives in a timely manner.
- **Review the physical security of its systems and network infrastructure to identify any weak links.** The NRB should have comprehensive physical security policies that address all potential vulnerabilities and threats to ensure strong security.
- **Build IT risk supervision capacity.** The NRB could hire or identify and train a pool of IT staff who are experienced in IT risk management and are certified in IT Audit, for supervision. This could be done at the organizational level e.g., to also support other supervision departments.
- **Review and adopt the CPMI Wholesale Payment Fraud End-point Security elements.** This should be done to the greatest extent possible for the RTGS system. The NRB should also develop a security controls framework for RTGS participants that includes a security attestation. This could be modelled against the SWIFT CSP.
- **PSD should immediately develop BCP for RTGS and test it regularly.** The plan should have a 2-hour RTO, including for extreme, but plausible scenario such as wide-area disruptions. BCP should be tested at least annually. The NRB should consider implementing an alternate to the RTGS system that is non-similar and can settle time-critical transactions for scenarios where it is not able to recover in 2 hours.

Strengthen prudential supervision, oversight and user protection of e-money and emerging payments

Baseline Diagnostics

106. **The NRB has issued 27 licenses to PSPs, of which 25 perform only e-money or domestic money transfer functions and the other 2 PSPs perform card payment functions.**[7] As the current licensing regime for PSPs is mostly limited to e-money and domestic

[7] The NRB noted that it has opened licenses for PSPs/PSOs offering innovative products and is also working on developing a regulatory sandbox for digital innovation.

money-transfer, it may not be conducive to innovative payments services. Payment activities, such as merchant acquisition and payment aggregators, are not provided for in the licensing policy, and while left unregulated may cause uncertainty. Furthermore, there are funds-in-transit and operational risks that may negatively impact consumer confidence if they materialize.

107. **There are safeguarding requirements for e-money PSPs, but they do not sufficiently protect customer funds.** E-money PSPs are required to segregate customer funds, hold them with a settlement bank and perform daily reconciliation of funds. The selection of settlement bank is subject to the NRB's approval and limited to Class A banks. There are also onboarding requirements for agents of e-money PSPs. However, these safeguards do not protect the funds from an insolvency of the e-money PSP or settlement bank. NRB also limits e-money PSPs to holding funds with only one bank, creating concentration risk.

108. **NRB is exploring CBDC and has issued a concept paper for public consultation in August 2022.** NRB's key policy goals for considering CBDC are better access to payments, providing resilience to payment systems and reducing costs of cash handling. CBDC, if issued, has potential financial stability implications.

Main Recommendations

109. **NRB could review whether its legislation and regulations need modernization to keep pace with its efforts to foster payment innovation.** Some countries have modernized their legal and regulatory frameworks to foster innovation and competition, while at the same time addressing the associated risks and consumer protection. A study into such activity-based, risk-focused regulatory regimes for payment systems could be conducted for the Nepal context.

110. **NRB should review the safeguards to protect float against insolvency of an e-money issuer or its settlement bank and ensure other e-money measures are comprehensive.** Safeguards could include insurance, bank guarantees, trust account, undertaking by banks, among others, making reference to good practices published by IMF and CPMI/World Bank. NRB should also diversify risks by allowing PSP to hold float in high quality liquid asset with multiple settlement banks.

111. **NRB should make a fully informed decision on whether to issue CBDC**. If so, it should incorporate design features that support public policy objectives and ensure an efficient, resilient, and competitive payment system.

E. FINANCIAL INCLUSION

Financial Inclusion Framework

Baseline Diagnostics

112. **Access to formal financial services has more than doubled in Nepal over the past 10 years**. According to the World Bank, access increased from 25 percent of adults in 2011 to 54 percent in 2021. This progress reflects concerted efforts by NRB and other stakeholders to reach the unbanked through a wide variety of programs. For example, NRB requires financial service providers (FSPs) to establish a certain number of "brick and mortar" access points (e.g., branches, ATMs), and dedicate a prescribed percentage of lending to deprived sectors. There is also a growing number of digital financial services available, such as e-money, QR code payments, and digital credit. Financial inclusion efforts are supported by a formal Financial Sector

Development Strategy and Financial Literacy Framework. NRB has a financial inclusion dashboard that collects various metrics from Class A, B, and C banks. There are some gaps in data, such for micro, small and medium enterprises (MSMEs) (demand side), and gender disaggregated data for loans and payments.

113. **Despite noteworthy efforts to expand access, nearly half of adults in Nepal are still excluded, and women are less likely to have an account than men**. Access in rural areas is also challenging. Usage of accounts is low, and a significant proportion of bank and e-wallet accounts are dormant. NRB's hands-on approach to credit allocation, branch locations, and other common business decisions provided momentum when financial inclusion was extremely low. However, now that the sector is more developed it may inhibit market-driven approaches, that could be more effective at reaching those who remain excluded.

Main Recommendations

114. **NRB should evaluate where it could revise its requirements for branching and lending to permit more demand driven, market friendly approaches by FSPs.** This would give FSPs freedom to develop more diverse offerings that would in turn expand customer choice. This can be done gradually, based on evidence of each program's respective impact. NRB is planning to have an external evaluation of various directed lending programs to determine their effectiveness, which should provide useful inputs.

115. **NRB should enhance its data collection efforts for MSME credit (demand side) and gender disaggregated data, and include MFI information in the Financial Inclusion Dashboard.** While NRB has information on credit availability for MSMEs, data on barriers to accessing credit could help refine policies in this area. Similarly, additional data on women's access to financial services would be useful to inform financial inclusion and financial literacy programs. NRB should also work with MFIs to incorporate their information into the Financial Inclusion Dashboard to provide a more complete picture of the indicators. NRB noted that it has conducted a baseline survey to identify gender and geography disaggregated demand side data. The survey report is in the final stage of public dissemination. The NRB will also include MFIs in the Financial Inclusion Dashboard.

Regulation and Supervision of Institutions Relevant to Financial Inclusion

Savings and Credit Cooperatives (SACCOs)

Baseline Diagnostics

116. **SACCOs are important providers of financial services in Nepal, including women**. There are an estimated 14,484 SACCOs serving urban and rural customers. In addition to traditional loans and savings, some SACCOs offer digital services in partnership with licensed providers. While filling a critical access gap, SACCOs are largely unsupervised and show signs of widespread governance issues, insider abuse, over-lending, and liquidity constraints that have prevented customer access to their deposits. Many SACCOs are small, local institutions but others are quite large, with total deposits exceeding that of some of the Class B and C banks.

117. **Risk in the SACCO sector appears to be increasing**. Lack of reliable data, a decentralized approach to supervision by inexperienced local authorities, and regulatory inertia increase risk to the financial sector due to linkages between SACCOs and BFIs. The level and severity of risk is challenging to estimate in the absence of good data and supervision. In addition to uneven financial reporting to the cooperatives regulator, only a few SACCOs participate in the

CIB, although customers may borrow at both BFIs and SACCOS, sometimes using a loan from one license type to repay another.

118. **The 2014 FSAP recommended improved oversight, including a shared supervisory framework between NRB and the DoC**. Although there was initial consideration by NRB to supervise the 15 largest cooperatives, this is no longer being pursued. There is also legal ambiguity as to whether NRB has authority to regulate SACCOs. NRB does supervise National Cooperative Bank, an NBFI that provides services to SACCO customers under a supervisory regime that is still being developed.

119. **Interviews with SACCOs revealed strong interest in being supervised by NRB or other competent authority.** SACCOs believe better oversight would enhance professionalism, trust, and viability of the sector. Some have undertaken their own self-regulatory efforts to strengthen risk management, governance, and controls. There is also a new regulatory reporting system that is gaining traction, with around 50 percent of SACCOs currently onboarded.

Main Recommendations

120. **NRB should work with the MoLCP to develop a coordinated supervision program for SACCOs with cooperative authorities, with the goal of minimizing risks to the financial sector.** NRB's role should be targeted to the largest and/or systemically important SACCOs. TA is recommended for development of the new regime, following global good practices. NRB stated it is exploring support for a second-tier cooperative to be created that would assist with supervising systemically important SACCOs.

121. **Data sharing arrangements for SACCOs should be formalized with cooperative authorities under a written agreement to ensure a timely flow of information**. Monitoring activities should be complemented by regular engagement between authorities to discuss sectoral risks and trends. NRB noted that it plans to work on formalizing data sharing with relevant cooperative authorities.

Microfinance Institutions (MFIs)

Baseline Diagnostics

122. **MFIs are another important source of financial services for low-income and rural customers in Nepal, especially women**. MFIs offer small loans and savings under a tiered (Class D) bank license with more limited permissible activities. Four MFIs offer wholesale services to other MFIs, and two take public deposits (i.e., other than from members) on a restricted basis. MFIs mostly offer unsecured group loans for female borrowers who lack collateral. Although MFIs have their roots in the Non-Governmental Organization (NGO) group lending model, many are digitalizing their product lines and offer complementary services such as money transfers and insurance through partnerships with other FSPs.

123. **With 64 providers, the microfinance sector is considered larger than it should be by both NRB and the MFIs**. This has led to unhealthy competition and impacts viability. For this reason, NRB is encouraging orderly consolidation within the sector and not issuing new licenses.

124. **MFIs are supervised similarly to Class A, B, and C banks, including onsite and offsite monitoring and prudential norms**. MFIs report NPLs under 5 percent in most cases, with two problematic institutions subject to PCA. Staff conducting MFI inspections lack expertise in the microfinance business model, due in part to the frequent rotations that occur with NRB

staff. In addition, uniform, compliance-based procedures are applied to all institutions regardless of complexity and size.

125. **Lending rates are capped at 15 percent, and service charges at 1.5 percent**. Funding comes mainly from investments and borrowings from other BFIs (including directed lending required by NRB) and voluntary savings from members. The interest rate ceiling for loans paired with variable rate funding costs has negatively affected interest margins for some; for example, some MFIs are lending at 15 percent while borrowing at 17 or 18 percent. This is obviously not sustainable.

126. **NRB is supportive of the MFIs' role in financial inclusion, but the current regulatory approach could do more to foster sustainability and stability**. Interest rate ceilings are usually counterproductive in financial services, including MFIs. If providers are not able to cover loan and administrative costs, they will be forced to restrict lending or go out of business, which often hits those at the base of the pyramid hardest. Policy goals for affordable credit are better served by robust transparency of terms and conditions, healthy competition, and access to good credit information. NRB staff indicated they are considering allowing MFIs to set their own rates using a base rate plus premium framework similar to BFIs, which would be positive for the sector.

127. **The MFI sector would benefit from a clearer vision and strategy**. MFIs that were interviewed noted they face competing expectations to operate a sustainable (i.e., profitable) bank while being viewed as a charitable endeavor like their NGO predecessors. Increased clarity and a shared vision for the future will help ensure MFIs' continued relevance and contribution to financial inclusion efforts.

Main Recommendations

128. **NRB should replace the MFI interest rate ceiling with a base rate plus premium**. To ensure MFIs retain their unique focus and accessibility to the poor, the new regime should be complemented by basic disclosure of key terms and conditions, clear definitions for microcredit (e.g., loan size, purpose), and market surveillance to ensure rates stay transparent and affordable. NRB is working on publishing a base rate and will review the need for the interest rate ceiling.

129. **MFI inspections should follow proportionate, risk-based procedures to better allocate staff resources and capture risks**. Inspections should ensure participation by at least one microfinance subject matter expert, with training extended to others, as resources permit.

130. **NRB should consider articulating its vision and goals for the microfinance sector in a formal policy**. This would signal and help build support for policies that allow microfinance to remain true to the spirit of its business model while allowing the sector to grow and thrive. NRB should include MFIs and other relevant stakeholders in this effort.

Credit information and preventing over-indebtedness

Baseline Diagnostics

131. **The CIB provides a basic platform to exchange credit information for 137 banks and financial institutions**. The CIB is owned by BFIs (90 percent) and NRB (10 percent) and is chaired by a member of NRB's management team. Information reported is mostly negative, but efforts are underway to incorporate alternative information (e.g., utility bills) and create a psychometric credit score to help expand access to borrowers who may be excluded due to lack

of credit history or collateral. All BFIs that extend credit must participate in the CIB. MFIs provide and access credit information on a separate platform from other banks, and only a few wholesale SACCOs participate. This greatly undermines the effectiveness of the system by precluding a comprehensive view of a customer's credit history. CIB shared during the review that they plan to merge the databases of MFIs and banks in the future so users can pull a single credit report for individual borrowers.

132. **A public blacklist is available on the CIB website with names of individuals who have defaulted on a loan or bounced a check**. While the NRB Act requires a blacklist to exist, it should not be publicly available. Public disclosure of this information is an unwarranted intrusion on customer privacy and could lead to harm if the information is misused. The list contains thousands of names dating back decades and is available to anyone to use for any purpose, including fraudulent or other illegal activities. Credit information systems normally limit sharing of customer information to identified purposes (e.g., loan, job) through a credit report to an authorized user. This ensures the accuracy and proper use of the data. While NRB needs to keep bad actors out of the system, the public blacklist may also deter the unbanked from seeking formal services for fear of public humiliation for making a mistake or struggling to repay a loan due to personal hardship like a job loss or health crisis.

Main Recommendations

133. **MFI and bank credit information should be combined on the CIB platform and incorporate SACCO data.** This can be done gradually as systems and data quality allow.

134. **The CIB should remove public access to the blacklist on its website**. NRB should also review its privacy rules to ensure they adequately protect customer privacy in financial services.

Digital payments and remittances

Baseline Diagnostics

135. **Digital payments are an increasingly important access point for financial inclusion**. There are 27 non-bank PSP, although only a handful are active. Four companies are the main providers of e-wallets, with the largest reporting market share of 56 percent. There are around 13,000 agents to provide cash in/cash out and other transactions. QR code payments were introduced in 2021. The use of debit cards and mobile banking is common, but credit card use is rare. Ecommerce is in early stages of development.

136. **Some products have greater traction than others**. For example, while QR payments have been incredibly popular, there is still much room for e-money usage to grow, with a large proportion of accounts inactive. The main reasons seem to be that many customers open accounts simply to receive a bonus or premium, along with a persistent preference for cash. The larger wallet providers are trying to increase activity and customer loyalty by incorporating other useful services to their apps.

137. **Remittances from migrant workers are critical source of income for Nepal citizens**. Inward remittances reached $7.6 billion in the year ending July 2022, mainly from the United States, Qatar, Saudi Arabia, India, and the United Arab Emirates. Migrant workers can use one of many sources to send and receive funds, including traditional money transmitters, banks, PSPs, and informal *hundis*. Remittances are frequently converted to cash but some FSPs offer incentives to link funds to an e-wallet or bank account. Because of the importance of remittances

to households (HH) in Nepal, this is one the best opportunities to engage consumers in formal financial services. NRB has implemented a number of incentives to help encourage formalization of remittances.

Financial Consumer Protection (FCP)

Baseline Diagnostics

138. **FCP is a critical component of inclusive financial services**. A sound framework for transparency, fair treatment, data protection and privacy, and dispute resolution promotes confidence and trust in financial services. Financial regulators increasingly recognize that FCP is not simply a "nice to have" but an important contributor to financial sector health, as well. As financial services increase in complexity through digital access points, FCP becomes even more important.

139. **NRB has a newly formed Financial Inclusion and Consumer Protection Division staffed with six people, three of which are assigned to FCP**. To date, FCP functions have been limited to responding to grievances and financial literacy activities. The dedicated division will be better able to identify and mitigate consumer risks in the marketplace, but will need the full array of legal, regulatory, and supervisory resources along with training and capacity building to do so. While this is a large undertaking, NRB can use a building block approach and prioritize its activities over time beginning with areas of greatest risk and potential impact.

Main Recommendations

140. **NRB should develop a comprehensive FCP function, including:**

- **Draft a dedicated FCP law and subordinate regulations.**
- **Develop tools and resources to supervise FCP, including manuals, policies, training, onsite inspection procedures, offsite monitoring tools, enforcement standards.**

TA would be desirable in implementing this recommendation to assist NRB in applying global good practices in line with Nepal's unique country context.

2. Technical Assistance Roadmap

141. **A TA Roadmap (TARM) was developed in cooperation with the authorities and in consultation with IMF departments.** Based on discussions with the authorities during the main FSSR mission and resulting conclusions, the mission team developed a comprehensive list of TA recommendations in the six topical areas. Reforms should be conducted with close involvement and coordination among the relevant competent authorities. Key recommendations were also shared with the principal collaborators in MCM and the area department team.

142. **The mission noted authorities' comments on the TARM, which have been largely addressed and would be further considered in follow-up TA.** Additional information on some of the topical areas were added, completion timeframes were adjusted, and TA needs modified, as appropriate. The mission views that the sequencing of a single (or multiple) TA under each workstream should be addressed in follow-up TA, which would be subject to approval by the Financial Sector Stability Fund and further discussions between authorities and IMF staff. Given the need to address the key risks and vulnerabilities identified, the mission maintains its recommendations for TA needs for banking supervision and regulation, stress testing, crisis management, and financial inclusion. This would assist authorities in enhancing capacity in financial sector oversight.

143. **The mission recommended that authorities should ensure the close alignment between the FSSR recommendations and the measures on improving financial sector regulation and supervision under the ECF.** This pertains to the prioritization and timelines for the implementation of the recommendations. Going forward, the mission views that the continuing efforts to improve asset quality and banking supervision, which are consistent with the proposed structural benchmarks under the ECF program, should warrant the highest priority from authorities.

144. **The TARM proposes TA to build capacity in the authorities to address risks and vulnerabilities in the financial system.** Based on the analysis of the risks and vulnerabilities and existing gaps, the TARM develops a prioritized set of actions that need to be taken by the authorities to address these vulnerabilities and to strengthen the financial system in the next three years. It presents, in one integrated table, the main strategic recommendations and the supporting TA to address the main risks and vulnerabilities identified in by the baseline diagnostic review. The comprehensive TARM presents the following:

- **Key Vulnerability:** Identified by the FSSR diagnostic review with high probability to affect the well-functioning of the financial system if left unaddressed, and which will benefit from targeted TA in most cases.
- **Recommendation:** Action by the authorities to address the vulnerability, in most cases to be supported by TA.
- **TA Activity:** Indication of whether for the implementation of an FSSR recommendation TA delivery is "needed" or "not needed", as well as instances where TA on a certain matter is already "in progress" or "planned".
- **Responsible Agency:** Those institutions that are primarily responsible to implement a given recommendation for TA.
- **Priority:** an indication of the level of priority associated with the TA activity (high, medium, low).

- **Timeframe:** an indication of the timeline when the TA activity should take place (short-term (ST), medium-term (MT), long-term (LT)).

The TA Activities in the TARM are grouped by topical areas, with several individual activities in each group.

Table 4. Nepal FSSR TA Roadmap

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
BANKING SUPERVISION AND REGULATION (Section II.A)					
Develop offsite surveillance capabilities					
A lack of forward-looking analysis to identify early emerging risks	Develop analytical tools to produce reports for offsite surveillance. Analytical tools are needed to extract the data from SIS and create reliable, consistent and easily-comparable reports for offsite supervision	Needed	NRB	High	ST
Structured succession planning and risk specialism for supervision	Enhance training programs to strengthen supervisory skills and build risk specialists in banking supervision	Not needed	NRB	High	ST
Assess regulations and supervisory processes					
A build-up of credit risks	Undertake a comprehensive review of credit risk supervision practices and processes targeting (i) connected lending, (ii) group exposures and (iii) risk concentrations.	Needed	NRB	High	MT
Liquidity and funding stress cause a disruption	Undertake an assessment of liquidity regulations and supervisory processes targeting: (I) development of funding plans; (ii) a quantitative impact study for the LCR; and (iii) longer-term plans to diversify bank sources of funding.	Needed	NRB	High	MT
Robustness of capital buffers to absorb losses and resilience during stress	Undertake a comprehensive review of the capital management framework including: (i) definition of capital; (ii) calculation of RWAs; (iii) SREP processes; (iv) Pillar 2; and (v) the buffer framework.	Needed	NRB	High	MT
Problem assets and loan loss provisioning	Undertake a comprehensive review of the regulations and supervisory processes for problem loans and loan loss provisioning with a focus on loan classifications and the transition to IFRS; exit of special measures related to COVID-19; and collateral valuation guidance.	Needed	NRB	High	MT
Absence of a consolidated supervision framework constrains the exercise of powers	Develop a comprehensive consolidated supervision framework that enables effective group supervision.	Needed	NRB	Medium	LT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
Inadequate business continuity and DR planning for larger systemic banks	Assess the regulations for BCP and DR	Not needed	NRB	Medium	MT
Vulnerability to climate- related financial risks	Climate-related financial risks should be integrated into supervision processes and risk management activities such as bank stress testing	Needed	NRB	Medium	LT
Phase out directed lending					
Directed lending causes distortions	Consider alternative programs and instruments to achieve goals associated with existing directed lending programs	Not needed	NRB	High	ST
STRESS TESTING (Section II.B)					
Revise existing micro stress testing of solvency and liquidity					
Overly simplified micro solvency stress tests based on single factor sensitivity analyses	Revamp the micro stress tests of solvency by using a smaller set of comprehensive scenarios and relying on more realistic calculations and projections over an explicit 1-year horizon	Needed	NRB	High	MT
A limited granularity of funding shocks and a lack of stress in the value of liquid assets in the micro liquidity stress tests	Improve micro stress tests of liquidity by introducing a richer funding shock structure, imposing haircuts on government securities, and making the horizon of liquidity distress more explicit	Not needed	NRB	Medium	MT
Micro-finance institutions not included in the micro stress testing	After revisions, extend the solvency and liquidity stress testing to include micro-finance institutions on a proportionate basis, with selected simplifications	Not needed	NRB	Medium	MT
Lack of use of micro stress test results in risk-based supervision	Use the micro stress test results, especially of solvency, to calibrate additional Pillar 2 capital buffers to strengthen the resilience of banks against adverse shocks	Not needed	NRB	Medium	MT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
Limited development of banks' own stress testing	Encourage banks to develop their own stress test scenarios on top of the NRB to reflect their risks and exposures, leveraging upon the expected introduction of IFRS/NFRS 9	Not needed	NRB	Medium	LT
Build a top-down macro stress testing framework					
Non-existent top-down macro stress tests of solvency	Develop macro stress tests of solvency of all supervised institutions (ABC and D class) based on explicit macroeconomic scenarios, credit risk satellite model(s), and consistent projection of banks' balance sheets and P&L items over a 3-year horizon	Needed	NRB	High	MT
No contagion and interconnectedness analyses in the financial sector performed	Complement the macro stress tests with developing a contagion block to test scenarios of domino-like sequences of institutions' failures due to their interconnectedness	Needed	NRB	Medium	MT
No macro stress tests of liquidity	Develop top-down liquidity stress tests after the introduction of the LCR	Needed	NRB	Low	LT
Strengthen macro-financial and systemic risk surveillance					
Lack of regular macro-financial surveillance	Strengthen the role, staffing and capacity of the existing financial stability unit to support developing a full-fledged regular systemic risk monitoring	Not needed	NRB	High	MT
Mostly only descriptive Financial Stability Report	Enhance the level of analyses in the published Financial Stability Report, adopting a risk-oriented forward-looking approach, based also on the newly developed macro stress tests and additional risk monitoring tools	Needed	NRB	Medium	LT
CRISIS MANAGEMENT (Section II.C)					
Strengthen the applicable legal and regulatory framework pertaining to crisis management					
The current legal and operational framework is not conducive for a fast and efficient reimbursement of deposits.	Review the DCGF institutional setup and legal framework, including but not limited to (i) the DCGF access to depositors' records at all times and to prescribe specific formats in which information should be provided (Single Costumer View files); (ii) the DGF powers to assess the quality of the information provided and request banks to correct it and to improve their management information systems if needed; (iii) use of DCGF resources for P&A	Needed	DCGF	High	ST

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
Current legal framework pertaining to bank resolution has significant gaps and inconsistencies in providing for adequate resolution tools.	Adopt a targeted review of the NRB Act to ensure the consistency of resolution tools (resolution of going concern bank under special administration and liquidation) as well as the consistency between the different relevant laws and regulations guiding bank resolutions.	Needed	NRB	Medium	MT
The current legal and regulatory framework for ELA has gaps which may, inter alia, expose the NRB to undue risks.	Review the NRB LOLR regulations and the applicable sections in the NRB Act.	Not Needed	NRB	High	ST
Enhance the crisis and resolution preparedness competences of authorities and continuing implementation of the current legal framework					
The current risk assessment framework is not sufficiently broad and forward looking, which may lead to delays in identifying vulnerabilities which may lead to costlier resolutions.	NRB to strengthen its frameworks and capacity for the early detection of bank stress and early intervention actions. The risk assessment should be more forward-looking than is currently the case, with a more structured link between the assessed risk of a bank and the scale of supervisory attention it receives	Needed	NRB	Medium	MT
Lack of adequate operational plans/procedure manuals for the implementation of the more relevant resolution tools	Strengthen the resolution preparedness of the NBM for the implementation of the various resolution tools (including P&A and bridge bank), including the preparation or improvement of operational plans	Needed	NRB	High	MT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
Absence of crisis simulation exercises to test the resolution preparedness of authorities and inter-agency cooperation	Carry out resolution simulation exercises to test authorities' internal resolution preparedness and robustness of operational plans as well as inter-agency cooperation and communication	Needed	NRB, MOF, DCGF	Medium	LT
The missing systemic crisis management framework and coupled with the lack of contingency planning poses curtails the country's capacity to withstand serious financial shocks.	Provide a framework for improved interagency cooperation via strengthening the systemic crisis management framework, and provide input for country- and agency-wide contingency planning, specifying the role of each relevant agency.	Needed	NRB, MOF, DCGF	Medium	LT
PAYMENT SYSTEMS (Section II.D)					
Strengthen legal framework and oversight function to provide high degree of legal certainty and sound payment systems oversight					
Legal certainty in the finality and netting of payment and securities transactions is unclear. This could cause unwinding of transactions, disrupt payment systems and create systemic risk	Review the legal framework to identify and address gaps in the provisions including those related to the finality and irrevocability of transactions settled through payment systems. It should take into consideration the relevant principles in PFMI.	Not needed	NRB	High	MT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
Inadequate skilled resources, with the most experienced PSD staff having less than 3 years of payment systems oversight experience. This impacts continuity of projects and could lead to a decline in standard of oversight and of FMI compliance.	Fill vacancies immediately. Train staff, limit the number and frequency of rotation of specialist staff in payment system and plan for succession.	Not needed	NRB	High	MT
Key laws, regulations and directives are not published in a language commonly used in financial markets. This may impede accurate understanding of the rules and risks of participating in the FMI.	Provide English version of key documents including PS Act, Bye-laws, design of RTGS system, security requirements etc.	Not needed	NRB	Medium	MT
Inadequate separation of the oversight and operator functions. This could lead to weak oversight and compromises in	Re-organize PSD to sufficiently deconflict the oversight and operator roles which now fall under the same Director. At a minimum, the functions should be split at the Director level but it is highly recommended that the split be implemented at the ED or higher level.	Not needed	NRB	High	MT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
standards and controls.					
Lack of formalized and documented working arrangements for RTGS system among NRB departments and units. This could lead to ambiguity in roles and responsibilities, and gaps in complying with international standards and NRB's oversight obligations.	Formalize and document internal arrangement for RTGS system operations, including reporting requirements by Operator Unit and supervision by Oversight Unit. Arrangements should also include the role of internal audit, risk-management functions and any other relevant departments for the RTGS system operations.	Not needed	NRB	High	MT
NRB is a 10% shareholder and chairman of Nepal Clearing House Limited which operates retail payment systems that competes with other payment operators. This puts NRB in a potential conflict of	Consider divesting shareholding and relinquishing chairmanship in NCHL and instead use oversight powers to influence the desired policy outcome.	Not needed	NRB	Medium	MT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
interest position as overseer of payment systems.					
Identify systemically important payment systems, formally adopt PFMI in regulations, and apply it to the designated payment systems					
Systemically important payment systems have not been formally identified and designated for oversight and compliance to PFMI. This hampers prioritization of supervision and creates potential risks to the financial system.	Develop FMI designation framework that identifies systemically important payment systems and other relevant FMIs	Needed	NRB	High	ST
	Formally adopt PFMI through regulations or policy statements and apply PFMI to the identified FMIs.				
No assessments have been conducted on the RTGS system against international standards (PFMI) and relevant payment systems. Consequently, there is no public disclosure of compliance. This leads to risks that gaps and remedial actions have not been identified, and hampers	RTGS Operations Unit should conduct a self-assessment of the RTGS system and other designated systems' observance against PFMI.				
	The Oversight Unit should conduct a self-assessment of NRB's responsibilities against PFMI.				
	The Oversight Unit should review the Operations Unit's self-assessment and require disclosure compliance according to the PFMI DF, at least once every two years. It should include authorities' responsibilities in the DF.				
	ACH should conduct a self-assessment of the ECC and other payment systems that will be designated, against PFMI. If these are not designated, selected principles should be applied to the payment systems.				
	NRB should require ACH to complete and publicly disclose the compliance to PFMI.				

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
participants' understanding of risks in the FMI.					
Lack of consideration for oversight cooperation with foreign regulators for multicurrency RTGS system. This could potentially affect efficient and effective oversight of interest to foreign authorities for the currencies concerned.	Establish whether there is a need for cooperative oversight with other payment system regulator for the foreign currencies settled through RTGS system. NRB should start by informing the relevant authorities in line with Resp E KC2 for its multi-currency RTGS. Continue to monitor and update on changes where relevant.	Not needed	NRB	Low	LT
Enhance RTGS system and increase utilization to support financial stability for Nepal's growing banking and capital market					
Considerable interbank payments are still settling via GL entries instead of RTGS. This means settlement risk has not been adequately mitigated despite RTGS implementation.	Consider additional measures to increase participation in RTGS and discourage inter-bank payments via GL entries, including to mandate that all high-value payments via checks must be settled through RTGS with the goal of eliminating them.	Not needed	NRB	High	LT
Intraday liquidity facilityof RTGS	Expedite the dematerialization of government securities to facilitate the full automation of intraday liquidity facility available to participants.	Not needed	NRB/PDMO	High	LT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
system are cumbersome to use and not been utilized so far. This exposes the system to liquidity risk.	Work with PDMO to accelerate the dematerialization of government securities and complete DOMS project as soon as possible.				
	Integrate or interface with DOMS to achieve delivery-vs-payment				
Gaps exist in the RTGS system rules for the settlement process of foreign currencies. As a result, participants may not be well-informed of design, operations and risk of foreign currency settlement in the RTGS system.	Enhance RTGS Rules document and make publicly available specific description of design and operations of the RTGS foreign currency, including the settlement process and any liquidity facilities that apply.	Not needed	NRB	High	ST
	Monitor growth in foreign currency and have plans for intraday liquidity risk management		NRB	Low	LT
Improve cybersecurity and operational resilience of key payment systems, including RTGS system, NRB and participants					
Cyber - The current IT Security directive to PSP/PSO does not sufficiently cover cyber resilience requirements. These include requirements for cyber resilience framework, governance, cyber response and recovery plans to meet the 2-hour	Expedite the completion of cyber resilience guidelines and ensure they are aligned with the CPMI-IOSCO Guidance on Cyber Resilience for FMI.	Needed	NRB	High	ST

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
RTO, specific cyber testing with key service providers, among others.					
Cyber - Key cyber strategies such as the cyber info-sharing platform, CERT and Securities Ops Centre are work-in-progress. The appointed CISO does not have a dedicated team.	CISO should have a dedicated team of information and cyber security officers with direct reporting to the CISO. Strategies to be completed as soon as possible.				
Physical Security - IT asset was installed in an open area of buildings of temporary occupation. This exposes the network and systems of NRB to risk of sabotage and unauthorized access.	Review physical security of all systems infrastructure and network to identify any weak links and remediate to ensure a high degree of security.				
Lack of cyber and IT risk supervision capacity in NRB. As a result, NRB cannot effectively assess cyber risks and enforce IT risk	Hire or identify a pool of IT staff who are experienced in IT risk management and are certified in IT Audit, for supervision, and provide the necessary training. This could be done at the organizational level e.g. to also support other supervision departments.	Not needed	NRB	High	ST

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
management regulations in payment systems.					
Fraud -Lack of requirements to reduce risk of wholesale payment fraud related to end-point security.	Review and adopt the CPMI Wholesale Payment Fraud End-point Security elements to extent possible for both its RTGS and SWIFT systems.	Not needed	NRB	High	MT
	Develop a security controls framework for RTGS participants that includes a security attestation. This could be modelled against the SWIFT CSP.				
BCP - NRB does not have a BCM framework in place yet. This exposes NRB and its RTGS system to risk that it would be unprepared for some scenarios, including wide-scale disruption events.	The BCM and plan for RTGS should have a 2-hour RTO for critical systems, including for extreme but plausible scenario such as wide-area disruptions. BC plans should be tested at least annually.	Not needed	NRB	High	MT
	Implement an alternate non-similar system that can settle time-critical transactions where it is not able to recover in 2 hours in extreme but plausible scenarios	Needed	NRB	High	LT
Strengthen prudential supervision, oversight and user protection of e-money and emerging payments					
Current licensing regime for payments is mostly limited to e-money and domestic money transfer, hence may not be conducive to innovation.	Consider modernizing legislation/regulations to be more activity-based and risk-focused to allow for innovation by conducting a study of cross-country comparison of such legislation	Needed	NRB	Medium	LT
Inadequate e-money float protection. This	Review safeguards to protect float against insolvency of e-money issuer and ensure other e-money measures are comprehensive. These could include insurance, bank guarantees, trust account, undertaking by banks. Diversify				

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
gives rise to the risk of financial losses for consumers in the event of e-money issuer or settlement bank failure.	risks by allowing PSP to hold float in high quality liquid asset with multiple settlement banks.				
CBDC, if issued, has potential financial stability implications	Make a fully informed decision on whether to issue CBDCs, and if so, incorporate design features that support public policy objectives and ensure an efficient, resilient, and competitive payment system.	Needed	NRB	Medium	MT
FINANCIAL INCLUSION (Section II.E)					
Shift to a more market-driven approach to inclusive financial services and improve data collection efforts					
NRB's hands-on approach to FSP product and strategic decisions constrains innovation and diversification.	NRB should evaluate where it could revise its requirements for branching and lending to permit more demand driven, market friendly approaches by FSPs.	Not needed	NRB	Medium	MT
Data gaps hinder informed policy decisions.	NRB should enhance its data collection efforts for MSME credit (demand side) and gender disaggregated data and work with MFIs to include their information in the Financial Inclusion Dashboard.	Not needed	NRB	Medium	MT
Create a more proportionate and robust oversight framework for large SACCOs and MFIs					
Failure to monitor and supervise large SACCOs exposes the financial sector to risks.	NRB should work with the MoLCP to develop a coordinated supervision program for SACCOs with cooperative authorities, with the goal of minimizing risks to the wider financial sector.	Needed	NRB, MOF, MoLCP	High	MT
Ineffective information sharing precludes	Data sharing arrangements for SACCOs should be formalized with cooperative authorities under a written agreement to ensure a timely flow of information.	Not needed	NRB, MOF, MoLCP	High	MT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
monitoring of SACCO risks.					
MFI interest rate ceiling undermines sustainability.	NRB should replace the MFI interest rate ceiling with a base rate plus premium.	Not needed	NRB	High	ST
Uniform compliance approach and lack of staff with microfinance expertise weakens MFI supervision.	MFI inspections should follow proportionate, risk-based procedures to better allocate resources and capture risks.	Not needed	NRB	Medium	MT
Lack of clearly articulated vision for the MFI sector could impact its sustainability.	NRB should consider articulating its vision and goals for the microfinance sector in a formal policy.	Not needed	NRB	Low	LT
Improve availability of comprehensive credit information and responsible use of customer information					
Lack of integrated credit information across providers limits CIB users' ability to assess credit risk and over-indebtedness.	MFI and bank credit information should be combined on the CIB platform and incorporate SACCO data.	Not needed	NRB, CIB	Medium	MT
Public access to blacklist on CIB website creates consumer risks and invades privacy.	The CIB should remove public access to the blacklist on its website.	Not needed	NRB, CIB	Medium	ST
Implement a comprehensive FCP regime					
Lack of FCP regime exposes consumers to risk.	NRB should develop a robust FCP function, including: - Dedicated FCP law and subordinate regulations - Tools and resources to supervise FCP.	Needed	NRB	Medium	LT

Key Vulnerability	Recommendation	TA Activity	Responsible Agency	Priority	Completion Timeframe[1]
[1] Timeframe: **ST**, short-term, less than six months; **MT**, medium-term, with results around 18 months; **LT**, long-term, with results around 30 months.					

Annex I. Assessment of Financial Sector Statistics

This annex presents the status of Nepal's monetary and financial statistics (MFS) and financial soundness indicators (FSIs), as well the underlying datasets for the construction of the Balance Sheet Approach (BSA) matrix.[8]

A. FINANCIAL SOUNDNESS INDICATORS (FSIS)

1. **Nepal regularly reports data on FSIs to the IMF's STA, which help monitor the soundness of the financial sector from a macroprudential vantage point.** The NRB reports and disseminates 13 core and 7 additional FSIs for DTs. Two additional FSIs for OFCs, a FSI pertaining to HHs and two FSIs related to real estate markets are also compiled by the NRB in collaboration with other financial regulators in the country. The FSIs are compiled with a quarterly frequency and reported to STA for dissemination on the IMF's FSI website. See Table A.1 for the list of currently reported FSIs.

2. **FSI definitions appear in line with IMF guidelines.** The regulatory and accounting practices of the DTs are also broadly in line with the *2019 FSIs Compilation Guide (2019 FSIs Guide)*. The 2019 FSIs Guide in turn defers to Basel principles and IFRS issued by the International Accounting Standard Board (IASB). The NRB has adopted the core principles prescribed by the Basel Committee on Banking Supervision including formalizing a new Capital Adequacy Framework in 2015, adopting the provisions of Basel III for commercial banks. Under the Nepal Chartered Accountants Act (1997) as amended, national standards (NFRS) are developed by the Accounting Standards Board (ASB), based on the relevant IFRS which DTs must comply with.[9]

3. **The NRB compiles FSIs based on Domestic Location (DL) Basis.** Although the *2019 FSIs Guide* recommends using cross border, cross sector, domestically incorporated (CBCSDI) method of consolidation, it also provides DL as an alternative method when resident DTs have no nonresident branches or subsidiaries or have ones that are so small that they do not materially affect the results. DL covers resident DTs along with their resident branches and subsidiaries in the same sector. No bank in Nepal has a foreign subsidiary or branch but some banks have resident subsidiaries in DTs and OFCs subsectors. Furthermore, the NRB does not collect group-consolidated data for the DTs that have subsidiaries. DL basis is largely adequate for compiling FSIs for DTs.

4. **The NRB is expected to start implementing the *2019 FSIs Guide* by December 2022.** The implementation of the 2019 FSIs Guide includes adopting new reporting forms and metadata templates to submit data to STA. In addition, Nepal is expected to expand the FSIs

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[8] MFS and FSIs are the two key sets of statistics collected and disseminated by the IMF through its Statistics Department, which are useful for financial sector stability analysis. In addition, the IMF developed BSA matrices, compiling key sectoral balance sheets in member countries' economies, as a starting point to diagnose risks and potential transmission channels of shocks, setting the stage for deeper analysis (see IMF Policy Paper, June 2015, "Balance Sheet Analysis in Fund Surveillance").

[9] In Nepal, IFRS standards are adopted as NFRS.

for OFCs. A 2021 FSI TA mission to Nepal assisted the authorities to prepare for the submission of an expanded set of FSIs for OFCs recommended in the *2019 FSIs Guide*.

B. MONETARY AND FINANCIAL STATISTICS

5. **The NRB reports monthly monetary statistics using SRFs for the central bank and ODCs.** The SRFs 1SR for the central bank and the 2SR for ODCs (comprising commercial banks, development banks, and finance companies, which accept deposits) are compiled broadly in line with the methodology of the *Monetary and Financial Statistics Manual and Compilation Guide (MFSMCG)* in terms of classification of financial instruments, asset valuation, and sectoring of institutional units. The central bank survey, the ODCs survey, and the depository corporations survey, compiled based on the SRFs, are published monthly in the *International Financial Statistics (IFS).*

6. **Coverage of Nepal's ODCs can be expanded to include the SACCOs and the MFIs which accept deposits.** The SACCOs and MFIs together account for close to 10 percent of the financial sector assets. The NRB publishes supplemental balance sheet data for MFIs but does not include these data in the SRF-2SR reported to STA. SACCOs provide annual balance sheet data to the Department of Cooperatives under MoLCP Alleviation, but lack of prescribed accounting standard and capacity issues hamper regular reporting. A 2019 MFS TA mission discussed the availability of SACCOs balance sheet data with the Department of Cooperatives and the National Co-operative Bank Limited **(**NCBL) which agreed to assist the NRB in obtaining data from the SACCOs. One of the recommendations of the mission was that the NRB formalize an agreement with the Department of Cooperatives and the NCBL covering data sharing, specifically the aggregated balance sheet of SACCOs, between the institutions. The mission also suggested that once MFIs start reporting data in the new reporting system of the NRB, they be included in the coverage of ODCs data reporting to the IMF.

7. **The NRB does not report data on OFCs to STA yet.** The size of the OFCs sector makes the compilation and dissemination of a quarterly OFC survey a priority for the NRB. The OFCs sector comprising mainly of insurance companies, employees' provident funds, mutual funds, and merchant banks represent around 12 percent of total financial system assets. More importantly, the OFCs are becoming increasingly important vehicles for long-term savings mobilization and credit provision as the country's financial system continues to develop. A 2019 MFS TA mission found that the NRB does not have the necessary balance sheet items to begin compiling data for the OFC sector in SRF 4SR. Following the mission, the authorities issued simplified call report forms to collect data from OFCs.

8. **A TA mission is scheduled in FY2023 to assist the NRB to compile the SRF 4SR and an OFC survey based on SRF 4SR**. The NRB has collected test data in the call report forms developed by the last STA mission. The upcoming TA mission will assist the NRB to map the data to the SRFs in line with the methodology of the *MFSMCG* and start regular reporting to the IMF for the dissemination of an OFC survey in the *IFS*. Reporting of SRF 4SR will also allow the compilation and dissemination of a financial corporation survey consolidating the data for the central bank, ODCs and OFCs.

C. BALANCE SHEET APPROACH

9. **The main data source for the BSA matrix are SRFs with additional information from the external sector and government sector statistics.** Monetary statistics data is the most important input for a BSA as it captures data on financial intermediation by financial corporations in the economy including information on counterpart sectors. The SRFs enable developing from-whom-to-whom tables for stocks for inclusion in the BSA. Other data sources include the international investment position (IIP), which provides information on stocks of resident sectors with the rest of the world by instrument, and the government financial balance sheet (GFS) information presenting assets and liabilities of the general government or its subsectors by instrument and counterpart.

10. **A BSA matrix for Nepal for end-2021 is provided in Table A.2, combining MFS and IIP data.** This version of from-whom-to-whom framework presents total assets and liabilities for all the sectors by counterpart sector and by currency, enabling to trace who finances whom, by how much and in what currency. Note that by disaggregating total assets and liabilities, other BSA matrices can be produced for each financial instrument and for different maturity where data are available. Nepal's GFS data are not available for 2021.

11. **Further improvements to underlying data would increase the completeness of the matrix as well as its usefulness as an analytical tool.** Specifically, the following extensions would be useful:

    - **As MFS is the key source data, once the NRB starts reporting the OFC data based on SRF 4SR and improves the quality of data on ODCs the completeness of the matrix as well as its usefulness will improve substantially.**
    - **The NRB compiles and reports annual IIP data based on the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6).** Due to lack of some breakdowns in IIP presentation as required under the BSA framework, the BSA matrix above makes some assumptions for the external sector part, which could be changed by users. As IIP does not provide separate data on external assets/liabilities of nonfinancial corporations (NFCs) or HHs, both of which are clubbed together with NPISHs and presented as one combined sector according to the BPM6, in the BSA matrix NFCs are assumed to hold all the external assets and liabilities of this combined sector. In addition, as the currency breakdown (in domestic and foreign currency) is not available in the IIP, external assets and liabilities of the domestic sectors vis-à-vis the external sector are assumed to be all in foreign currency. The NRB in coordination with other relevant agencies should take steps to ensure consistency of IIP with other macroeconomic datasets (1SR, 2SR, GFS, and external debt statistics (EDS)) to develop consistent external sector assets/liabilities of the BSA matrix. Developing data on the currency breakdown would further improve the quality of the BSA matrix. More generally, the NRB should aim to improve the coverage of IIP data on other investment and portfolio investment by improving data collection systems and preparing a coordinated portfolio survey.
    - **Although the NRB regularly submits annual GFS data, including financial balance sheet and stock positions by counterpart information for the general government, the data is still presented at face value and, therefore, it is difficult to be reconciliated with similar conceptual data in other macroeconomic datasets.** Efforts should be made to cover some institutional gaps in the general government information, and to align data for stock positions on financial assets and liabilities with the methodological framework of the GFSM 2014, particularly, the valuation method applied to

stock positions, and data reconciliation, both internally through the GFS compilation process and, also, with other macroeconomic datasets.

12. **Most of the remaining data gaps in the BSA matrix—after using MFS, IIP and GFS data—can be filled with data on NFCs and HHs.** However, collecting data on positions between NFCs and HHs can be challenging, as they can only be obtained from national accounts-related data sources. Data quality, coverage, periodicity, and timeliness are usually key issues, even if source data are available.

D. FINANCIAL ACCESS SURVEY

13. **The NRB has also been reporting data to the IMF's Financial Access Survey (FAS) since its launch in 2009.** Nepal has been a regular reporter of key indicators on access to and use of financial services in Nepal for the period 2004-2021 including number of commercial bank branches per 100,000 adults & number of ATMs per 100,000 adults adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals (SDGs). Since 2019, Nepal has also been reporting indicators on mobile and internet banking and mobile money. The country doesn't yet report gender dis-aggregated data on use of financial services. The FSSR mission discovered that some gender data on financial access is available with the authorities and recommends that the NRB coordinates with IMF to start reporting this data.

Table 5. Nepal Financial Soundness Indicators 2021Q2-2022Q2

	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
Core FSIs for Deposit Takers					
Regulatory capital to risk-weighted assets	14.2	13.4	13.3	13.5	13.5
Tier 1 capital to risk-weighted assets	10.9	10.4	10.4	10.6	10.7
Nonperforming loans net of provisions to capital	2.6	2.2	2.1	2.7	2.3
Tier 1 capital to assets	9.0	9.0	9.0	9.0	9.2
Nonperforming loans to total gross loans	1.4	1.2	1.2	1.3	1.2
Provisions to nonperforming loans	68.0	70.6	71.4	66.8	68.3
Return on assets	1.9	1.6	1.6	1.6	1.8
Return on equity	12.5	11.0	11.3	11.1	12.7
Interest margin to gross income	71.0	67.9	70.5	72.6	75.9
Noninterest expenses to gross income	44.1	46.4	46.5	46.6	46.4
Liquid assets to total assets	22.2	19.6	18.7	19.2	22.1
Liquid assets to short-term liabilities	32.5	29.7	25.5	26.7	43.6
Net open position in foreign exchange to capital	0.2	0.9	0.7	0.4	0.5
Additional FSIs for Deposit Takers					
Personnel expenses to noninterest expenses	61.2	64.3	62.1	60.5	59.9
Spread between highest and lowest interbank rates (base points)	115.0	7.0	24.0	50.0	5.0
Customer deposits to total (non-interbank) loans	93.3	87.9	87.3	87.1	91.3
Foreign-currency-denominated loans to total loans	3.8	3.7	2.5	1.1	1.0

Foreign-currency-denominated liabilities to total liabilities	3.4	3.7	2.8	3.1	3.4
Additional FSIs for Other Financial Corporations	...	...	...	...	
OFCs' assets to total financial system assets: total OFCs	17.9	17.8	17.6	17.6	18.2
OFCs' assets to gross domestic product: OFCs	28.4	29.0	29.3	27.3	28.1
Real Estate Markets					
Residential real estate loans to total gross loans	7.6	7.4	7.8	7.6	7.8
Commercial real estate loans to total gross loans	3.1	3.1	3.1	3.1	3.4
Households					
Household debt to gross domestic product	26.2	27.5	28.8	27.0	26.35

Table 6. Nepal Balance Sheet Approach Matrix with MFS and IIP data

Balance Sheet Approach Matrix

Nepal

2021 - Percent of GDP (120 Billions)

	Government		Central Bank		Other Depository Corporations		Other Financial Corporations		Nonfinancial Corporations		Households		External		Total	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Government			**Source: CB**		**Source: ODCs**		**Source: OFCs**		(GFS/MFS estimation)		(GFS/MFS estimation)		**Source: IIP**			
Total			2.06	15.56	18.68	1.20	...	...	...	...	-	-	22.47	-	43.21	16.76
In domestic currency			2.06	15.56	18.68	1.20	...	...	...	...	-	-	-	-	20.74	16.76
In foreign currency			-	-	-	-	...	...	-	-	-	-	22.47	-	22.47	-
Central Bank	**Source: CB**				**Source: CB**		**Source: CB**		**Source: CB**		**Source: CB**		**Source: CB**			
Total	15.56	2.06			7.64	7.57	-	0.02	0.30	0.00	13.37	0.13	1.17	28.15	38.04	37.93
In domestic currency	15.56	2.06			7.64	7.57	-	0.02	0.30	0.00	13.37	0.13	-	-	36.87	9.78
In foreign currency	-	-			-	-	-	-	-	-	-	-	1.17	28.15	1.17	28.15
Oth. Dep.	**Source: ODCs**		**Source: CB**		**Source: ODCs**		**Source: ODCs**		**Source: ODCs**		**Source: ODCs**		**Source: ODCs**			
Total	1.20	18.68	7.57	7.64	7.22	11.23	21.54	5.54	20.54	69.47	87.57	38.85	2.26	3.25	147.88	154.65
In domestic currency	1.20	18.68	7.57	7.64	6.36	10.17	21.54	5.54	20.41	65.88	85.92	38.80	1.10	-	144.09	146.71
In foreign currency	-	-	-	-	0.86	1.06	-	(0.00)	0.12	3.59	1.65	0.04	1.16	3.25	3.79	7.94
Oth. Fin Corporations	**Source: OFCs**		**Source: CB**		**Source: ODCs**		**Source: OFCs**		**Source: OFCs**		**Source: OFCs**		**Source: OFCs**			
Total	...	...	0.02	-	5.54	21.54	...	...	...	...	...	...	...	...	5.56	21.54
In domestic currency	...	...	0.02	-	5.54	21.54	...	...	...	...	...	...	...	...	5.56	21.54
In foreign currency	...	...	-	-	(0.00)	-	...	...	...	...	...	...	...	...	(0.00)	-
Nonfinancial Corporati	(GFS/MFS estimation)		**Source: CB**		**Source: ODCs**		**Source: OFCs**				(No sectoral data)		**Source: IIP**			
Total	...	...	0.00	0.30	69.47	20.54	...	...					7.89	0.91	77.36	21.74
In domestic currency	...	...	0.00	0.30	65.88	20.41	...	...					-	-	65.88	20.71
In foreign currency	-	-	-	-	3.59	0.12	...	...					7.89	0.91	11.48	1.03
Households	(GFS/MFS estimation)		**Source: CB**		**Source: ODCs**		**Source: OFCs**		(No sectoral data)				**Source: IIP**			
Total	-	-	0.13	13.37	38.85	87.57	...	...					...	...	38.98	100.94
In domestic currency	-	-	0.13	13.37	38.80	85.92	...	...					...	...	38.93	99.29
In foreign currency	-	-	-	-	0.04	1.65	...	...					...	...	0.04	1.65
External	**Source: IIP**		**Source: CB**		**Source: ODCs**		**Source: OFCs**		**Source: IIP**		**Source: IIP**					
Total	-	22.47	28.15	1.17	3.25	2.26	...	...	0.91	7.89	...	...			32.31	33.79
In domestic currency	-	-	-	-	-	1.10	...	...	-	-	...	...			-	1.10
In foreign currency	-	22.47	28.15	1.17	3.25	1.16	...	...	0.91	7.89	...	...			32.31	32.69
Total	16.76	43.21	37.93	38.04	150.63	151.89	21.54	5.56	21.74	77.36	100.94	38.98	33.79	32.31	CHECK	CHECK
In domestic currency	16.76	20.74	9.78	36.87	142.90	147.90	21.54	5.56	20.71	65.88	99.29	38.93	1.10	-	291.35	295.16
In foreign currency	-	22.47	28.15	1.17	7.74	3.99	-	(0.00)	1.03	11.48	1.65	0.04	32.69	32.31	70.23	70.43

Annex II. Assessment of TA Needs in Financial Sector Statistics

14. **The authorities in Nepal will benefit from TA in financial sector statistics.** The NRB understands that statistical coverage of the financial sector is essential for surveillance and is focused on closing important data gaps especially in the MFS workstream.

15. **More broadly, NRB staff are encouraged to seek to attend regional and IMF Headquarters (HQ) training courses on financial sector statistics.** STA regularly delivers courses on both MFS and the FSIs. HQ courses are offered once every two years, although the schedule has been disrupted by Covid-19. Curriculum details and the schedule, once in-person training recommences, are available on the webpage of the IMF Institute for Capacity Development.

A. FINANCIAL SOUNDNESS INDICATORS

16. **The NRB received TA on FSIs in 2021.** The mission assisted the NRB staff in compiling select FSIs for OFCs for reporting to the IMF. Specifically, the mission assisted the NRB staff in (i) reviewing source data for OFCs to assess their adequacy for compiling FSIs; (ii) mapping source data to the FSI templates to produce the OFCs sectoral financial statements and indicators; and (iii) developing a workplan to compile and report selected FSIs for OFCs. Though the mission recommended reporting of FSIs for OFC starting December 2021, the authorities haven't been able to report the data for OFCs.

17. **NRB staff might need TA in the medium to long term to implement all the recommendations of *2019 FSIs Guide.*** The implementation of the *2019 FSIs Guide* includes the expansion of the set of FSIs for the DTs, including new indicators for OFCs, NFCs, and HHs, and compiling concentration and distribution measures (CDMs) to capture tail risks, concentrations, variations in distributions, and the volatility of indicators over time that simple averages can miss. While a 2021 TA mission assisted the NRB to compile additional FSIs for OFCs, the NRB wishes to pursue compilation of the FSIs for the NFCs and HHs sectors. This will require collaboration with the Central Bureau of Statistics and Registrar of Companies to assess the adequacy of currently available data and to develop a road map to fill the identified gaps and then compile and report the additional FSIs. So, while TA is not needed in the immediate future, TA on FSIs in the medium-long term can be considered.

B. MONETARY AND FINANCIAL STATISTICS

18. **A TA mission for expanding the coverage of MFS to OFCs is already planned for FY2023.** As per recommendations of a 2020 MFS TA mission, the NRB is currently focusing on collecting data from non-bank sector including the MFIs, Citizen Investment Trust, Employee Provident Fund, and Hydroelectricity Investment and Development Company using simplified report forms. Not much progress has been made, to receive data from insurance companies on the designed templates. So, a TA mission has been planned to map the data already collected for the OFCs sub-sectors to the SRF 4SR following the methodology of the

MFSMCG. Further the mission will review the progress made in the remaining OFC sub-sectors.

19. **The TA mission on MFS will also discuss the progress made by the NRB on cooperating with the Department of Cooperatives on collecting balance sheet data for SACCOs.** Based on the feedback received, the TA mission will provide a roadmap on how to include the SACCOs in the MFS. The TA mission will also identify the MFIs which accept deposits and map them to the SRF-2SR accordingly. Future TA may be needed to include the SACCOs in the SRF-2SR.