Integration of Financial and Social Performance: Survey of Cooperatives in West Java, Indonesia

Eka Setiadjatnika[a], Rima Elya Dasuki[b], Ardi Nupi Hasyim[c], [a,b,c]Indonesian Cooperative Management Institute (IKOPIN), Email: [a]ekasetiajatnika@ikopin.ac.id, [b]rimadasuki@ikopin.ac.id, [c]ardi.nupi@yahoo.com

The first issue in this research is to conduct studies that relate to the sustainability of cooperatives. Based on data obtained, 35.6% of cooperatives in West Java are not active. The second issue is to study the cooperatives' financial performance related to capital structure and credit risk, given the challenges of today's needs for readiness of cooperatives in the era of the ASEAN Economic Community in 2015, which is the ultimate goal of economic integration as envisioned in the ASEAN Vision 2020. The third issue in this topic is a review of the social performance as based on factual conditions of cooperative life in Indonesia: up until today there is a gap between the concept of universal cooperatives and their practice. The fourth issue in this research conducted a study on the scale of business that may affect the sustainability of cooperatives. Analysing integrated cooperative models would involve many factors, both quantitative and qualitative. This study took a sample of 76 cooperatives with the data observed for the variables related to capital structure, credit risk, social performance, financial performance and sustainability of cooperatives, with the multi regression simultan recursive model panel data method, over a period of 72 months in the province of West Java. Based on the results, data processing obtained an adjusted R-square value of 0.716201, or 71.62 percent indicating that the performance of the financial and social performance simultaneously gives effect to a sustainability of 71.62% for small-scale cooperatives in West Java. Based on test results, simultaneously and partially also showed that there was integration between financial performance and social performance to achieve sustainability. Empirical findings indicate that there is significant influence either simultaneously or partial capital structure and credit risk on financial performance in the Cooperative in West Java, as well as the integration between social performance and financial performance in achieving sustainability of cooperatives. These studies have found a relationship between cooperative financial sustainability

and achievement of social objectives, so that they should be considered cost-efficient capital funding functions. The relationship between the financial aspect and social aspect in an organisation will not provide conflict in achieving goals.

Key words: *Capital Structure, Credit Risk, Social Performance, Financial Performance, Sustainability of Cooperatives.*

Introduction

Background

A microfinance approach through cooperative organisation aims to reduce poverty. One way to maintain the social mission and financial sustainability of the cooperative is the integration of dual purposes: maintaining financial sustainability and social welfare organisations.

Definition, purpose and principles of the cooperative continues to develop from time to time (Mc Killop, 2006). Fairbairn (1994) clearly discusses that the basic element of cooperative activities is how the income of the cooperative can provide benefits to members, the cooperative journey integrating social objectives and financial goals so that the welfare of members is achieved in a broader sense.

The first issue in this research is to conduct studies that relate to the sustainability of cooperatives. Based on data obtained, 35.6 % of cooperatives in West Java are not active. Based on Dunford's research (2006), financial sustainability and the balance between positive social impact is the most important goal to achieving social welfare. In accordance with this assumption, the research focusses on the analysis of how the financial structure, credit risk, social performance and financial performance are expected to have positive implications for the sustainability of the cooperative. This study tries to find approaches that can help achieve these two goals to maintain the sustainability of cooperatives.

The second issue in this research topic is to study the cooperative financial performance related to capital structure and credit risk, given the challenges facing cooperatives in the era of the ASEAN Economic Community in 2015, which has the ultimate goal of economic integration as envisioned in the ASEAN Vision 2020.

The third issue in this topic is a review of the social performance as based on factual conditions of cooperative life in Indonesia; up until today there is a gap between the concept of universal cooperatives and the practice.

The fourth issue was the conduct of a study on the scale of business that may affect the sustainability of cooperatives.

That description is the basis for doing research with the main theme of capital structure, credit risk, social performance and financial performance in a cooperative effort to maintain sustainability. This is the starting point: the quality of cooperative management is still considered below the standard required for the development of cooperative efforts.

Under these conditions, researchers interested in analysing the good cooperative aspects will find the capital structure, credit risk, social performance and financial performance will have an impact on the sustainability of cooperatives. This study tries to find approaches that can help achieve these two objectives of maintaining the viability of cooperatives, especially savings and credit cooperatives.

Research Objectives

This study aimed to assess and develop the empirical model of the impact of capital structure and credit risk on financial performance, as well as integration of social performance and financial performance in order to achieve sustainability of cooperatives.

Literature Review

An integrated approach to dealing with the concept of cooperative operational efficiency related to the business activities of the company as a member of the cooperative and the efficiency of the parties will obtain cooperative effect (Yuyun Wirasasmita, 2012). In accordance with the principle of cooperation, cooperatives rely on cooperation rather than competition among themselves. Increasingly, competition and the challenges of globalisation are achieved through horizontal and vertical integration, as well as integration between the financial and social aspects, which allows basic units of the integrated system to remain operational to meet the needs of members. This integration allows the cooperative to combine strength as local organisations with high advantages (Batemen, 2007). Integration of the cooperative includes horizontal integration, vertical integration and the integration of financial aspects and social aspects. Horizontal integration, ie collaboration of cooperatives operating at the same level of organisation, where the cooperatives work together to accomplish a specific task. Horizontal integration can also take the form of a merger in creating a new cooperative, where two or more cooperatives merge and reduce costs to enter into new business areas or to strengthen their position against competitors. Vertical integration means building a system consisting of basic units with higher level units.

Orbuch studies (2011) have demonstrated the existence of a significant social impact resulting from the organisation microlenders; this suggests that microfinance should incorporate social intervention if it is to serve as a tool that works to achieve the welfare of the community. Financially sustainable cooperatives help to create organisational efficiency, which is a value added for the organisation: integration of services can be a powerful method for the cooperative to comprehensively improve the lives of members and become financially stable. The integrated approach provides several benefits to members and the society (Desrochers, 2005).

One evidence of economic improvement for members with an integrated approach is the tendency that members in the group were able to restore good credit so as to have the opportunity to have a readiness to access larger loans for their business. Integrated microfinance can work well, especially in circumstances where the state of public services is still weak, allowing the cooperative to serve the needs of the community that is wide enough to use an integrated approach along with a supportive partner.

Microfinance as applied in cooperatives started as a development strategy with objectives that can reduce the poverty of microfinance loan recipients, but due to increased competition and an emphasis on profits the cooperatives may experience a shift in mission, potentially ignoring the initial mission as a tool with a social function to serve the community. One of the most effective ways to maintain this mission is the implementation of the integration between social mission and financial sustainability that has been proven to give a positive value for members and the public funds: this showed that this should should happen as a "tradeoff" between the purpose of keeping the financial sustainability of the organisation and helping to serve members and community as a social mission.

The integration approach requires cooperation with the government and stakeholders in implementing social services, so that cooperatives can better focus on serving the credit. The main priority should expand the number of customers that are achieved by the cooperative and should improve the quality of the beneficiaries, so that the positive effects of microfinance can be sustainable. Microfinance has the potential to be a useful transformative tool when approached holistically. The previous qualitative research finds that the cooperative seeks to maximise the needs of members and the volume of credit. Moreover, because of its dependence on external socially oriented investors, cooperatives required to implement performance measurement systems for the financial and social performance integrate it into their management objectives. This study contributes to the efficiency assessment of cooperatives that produce output that place capital and loan volume as a measure of financial and social performance (Amersdorffer, 2009).

The cooperative is a non-profit organisation whose mission is to maximise the benefits for their members, not the maximisation of profit, but to consider cooperative cost minimisation

strategies. As microfinance institutions, cooperatives generate double output , namely financial services on the one hand and positive social effects on the other side. Based on a comprehensive survey on the analysis of the efficiency of financial institutions, Berger and Humphrey (1997) discuss these two approaches. Hermes et al (2008) examined the trade-offs or compatibility between efficiency and financial reach by using Stochastic Frontier Analysis (SFA). In research, Hermes et al (2008) found a negative relationship between outreach and financial performance (Balkenhol, 2007; Morduch, 2000). (Gutiérrez-Nieto et al., 2007) emphasise that microfinance institutions including cooperatives have a dual purpose specified in their output. First, assessed through financial sustainability, reflected in the input of the operational costs, and operational sustainability, reflected in the output of interest and fee income. Second, judging from their social efficiency with regards outreach represented by the output variable number of loans and loan volume. Regarding social efficiency, (Gutiérrez-Nieto, Serrano-Cinca, Molinero & March 2009) broaden their concept of social performance in a specification which includes standard variable assets, operating costs, and the number of employees as well as the input credit and income on the output side. A measurement of social efficiency can be seen also from the number of women borrowers and indicators that measure the extent to which cooperative activities can provide benefits to marginal groups. The social performance indicator used is the ratio of "average loan balance per borrower" and "income per capita".

Social Performance Indicators (Zeller, Lapenu, Greenly 2003) are one of the most comprehensive measuring tool of indicators related to social performance at the institutional level (evaluation process and the capacity to reach social performance), and the side effects – members and other stakeholders will be affected by the presence of co-operatives. Cooperatives have strategic objectives to provide the maximum amount of loans to the members, so affordability as social performance indicators can also be achieved.

Social performance assessment system based on the four dimensions of social performance (Doligez & Lapenu, 2007) are: (1) Affordability, (2) the adaptation and quality of service, (3) economic benefits, and (4) social responsibility. Target and Outreach refers to the cooperative members and the surrounding community. Social responsibility to the members can be seen as an essential component of financial services.

Based on a comprehensive assessment, the social performance of social output used in the analysis of efficiency and good financial performance will result in significant changes. High costs for external capital is a severe obstacle to the growth of cooperatives. Cooperatives use external funds at a high cost to achieve the purpose of serving the community as much as possible. Financial services provided by the cooperative with high social performance have a social impact and should be considered in the assessment of the sustainability of the cooperative in the future.

Analysing the integrated cooperative model is not a simple matter, because it will involve many factors, both quantitative and qualitative, and cooperatives often have to be a hybrid. In order to more effectively advocate for an integrated approach, it is necessary to conduct the study to assess the quantitative and qualitative benefits experienced by the people and organisations involved with social services, as combining social services is an investment that will make people more productive and generally will be success in business.

Integrated microfinance will empower the community, where the services provided will meet the needs of the community and enable them to further improve the standard of living (Orbuch, 2011). Good performance on the financial aspects and social aspects of sustainability will be very supportive of the cooperative.

Methodology

In accordance with the objectives to be achieved, the research is a form of verification, which is a type of research that aims to determine the relationship between variables through hypothesis testing.

Sources of Data

The research was conducted in West Java with a population of Credit Unions in West Java, amounting to 535 cooperatives, with active cooperation as much as 394 cooperatives. West Java Province is one of the provinces with dominant existence of cooperatives – 15.26% of the total cooperatives in Indonesia – so the West Java population is used as a research area. This study is focussed on 76 cooperatives in cooperation with banks over 72 months. This is based on the fact that cooperation between cooperatives and the micro business units of the banking institutions to form a separate unit is unique as well, as with the reporting system, assisted by the banking system, allowing acquired data time series and cross sections required in this study.

Variable

Table 1:

#	Variable	Concept	Indicator	Scala
1	Capital Structure	The ratio between debt and total assets	***Total Debt to Total Asset Ratio (TDTA)*** TDTA = Total Debt / Total Asset **Total Debt** = Short Term Debt + Long Term Debt **Total Assets** = Current Asset + Fixed Asset	Ratio
		The ratio between total debt to equity	***Total Debt to Equity Ratio (TDTE)*** TDTE = Total Debt / Total Equity **Total Debt** = Short Term Debt + Long Term Debt **Equity** = Net Worth of Cooperative	Ratio
2	Credit Risk	The number of loans distributed compared with the cooperative's ability to raise funds	***Loan To Deposit Ratio (LDR)*** $$LDR = \frac{Loan}{Deposit}$$ **Loan** = the amount of credit) **Deposit** = member and non-member saving (funds collected from third parties)	Ratio
		The possibility of losses due to non return loans, which will result in the disruption of the organisation's liquidity	***Bad Debt Ratio*** BDR = <u>O/S Koll II x 50%)+(O/S Koll III x 75%)+(OS Koll IV x 100%)</u> Total Loans Provided **Bad Debt** = Estimated amount of doubtful O/S Koll II = Loans Substandard O / S Koll III = Loans doubt O / S Koll IV = Loan Loss	Ratio

#	Variable	Concept	Indicator	Scala
3	Social Performance	The relationship between the cooperative with customers and stakeholders in terms of non-financial aspects in supporting the sustainability of cooperatives	Average Loan Size = ALZ = (TC/MZ)/CP TC = Total Credit MZ= Member Size Credit CP= Maximum limit of credit	Ratio
4	Financial Performance	Financial parameters are interested in supporting the sustainability of cooperatives The ability of cooperatives to get profitability	*Return On Asset (ROA)* ROA = Profit / Asset Profit is the remainder of a cooperative effort, the difference of income and expenses Total assets are Fixed Assets plus Current Assets	Ratio
5	Sustainability	The ability for independent and sustainable operation	*Growth of Sales (GS)* $G_oS = (S_{t+1} - S_t) / S_t$ Growth of Sales = sales growth S_t = Current Sales S_{t+1}= Next Year Sales	Ratio

Research Model

The design of data analysis with quantitative approach, the statistical analysis and the ratio of recursive simultaneous multiple regression models with panel data methods using Eviews, which is based on the type of data collected and its relevance to the objectives of the research hypothesis. Hypothesis testing on a model that has been free from the assumptions of regression.

Panel Regression Model of the title above as follows:

a. First Model
$$Y = \beta_0 + b_1X_{1it} + b_2X_2it + b_3X_{3it} + b_4X_{4it} + e_{it}$$
$$ROA = \beta_0 + b_1TDTA_{it} + b_2TDE_{it} + b_3LDR_{it} + b_4BDR_{it} + e_{it}$$

where:
ROA = Return on assets
β_0 = constant

TDTA = Total debt to total assets
EFT = Total debt to equity
LDR = Loan to deposit ratio
BDR = Bad debt ratio b (1... 2) = regression coefficient of each independent variable
E = Error term
t = Time
i = Cooperative

b. Second Models
$$Z = \delta_0 + b_1 X_{1it} + b_2 X_{2it} + e_{it}$$
$$GS = \delta_0 + b_1 ROA_{it} + b_2 ALZ_{it} + e_{it}$$

Specification:
GA = Growth of Assets (Sustainability)
δ_0 = constant
ROA = Return on Assets (Financial Performance)
ALZ = Average Loan Size (Social Performance)
b (1... 2) = regression coefficient of each independent variable
E = Error term
t = Time
i = Cooperative

Results and Discussion

Analysis of the research model based on the results of all statistical tests either partially or simultaneously testing. From the test results will be generated the conclusion of the study. Testing will be done through the following steps; (1) pooled test the model, (2) the Hausman specification test, (3) testing heteroscedasticity assumption, (4) the interpretation of the results of the regression model estimation, (5) and the coefficient of determination (6) hypothesis testing.

Table 2: Results of Regression Analysis The Impact of Capital Structure and Credit Risk to Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032113	0.001905	8.772032	0.0000
TDTA	-0.009994	0.004091	-2.878297	0.0011
TDE	-0.002210	0.000371	-1.99596	0.0031
LDR	0.051276	0.000213	7.662463	0.0000
BDR	-0.238584	0.006043	-21.00834	0.0000
R-squared	0.797962	Mean dependent var		0.079075
Adjusted R-squared	0.627860	S.D. dependent var		0.345423
S.E. of regression	0.266141	Sum squared resid		232.0271
F-statistic	36.07727	Durbin-Watson stat		0.556229
Prob(F-statistic)	0.000000			

Source: Results of Data Processing (2014)

Estimation Model gives the following results:

Y = 0.032 - 0.009 TDTA - 0,002 LDR TDE + 0.0051 - 0.2399 BDR

(0.0019)   (0.0041)   (0.0004)   (0.0002)   (0.0060)

This study shows the results of a negative association between increased use of debt in the capital structure and financial performance. This has similarities with the results of the study (Kester, 1986; Lang, 1988, Fama and French, 1998, Gleason et al, 2000; Simerly and Li, 2000, Booth et al, 2001 Ibrahim, 2009), which showed a negative relationship between capital structure and financial performance.

Based on the results of data processing obtained adjusted R-square value of 0.6287, or 62.87 per cent indicate that the capital structure and credit risk simultaneously able to explain the changes in the financial performance of the Cooperative in West Java amounted to 62.87 percent. Based on simultaneous test or exam it can be concluded that partial capital structure and credit risk simultaneously have a significant effect on the financial performance of the Cooperative in West Java.

To analyse the integration between financial performance and social performance to achieve sustainability of the cooperative, use of simultaneous recursive approach to multi-regression models were used where ROA is estimated ROA. ROA is based on the calculation of the first model.

Table 3: Results of Regression Analysis Integration Financial Performance and Social Performance to Sustainability Cooperative.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.162419	0.005773	24.35782	0.0000
ROA-Pred	0.341903	0.013102	3.027825	0.0001
ALZ	0.268776	0.041185	1.997464	0.0005
	Weighted Statistics			
R-squared	0.844430	Mean dependent var		0.221163
Adjusted R-squared	0.728032	S.D. dependent var		1.078302
S.E. of regression	1.072104	Sum squared resid		3802.158
F-statistic	2.655681	Durbin-Watson stat		2.112073
Prob (F-statistic)	0.000000			

Source: Results of Data Processing (2014)

Through refineries results obtained are presented in table 4.2 above, there can be formed a linear regression equation as follows:

Z = 0.162 + 0.269 ALZ + 0.342 ROA
 (0.0057) (0.0411)   (0.0131)

Z = Growth of Sales (Sustainability)

ROA = Return on Assets / prediction (Financial Performance)

ALZ = Average Loan Size (Social Performance)

The coefficient of determination is calculated to determine how much influence the two independent variables (financial performance and social performance) simultaneously have on sustainability. Based on the results of data processing obtained, adjusted R-square value of 0.7280, or 72.80 per cent indicate that the performance of the financial and social performance simultaneously give effect to the sustainability of 72.80% in the Cooperative. While the test is based on simultaneous and partial test shows that the performance of the financial and social performance affect the sustainability of cooperatives. This illustrates the integration between financial performance and social performance to achieve sustainability of cooperatives.

This study also analysed the two models based on the scale of business, which in this case discussed small-scale enterprises investigated in West Java.

Table 4: Results of Regression Analysis Effect of Capital Structure and Credit Risk to Financial Performance Based on Business Scale

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075067	0.004264	11.22131	0.0000
TDTA	-0.036460	0.004114	-2.458153	0.0021
TDE	0.076900	0.004610	3.743465	0.0011
LDR	0.008767	0.001600	4.690680	0.0000
BDR	-0.197783	0.008752	-11.07703	0.0000
R-squared	0.769802	Mean dependent var		0.032118
Adjusted R-squared	0.685631	S.D. dependent var		0.153664
S.E. of regression	0.095396	Sum squared resid		25.87215
F-statistic	24.02700	Durbin-Watson stat		0.504604
Prob(F-statistic)	0.000000			

Source: Results of Data Processing (2014)

Through refineries results obtained are presented in Table 3.3 above,there can be formed a linear regression equation as follows:

ROA = 0,075- 0,036 TDTA + 0.077 TDE + 0.009 LDR - 0.198 BDR
(0.0042)   (0.0041)   (0.0046)   (0.0016)   (0.0087)

where:
ROA = Return on assets (Financial Performance)
TDTA = Total debt to total assets (Capital Structure)
TDE = Total debt to equity (capital structure)
LDR = Loan to deposit ratio (Credit Risk)
BDR = Bad debt losses (Credit Risk)

The coefficient of determination is calculated to determine how much influence the three independent variables (capital structure and credit risk) simultaneously have on financial performance. Based on the results of data processing using Eviews software contained in Table 3.3, obtained adjusted R-square value of 0.6856, or 68.56 per cent indicate that the capital structure and credit risk simultaneously are able to explain the changes in the financial performance of the Cooperative Swamitra Micro Business Unit Bukopin in West Java amounted to 68.56 percent. In other words, capital structure and credit risk jointly contribute to or influence by 68.56% on financial performance.

To analyse the integration between financial performance and social performance to achieve sustainability cooperative approach based on multi-scale effort to use a recursive simultaneous

regression models were used, where ROA is estimated based on the calculation of the first model.

Table 5: Results of Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.177103	0.005690	17.22781	0.0000
ROA	0.370787	0.111162	2.210046	0.0022
ALZ	0.099832	0.031507	2.675957	0.0076
	Weighted Statistics			
R-squared	0.830800	Mean dependent var		0.200656
Adjusted R-squared	0.716201	S.D. dependent var		1.080687
S.E. of regression	1.063465	Sum squared resid		3186.045
F-statistic	2.098955	Durbin-Watson stat		2.033508
Prob (F-statistic)	0.000006			

Source: Data Processing (2014)

Through refineries results obtained are presented in Table 4.4 above, there can be formed a linear regression equation as follows:

GS = 0.177 + 0.099 ALZ + 0.371 ROA
(0.0056)   (0.0315)   (01111)

where:
GS = Growth of Sales (Sustainability)
ROA = Return on assets (Financial Performance)
ALZ = Average loan size (Social Performance)

Based on the results of data processing obtained, adjusted R-square value of 0.716201, or 71.62 per cent indicate that the performance of the financial and social performance simultaneously gives effect to the sustainability of 71.62% in small-scale cooperatives in West Java. Based on test results simultaneously and partially also showed that there was integration between financial performance and social performance in achieving sustainability.

Conclusions

Empirical findings indicate that there is significant influence either simultaneously or partial capital structure and credit risk on financial performance in the Cooperatives in West Java, as well as the integration between social performance and financial performance in achieving sustainability of cooperatives.

These studies have found a relationship between cooperative financial sustainability and achievement of social objectives, so that should be considered as cost-efficient capital funding functions.

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