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Indicators for Measuring Performance of Financial Cooperatives in Nepal

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Abstract

Comprehensive institutional assessment tool helps to appraise performance of an organization and adopt appropriate strategies for enhancing performance. Different organizations demand different indicators and standards for appraising performance. Different tools such as PEARLS and CAMEL have been prescribed measure performance of financial institutions. These tools were developed in different contexts and are not adopted in Nepali cooperative sector. The objective of this paper is to identify and recommend different indicators for measuring performance of financial cooperatives in Nepal. Expert interviews and focus group discussions were applied to explore the indicators for performance assessment. The identified indicators were piloted with randomly selected 210 cooperatives. The findings showed that 32 financial ratios under eight performance measurement dimensions and 25 self-governance related indicators are needed to assess the performance of financial cooperatives in Nepal and elsewhere. Implications of the findings are discussed and limitations of the study are highlighted,

Keywords: Performance measurement, financial cooperatives, ELEPHANTS rating-tools

Introduction

A cooperative is a voluntary association of groups of people who come together to realize individual needs through a jointly owned business unit. International Cooperative Alliance (ICA) (1995) defined cooperative as “an autonomous association of persons, united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.” Cooperative arrangement is based on the powerful idea that together, a group of people can achieve goals that individual alone could not achieve (Dogarawa, 2012). This characteristic of the cooperative is defined as ‘one for all and all for one', which is the main philosophy and guiding principle for the success of a cooperative society. The seven internationally accepted cooperatives' principles[1] and cooperative values provide basic guideline to establish and manage cooperative societies. However, in the case of Nepal, rather than active participation of members, government had direct control over cooperative, and the movement remained fragile till 1992. A major change in the

[1] Seven principles of cooperative are: Voluntary and Open membership; Democratic Control; Members' economic participation; Autonomy and independence; Education, training and information; Cooperation among cooperatives, Concern for the community.

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cooperative sector in Nepal took place in 1992, when the liberal Cooperative Act 1992 was promulgated. Nepal's cooperative sector comprises National Cooperative Federation, 20 Central Cooperative Unions, 321 District Cooperative Unions and about 33,000 primary cooperatives of various types (Department of Cooperatives [DoC], 2016).

The co-operative sector in Nepal plays a very important role in enhancing access to finance, providing non-financial services and helping to improve the socio-economic condition of members. Making Access Possible (MAP) survey conducted by United Nations Capital Development Fund (UNCDF) and Nepal Rastra Bank in 2014 revealed that 19 percent people prefer to save in cooperative and 9 percent people borrow from cooperative (UNCDF, 2015). Despite these facts, the sector suffers problems associated with weak regulation, poor planning, poor financial management, weak governance, and politicization among many others. As per regulation, the DoC is responsible to supervise and strengthen the sector. However, the DoC lacks sufficient human and technical resources and assessment tools to monitor and assess large number of cooperatives (German Technical Cooperation [GIZ], 2008).

Although, the numbers of registered cooperatives have reached over 33,000; all of them are not effective (Ministry of Cooperatives and Poverty Alleviation [MoCPA], 2013). Many studies have estimated that about half of the cooperatives are dormant or inactive (Simkhada, 1013). Very little is known about why some cooperatives are efficient and successful while others are dormant and on the verge of collapse. It is also not clear about the key performance indicators a cooperative as Nepal still lacks comprehensive tool to examine the performance of a cooperative.

The DoC has developed reporting and monitoring form to report the progress and to check the safety and soundness of cooperatives. However, the monitoring form lacks many important indicators for assessing performance (GIZ, 2015). There is lack of national effort to develop and adopt minimum key performance indicators (KPIs) to measure performance of cooperatives. A few cooperative promoting agencies and networks have developed their own KPIs. But, these indicators are neither tested in cooperatives properly nor discussed with larger stakeholders.

The purpose of this study is to develop, test, and recommend a tool and associated indicators for assessing the performance of financial cooperatives. It compares and contrasts available knowledge and experts opinions to measure performance of cooperative and proposes the dimensions and indicators for measuring the performance of financial cooperatives in Nepal.

Literature Review

International Credit Union Regulators' Network's (ICURN) principles for effective regulation and supervision of cooperative sector suggest that formulating appropriate regulatory framework, setting minimum KPIs for cooperatives, allocating adequate resources (human, technical and financial), regular monitoring and applying correcting measures are key for the success of the cooperative sector (WOCCU, 2011). ICURN has developed principles to effectively regulate and supervise financial cooperatives. The ICURN principles include required authorities, roles, responsibilities, resources and expertise of regulator for effective regulation and supervision, and standards and norms to be adhered by the cooperatives (WOCCU, 2011). The ICURN principles are considered as the guiding principles across the world for effective regulation and supervision of cooperative sector.

Incorporating of both Financial and Social Indicators in the Rating Tool

Appropriately designed KPIs are helpful to report progress, evaluate target vis-a-vis achievement, compare with past performance and standards, ensure efficient use of members' investment, develop early warning system, and take necessary corrective measures accurately (Kneiding and Tracey, 2009). The financial ratios provide important information for management decision and provide essential indicators for regulator to check safe and soundness of the cooperatives business. Social indicators such as serving to the target group, financial inclusion, members' satisfaction measure social returns. Sustainability and performance of any program or action depend on strategy, employees' and customers' satisfaction and macro environment (Epstein & Roy, 2001). Therefore the KPIs should consider double bottom line of achieving financial and social returns on investment (Kneiding and Tracey, 2009). Both social and financial drivers affect the financial performance of cooperatives and should be included in the rating indicators.

Gaps in Available Tools to Appraise the Performance of Financial Cooperatives

Prudently designed and measured indicators assess the strengths and vulnerabilities of financial systems and support to take timely corrective measures (International Monetary Fund [IMF], 2006). In the banking sector, CAMELS rating tool is widely used. The Basel committee on banking supervision provides a forum to enhance understanding of key supervisory issues and improve banking supervision. The committee revises and updates the CAMELS ratios in the changing context to minimize possible risks. As CAMELS is developed to assess the performance of banks, its ratios and standards may not be fully applicable to cooperative society (Trivedi, n.d). Types of organizations, there objectives, and activities may demand different ratios and standards (Negre & Maguire, 2002). Unlike bank, the owners of cooperatives are users and their objective is to provide services to members rather than profit maximization; therefore, financial ratios and standard of banking industry may not be applicable to cooperatives (Gentzoglanis, 1997).

In partnership with regional credit unions, the World Council of Credit Unions (WOCCU) has developed PEARLS monitoring system. PEARLS contains 46 quantitative/financial indicators that measure performance of credit unions and financial cooperatives (WOCCU, 2015). The PEARLS ratios can be used to compare and rank institutions in one country or across countries. It is primarily a management tool for cooperative society and can also be used as a supervisory tool by regulator. As a management tool, PEARLS signals problems to managers before the problems become too big to manage. It offers indicators and standards to monitor management's progress. For regulator, PEARLS provides information to supervise the performance of the cooperatives. Most of the indicators of PEARLS provide prudential norms to be followed by financial cooperatives. The target goals or standards of each indicator are put forth by the WOCCU based on its field experience of promoting and strengthening cooperative sector. The financial cooperative that meets the PEARLS standards is considered as an excellent, safe, and sound cooperative society.

Although the PEARLS ratios are widely used to assess performance for financial cooperative, it lacks some important ratios to assess the performance. For example, PEARLS lacks ratios to measure efficiency and productivity which is considered one of the key ratios to measure performance. According to the Micro Banking bulletin (2006), productivity is a combination of outreach and efficiency, and productive institutions maximize services with minimal resources. Efficiency is a function of how well an institution manages available resources to maximize output (Brand, 2000). High performing organizations have higher efficiency and productivity ratios than peers. Outstanding loans and members per staff are the major indicators to measure productivity (Holtmann, 2001) and administrative and operational efficiency is the major indicator to measure efficiency ratios

Moreover, there is no consensus among practitioners on which PEARLS ratios are very important and must be included in accessing performance. For example, the Asian Confederation of Credit Unions (ACCU) has adopted 13 indicators from PEARLS in the "A-one Competitive Choice for Excellence in Service and Soundness (ACCESS)" rating tool (ACCESS , n.d). The Nepal Federation of Saving and Credit Cooperative Union (NEFSCUN) has included 15 ratios from PEARLS in cooperative assessment tools. Wide variances are found while adopting PEARLS, and there is no consensus on how many PEARLS ratios must be included while assessing performance of a cooperative.

The ACCU has developed ACCESS rating tool to assess the financial and institutional health of cooperatives in Asia region. The tool is based on the Balanced Scorecard developed by Kaplan and Nortion in 1992. ACCESS has 87 indicators to assess four aspects of performance: financial perspective, customers' perspective, internal business perspective and learning & growth perspective (ACCESS, n.d). Financial health is assessed by applying 13 selected financial ratios of PEARLS. The customers' perspective measures types of products and services offered by the society to fulfill members' needs, quality of services, and customer satisfaction. Internal business perspective measures policies and procedures of cooperative, business plan, operational efficiency, and competitive position. Learning and growth perspective measures leadership, knowledge and activeness of board of directors, human resource, good governance, and employee satisfaction. The financial indicators carry 40 percent weight and non-financial indicators carry remaining 60 percent weight of the total score. The cooperative experts and practitioners mentioned that rating of non-financial indicators depends on subjective evaluation and perception of assessors. Therefore, the ACCESS grading may or may not accurately assess the cooperative, as subjective rating may inflate or deflate the grade.

The Nepal Federation of Savings and Credit Cooperative Unions Ltd. NEFSCUN), the central federation of savings and credit cooperatives, has developed Program for Building Absolute and Professionalization (PROBATION) tools to measure the performance of member cooperatives. The indicators of PROBATION include financial health, harmony with members, institutional development and good governance, management, planning, accountability, and legitimacy (NEFSCUN, 2015). It applies 15 PEARLS ratios to measure financial health, of which 13 PEARLS ratios are similar to those used by ACCESS while adding two ratios (share to total assets and liquid assets to total assets). Financial indicators carry 50% weight and other indicators carry 50% weight. The NEFSCUN and ACCU work under same umbrella, and it is not clear why they are using different rating tools. Both the ACCESS and PROBATION have adopted only few financial ratios from PEARLS, which indicates that all 46 ratios of PEARLS are not important to assess financial performance of cooperatives. Moreover, PEARLS measures only financial performance. It doesn't measures other important aspect of the institution such as governance, HR, satisfaction, services to members, outreach and others. This indicates that the cooperative sector internationally lacks uniform rating tool or lacks minimum acceptable KPIs to assess performance.

Besides PEARLS, some cooperatives are using other tools. For example, Small Farmer Development Bank (SFDB), a microfinance wholesale bank with technical and financial support from German Technical Cooperation (GIZ), has developed a grading tool for Small Farmers Agricultural Cooperatives Limited (SFACLs) in 2005/6 and piloted it with 145 SFACLs (GIZ, 2008). The grading tool includes 14 indicators. Some of these indicators are derived from PEARLS, some are drawn from

Consultative Group to Assist the Poor (CGAP, 2008), and other ratios are specifically related to SFDB and SFACLs. Two indicators, viz.: share investment in SFDB and repayment of loans to SFDB, do not measure the health of the SFACLs. Some SFACLs which incurred losses are also graded as A and B grade, which indicates that the grading system used by SFDB needs updating (Pokharel & Dhungana, 2013). Moreover, basis for selecting of different financial indicators from PEARLS and CGAP and providing weights to different ratios are not thoroughly explained.

The United Nations Capital Development Fund (UNCDF) in the Microfinance Distance Learning Training manual has stated five key areas of financial performance of MFIs. These five areas of financial performance include outreach, productivity, efficiency, self-sufficiency, and delinquency (UNCDF, 2003). These dimensions are similar to the 18 KPIs developed by the Small Enterprise Education Promotion (SEEP) Network (2005) to evaluate the performance of MFIs. The KPIs developed by SEEP are divided into the four dimensions: (1) Profitability and Sustainability (Operational Self Sufficiency [OSS], Financial Self Sufficiency [FSS], Return on assets [ROA], Return on equity [ROE]), (2) assets/liability management ratios (Yield on portfolio, portfolio to assets, cost of funds, debt to equity, liquidity), (3) portfolio quality ratios (Portfolio at Risk [PAR], write-off ratio), (4) efficiency and productivity (Operating expense ratio, cost per active client, borrowers per loan officer, active clients per staff member, client turnover, average outstanding loan size, average loan disbursed). CGAP adopted similar ratios used by UNCDF and SEEP.

The PEARLS, SFDB, UNCDF, SEEP, CAMELS and other rating tools have prescribed different ratios to measure the health of financial institutions, though there are many commonalities. The cooperative promoting organizations, wholesale banks, and cooperatives' network in Nepal are using selected ratios of already developed tools or prepare their own rating tools from assembling financial ratios from different sources. These tools are neither discussed thoroughly with experts nor piloted properly to check applicability and validity. The internationally and nationally available rating tools are developed in different context and time and may not be fully applicable in the current scenario. Moreover, one tool lacks important ratios the other rating tools have. There is knowledge gap on appropriate performance assessment tool for financial cooperative, which indicates a need for developing an appropriate rating tool for financial cooperatives in Nepal.

Methods

Individual expert interviews and Focus Group Discussions (FGDs) were conducted with experts and practitioners in the cooperative and micro finance sector and collected their ideas/experiences on KPIs to be included in the appraisal tool for financial cooperatives. Relevant information from literatures such as institutional appraisal tools and ratios used by various agencies/financial institutions, empirical studies, and research articles in the field of institutional assessment and performance measurement were cited to provide support to field data and to strengthen the arguments discussed in the article. The author also included his experiences of promoting, assessing and strengthening cooperatives while formulating questions, facilitating discussion, conducting interviews, and interpretation of the findings.

In-depth individual interviews were conducted with 31 experts working with cooperatives, microfinance institutions, donor organizations, wholesale financial service providers, and supporting organizations working in the cooperative or microfinance field during February-April, 2016. They were selected by applying purposive sampling technique. Some interviews were conducted face-to-face while some respondents were asked to send their answers via e-mail. The answers provided by experts were summarized. The recommended indicators were compared with literature and categorized into different dimensions of performance measurement of financial cooperatives.

The same experts (31 research participants) and some scholars/academicians were invited for focus group discussion to discuss on the appropriate performance measurement indicators for financial cooperative in April 2016. The FGD members were asked to provide their opinion on need of a new performance rating tool. Fifteen experts and scholars were presented in the FGD. Their responses were recorded, and also noted. They were asked how many and which performance evaluation dimensions are important to include in the performance rating tool and what are the major performance measurement indicators in each dimension. During FGD, the experts mentioned that there is gap in current performance assessment tools and it needs to be revised or contextualized.

The findings of the FGD were compared with the findings of in-depth individual interviews after which performance measurement tool with dimensions and indicators under each dimension to measure performance was prepared. The tool was translated into Nepali and tested with five cooperatives in the Kathmandu valley before applying with larger sample during April –May 2016. The tool was then applied/piloted with 210 randomly selected [2] cooperatives representing all geographical locations of Nepal (plain, hills, and mountains), mix-sex cooperatives and women only managed cooperatives while covering small, medium and large size cooperatives and cooperative with different age. The information from 210 cooperatives were collected and analyzed during June 2016 to February 2017. The findings were presented in in the national microfinance summit 2017. Based on the findings from piloting and feedback from summit, KPIs and standards are recommended for Nepali financial cooperative sectors which can be also useful to the cooperatives around the globe.

Rating Tool for Financial Cooperative

Careful evaluation of literature, consultation with experts, and testing are needed before recommending dimensions and set of ratios under each dimension to measure performance of a cooperative. The research findings identified nine dimensions and several ratios under each dimension to measures performance of cooperative. Out of nine dimensions seven are financial and two are social and governance related indicators. The cooperative are self-managed, control and capitalize social enterprise. Hence the non-financial measure is also equally important. The experts during interview and panel discussion also strongly suggested for incorporating social and governance related indicators. The nine dimensions and ratios under each dimensions identified are stated in the Table 1.

The indicators used by PEARLS (ACCESS & PROBATION), SFDB, UNCDF, CGAP and SEEP (Table 1) and expert interviews provided basis for selecting essential performance measurement dimensions and indicators. The ratios used in ACCESS & PROBATION are important and well tested ratios and experts also suggested incorporating all these ratios. Thus these ratios are included in the proposed rating tool. Literature and experts suggested that the financial ratios used by the ACCESS & PROBATION lack important ratios to measures productivity, efficiency, targeting/inclusion, and self-governance. Therefore these ratios are also included in the rating tool. Available literature, expert interviews, and FGD identified nine dimensions and 40 financial ratios and 30 social inclusion and governance related ratios to measures performance of cooperative.

[2] The sample size is selected by applying sampling formula of Yamane (1967), which is: $N0 = N/(1+N^* \alpha^2)$.

Table 1
Comparison of financial ratios used by different agencies

Key areas of performance dimensions	Performance ratios used by		
	PEARLS, ACCESS & PROBATION	SFDB	UNCDF, SEEP, CGAP
Earning and sustainability	RoE	OSS and FSS	Portfolio Yield, OSS, FSS, RoE, RoA
Liquidity	Liquid assets to total deposits Liquid assets to total assets (PROBATION)	Liquid assets to total deposits	Liquid assets to deposits and short term liabilities
Efficiency	Total operating Expenses to average assets		Administrative & Operating expenses ratio, cost per active client
Productivity			Per staff members, borrowers, savings & loan
Healthy capital structure	Ratios of Institutional capital; Share; Outstanding loan; Savings; Borrowing, and Non-earning assets	Ratio of Internal source to loan Ratio of Institutional capital to external loan	Capital adequacy, Loan portfolio to total assets, debt to equity
Assets quality	Delinquency rate Provisions for delinquent loans >12 months & 1-12 months	Repayment rate, Monthly interest paying members, Provisioning against delinquent loan	Percentage of delinquent borrowers and loan, Portfolio At Risk (PAR), write-off ratio, Provisioning against delinquent loan above 30 days
Net Growth	Growth in membership, Assets, savings, share and others	Membership, assets growth	Growth in client and assets
Targeting and Outreach		Ratio of female members	Average loan balance as % of national GDP, Av. outstanding loan
Self-governance	Literature and expert interviews has suggested good governance related indicators as key indicators for self-managed and autonomous organization like cooperative.		

Piloting of the Rating Tool

The tool was applied in 210 randomly selected cooperatives which were affiliated to the Small Farmer Development Bank (SFDB). Two fiscal years (070/071 and 071/072 B.S.) audited financial statements were collected to calculate financial ratios. Separate form was developed to collect inclusion, governance, and loan quality related information as the financial statements did not contain these information

The SFDB provides services to cooperatives through nine area offices and one unit office. The area managers and unit managers were requested to organize a joint meeting of staff of area offices, chairpersons, and managers of cooperatives selected in the sample. The participants of the meeting were first given information about the purpose, rationale, and methodology of the study. The participants were also asked to read the each item and share if there is any confusion or misunderstanding on particular item/ indicator. There was not serious concern on the understanding of indicators.

The financial statements and completed forms were collected through the area and unit offices. Each area and unit office collected financial statements and completed formats. The network of SFDB helped to collect information from all sampled cooperatives (The response rate was 97 %).

Results and Discussion

The pilot-test identified 32 financial ratios (out of 35) as key ratios to measure performance. The three dropped ratios were: (1) External loan to total assets, (2) Repayment rate, and (3) Average loan balance to per-capita GDP. As most of the cooperatives had borrowed loan from SFDB and loan to total assets ratio did not explained anything about performance, hence it was decided to drop this ratio. Repayment rate does not tell about quality of loan product and most of the ratings tools lack this information. Average loan balance to per-capita GDP is a good indicator to measure depth of outreach, but purpose of cooperative is to serve to members rather than serving only the poor. Hence it was decided to exclude these four ratios.

There were all together 30 inclusion and governance related indicators. Out of 30 five were dropped and 25 were retained. The five dropped ratios were: (1) Staff dropouts rate, (2) Members dropouts (including passive members) rate, (3) Regular saver rate, (4) Attendance rate at general assembly, and (5) Attendance rate at board meeting. Information on regular saver rate and attendance rate at general assembly and board do not seem to be reliable as most of the cooperative either stated 100 % attendance rate or left the column blank and findings showed very negligible staff and members dropouts' rate. Hence, these five ratios were excluded.

The data collected from 210 cooperatives was entered in excel sheet and ratios of all indicators and their average were calculated. The average performance of 210 cooperatives has been considered as average standards for cooperative sector in Nepal. The average standards identified through this study were more or less similar to the standards prescribed by other rating tools. Therefore, the findings could be claimed as valid. The performance measurement dimensions, indicators under each dimension, and minimum recommended standard are explained in the following section.

Dimension 1: Earnings (financial sustainability and profitability)

Sustainability is explained from different perspective such as ecological, social, institutional, and financial. For business entity financial sustainability is more important for long-term survival. Financial sustainability is the ability of an organization to maintain its operating costs and provide service to members/customers on continuous basis. A program is financially sustainable when internally generated revenues are sufficient to cover all the program related expenses.

Table 2
Earnings ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			In PEARLS and other tools	For Nepalese Context	
Earnings (Profitability and sustainability)	Gross Margin	Yield in portfolio- Cost of fund	> 6	> 8	SEEP
	Return on assets (ROA)	Net profit/Average total assets	Market rate & above inflation rate	> 3	PEARLS CGAP SEEP
	Return on equity (ROE)	Net profit/Average equity	Market rate and above inflation rate and more than interest paid to deposit	> 20	ACCESS, PROBATION CGAP SEEP
	Operational self-sufficiency (OSS)	Financial income / Total operating expense	>120%	>130%	UNCDF CGAP/SEEP SFDB
	Financial self-sufficiency (FSS)	Financial income / Total operating expense + Imputed cost of capital	>105%	>105%	UNCDF CGAP/SEEP SFDB

From regulation and supervision perspective financial sustainability and profitability is more important as it is an important indicator to measure financial stability of the institutions and safety of peoples' money; therefore, ratios to measure financial sustainability are generally included in the KPIs. PEARLS, ACCESS & PROBATION lack ratios to measure sustainability. UNCDF, SFDB, SEEP and CGAP have used these ratios as one of the key ratios and experts also suggested to include ratios to measure sustainability. The OSS and FSS are used to measure financial sustainability. The OSS indicates whether enough revenue has been earned to cover all direct and indirect costs. FSS measures whether earnings are sufficient to cover all the cost as well as to maintain the value of equity.

The letter E of the CAMELS measures earning, the letter R of the PEARLS measures rate of returns, SEEP, UNCDF and CGAP use term profitability to measure earnings. The RoE and RoA are mainly used to measure profitability. Comparison of different rating tools, interviews with experts, and piloting have indicated the following minimum required ratios to measure earnings.

Dimension 2: Liquidity

Liquid assets do not earn any income; however, certain level of liquidity must be maintained for smooth operation of the activities and to minimize the risks. If a cooperative cannot invest member savings and other funds in high earning assets, it will not be able to pay high return on savings and shares. If all the funds are invested, the cooperative may not be able to fulfill the withdrawal requests of members' deposit. If a cooperative cannot fulfill the deposits withdrawal requests and loan demand of members, the rumors may spread to other members within a couple of hours and the cooperative may be at a high risk. Therefore, maintaining appropriate level of liquidity is essential for financial cooperatives and it is one of the essential indicators to examine the health of cooperatives. Higher level of liquidity should be maintained if liabilities are typically short term and assets have a longer maturity (International Monetary Fund [IMF], 2006). The ACCESS & PROBATION mentioned that savings and credit cooperatives should maintain 15 % of deposit and 1 % of total assets in liquid assets which is also verified by experts in the interviews. Hence, the following two ratios are proposed to measure liquidity.

Table 3
Liquidity ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			PEARLS	For Nepalese Context	
Liquidity	Liquid assets to total assets ratio	Liquid assets/Total assets	1-2%	5%	PROBATION
	Liquid assets to deposit ratio	Liquid assets /Savings deposit	12-15%	15%	ACCESS PROBATION

Dimension 3: Efficiency

Efficiency ratios measure how much it costs to lend one unit of currency; the lower the ratio, more efficient is the institution. The administrative efficiency and operational efficiency are used to measure the efficiency (Brand, 2000). Total operating expenses include administrative expenses, cost of funds, and loan loss provisioning. Cost of living, salary scale, economic activities, loan ceiling and average loan amount, ratio of support staff to loan officer, and many other factors may affect the efficiency of a cooperative. Regulators, promoting organization, and management of cooperatives should consider these factors while comparing and interpreting efficiency ratios. These ratios are not used by ACCESS and PROBATION. The PEARLS, Microbanking bulletin, UNCDF and SEEP used following two ratios to measure efficiency, which is also confirmed by experts in the interview and validated in the piloting.

Table 4
Efficiency ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			In PEARLS and other tools	For Nepalese Context	
Efficiency	Administrative expenses ratio	Total Administrative expense/ Average Outstanding Loan	2-3%	2 %	UNCDF, CGAP and SEEP
	Operating expenses ratio	Total operating expense/ Average Outstanding Loan	5-6%	8 %	PEARLS UNCDF, CGAP and SEEP

Dimension 4: Productivity

Productivity ratios measure the output of certain inputs; the higher the ratios, the more productive is the operations. The drivers of productivity include: employees' skills, commitment, capacity, motivation and organizational system (operating procedures, software, decision making) of an institution. Infrastructure, population density, awareness and skills of client, geography, age of the organization, and other external environment also affect the productivity (Holtmann, 2001). While deciding productivity target, cooperatives should consider drivers of productivity.

By increasing productivity, a cooperative can lower per unit costs, improve efficiency, and provide services at lower cost. Therefore, this is one of the important ratios to be included in the KPIs to measure the performance of a cooperative. PEARLS lack ratios to measure productivity; however, ICURN has suggested measuring the productivity of cooperative. UNCDF, CGAP, Microbanking bulletin, and SEEP have used this ratio as one of the key indicators; and the experts in interviews and FGDs also suggested for including the following ratios to measure the productivity of an institution which is also validated in the piloting.

Dimension 5: Healthy Financial Structure

Financial structure shows the sources and uses of funds of an organization. The organizational efficiency and earnings depends on effective mobilization of funds obtained from different sources in different income earning activities and maintaining appropriate mix of debt and equity. It is observed that financial cooperatives utilize most of the funds to provide loan to their members. Higher use of fund to provide credit, help cooperatives to generate more income, but it may also increase credit risks, liquidity risks, and other risks. If all the funds are invested, they may not have liquid assets to meet liabilities or member demand of deposits. Therefore, right mix of sources and uses of funds or effective management of assets and liability is considered the crucial indicators for examining financial health of the cooperatives.

Table 5
Productivity ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			In PEARLS and other tools	For Nepalese Context	
Productivity	Member per Staff	Number of members /Number of staff	400-500	300	WOCCU CGAP and SEEP
	Borrowers per staff	Number of borrowers /Number of staff	300-400	150	CGAP and SEEP
	Outstanding loan per staff (Rs. in million)	Outstanding loan /Number of staff	Depend on size & maturity	10-15	CGAP, UNCDF
	Savings per staff (Rs. in million)	Total Savings /Number of staff	Depend on size & maturity	6-10	CGAP, SEEP

If a cooperative generates sufficient income to cover operating costs, pay market rate of interest on savings and dividend on shares and maintain capital adequacy, its financial structure is considered healthy. Hence measuring financial structure is important, as it decides other performance of the cooperative. The FGDs, interviews with experts, and pilot-test suggested using the following ratios to measure right-mix of capital. These indicators are also used by ACCESS and PROBATION.

PEARLS does not recommend for borrowing from financial institutions; however, experts suggested borrowing and relationship with external financial institutions helps cooperatives to manage fund.

Dimension 6: Assets quality

Loan portfolio is the single largest and major income-earning asset of financial institutions. Collecting interest and principal amount as per schedule and controlling delinquency allows an institution to continually provide credit and generate income. Assets quality also determines the institutional profitability. High percentage of loan delinquency means high percentages non-earning assets. High delinquency increases monitoring cost as cooperatives need to conduct frequent follow-up of delinquent borrowers. It increases provisioning cost. Legal action against delinquent borrowers also increases the cost. Hence, delinquent loan must be kept at a minimum level.

The failure to control loan delinquency is probably the main reason of downfall of a financial institution. Hence, ratios related to measuring delinquency and making adequate provisioning are considered the crucial indicators to assess health of an organization. Analyzing delinquency and comparing it with peers or over the years help regulators and cooperatives to understand the causes of delinquency and identify the strategies to minimize credit risk. The literature, field interviews, and piloting suggested the following ratios to measure assets quality.

Most of the cooperatives don't calculate PAR; however, literature suggests this is one of the important ratios to assess assets quality and suggested to include in the assessment tool.

Table 6
Ratios of healthy financial structure

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			In PEARLS and other tools	For Nepalese Context	
Healthy financial structure	Ratio of outstanding loan to TA	Net outstanding loan amount / Total assets (TA)	70-80 %	80-90 %	PEARLS, ACCESS, PROBATION SEEP
	Ratio of deposit to TA	Total Savings Deposits / TA	70-80 %	50-60 %	
	Ratio of share capital to TA	Total share capital / TA	10-20 %	10-20 %	
	Ratio of institutional capital to TA	Total institutional capital / TA	Min 10 %	10-20 %	
	Ratio of Non-earning assets to TA	Total Non-earning assets[3]/ TA	Max 5%	10 -15 %	ACCESS, PROBATION

Dimension 7: Net Growth

The inflation adjusted growth is considered as net growth. An unadjusted growth rate does not have much meaning; it may also be misleading. Higher growth rate or growth above industry average indicates that cooperative's members are satisfied with staff's behaviors and services offered. Assessing growth helps understand how an organization is performing currently and it will also indicate how it will perform in the future. PEARLS uses 12 ratios and ACCESS and PROBATION use only two indicators (growth in membership and total assets) to measure growth. All 12 ratios may not be needed and only two ratios are not sufficient to assess growth. The experts suggested the following five ratios to measure growth.

Dimension 8: Targeting and inclusion

Different institutions such as banks, micro finance institutions, cooperatives, credit unions, and Non-governmental Organizations (NGOs) are involved in providing microfinance services. Targeting is required to reach to targeted population. Microfinance service providers adopt many strategies such as working in rural areas or working with the poor segment of the society, forming group of targeted people, conducting monthly meeting, providing small loans, and collecting small regular repayments to ensure that the poor are served and not so poor are excluded. Financial institutions use different

[3] Included cash, bank, fixed assets and receivables and pre-paid expenses in non-earning assets

targeting tools to identify and serve the poor and use different ratios to assess how well they have served targeted clients and how they are promoting financial inclusion. PEARLS lack ratios to measure targeting and financial inclusion. These ratios are important if a cooperative claims that it is serving the poor. The experts and practitioners during FGDs suggested the following ratios to assess targeting status in cooperative.

Table 7
Assets quality ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			PEARLS and other tools	For Nepalese Context	
Assets Quality	Delinquency rate	Total loan delinquency /Outstanding loan	5% or less[4]	<2%	ACCESS, PROBATION UNCDF
	Portfolio At Risk (PAR)	Outstanding balance of loans with more than 30 days overdue / Outstanding Portfolio	<5% or Industry average	<5%	UNCDF, CGAP, SEEP
	Regular (monthly) interest payer	Regular interest payers / Total borrowers		>95%	SFDB
	Provisions for loans delinquent for more than 12 months	Provisions for Loan Losses / Provisions required for Loans Delinquent >12 months	100%	100%	ACCESS, PROBATION
	Provisions for loans delinquent for 1-12 months	Provisions for Loan Losses / Provisions required for loans delinquent less than 12 months	35%	35%	ACCESS, PROBATION
	Reserve rate	Provisioned amount/required provisioning including 1% for good loan	100%	100%	UNCDF, CGAP, SEEP

During piloting, it was noticed that many cooperatives were not comfortable to calculate ratio of average loan balance to per-capita GDP as average loan balance is much higher than GDB per-capita; therefore this ratio is dropped. As this is a very important indicator to assess targeting, further discussion is needed to decide whether to include or exclude this ratio.

[4] PEARLS recommend the benchmark for delinquency rate at 5% or less and ACCESS recommend that it should be less than 2 of loan portfolio. The UNCDF and CGAP mentioned that the ratio should be compared with peers or with the industry average.

Table 8
Net growth ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			In PEARLS	Nepalese Context	
Growth	Growth in membership[5]	Difference of Current and previous year/ Last year's member	Minimum 12% or >inflation rate	Inflation rate+10%	PEARLS, ACCESS PROBATION
	Growth in Savings	Difference / Last year's savings	Above inflation rate	Inflation rate+20	PEARLS
	Growth in assets	Difference / Last year's assets	Above inflation rate	Inflation rate+20	ACCESS PROBATION
	Growth in institutional capital (Share and reserve)	Difference / Last year's institutional capital	Inflation rate+ Average GDP growth rate	Inflation rate+20	PEARLS
	Growth in profit	Difference / Last year's profit	Inflation rate+ Average GDP growth rate	Inflation rate+20	PEARLS

Table 9
Targeting and inclusion ratios

Indicator	Ratios	Measurement	Standard recommended		Reference sources
			Rating tools	Nepalese Context	
Targeting	Coverage ratio	Total families in the operating areas/Total families covered	Not Available (NA)	More than 95%	Expert view
	Female member ratio	Total female member / Total member	NA	More than 60%	SFDB
	Inclusion in board	Female and disadvantaged member in the board/ Total board member	NA	More than 60%	Expert view

[5] Growth in membership depend on size, maturity and location of cooperative

Table 10
Self-governance

SN	Indicator	Yes (0.8)	No (0)	Partially comply (0.44)
1	Proper information dissemination system to maintain transparency			
2	Regularity of General Assembly(GA)			
3	At least 50% members attended in GA			
4	Discussion and approval of budget, activities audit report by GA			
5	Publication and distribution of annual progress report to members			
6	Set qualification to be a board members			
7	Regular meeting of the board (At least 12 meeting in the year)			
8	Formulation of membership, savings, loan, personnel and other policy			
9	At least 90 % member save regularly and pay loan regularly as well			
10	Formulation and implementation of business plan			
11	Review of target and progress on monthly basis			
12	Terms of reference is provided to staff			
13	Evaluation of staff Performance and provision of rewards			
14	Implementation of board decision			
15	Quarterly meeting and internal audit by A/C committee			
16	Knowledge and skills of A/C committee to conduct internal audit			
17	Up to date account and records of the society			
18	Staff prepare progress report comparing target and progress			
19	Regular monthly staff meeting & discussion of progress of the society			
20	Corrective measures to improve the weakness identify by the auditor or other evaluators			
21	Society has received the best cooperative award in the district			
22	Organization/participation of at least two training in a year to upgrade the capacity of board & staff			
23	Provision of financial services as per the demand of members			
24	Provision of at least two non-financial services from own resources or from external support			
25	Appropriate mechanism to obtain grievances of members			

Dimension 9: Self-governance

A cooperative is a self-managed and self- controlled autonomous membership-based organization. Its financial performances depends on competency and motivation of its human resources and efficient management. Maintaining rule of law, fairness and transparency, capacity building and developing better relationship with members, employees, suppliers, and communities enhance performances (Hillman & Keim, 2001). Among different aspects of management, employee satisfaction is the most important factor as they are directly involved in serving customers, suppliers, and communities. Clients/members satisfaction and retaining them is also a vital factor for the success of any organization. Satisfied clients come back to take services and remain for long period of time. Studies have shown a strong positive relationship between employee satisfaction and client satisfaction (Bulgarella, 2005). The satisfied employees show good behaviors to clients and serve them courteously. Literature, experts opinion, and piloting suggested applying following indicators to assess the self-governance of a cooperative and measure them in the continuum of yes, no and partially comply (Table 10).

Weightage of financial and governance indicators

Measurement of governance and management are subjective and rating may be affected by perception of assessor and influence of environment. There will be chances of high or low rating. The participants during interaction shared that they have seen cooperatives with different size and performance are rated into same grade. In this study also many financially weak cooperative score high in governance and management score; the governance score range from 28 % to 100 % while financial performance is range 50 % to 85 %. To minimize the chances of over rating, 80% weightage is given for financial performance and 20 percentage weightage is given for governance. The detail is stated in Table 11.

Table 11
Weightage for financial and self-governance indicators

Rating areas	Total indicator	Value to each indicator	Total point
Financial performance	32	2.5	80
Self-governance	25	0.8	20
Total			100

Table 12
Grading of cooperatives

Grade	No. of Cooperatives	Percentage
A	76	36. 2%
B	97	46,2%
C	36	17.1%
D	1	0.5 %
E	0	0%
Total	210	100%

The results of the ELEPHANTS rating in 210 randomly selected financial cooperatives representing from all geographical regions, and cooperative of different types and size is mentioned in Table 12.

The findings were presented in a meeting with the selected leaders of the sampled cooperatives, the promoting organizations; wholesale lenders, and experts. They also validated the findings/ grading of the cooperatives.

Implications

The study identified nine dimensions and 32 financial and 25 self-governance related indicators to assess performance of financial cooperatives in Nepali context. The nine dimensions identified by the study are: **E**arnings, **L**iquidity, **E**fficiency, **P**roductivity, **H**ealthy capital structure, **A**ssets quality, **Ne**t growth, **T**argeting, and **S**elf-governance which may be abbreviated as ELEPHANTS**.**

Carton & Hofer (2006) stated 71 different dependent variables under nine dimensions to measures performance: profitability, market share, market value, growth, efficiency, liquidity, sustainability, size of transaction, and social indicators. Of the 138 articles they reviewed, 70 % included profitability (RoA and RoE), 27% included growth, 18% included market share, 18% included governance, 17% included market value of the equity, 11% included efficiency, productivity and sustainability, 7% included liquidity, and 4% included other measures. This showed that profitability, growth, market share, governance, market value, sustainability, efficiency, productivity, and liquidity are the main dimensions of organizational performance. These dimensions are also validated by interviews and piloting except market value of the equity. Cooperatives' shares are not listed in stock exchange; hence, market value of equity is not relevant for them. Maintaining assets quality is crucial aspect for the sustainability of financial institutions, hence it is one of the important dimensions.

The finding of the study and indicators of the ELEPHANTS was presented during National Microfinance Summit Nepal. Most of the summit participants agreed with the dimensions and indicators. The summit participants suggested government and the regulating body of cooperatives to adopt the proposed tool for monitoring, grading, and regulation of cooperative. Some participants asked to add indicators related to client protection principle, which is beyond the scope as it does not directly relate to performance assessment of financial cooperatives.

Cooperative leaders and professionals in cooperative sector in various occasions suggested conducting trainers training to the cooperative network, staff of cooperative, and cooperative promoting agencies to use the tool. The support of government, regulator, cooperative network, and cooperative promoting agencies is needed to apply the tool for assessing performance of financial cooperatives.

The average performance of 210 cooperatives is considered as average standards for cooperative sector in Nepal. These average standards are more or less similar to the standards prescribed by other rating tools. Therefore, these standards are considered reliable to assess the performance of financial cooperatives and grading them into different category. This supports the acceptability of ELEPHANTS. However, the standards may need to be revised gradually after applying them in a larger population of cooperatives in future or changes may be required to address the changing context.

Several factors such as age, competition, geography, socio-cultural aspect, and other factors may affect performance of cooperative and performance standards. The evaluators must keep these factors into consideration while interpreting and comparing the results of the assessment with standards.

The leaders of some promising cooperatives during this study mentioned that the rating tools such as PROBATION and ACCESS provide high weightage in subjective indicators. Therefore, the PROBATION and ACCESS grading may or may not accurately assess the cooperative, as subjective rating may inflate or deflate the grade. The pilot testing result of ELEPHANTS confirmed that this tool is more reliable than other tools. Adaptation of ELEPHANTS by the government of Nepal is needed to fully utilize the tool for strengthening the cooperative sector in Nepal. It may as well be replicated in other parts of the globe.

Limitations and Future Research Directions

The population of the study included the cooperatives affiliated with Small Farmer Development Bank. Although, the sampled cooperatives represent all geographical locations of Nepal (plain, hills, and mountains) and most of the cooperative types (mix-sex cooperatives, women only managed cooperatives, small, medium and large size cooperatives and cooperative with different age) there are still many varieties of cooperatives which are not included in the study. Therefore, the identified nine dimensions and 32 financial and 25 self-governance related indicators and standard prescribed may not be applicable for all types of cooperatives. Future research is needed to fulfill this gap by incorporating more samples and revisiting the tool.

The national micro-finance summit participants confirmed that ELEPHANTS **(E**arnings, **L**iquidity, **E**fficiency, **P**roductivity, **H**ealthy capital structure, **A**ssets quality, **Ne**t growth, **T**argeting and **S**elf-governance) rating tool may address most of the shortcomings of current ratings tools used by cooperatives. The completeness and applicability of the tool cannot be confirmed until it is used by cooperatives and the regulator. After application of the tool, future research is required to explore the experiences of users, check the validity of the indicators, and recommend for revising the tool if needed.

The banking sector is using CAMELS but cooperative sector has not adopted any suitable tool for assessing the performance. This is hampering the task of setting national standards and effectively regulating and monitoring the cooperative sector. The government (Department of Cooperative or Ministry of Cooperative and Poverty Alleviation) in collaboration with the cooperative network should form taskforce to apply ELEPHANTS. The task force may carry out action research with representative cooperatives, reexamine the tool, and roll out it to the sector for its full applications a step towards strengthening the performance of cooperatives in Nepal.

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