

The Factors that Influence the Loan Repayments of Credit Union Members and Performance Analysis on Credit Union

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Abstract. Taker Credit Cooperative has a high level of non-performing loans (NPL) at 6.60 percent with greater emphasis on financial aspects in measuring its performance. The purpose of this study includes: (1) To analyze the factors that influence the loans repayments of the members of Taker Credit Cooperative to decrease NPL below 5 percent, (2) To evaluate the performance of Taker Credit Cooperative based on the Balanced Scorecard approach, (3) To formulate the alternative policy that become priority in improving the management performance of Taker Cooperative Credit. This research paper uses the case study approach on the factors that influence the loans repayments of the members, which is analyzed using logistic regression and descriptive analysis. The performance of Taker Credit Cooperative is analyzed with AHP in weighting scoring criteria on BSC perspective. The results of this study are: (1) Loans is given to the members in the group with a “common bond. To conduct financial literacy and monitoring members whose age are above 30 years with low income, but with high loans ceiling and interests rate. Maximizing profits from lending and investment assets. (2) Encouraging members to meet obligations and utilize products. To provide rewards for active members. To create a database of members, To employ special staff for financial counseling and marketing. (3) Revising the Standard Operational Procedure on management of loans risk. Providing shuttle service for savings and loan installments. (4) To the competence of staff for education, training, and mentoring. To provide access to the staff to the strategic information through the use of management information system technology. To create individual staff performance agreement form and developing remuneration packages.

Keywords: balanced scorecard, credit union, taker credit cooperative

Abstrak. Koperasi Kredit Taker memiliki tingkat kredit bermasalah (NPL) yang tinggi yakni 6.60 persen dan selama ini pengukuran kinerja lebih menekankan pada aspek keuangan. Tujuan penelitian adalah: (1) Menganalisis faktor-faktor yang mempengaruhi pengembalian kredit anggota Kopdit Taker untuk menurunkan NPL di bawah 5 persen, (2) Mengevaluasi kinerja Kopdit Taker dengan pendekatan Balanced Scorecard, (3) Merumuskan prioritas alternatif kebijakan untuk peningkatan kinerja Kopdit Taker. Metode penelitian ini menggunakan pendekatan studi kasus tentang faktor-faktor yang memengaruhi pengembalian pinjaman anggota, yang dianalisis dengan menggunakan regresi logistik dan analisis deskriptif. Kinerja Kopdit Taker dianalisis dengan AHP untuk penentuan kriteria pembobotan pada perspektif BSC. Hasil penelitian ini adalah: (1) kredit diberikan kepada anggota dalam satu kelompok dengan ikatan pemersatu atau “common bond”. Melakukan financial literacy dan monitoring anggota yang usianya > 30 tahun dengan pendapatan rendah, tetapi plafon kredit dan suku bunga pinjamannya tinggi. Memaksimalkan keuntungan dari aset pinjaman dan investasi. (2) Mendorong anggota memenuhi kewajiban dan memanfaatkan produk-produk. Memberikan reward bagi anggota yang aktif. Membuat database anggota dan menjaring anggota baru, mempekerjakan staf khusus sebagai konseling keuangan dan pemasaran. (3) Meninjau kembali manual SOP kredit dan manajemen resiko. Menyediakan pelayanan antar jemput simpanan dan pinjaman serta angsuran. (4) Peningkatan kompetensi staf dengan alokasi anggaran khusus untuk pendidikan, pelatihan, dan mentoring. Memberikan akses ke informasi strategis kepada staf melalui penggunaan teknologi sistem informasi manajemen. Membuat formulir kesepakatan kinerja individu staf dan mengembangkan paket remunerasi

Kata kunci: balance scorecard, credit union, koperasi kredit taker

INTRODUCTION

Indonesia has not fully recovered from the Asian financial crisis back in 1998 and, by the end of 2014, the economic growth of the country is yet to reach 8 percent. The Asian financial crisis that occurred globally in 1996-1997 was a result of the deregulation and liberalization of financial system that caused the rapid increase of nonperforming loans or NPLs (Yang, 2003) and therefore many banks collapsed because of high cost, liquidation, non-performing loans, and loss assets. However, non-banking micro-financing

institutions (LKMs) such as cooperatives, inheritance management body (Baitul-Mal), and credit unions that were based on public funds still existed, survived, and thrived through the financial crisis.

In the midst of the number of poor in Indonesia that reached 10.96 (the Central Statistics Agency, 2014), the presence of LKMs such as cooperatives also contributed in reducing poverty rate. Out of 100 studies on micro-financing that were conducted from 1986 to 2012, it was discovered that micro-financing programs was proven to be able to increase income rate and elevated families out of poverty.

In addition to serve as “the banking sector for the poor”, the micro-financing sector is currently viewed by many as the tool that would support the society development (Roy and Goswami 2013). In Indonesia, many micro-business actors that did not meet the requirements from the bank received financing from cooperatives. In 2014, out of 56.5 million business enterprises, 99.9 percent was small and medium enterprises (SMEs) that consisted of micro enterprises (98.79 percent), small enterprises (1.11 percent), and medium enterprises (0.09 percent), whereas large enterprises only at 0.01 percent. In order to develop 56.6 million SMEs in Indonesia, at least funds of Rp 400,692 trillion was needed, but as many as 38.19 million SMEs or 70 percent were not feasible or bankable. It was recorded that only 4,898 SMEs that were feasible, bankable, and deserved to go public (the Cooperatives and SMEs Ministry). This indicates the importance of non-banking micro-financing institutions such as cooperatives with microloan programs to take bigger role in supporting SME financing.

According to a report from the Cooperatives and SMEs Ministry in 2013, the number of cooperatives in Indonesia that were registered on the Cooperatives and SMEs Ministry reached 206,338 units of which 144,839 classified as active and 61,499 classified as inactive. On the Table 1, we could see that in 2009-2013, the volume of cooperatives continued to increase, which indicated a relatively big potential in developing financial business that based on public funding.

To allow the cooperatives to constantly thrive, they should be supported with a more strategic business

performance improvement that can be measured both financially and non-financially. This required a model of financial and non-financial assessment that put the interests and the well-being of the members at the center of the entire cooperative’s activities.

This research paper focused on the case study of Takeru Credit Union (Kopdit Takeru) which legal status was cooperative but the ways of working and operating a little bit different in comparison to cooperatives in general because Kopdit Takeru is protected under Inkopdit, the national umbrella organization for credit cooperatives, that both supervise and become the public fund insurer for financial institutions that commonly referred as credit union (CU) which only focused in the fulfillment of access on savings and loans for its members. Currently, there are several CUs that did not experience growth, stagnant, or even closed down because of poor management from both supervisors and executive board. According to Munaldus et al. (2014), in order to avoid crisis, CUs should focus on the strengthening of two aspects, namely economic sustainability and social sustainability.

All this time, for the performance assessment, CUs have their own standards of operations set by World Council of Credit Union (WOCCU) known as PEARLS (Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity, Sign of growth) as a monitoring system for financial performance designed to guide CU management in managing their financial by using 13 indicators. As for government regulations on the assessment of credit cooperatives, there was the Law of Cooperatives in 1992 and the Indonesia’s

Table 1. The Development of Cooperatives in 2010-2013

No.	Indicator	Units	2010-2011	2011-2012	2012-2013
1	The number of cooperatives	Unit	177 482	188 181	194 295
2	The growth of cooperatives	Percent	4.15	6.03	3.25
3	The number of active cooperatives	Unit	124 855	133 666	139 321
4	The percentage of active cooperatives from the total number of cooperatives	Percent	70.35	71.03	71.71
5	The growth of the number of active cooperatives	Percent	3.64	7.06	4.23
6	The number of active cooperatives	People	30 461 121	30 849 913	33 869 439
7	The growth of the member of active cooperatives	Percent	4.18	1.28	9.79
8	Capital	Rp. Mil- lion	64 788 727	75 484 237	102 826 158
9	Capital growth	Percent	8.25	16.51	36.22
10	Business volume	Rp. Mil- lion	76 822 082	95 062 402	119 182 690
11	The growth of business volume	Percent	-6.43	23.74	25.37
12	Business outcome margins (SHU)	Rp. Mil- lion	5 622 164	6 336 481	6 661 926
13	SHU growth	Percent	6.00	12.71	5.14

Source: the Cooperatives and SMEs Ministry (2013)

Cooperative and SMEs Ministerial Regulation No: 14/per/M.KUKM/XII/2009.

With the development of Kopdit Takeras that continue to grow, there is a need for performance assessment method that include both financial and non-financial performance, which also more strategic in order to improve the business performance to allow the strengthening of economic sustainability and social sustainability. Currently, Kopdit Takeras has a high level of gross non-performing loans (NPL) at 6.60 percent. This is one of the factors that restrict the strengthening of its economic sustainability and thus causing the performance of Kopdit Takeras to be poor and, in the end, hampering the strengthening of the social sustainability for its members. The performance evaluation that is merely conducted on the financial aspect, particularly NPLs, is not sufficient to strengthen economic and social sustainability and therefore more comprehensive performance evaluation is required with the consideration of the NPL factor in the financial perspective to measure financial performance and non-financial perspective in order to formulate alternative policy that become the priority of the management to improve the performance of Kopdit Takeras for further evaluation and learning. Currently, thanks to the development of science, there are many performance assessment methods available, one of them is the Balanced Scorecard (BSC). In the context of BSC as a performance assessment system, it is very relevant to conduct an adjustment toward the four perspectives proposed by Kaplan and Norton that put the financial performance as the main goal (Mutasowifin 2002).

The main problem faced by Kopdit Takeras was the improvement toward financial and non-financial performance management controlled by resources as the determinant of the entire success of performance. So far, Kopdit Takeras attempted to conduct internal and external improvement in a bid to improve its performance. According to Iksan and Sukardi (2009), the improvement toward management activities is focused on indicators both the lagging and leading indicators that have major gaps between actual performance and the standards. From 2008 to 2013, the annual growth of the loans of the members of Kopdit Takeras continued to increase, which required Kopdit Takeras to be more professional in managing the risk of loans. According to the financial reports of Kopdit Takeras, it was reported that the level of gross non-performing loans was at 6.60 percent or Rp1,897,396,609, which was a result of a total of 199 members with 3-12 months in arrears on their loans out of 939 members who have loans, which could hamper the economic stability strengthening from the financial aspect. This caught serious attention from supervisors and management in order to lower NPL to under 5 percent so that the financial performance of Kopdit Takeras could improve.

So far, in assessing its performance, Kopdit Takeras used the PEARLS analysis that was established by WOCCU, which more emphasized on financial

performance as well as the health analysis that was established by the government in the Indonesian Cooperative and Small and Medium Enterprises Ministerial Regulation No: 14/per/M.KUKM/XII/2009, and thus the non-financial performance is yet to be properly measured. The performance evaluation that merely relied on the measurement of financial performance is not sufficient to improve the performance to trigger economic and social sustainability strengthening. The analysis of company performance that merely used the financial ratio analysis as company performance indicator will make it difficult for the company to identify the factor or the problems of the decrease of working performance from non-financial perspective (Murah, 2014), which means there is a need for a performance measurement from both financial and non-financial aspects to become the foundation in formulating alternative policy that become the priority of the management to increase the performance of Kopdit Takeras. Therefore, it is suggested to use BSC to provide a broader perspective for Kopdit Takeras in relation to its competitive positioning as well as the policies and strategic decisions it takes. According to Gasperz (2013), the fundamental reason of why local or even world-class organizations select BSC as the framework of their management system is because the formula is able to identify the strengths and opportunities for improvement from various areas in organization in relation to leadership, vision, values, and focus strategy on both financial and non-financial perspective as well as easily adapting with business environment, can be applied on big and small organizations, and is proven as valid global management practices to improve organizational superiority. Based on the problem, the problem formulation that can be proposed and answered in this research are: 1) what are the factors that influence repayment loans from Kopdit Takeras members to decrease NPL under 5 percent; 2) how to design the performance measurement for Kopdit Takeras from both financial and non-financial perspective?; 3) What is the alternative policy that become the priority of the management in order to improve the performance of Kopdit Takeras?

The framework of this research paper is developed from two issues of Kopdit Takeras, namely how to strengthen Kopdit Takeras in both economic sustainability and social sustainability aspects.

With regard to the issue above, the goals of this research include analyzing the factors that influence loans repayment from Kopdit Takeras members to press NPL under 5 percent, evaluating the performance of Kopdit Takeras with the Balanced Scorecard approach, and formulating alternative policy that become the priority of the management to improve the performance of Kopdit Takeras.

The newness of this study is on the research method that was developed from two main issues, namely the strengthening of economic sustainability and social sustainability on micro-financing institutions in the form of Credit Union (CU) or known as credit

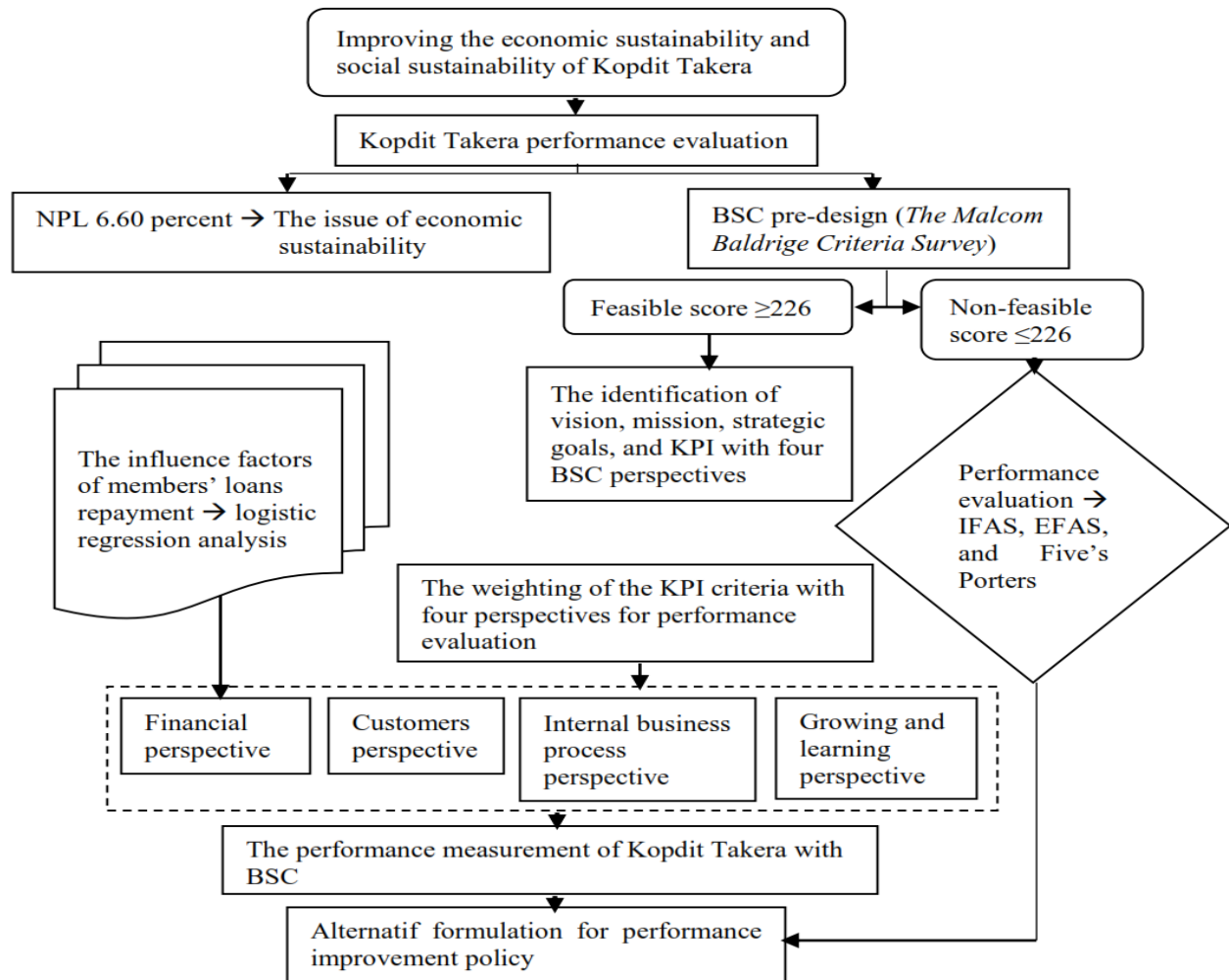


Figure 1. The Conceptual Framework

Source: Yuwono et al (2003), Gasperz (2013), Munaldus et al (2014), Danasanjaya (2003)

cooperative. These two issues became the foundation in formulating alternative policy that became the priority of the management to improve the performance of Kopdit Takerana based on performance analysis with the Balanced Scorecard (BSC) approach.

RESEARCH METHODS

This research was conducted in Kopdit Takerana, which is located on Jl. Gunung Sahari, Central Jakarta and was done in four months, from August to November 2014. The location for this research was selected in purpose with the consideration that Kopdit Takerana was developed by the National Umbrella Organization for Credit Cooperatives (Inkopdit) that located in Jakarta. Inkopdit is commissioned to supervise and become the institution of public fund insurer for financial institutions commonly referred as Credit Union (CU). The data type, method, and data source in this research are explained below.

The selection of the respondents for performance design utilized the BSC approach based on non-probability sampling method. The data was obtained

with two ways. First, the questionnaire on the BSC pre-design: The Baldrige Criteria Survey was spread to five respondents that represent the executive board, supervisor, and management of Kopdit Takerana. Second, structured interviews with questionnaire that involved ten respondents who were deemed as the experts for the identification of vision, mission, strategic goals, and KPI establishment. Furthermore, the performance evaluation designing was conducted with the making of weighting criteria with four BSC perspectives using the Analytical Hierarchy Process (AHP) approach. The selection of AHP approach was because the AHP work principle could simplify complex issues that not structured, strategic and dynamic into parts that also organized within hierarchy. The level of interests of each variables is given numeric score, subjectively on the significance of the variable and relatively in comparison with other variables (Marimim and Magfirah 2011).

Based on the probability sampling method to determine the sample of members loans analysis form that used the Slovin formula from the calculation results, the researched found the number of respondents that

Table 1. The Measurement of SEM Analysis for Model Suitability

Data type	Analysis method	Data source
1. Data Primer		
Questionnaire from the Baldrige Criteria Survey	Likert (scale 1-5)	Respondents
Questionnaire on the identification of vision, mission, strategic goals, and KPI with the BSC approach	Descriptive	Respondents
Questionnaire on the criteria of KPI weighting	AHP and descriptive	Respondents
2. Secondary data		
The results of the loans analysis form	Logistic regression	Managers
The profile of the organization and the pattern of cooperative policy	Descriptive	Executive board and managers
Other supporting references	Descriptive	Financial reports and other references

Source: compiled by researcher, 2014

should be analyzed consisted of Takeras members that had loans as many as 100 people out of 993 members who had loans.

The analysis used logistic regression to test both partially and simultaneously the factors that influence the loans repayment from the members. The reason of using this tool was because the logistic regression model also did not require the sample of both performing loans and non-performing loans to be comparable (Ghozali, 2005 in Januarti and Nasir, 2006). In addition, the classification level of the logistic regression analysis is better in comparison to other statistics tools and not sensitive toward the sample with different frequency (Maddala, 1983). The logistic regression is an analysis model to find out the influence of predictor variables with metric scale (continuous) or categorical scale (nominal) toward the response variable with categorical scale. The estimation of the model is (Sharma and Subhash 1996) :

$$Li = \ln \left[\frac{p}{1-p} \right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

Notes: Li: response variable, scored 1 and 0, β_0 : constants, β_1 : the coefficients of predictor variable 1, β_k : the coefficients of predictor variable k, X_1 : predictor variable 1, X_k : predictor variable k.

The logistic regression equation for this research is:

$$Y = b_0 + b_1 AGE + b_2 GEN + b_3 JOB + b_4 INC + b_5 OBJ + b_6 PLA + b_7 DUR + b_8 COL + b_9 INST + b_{10} INT e$$

“Y” is the performance level of loans repayment (1= performing; 0= non-performing). The dependent variable (Y) is the variable that illustrate the quality of loans. The score of this variable is 1 (one) if performing or no arrears or the collectability category 1 and scored at 0 (zero) if non-performing or in arrears with collectability category 2 or in special attention (in arrears for 90 days), collectability 3 or not performing enough (in arrears for 120 days), collectability 4 or in question (in arrears for 180 days), and collectability 5 or non-performing (in arrears for more than 180 days).

X_n is the independent variable, which was determined based on the variables listed on the loans analysis form of Kopdit Takeras that consisted of X1 AGE that is the age number as independent variable (X1). The age aspect itself is classified into three categories, namely youth (≤ 30 years old) scored at 1 (one), productive ($>30-58$ years old) scored at 2 (two), non-productive age (>58 years old) scored at 3 (three). Meanwhile, X2 GEN that is gender is the variable independent of gender (X2), which classified into two categories, namely male that is scored at 0 (zero) and female that is scored at 1 (zero). X3 JOB means job. The variable independent of job (X3) is classified into 6 (six) categories, namely civil servants scored at 1 (zero), employees scored at 2 (two), entrepreneurs valued at 3 (three), housewives valued at 4 (four), university students valued at 5 (five), and freelancers valued at 6 (six).

X4 INC is the income as independent variable (X4) where income levels are classified into three categories, namely small income level ($\leq Rp 3.000.000$) valued at 1, medium income level ($>Rp 3.000.000-Rp 6.000.000$) valued at 2 (two), and big income level ($>Rp6.000.000$) valued at 3 (three). X5 OBJ is the purpose of loans. The independent variable (X5) of the loans purpose is classified into 6 (six) categories, namely for productive purpose valued at 1 (one), health purpose valued at 2 (two), housing purpose valued at 3 (three), education purpose valued at 4 (four), stock capitalization purpose valued at 5 (five), and consumption purpose valued at 6 (six).

X6 PLA is size of loan ceiling. The size of loan ceiling is around Rp 500,000-Rp 550,000,000. The independent variable (X6) of the loan ceiling is the obligation of the debtors with $<Rp5,000,000$ valued at 1 (one), Rp5,000,000 – Rp15,000,000 valued at 2 (two), $>Rp15,000,000-Rp25,000,000$ valued at 3 (three), $>Rp25,000,000 - Rp50,000,000$ valued at 4 (four), $>Rp50,000,000$ valued at 5 (five). X7 DUR is the term of loans as independent variable (X7). The term of loans is the period of loans to members of the cooperative with 3 (three) categories namely <12 months valued at 1 (one), 12-24 months valued at 2 (two), and >24 months valued at 3 (three).

X8 COL is collateral independent variable (X8). Collateral is classified into three categories, namely

small collateral valued at 1 (one), compatible collateral valued at 2 (two), bigger collateral 3 (three). X9 INST is installments as independent variable (X9). Installments are classified into 3 (three) categories, namely <Rp500,000 valued at 1 (one), >Rp500,000-Rp1,000,000 valued at 2 (two), and >Rp1,000,000 valued at 3 (three). X10 INT is the interest rate that is determined by the annual effective interest rate that determined for each members as independent variable (X10). The interest rate is the annual effective interest rate that is set by members with the category of <19.20 percent valued at 1 (one), >19.20 - <24 percent valued at 2 (two), 24 percent-36 percent valued at 3 (three).

In conducting goodness of fit test in logistic regression the researcher used Hosmer and Lemeshow Test. The foundation of the decision making was the goodness of fit test that was measured with chi-squared value: if the probability >0.05 then H₀ is not rejected. However, if the probability <0.05 then H₀ is rejected. In order to find out the significance of the model and free variables that were analyzed, there are two tests that could be used, namely (Nachrowi and Usman, 2002): a) The G test to examine every models with the following statistics test: If H₀ is rejected when $G > X^2_{\alpha, p; \alpha}$ is on significant level. If H₀ is rejected, the model A is significant on the significance level α ; and b) The Wald Test to examine the significance of each free variables, with statistical tests as follows: H₀ is rejected $W_j > X$; with α is the significance level that is selected. H₀ rejected means the parameter is statistically significant on α significance level.

The designation of the performance evaluation of Kopdit Takeru with the measurement of cooperative readiness using BSC with the questionnaire of the Baldrige Criteria survey. According to Tuttle (2002), the Baldrige Criteria is a measurement system for management performance that will function as the direction for the implementation process of strategic plan, and will measure the real condition from the whole performance of the company. As a survey tool for performance measurement, the Baldrige Criteria is flexible and can be used for various cases in system development and function as initial evaluation tool to determine the current condition of company performance (Danasanjaya, 2002). According to Yuwono et al (2002), the questions in the Baldrige Criteria include key indicators as framework to assess performance; organization, customers, products and service, operational, human resources and finance. This survey will help the company in harmonizing existing resources, improving communication, productivity, and effectiveness as well as reaching strategic goals.

In this research, the Baldrige Criteria was used as the opening survey tools to measure how far the readiness of Kopdit Takeru to implement the BSC concept. From the measurement results, we would find out the real condition and the effectiveness of the existing performance evaluation system, as well as what steps that should be taken by Kopdit Takeru (Danasanjaya 2002). For the data processing, the Baldrige Criteria uses the calculation scale as follows (Yuwono et al, 2002):

The total of questions number 1-5 _____ x 2 = _____

The total of questions number 6-40 _____ x 1 = _____

The total of questions number 41-50 _____ x 2 = _____

After the results of each questions were calculated, the researcher would find the mean (average) of the entire questionnaire a (median/middle value) with the formula :

$$\mu = \frac{\sum_{i=1}^n X_i}{n}$$

Notes

X_i = The total score of each questions, n = The number of questions

After obtaining the average middle value from the Baldrige Criteria questionnaire, the next step would be interpreting the value with the following requirement (Yuwono et al, 2002): 1) Score between 276-325: The company already possesses strategic planning, performance evaluation system, as well as structural readiness and decent system, and therefore could shorten the BSC designation process comprehensively; 2) Score between 226-275: the organization has a decent and systematic performance evaluation approach, but possesses weakness in measuring the satisfaction of the customers and employees. If the company wants to design BSC to the arrangement of team scorecard, individual scorecard and human resources scorecard, then it would need improvement on the system and procedure in the customer service and human resources aspects; 3) Score between 176-225: there is an obscurity on strategy, work program, and performance evaluation system for the managerial level. Before designing BSC, the company strategy should re-formulated and it should fix the work program and internal procedure; 4) Score between 175 or below: the organization is yet to have enough readiness in the aspects of structure and system, so therefore before entering the BSC designation step, the existing strategy should be totally revised in order to trigger the change in paradigm on the management of organization/company; 5) If the score < 226, this means that the cooperative is not yet feasible to apply BSC, then the (c) and (d) stage is not implemented. As for the alternative advanced step, it could use IFAS, EFAS, and Five Porters analysis; 6) If the score score ≥ 226 , a data analysis on vision, mission, strategic goals, and KPI attributes should be applied for performance measurement with BSC based on the results of the interviews with the respondents with the use of questionnaire, a) the determination of the weight of KPI with BSC perspective for performance measurement with AHP, b) the analysis on the results of performance measurement of Kopdit Takeru. c) the formulation of alternative policy that become the priority of Kopdit Takeru.

RESULT AND DISCUSSION

The factors that influence the loans repayment from the members consist of ten variables that were analyzed with the use of binary logistic regression with SPSS 17.0. software. On the Table 3, we could see that the p-value that was obtained was 0.455. On the real standard was

Table 3. Hosmer and Lemeshow Test

Step	Chi square	Df	Sig
1	7.786	8	0.455

5 percent (trust level 95 percent). The p-value (0.455) >α (0.05), and thus H0 was rejected because the model that emerged was feasible (there was no real difference between the classification that was predicted with the classification that was observed).

Table 4 indicated that the real standard of 5 percent, the G2 value of 80.740 with p-value (0.000) obtained was smaller than α (0.05). Therefore, it can be concluded that at least there was one free variable that influence the performance of the repayment (attached variables), and thus rejecting H0.

On Table 5, it was apparent that there were four free variables measured with the Wald test that have smaller p-value than α (0.05) on real standard of 5 percent, namely: age, income, loan ceiling, and interest rate. With that, it can be concluded that these variables significantly influenced the performance of loans repayment. Meanwhile, free variables that did not have real influence toward the loans repayment performance were gender, job, the purpose of the loans, collateral, repayment period, and installments.

On the free variable of X2 AGE (age), it possessed negative regression coefficient of -2.129, which means that the age factor negatively influenced the loans repayments, where the older the age would make the chance of the loans repayment to be consistent become smaller. The p-value 0.011<0.05 indicated that age significantly influenced the performance of loans repayment in real standard of 5 percent. The odd ratio

Table 4. Omnibus Tests of Model Coefficient

Step 1	Chi-square	Df	Sig
Step	80.740	10	0.000
Block	80.740	10	0.000
Model	80.740	10	0.000

Table 5. The factors that influence the performance of loans repayments

Variable	Coefficient	Sig	Odd ratio
X1 GEN	0.654	0.360	1.923
X2 AGE	-2.129	0.011	0.119
X3 JOB	-0.078	0.814	0.925
X4 INC	2.127	0.011	8.390
X5 OBJ	0.257	0.245	1.293
X6 PLAF	-1.404	0.035	0.246
X7 COL	0.444	0.307	1.558
X8 DUR	0.671	0.356	1.957
X9 INST	1.105	0.153	3.018
X10 INT	-2.436	0.000	0.088
Constant	1.626	0.553	5.083

of 0.119 indicated that the age group >30 years old possessed bigger chance in terms of non-performing loans repayment 0.119 times.

The free variable of X4 INC (income) was at positive value of 2.127, which means that income positively influenced the performance of loans repayment. The p-value of 0.011<0.05 indicated that income significantly influenced the performance of loans repayment in real standard of 5 percent. The odd ratio of 8.390 means that members with higher income would have better change of 8.390 times in consistently repaying their loans in comparison with members with lower income.

The free variable of X6 PLAF (loans ceiling) possessed a negative regression coefficient at -1.404, which indicated that it had negative influence toward the performance of loans repayment. The p-value was at 0.035<0.05. This indicated that loans ceiling significantly influenced the consistency of loans repayment on real standard of 5 percent. The odd ratio of 0.246 indicated that the higher loan ceiling would reduce the change of the loans repayment to become consistent as many as 0.246 times in comparison to lower loans ceiling.

The interest rate negatively influenced the consistency of loans repayment (free variable X10 INT) because it had negative regression coefficient of -2.436 with p-value of 0.000<0.05, which indicated that interest rate significantly influenced the consistency of loans repayment on real standard of 4 percent. The odd ratio of 0.088 means that members with higher interest rate would have 0.088 times bigger change in the inconsistency in loans repayment.

The regression equation model to predict the consistency of loans repayment by members used the binary logistic regression model:

$$Y = 1,626 - 2,129AGE + 2,127INC - 1,404PLAF - 2,436INT$$

With the discovery of the four variables, Kopdit Takeru could establish the alternative strategy that become the priority in order to anticipate the risks of loans in a premature manner by conducting deeper analysis that is supported by valid and accurate data as well as the latest information about the characteristics of the members when deciding creditworthiness, including the monitoring on the economic condition of the members whose age >30 years old with low income, but with high loans ceiling and interest rate, in order to find out the ability of the members in fulfilling their obligations. This is known by observing the number of family members who become their responsibility and monthly income, as well as the households economy. This would require Kopdit Takeru to be more familiar and acquainted with the condition of its members through financial literacy activities conducted periodically. With the existence of this monitoring system, Kopdit Takeru could immediately avoid and early anticipate the problems that could decrease the quality of the loans of the members. One of the aspects that could help during difficult condition and recession and has positive impact on economic capability is financial literacy. Financial literacy is the capability to both understand and analyze financial choices, future

plans, and the right response during difficult condition. This capability could influence the condition of life and work as well as very useful in anticipating the future and improving the family income (Taft et al,2013).

In order to measure the readiness of Kopdit Takera in applying BSC, the researcher conducted survey with the format of the Baldrige Criteria (Danasanjaya 2003) by distributing the first batch of questionnaire on five respondents. After the score every questionnaire was calculated, the researcher found the mean (middle value) as the following:

$$\mu = \frac{\sum_{i=1}^5 259 + 225 + 219 + 213 + 220}{5} = 227,20$$

Based on the interpretation of the value scale in Chapter III, the score 227.20 was in the range between 226 and 275, which means that the company already possessed a systematic performance evaluation approach, but with weaknesses in the measurement of the satisfaction of customers and employees. This score means that, should the cooperative want to design BSC to the arrangement of team scorecard, human resources scorecard, and BSC target projection, it would need an improvement on both the system and procedure in the field of members and human resources service. Based on the score that was obtained, the cooperative was in the feasible category in directly designing BSC without re-formulating the company strategy. After the generated score from the Baldrige Criteria was feasible, the next step would be the identification of BSC through addressing the opinions of respondents through Q&A discussion with questionnaire with the brainstorming discussion technique between respondents and researcher.

A vision is the comprehensive statement on the ideal picture that an organization strive to achieve in the future (Gaspersz, 2013). The vision of the cooperative before the adjustment was "Takera Credit Cooperative that is healthy, strong, professional, and independent (SEKOPRIMA)." During the discussions with the respondents, the phrase did not contain the four perspectives of BSC, and therefore in the discussions the respondents were suggested to come with an idea for vision statement that include the four perspectives of BSC. After the discussion process with respondents, the idea for additional words were "to become a cooperative that is healthy, strong, professional, trusted, and independent (SEKOPRIMA) in order to accomplish the prosperity of its members."

Mission is the business statement from a cooperative that state the business reasons about the existence of the cooperative. Before the discussion took place, the mission of the cooperative did not state the results, period of time, and measurement. From the results of the discussion, the mission of the cooperative received additional idea since the previous two missions, namely to increase the independence of its members in managing its financial and prosperity and to strengthen the network of credit cooperatives in Jakarta and even Indonesia.

The mission statements above did not illustrate the four perspectives of BSC, and therefore from the results

of the discussions, it was suggested that the mission statement to be improved with additional missions that referred to the four perspectives of BSC, namely a) to improve the independence of its members in terms of financial and prosperity management, b) to fulfill the health aspect of the cooperative, c) to increase the market share of cooperatives, d) to provide quick and high-quality service, e) to have professional human resources, f) to strengthen the network of credit cooperative.

Values are the principles of an organization in order to control the journey of the organization that guide them into development as well as implementing every policy and action. In order to create values, micro-financing institutions must create firm decisions that emphasize on normative arguments as the creation mechanism of positive values creation that they would create and types of clients they desire to be served and how they will intensively serve their clients (Vinneli, 2002). As for the results of the discussion, the values of the cooperative were: Integrity, Independent, Trusted, Professional, and Member Satisfaction.

A purpose indicate how the actions and results that were desired could be achieve as the broad statement of what the organization would accomplish. From the results of the discussions, the purpose of the cooperative that was based on the four perspective of BSC was found, namely: a) Financial perspective: increasing the growth of member savings, b) Customer perspective: providing satisfactions in the form of the increase in dividends and developing trust between members and the cooperative and encouraging the growth of the businesses of the members, c) Internal business process perspective: providing quick and high-quality service toward the members through the management of the assets of the members and innovation of savings products, d) Learning and growth perspective: improving the competence of the staff and ensuring the integrity and the accountability of the staff in providing service.

In the next stage, the researcher organized a discussion on the establishment of strategic goals, KPI, targets, and strategic initiatives with the supervisors, executive board members, and the managers of Kopdit Takera with the use of questionnaire. The results of the discussion generated 14 KPIs to support the achievement of strategic goals as seen on Table 6.

The next stage was to compile a strategic map in order to see the cause-effect relationships of vision, mission, and strategy of the company as well as various strategic goals of the company and the benchmarks in each perspectives. Based on the results of the data processing, the strategic map can be seen on Figure 2.

On Figure 2, it was obvious how the staff competence would lead to the improvement on the internal business process and affect the improvement of service to the members, and thus would provide the improvement on the financial results that, in the end, contribute to the achievement of both vision and mission of Kopdit Takera (on figure 3).

Kaplan (2010) explained cause-effect relationship as the business performance flow from the lower level

Table 6. KPI, targets, and strategic initiatives from strategic goals

Perspective	Strategic goal	Key performance indicator		Target	Strategic initiative
		Lag indicator	Lead indicator		
Financial	Reducing negligent credit losses >12 months	Protection	P1. The reserve fund for negligent credit risk/non-performing loans total >12 months P2. The reserve fund for net NPL/NPL total 1-12 months	P1=100% P2=35%	Conducting credit-rating, customer relation, and handling negligent credit step-by-step
	Security, health, and profit	Effective financial structure	E1. Net account receivable / Total assets E5. Non-stock savings/total assets E6. External loans/Total assets E9. Net institutional capital	E1=70-80% E5=70-80% E6=5% E9=>10%	Increasing loan portfolio
	Reducing the negative impact of profit gains and solvency	Asset quality	A1. NPL total/Account receivable total A2. Non-producing assets/ Total assets	A1=<=5% A2=<=5%	Providing attractive and competitive savings products
	Increasing the income and reducing the costs of debts and capital;	Rates of return on cost	R7. The financial cost: Stocks savings of the members/the average of stocks savings R9. Operational assets/average assets	R7 > inflation R9 =5%	Reducing the waste of managerial cost from assets and utilizing productive assets
	Increasing cash reserves	Liquidity	L1. Liquid Investment+Liquid Assets – Short-term obligations/ non-stock savings	L1 minimal 15%	Possessing strong liquidity reserves to fulfill savings withdrawal and short-term obligations (< 30 days)
	Increasing the growth of members and assets	Signs of Growth	S10. Growth of members S11. Growth of total assets	S10>12% S11 above inflation rate	
Customers	Improving the quality of the members	The loyalty of the members	The number of members who fulfill obligations and use products	65%	Developing the latest IT-based products and service
	Improving the satisfaction of the members	Members Satisfaction Index	The questionnaire on member satisfaction	3 (1-4 satisfaction scale)	Accelerating the promotion of member network, member education, and member satisfaction evaluation
	Improving the growth of the members	The growth of new members	The number of new members	20%	Conducting socialization on society groups and institutions
Internal business	Developing cooperative products	Generating new products	New products amount plan	2 products	Cooperation with agencies, learning from competitors, and routine socialization
	Improving cooperative SOP	Service error level	SOP that is followed	100%	Training the staff members and creating performance check list
	Improving installment collectability	Credit installment consistency	The consistency of the loans repayment	97%	Creating computer application tool for the analysis of creditworthiness, member development, periodic visit
Growth and learning	Increasing staff competence	Staff productivity	Work agreement form evaluation	3 (1-4 good scale)	Creating individual performance target and routine training
	Improving staff work satisfaction	Staff satisfaction index	Satisfaction statement from	3(1-4 satisfaction scale)	The development of an integrated human resources system to generate an optimal performance for the management, supervisor, and staff that have the competence and integrity based on vision-mission-value

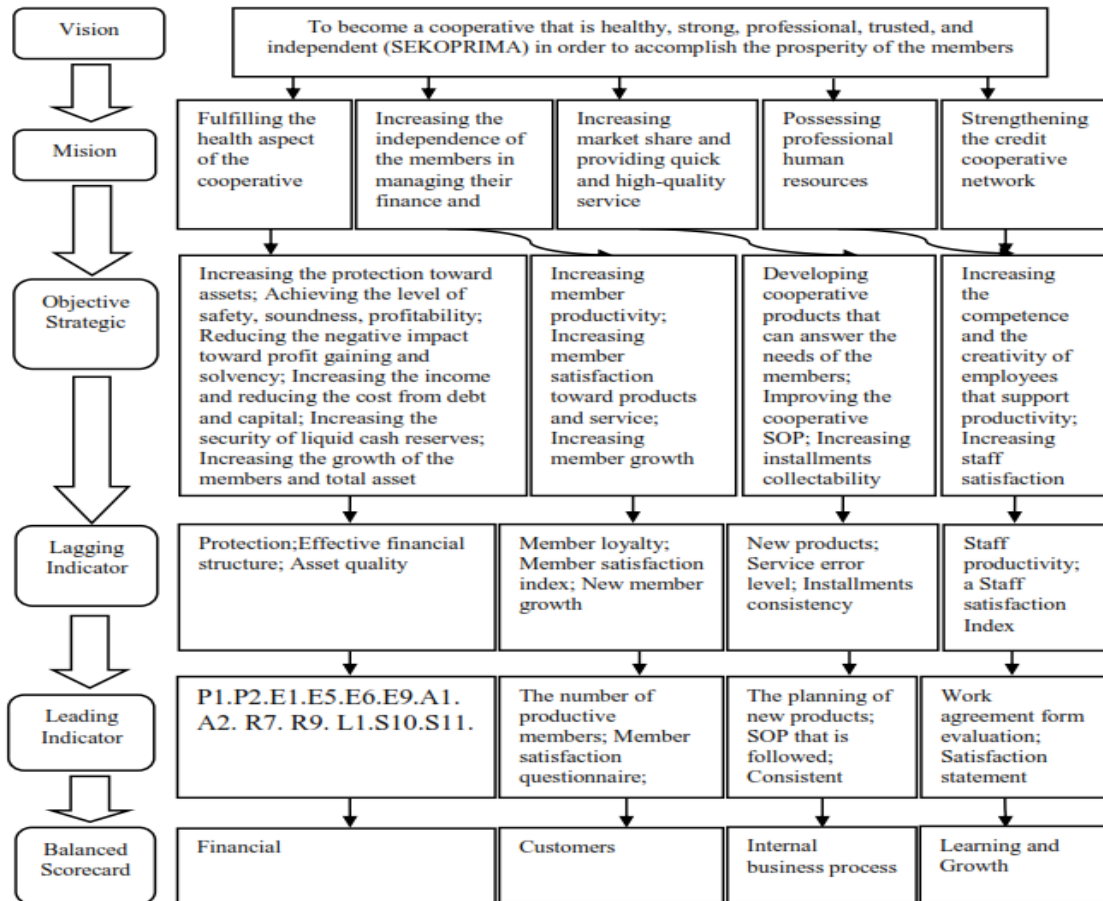


Figure 2. The Strategic Map of the Relations Between Vision, Mission, Strategic Goals, and KPI

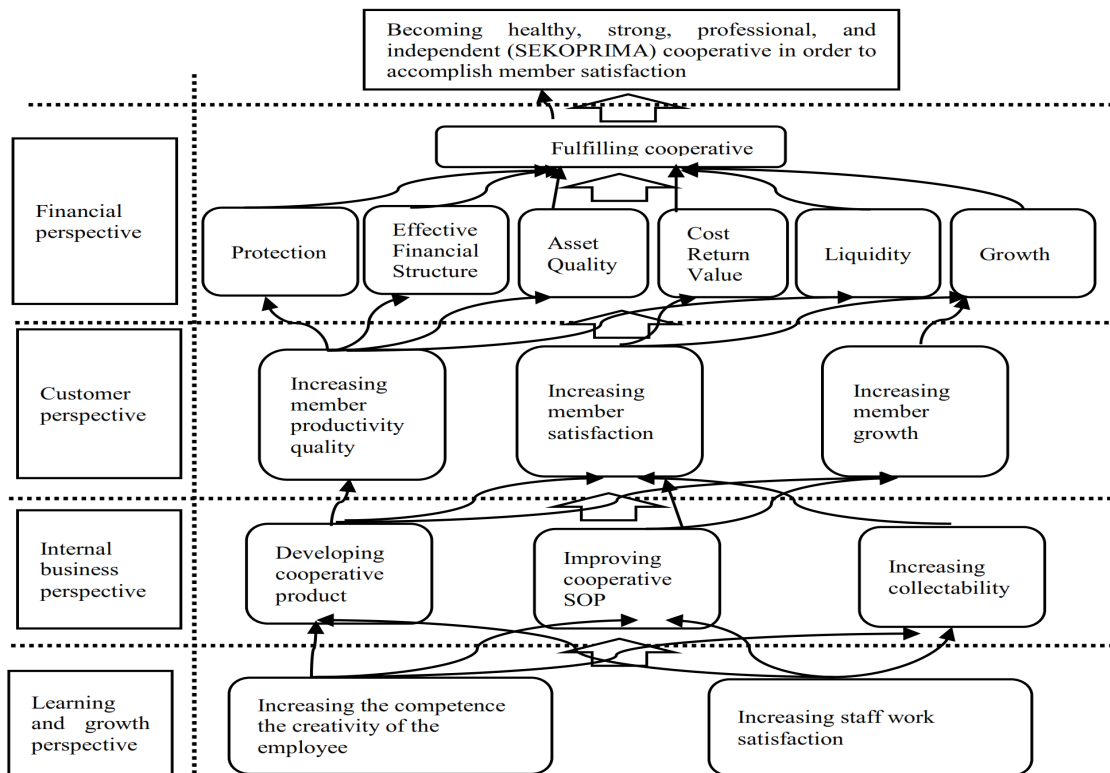


Figure 3. The Cause-Effect Relationships Between the Four Perspectives of BSC

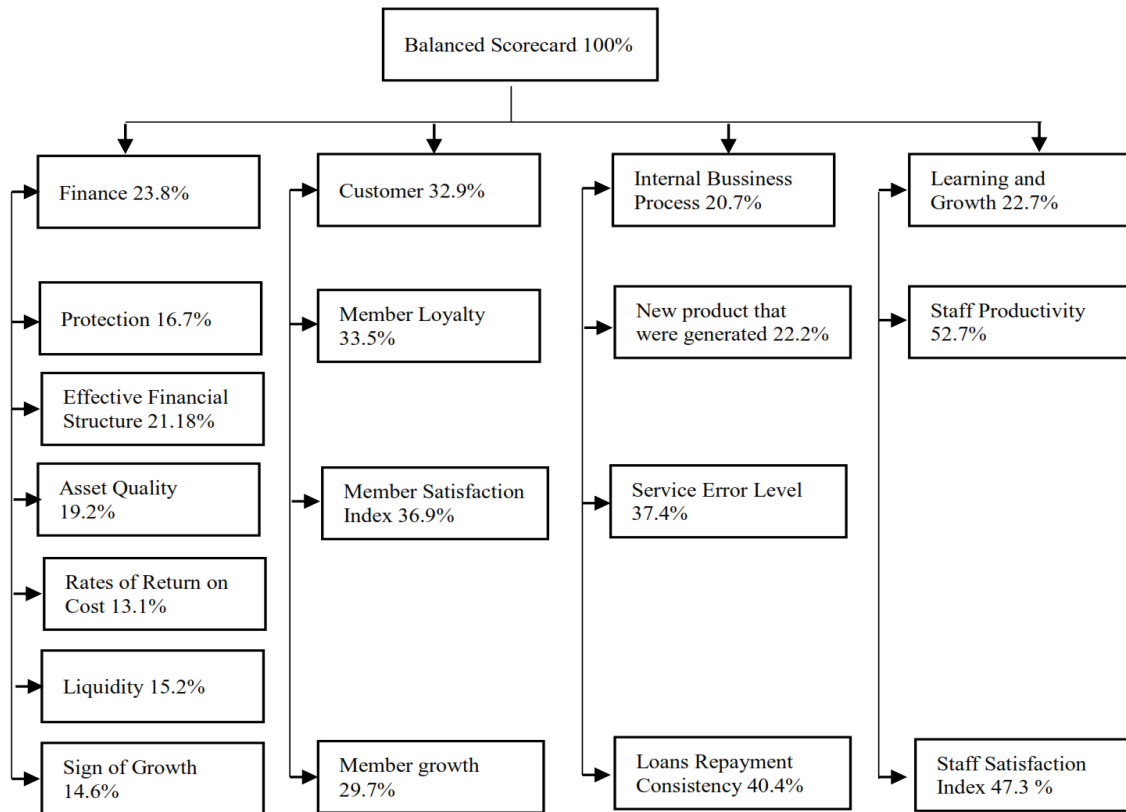


Figure 4. The Scoring Criteria Based on BSC Weighting Results

to the higher level in or between perspectives. The cause-effect relationship indicates one side as leader or controller, producing output or effect on the other side.

The BSC weighting justification determination assessment is using AHP through the distribution of questionnaire toward 10 respondents. The results of the data processing with AHP has the level of inconsistency ratio at 0.01. The data processing process is using the Expert Choice decision-making software, with the average score of geometric mean from the entire respondents in the BSC weighting arrangement can be seen on Attachment 1. The geometric mean was later processed again using the Expert Choice 2000 that generated the weighting criteria that can be seen on Figure 4.

After the establishment of KPI weighting criteria was finished, the next step was to conduct performance measurement simulation in order to evaluate the performance achievements from each KPI. The KPI achievements can be discovered through KPI performance index calculation with the following formula (Kaplan dan Norton 2003):

$$KPI\ Index = \frac{Hasil\ Aktual}{Target} \times 100\%$$

The next step was conducting a discussion with the executive board, supervisor, and the management of the cooperative to determine the success rate of the achievements of each index with the range scale to determine the performance of each KPI, as seen on Table 7.

There are four notes in reading the Table 7 above. Firstly, the performance index scale <60: the cooperative performance is deemed poor, so therefore it needs improvement on KPI with rating <3. This range means that cooperative is yet to possess efficient and effective structure and system, so therefore cooperative needs to totally revise its strategy architecture to prompt change in paradigm in cooperative management. Secondly, performance index scale ≥60-80: the cooperative performance is deemed moderate. Cooperative already possess strategic planning and performance evaluation system, but it still needs improvement on KPI with rating <3. This scale range means there is still obscurity in the strategy, work program, and performance evaluation system. The company strategy should be re-formulated and it should fix both the work program and internal procedure.

Third, the performance index scale ≥80-100: the company performance is deemed good because the company has good and systematic performance evaluation approach, but it needs improvement on the KPI that still has the rating of 3. This scale range means

Table 7. The Range of Performance Evaluation

Performance index range	Scale description	Rating
<60	Poor	1
≥60-80	Moderate	2
≥80-100	Good	3
≥100	Very good	4

the cooperation needs improvement on both the system and procedure in customer and human resources service. Fourth, the performance index scale ≥ 100 : the cooperative performance is very good. This scale range means that cooperative already has strategic planning, performance evaluation system, as well as structural readiness and very decent system.

The next stage was performance measurement with the use of the BSC approach as seen on Table 8. It was visible that the final score of the Kopdit Taker performance is at 2.58, which means that it fell into the "moderate" performance assessment category. With the KPI category and performance index scored poorly on Financial Perspective, namely Protection and Asset Quality, whereas on Customer Perspective namely Member Loyalty and Member Growth, and Internal Business Process Perspective namely the consistency of loans repayment. Meanwhile, on the Learning and Growth Perspective, the KPI with moderate performance index is the staff productivity (on table 8).

The results of the analysis toward the factor that influenced the repayment of member loans and performance evaluation results with the use of BSC approach became the foundation in creating alternative strategy formula that become the priority of Kopdit Taker in order to strengthen economic sustainability and social sustainability of Kopdit Taker. One of the factors that hamper the economic sustainability is the high level of NPL at 6.60 percent, which also hamper the improvement of social sustainability. This is supported the discovery of one of the KPIs on financial perspective, which is Asset Quality with performance index of 40 percent, which means poor performance, and therefore there is a need to conduct another analysis toward the factors that influence non-performing loans, since the core business of Kopdit Taker is financing, and thus high level of NPL will strongly influence the financial performance of Kopdit Taker.

Based on the results of performance evaluation with the use of BSC as seen on Table 8, there are two KPIs with weaknesses, namely Protection with performance index of 44 percent, which means poor percentage and Asset Quality with performance index of 40 percent that means poor performance. Therefore, we can formulate the alternative policy that become the priority of Kopdit Taker management for performance improvement. In order to increase the performance index on Asset Quality KPI, Kopdit Taker need to press NPL under 5 percent with the following ways: a) tracking loans provided including monitoring toward the characteristics of the members and the characteristics of loans with the most influence toward loans performance, namely age, income, loans ceiling, and interest rate variables. This means that Kopdit Taker need to conduct a monitoring toward the economic condition of the members > 30 years old with low income, but with high loans ceiling and interest rate, b) revisiting the loans SOP manual and updating the loans analysis form with adding the 5C element, c) distributing loans that adjusted to member conditions with providing loans product for seasonal business, during certain holidays, savings product with

particular ceiling that not too large and limited time in the form of promotional savings, d) loans should be given to the members that joined a group in a "common bond", e) conducting periodical financial literacy activities.

In addition, in order to improve the performance index on Protection KPI, Kopdit Taker must ensure the provision of risk reserve and funds and the provision of negligent lending used to close the total of non-performing loans 1- >12 months by anticipating loans credit early and increasing income through interest rates gained from lending with the following alternative strategy: a) creating monthly targets to increase the activity of collecting and distributing funds so that the income from interests rate can increase, b) the identification of income sources to increase income, for example administrative cuts, late repayment fee 1 percent, c) Organizing the activity that can lead to additional costs such as late repayment, error on the bookkeeping, as well as conducting cost analysis that is classified into two categories, namely interest costs (consisted of various savings, debts, and equity capital if existed) and costs other than interest rate (consisted of salary, office operations, bad-debts, depreciation, training, maintenance of fixed assets, business development, social cost), d) maximizing profits from productive asset investment that made into work capital in financial sector that both profitable and in accordance with government regulation.

After conducting performance evaluation as seen on Table 8, it was discovered that there are two KPIs with weaknesses, namely Member Loyalty with performance index of 58 percent, which means poor performance and the Growth of New Member with performance index of 13 percent that means poor performance. Kopdit Taker mainly prioritize the improvement of its service to the members by the formulation of alternative policy that become priority to strengthen economic sustainability and social sustainability as the following.

In order to improve the performance index on the Member Loyalty KPI, the alternative policy is as follows: a) an inventory on the member necessity list through suggestion box, survey on member satisfaction and needs, group meetings, management visit to members, in order to encourage members to fulfill obligations and utilize products, b) rewarding members who are actively utilizing products through lottery or repayment of loans cuts, c) allocating special loans for the member welfare on housing or business space with low annual interest rate, d) improving good and professional impression with the creation of market goods that attached on both the inside and the outside of office in professional manner by using the photos of the members that illustrate member satisfaction and the superiority of the cooperative, e) creating the latest member database that include their identity based on personal characteristics, economic characteristics, and activity characteristics in the cooperative, as a foundation for the cooperative to fulfill the needs and the desire of the members, f) in order to increase the performance index of the

Table 8. The performance measurement with the use of BSC

No	KPI	Definition	Target	Actual Performance	Performance Index (%)	Unit	Rating	Weight (%)	Score
1	Financial Perspective (23.8%)								
	Protection	P1 ; P2	P1=100% P2=35%	P1=59.29% P2=0.00%	44	Percent	1	16.7	0.17
	Effective Financial Structure	E1; E5; E6 ; E9	E1=70-80% E5=70-80% E6=5% E9=>10%	E1=82.39% E5=45.83% E6=13.63% E9=0.07%	81	Percent	3	21.1	0.63
	Asset Quality	A1 ; A2	A1= \leq 5% A2= \leq 5%	A1=6.60% A2=5.48%	40	Percent	1	19.2	0.58
	Rates Of Return On Cost	R7 ; R 9	R7>inflation R9 =5%	R7=9.14 R9=5.14%	107	Percent	4	13.1	0.52
	Liquidity	L1	L1 minimal 15%	L1=59.65%	398	Percent	4	15.2	0.61
	Signs Of Growth	S10 ; S11	S10>12% S11 > inflation	S10=2.68% S11=20.13%	112	Percent	4	14.6	0.58
	Sub final score								2.71
	The Subtotal of Financial Perspective Performance = Sub Final Score x Perspective Weight Percentage							2.71 x 23.8%	0.64
2	Customer Perspective (32.9%)								
	Member Loyalty	The number of members who fulfill obligations and utilize products	65%	38%	58	Percent	1	33.5	0,34
	Member Satisfaction Index	Questionnaire on member satisfaction	3 (satisfied from 1-4 scale range)	3,3	110	Percent	4	36.9	1,48
	Growth of new members	The number of new members	20%	2.6%	13	Percent	1	29,7	0,30
	Sub final score								2.11
	The Subtotal of Financial Perspective Performance = Sub Final Score x Customer Perspective Weight Percentage							2.11 x 40.5%	0.69
3	Internal Business Process Perspective (20.7%)								
	New products generated	The plan of the number of new products	2 products	2 products	100	Percent	4	22,2	0,89
	Service error level	SOP that is followed	100%	100%	100	Percent	4	37,4	1,50
	The consistency of loans repayment	The consistency of loans repayment	100%	93,4%	34	Percent	1	40.4	0,40
	Sub final score								2.79
	The Subtotal of Financial Perspective Performance = Sub Final Score x Internal Business Process Perspective Weight							3,47 x 20.7%	0,58
4	Learning and Growth Perspective (22.7%)								
	Staff Productivity	Work Agreement Form Evaluation	3,5 (good from 1-4 scale)	2,5	71	Index	2	52.7	1,29
	Staff satisfaction index	Satisfied statement from staff	3(satisfied from 1-4 scale)	3,4	113	Index	4	47.3	1,41
	Sub final score								2.95
	The Subtotal of Financial Perspective Performance = Sub Final Score x Learning and Growth Perspective Weight							3,34x22.7%	0,67
5	Performance Evaluation Total (subtotal finance+customer+Internal Business+learning & Growth)				0,64+0,69+0.58+0.67= 2,58		2,58 (Moderate)		

Growth of New Members, Kopdit Takeru should create the priority alternative policy as the following, g) capturing new members by accelerating marketing campaign to companies and market with the creation of groups with 'common bond', h) offering reward for members who successfully increase the number of their group members, i) recruiting product and loans marketing staff whose active and able to communicate the presentation of cooperative products.

After conducting the performance evaluation as seen on Table 8, there was one KPI with weaknesses, namely Loans Repayment with performance index of 34 percent that means poor performance. As for the formulation of alternative policy that become the priority for the strengthening of economic sustainability and social sustainability, to increase the performance index of the loans collectability level, Kopdit Takeru should implement the following alternative policy: a) providing loans with shuttle system, b) in the long term, the loans interest rate should be reduced after the targets of SHU achievements and asset growth are achieved. This will encourage more members who seek for loans, but certainly the income from interests rate will decrease. This can be resolved with increasing the number of loans to many members, c) Holding interests rate discounts as promotional products for members who are able to repay on time with certain amount of loans, d) Hiring special staff to work as financial counselor for members with troubles on their loans, so there will be a periodical monitoring process toward members, d) providing debit cards that can be used on the cooperative's Automated Teller Machine (ATM) or in cooperation with banks.

Based on the results of the performance evaluation, as seen on Table 8, the perspective of growth and learning has weaknesses on staff productivity KPI with performance index 71% that means the performance is moderate. This can be resolved with the establishment of alternative policy that become the priority to strengthen economic sustainability and social sustainability, as the following: a) conducting survey and consulting with the cooperative management in order to obtain inputs on the needs for the improvement of staff competence by allocating special budget, b) providing access to strategic information toward staff through the utilization of management information system that can be used by staff to support their performance, to facilitate and to speed up staff work, c) creating staff individual performance agreement form that is reviewed every four months to develop the commitment and as evaluation material, as well as staff productivity benchmark, d) developing remuneration package for staff with grade system, for example with range 1-10 that is determined based on the criteria of activity, success, positions, and strategic level.

CONCLUSION

Based on the field research, it can be concluded that: first, the factors that influence the loans repayment from Kopdit Takeru members are age, income, loans ceiling, and interests rate. Second, the results of the performance

evaluation of Kopdit Takeru with BSC approach obtained the total score of 2.58 (moderate) from the scale of 1-4. The details of the performance index that have weaknesses, include: (1) There are two financial perspective KPIs with weaknesses, namely Protection with performance index of 44 percent that means poor performance and Asset Quality with performance index of 40 percent that means poor performance index. (2) From the Customer Perspective, there are two KPIs with weaknesses, namely member loyalty with the performance index of 58 percent that means poor and the growth of new members with performance index of 13 percent that means poor. (3) On the internal business process perspective KPI, there is weakness on the consistency of loans repayment with performance index of 34 percent that means poor performance. (4) On the growth and learning perspective KPI, there is weakness on staff productivity with performance index of 71 percent that means moderate. Third, the formulation of the alternative policy that become the priority of the Kopdit Takeru management for performance improvement, namely: (a) Loans are provided to members who joined groups with "common bond." Conducting financial literacy as well as monitoring the economic condition of the members >30 years old with low income but high loans ceiling and interests rate. Allocating funds to compensate the loss from negligent loans from the profit of interests rate and productive asset investment. Managing activities that trigger additional costs. (b) Encouraging members to utilize products through annual survey, suggestion box, questionnaire, group meetings, management visit to members. Providing debit cards. Rewarding active members. And conducting financial literacy activities. Hiring special staff as financial counselor and marketing staff. (c) Providing shuttle service. In the long-term, interests rate should be decreased after the targets of SHU and assets growth achievement are achieved. (d) The improvement of staff competence. Providing access to strategic information. Creating performance agreement form. Developing remuneration package.

Meanwhile, the suggestions that can be given are, first, the cooperative need to conduct additional workshops to apply performance design with the use of BSC and arranging BSC team that is tasked for performance management transition. Second, the limitations of this research is on the determination of independent variables, which is only based on the existing loans analysis form of Kopdit Takeru, so therefore there is a need for additional variables such as financial literacy, the total number of savings, and the business condition of the members, as well as macroeconomic condition variable that also contribute to the occurrence of non-performing loans. This can be the focus of upcoming studies.

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