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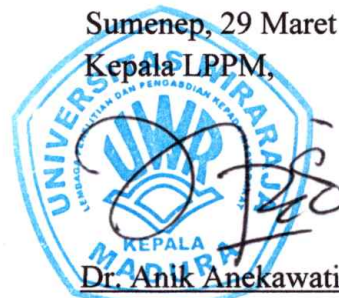
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IMPLEMENTATION OF PEARLS ANALYSIS TO MEASURE THE FINANCIAL PERFORMANCE OF COOPERATIVES (A case study on the Trisula Sejahtera Bersatu Women's Cooperative, Pamekasan Regency)

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1 IMPLEMENTATION OF PEARLS ANALYSIS TO MEASURE THE FINANCIAL PERFORMANCE OF COOPERATIVES

(A case study on the Trisula Sejahtera Bersatu Women's Cooperative,
Pamekasan Regency)

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1 Abstract

This study aims to determine the financial performance of cooperatives using PEARLS analysis. The data sources used are secondary data sources in the form of financial reports from 2017 to 2019 and non-financial reports in the form of data on the number of members. The results showed that the cooperative's financial performance on variable P showed a non-ideal performance; variable E shows indicators E1 and E5 are not ideal, E6 is less than ideal and E9 is ideal; variable A shows non-ideal performance; Variable R shows indicators R9 is not ideal and R12 is ideal; variable L indicates the category is not ideal; and the S variable shows that S10 is not ideal and S11 is less than ideal. From the analysis of PEARLS indicate that the performance of cooperatives in a state which is not good because of the 13 indicators studied, only three indicators that show the ideal categories while the 8 indicators are always in a state which is not ideal and the two other indicators simply ideal in a given year

Keywords: Cooperative, PEARLS Analysis, and Financial Performance

Abstrak

Penelitian² ini bertujuan untuk mengetahui kinerja keuangan koperasi dengan menggunakan analisis PEARLS. Sumber data yang digunakan adalah sumber data sekunder berupa laporan keuangan tahun 2017 sampai dengan tahun 2019 dan laporan non keuangan berupa data jumlah anggota. Hasil penelitian menunjukkan bahwa kinerja keuangan koperasi pada variabel P menunjukkan kinerja yang tidak ideal; variabel E menunjukkan indikator E1 dan E5 tidak ideal, E6 kurang ideal dan E9 ideal; variabel A menunjukkan kinerja yang tidak ideal; Variabel R menunjukkan indikator R9 tidak ideal dan R12 ideal; variabel L menunjukkan kategori tidak ideal; dan variabel S menunjukkan bahwa S10 tidak ideal dan S11 kurang ideal. Dari analisis PEARLS menunjukkan bahwa kinerja koperasi dalam keadaan yang kurang baik karena dari 13 indikator yang diteliti, hanya tiga indikator yang menunjukkan kategori ideal sedangkan 8 indikator selalu dalam keadaan tidak ideal dan dua lainnya indikator cukup ideal pada tahun tertentu

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Kata Kunci: Koperasi, Analisis PEARLS, dan Kinerja Keuangan

1. Introduction

In the recovery period of the current economic crisis, cooperatives have a greater opportunity to perform better than large companies which are expected to bring economic growth of 7%, which is only a discourse because it is not a growth from within the company (Manurung, 2000).). In contrast to cooperatives, where cooperatives are business entities established by individuals or several cooperative legal entities, which have common interests in the economic, socio-cultural fields according to cooperative principles and are managed on the principle of kinship and are developed as a very important business entity (Hutasuhut, 2001). In carrying out its business, cooperatives use member savings as capital. In contrast to companies which in the process of their business activities aim to obtain the maximum profit, the orientation of cooperatives is to maximize the services and welfare of its members.

One type of cooperative that exists is a savings and loan cooperative or often equated with a credit cooperative, this cooperative provides services in the form of savings and lending to its members. The activities of savings and loan cooperatives as intermediaries for funds are expected to help the people's economy, especially for people with lower middle income because the interest charged tends to be lower when compared to other financial institutions. Through savings and loan cooperatives, members who need capital to develop their businesses can borrow funds from savings and loan cooperatives.

The advantages of savings and loan cooperatives include easy terms, fast disbursement processes and low interest that attract people to take advantage of the services of savings and loan cooperatives when compared to other financial institutions. Easy requirements and the absence of collateral often make savings and loan cooperatives have problems with

negligent loans or commonly called bad loans, so it is important to conduct an analysis or assessment of the cooperative's financial condition to find out how the cooperative's financial condition is, so that the cooperative can still run smoothly.

Cooperative financial health analysis is one way to determine the financial condition of the institution. Analysis of the level of financial soundness of institutions includes analytical techniques on financial statements to obtain information that is very useful in decision making, in other words, the purpose of analyzing aspects of financial statements is to convert data into information for those who need it and also to determine future plans.

World Council of Credit Unions (WOCCU) which is the parent organization of the Credit Unions world's since 1970, based in Wisconsin, America, has a method with its own standards for monitoring the financial performance and management of *Credit Unions*, the

method is the PEARLS method. The PEARLS method itself is designed to overcome the shortcomings of the CAMEL method, it is stated in the *WOCCU Toolkit Series Number 4* "CAMEL analysis cannot assess the overall performance of *credit unions* and CAMEL is only an evaluation tool while PEARLS is considered not only as an evaluation tool but as a management tool as well. "

The Trisula Sejahtera Bersatu Women's Cooperative is a savings and loan cooperative that was founded in 1979 in KH. Sinhaji No. 25 Pamekasan. Researchers are interested in conducting research at the Trisula Sejahtera Bersatu Women's Cooperative because they see some of the problems that occur in this cooperative. **First**, negligent loans, both negligent loans of more than 12 months and negligent loans of 1 to 12 months, the numbers are quite high, even in 2017 to 2018 the existing risk reserve funds are not comparable to the number of existing negligent loans. The cooperative also does not

determine the remaining percentage of allocated for the risk reserve fund.
 the remaining operating proceeds
 menyediakan informasi

Table 1
 Table of Negligent Loans and Risk Reserved Funds for the
 Women's Cooperative Trisula Sejahtera Bersatu
 Period 2017-2019

Years of	Negligent Loans 1- 12 months	Negligent Loans > 12 months	Total Defaulting Loans	Reserved Fund Risk
2017	Rp356,951,000	Rp181,830,000	Rp538,781,000	Rp362,551,699
2018	Rp352,166,000	Rp175,810,000	Rp527,976,000	Rp447,391,011
2019	Rp313,577,000	Rp112,490,000	Rp426,067,000	Rp543,383,365

Source : Trisula Sejahtera Bersatu Women's Cooperative

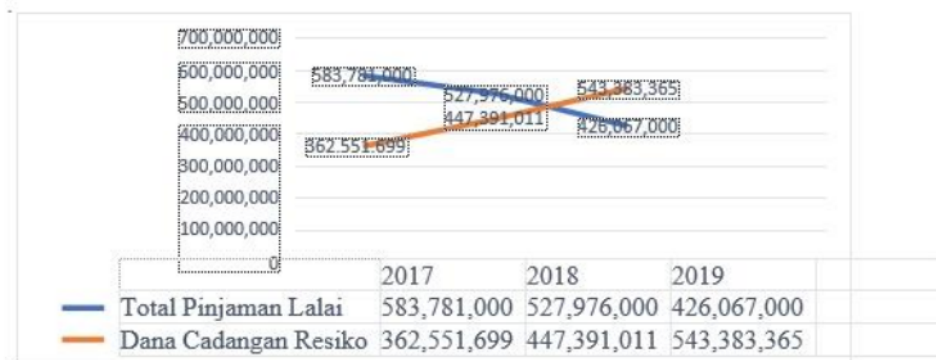


Figure 1
 Total Comparison Graph Negligent Loans and Risk Reserve Funds for the
 Trisula Sejahtera Bersatu Women's Cooperative for
 the 2017-2019 Period

Second, the cooperative stated that of insufficient funds if there are the existing funds, either in the form of members who will withdraw their cash or deposits in the bank, were deposits at any time. **Third**, since entirely replayed to be loaned to 2014 the cooperative has not accepted members. This is certainly not good new members, which means that there because it causes problems in the form is no growth in the number of

members owned by the cooperative. The aim of this study is to find out how the financial performance of the Trisula Sejahtera Bersatu Women's Cooperative from 2017 to 2019 is reviewed using PEARLS analysis.

2. Literature Review

2.1 Cooperatives

Cooperatives are business entities in the economic field, whose members are generally economically weak who join voluntarily and on equal rights, are obliged to carry out a business that aims to meet the needs of its members (Kartasapoetra *et al*, 2007).

Cooperatives are a business organization owned and operated by individuals for the common good. Cooperatives base their activities on the principle of the people's economic movement based on the principle of kinship (Sumantri and Permana, 2017:1). Cooperatives are a joint business entity among people who have common interests, and are run and managed together based on the

principle of kinship (Hasmawati, 2013)

According to the Law No. 25 of 1992, cooperatives can generally be grouped into consumer cooperatives, producer cooperatives and credit (financial services) cooperatives. Cooperatives can also be grouped based on their business sectors, including:

- a. Savings and Loans
- b. Cooperatives Consumer
- c. Cooperatives Producer
- d. Cooperatives Marketing
- e. Cooperatives Services
- f. Cooperatives Multipurpose

Cooperatives Savings and loan cooperatives or credit cooperatives are cooperatives established to provide easy loans and low interest rates to their members with capital originating from members' savings (Widiyanti and Sunindhia, 2008). According to Soedarsa and Nathalia (2016), savings and loan cooperatives or financial services cooperatives are cooperatives engaged in the financial sector with

their activities of doing savings and loans. Sources of funds are obtained from members in the form of principal savings, mandatory deposits or from other sources such as from banking financial institutions. Funds collected by cooperatives are channeled back to members or prospective members. For the distribution of these funds, the cooperative earns income in the form of interest income. Savings and loan cooperatives are cooperatives that are engaged in fertilizing the funds of their members to then be loaned back to members who need financial assistance (Selan *et al*, 2018). Savings and loan cooperatives are cooperatives that specifically aim to serve or require their members to save, in addition to being able to provide loans to their members (Sumantri and Permana, 2017:81).

2.2 PEARLS Analysis

According to Richardson (2002), *PEARLS* is a method to assess the level of health or performance financial system developed by WOCCU as a guide for managing

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Credit Unions. *PEARLS* stands
Protection, Effective financial structure,
Asset quality, Rates of return and
costs, Liquidity and Signs of growth.
There are 4 uses *PEARLS* namely
(Richardson, 2002), namely:

- a. As a tool for assessing the performance of the Credit Union
- b. Standardized ratios and formulas
- c. can be used to rank a Credit Union
- d. As a surveillance tool

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Analysis *PEARLS* consists of six important variables namely protection, effective financial structure, quantity of assets, Rates of return and costs, liquidity and signs of growth. According to Richardson (2002) this system contains a set of financial ratios or quantitative indicators which in total there are 44 indicators but in this study only 13 ratios were used because according to the article *Monograph 4* issued by WOCCU assessing the financial performance of *Credit*

Unions it only needed 13 ratios to determine the performance of Credit Union is good or not. The following are 44 indicators of the PEARLS system. The following below are the ideal standards of PEARLS analysis indicators including:

Table 2
 Ideal Standards of PEARLS Indicators

Aspects	Indicators	of Ideal Standard
Protection	P1	100%
	P2	35%
	P3	100%
	P4	Minimum
	P5	100%
	P6	110%
Effective Financial Structure	E1	70% - 80%
	E2	20%
	E3	10%
	E4	0%
	E5	70% - 80%
	E6	5%
	E7	10% - 20%
	E8	10%
	E9	10%
Asset Quality	A1	5%
	A2	5%
	A3	> 200%
Rates of Return and Cost	R1	≥ Value entrepreneurial
	R2	≥ interest rate
	R3	≥ interest rate

	R4	≥ R1	
	R5>	Inflation	
	R6	≥ interest	
	R7	≥ interest	
	R8	≥ R10 and R12	
	R9	≤ 5%	
	R10	= Loans Delinquent	
	R11	Minimal	
	R12	≥ 10%	
	R13	> Inflation	
	Liquidity	L1	15%
		L2	10%
		L3	< 1%
Signs Of Growth	S1	= E1	
	S2	= E2	
	S3	= E3	
	S4	= E4	
	S5	= E5	
	S6	= E6	
	S7	= E7	
	S8	= E8	
	S9	= E9	
	S10	> 12%	
	S11	> Inflation	

Source : Richardson (2002)

8 2.3 Financial

Performance a company's financial performance can be interpreted as a prospect or future, growth, and good potential for the company (Orniati, 2009:206).

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 Financial performance is the work

performance that has been achieved by the company in a certain period and is stated in the financial statements (Muliani *et al.*, 2014)

2.4 Previous Research

Following below are previous studies including:

- a. Pearls Analysis as a Financial Performance Measurement Tool at KOPDIT Sinar Harapan Kediri (Sunarwati, 2018). The results of the research, the variable *protection* experienced a decrease in performance; variable *Effective Financial Structure* decreased which resulted in less than ideal performance; variable *Asset Quality* has poor performance; variable *Rates Of Return And Cost* in several months is still not ideal; variable *Liquidity* indicates a stable or ideal position; and the variable *Sign Of Growth* has decreased
- b. Juki's research (2017) with the title Financial performance based on the PEARLS ratio at the Semandang Jaya Credit Union. The results showed that not all research indicators were ideal. This shows the low financial performance. Where this is caused by high rates of negligent loans, weak institutional capital, high non-productive assets and low growth rates of members.
- c. Analysis of Cooperative Health Levels Based on Pearls Indicators in Cu Sauan Sibarrung Cooperatives (Tangdialla and Sanda, 2021). Where the results of the study show that aspects of *protection* and *liquidity* have healthy performance, while other aspects such as *effective financial structure, asset quality, rates of return and cost* and *sign of growth* show unhealthy and even unhealthy performance.

- d. ¹ Comparative analysis of financial performance using the pearls method on credit unions Hati Amboina and credit union ain hov ain in Maluku province. From the results of research and calculations using the PEARLS method, CU HA has better financial performance compared to CU AHA because the average growth rate of CU HA liver is faster and more efficient than CU AHA (Siaila, 2017).
- e. Ahie's research (2021) ¹ with the title research on the financial performance of credit union rivet kumang branch office in Melawi district based on PEARLS. The results of the study show that all aspects are in a non-ideal position, which means that financial performance is not healthy

2.5 Research Methods

Object of the research is the Trisula Sejahtera Bersatu Women's Cooperative which is located on Jl.

Shinhaji No. 25 Pamekaan, Madura. This research uses descriptive quantitative research, which is an analytical method that analyzes problems based on numerical calculations and research results without making comparisons with other variables.

This research is a descriptive case study, which means that the data that has been obtained from the research object, namely the Trisula Sejahtera Bersatu women's cooperative, will be analyzed further. According to Sujarweni (2014), a case study is research that has the aim of providing a detailed description of a case regarding what is being studied

Types of data used in this study are financial statements in the form of statement of financial position and income statements and additional data in the form of bad credit data and a list of the number of members of the Trisula Sejahtera Bersatu Women's Cooperative for 2017-2019. Sources of data used in this study is secondary data sources, namely data obtained

indirectly or through intermediary media (obtained and recorded by other parties).

To obtain data using the documentation method, namely data collection techniques by recording from existing documents and to analyze financial performance on The Trisula Sejahtera Bersatu Women's Cooperative used the PEARLS method. Of the 44 existing indicators, this study only uses 13 indicators because according to the article *Monograph 4* issued by WOCCU, assessing the financial performance of *Credit Unions* only requires these 13 ratios to determine whether the performance is *Credit Union's* good or not. The following 13 indicators are used, including:

Protection

- a) Availability of risk reserve funds to cover non-performing loans >12 months (P1)

$$P1 = \frac{a}{b} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\geq 100\%$

- b) Availability of risk reserve funds to cover default loans 1-12 months (P2)

$$P2 = \frac{ab}{c} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach 35%

Information :

a = existing risk reserve fund
b = negligent loan > 12 months
c = total loan 1-12 months

- 1) *Effective Financial Structure*
 - a) Ratio of outstanding receivables (E1)

$$E1 = \frac{ab}{c} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach 70-80%

Description :

a = total receivables outstanding
b = total risk reserve
c = total assets

- b) Non-stock deposit ratio (E5)

$$E5 = \frac{a}{b} \times 100\%$$

According to Richardson (2002), this indicator is said to

be good if the results reach 70-80%

Information:

a = member's non-share deposits

b = total assets

c) Loans to outsiders ratio (E6)

$$E6 = \frac{a}{b} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\leq 5\%$

Information:

a = debt to external parties

b = total assets

d) Net institutional capital ratio (E9)

$$E9 = \frac{[(a + b) - (c + 35\% \times d) + e]}{f} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\geq 10\%$

Explanation:

a = institutional capital

b = risk reserve fund

c = default loans over 12 months

d = default loans 1-12 months

e = assets that do not generate

f = total assets

2) *Assets quality*

a) Ratio of total loans negligent to total receivables (A1)

$$A1 = \frac{a}{b} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\leq 5\%$

Description:

a = total default loans

b = total outstanding receivables

b) Ratio of non-productive assets to total assets (A2)

$$A2 = \frac{a}{b} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\leq 5\%$

Explanation:

a = total assets that do not generate

b = total assets

3) *Rates of return and cost*

a) Ratio of operating costs/average assets (R9)

$$R9 = \frac{a}{\left[\frac{(b + c)}{2} \right]} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\leq 5\%$

Information :

a = total operating costs
 b = total assets until the end of the year this is
 c = total assets until the end of last year

b) Ratio of income to average assets (R12)

$$R12 = \frac{a}{\left[\frac{(b+c)}{2}\right]} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\geq 10\%$

Description :

a = SHU
 b = total assets until the end of the current year
 c = total assets until the end of last year

4) Liquidity

a) Ratio of liquidity to deposits (L1)

$$L1 = \frac{(a+b) - c}{d} \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach 15%

Description :

a = liquid investment
 b = liquid assets do not generate
 c = short-term debt
 d = total non-share deposits

5) Signs of growth

a) Ratio of growth of members (S10)

$$S10 = \left[\frac{a}{b}\right] - 1 \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach $\geq 12\%$

Information³

a = the last number of members
 b = the number of members until the end of last year

b) Total growth ratio 1 assets (S11)

$$S11 = \left[\frac{a}{b}\right] - 1 \times 100\%$$

According to Richardson (2002), this indicator is said to be good if the results reach \geq inflation rate

Information :

a = total assets for the current year
 b = total assets until the end of last year

4. Results and Discussion

4.1 Results

1. Protection

This aspect aims to measure the adequacy of cooperative risk

reserve funds to cover bad loans which is more than 12 months and bad loans 1-12 months.

- a. Availability of risk reserve funds to cover non-performing loans >12 months (P1)

Table 3. Calculation of the Ratio of Availability of Risk Reserved Funds to Cover Bad Loans >12 Months

Years	Risk Reserve Funds	Non-performing loans >12 months	P1
2017	Rp362,551,699	Rp181,830,000	199.39%
2018	Rp447,391,011	Rp175,8110,000	254.47%
2019	Rp543,383,365	Rp112,490,000	483.05%

Source : processed data (2019)

From the results of the calculation of the P1 ratio it continues to increase every year. In 2017 it showed a yield of 199.39%, meaning that every Rp.1 loan default > 12 months guaranteed by a risk reserve fund of Rp1.99. In 2018 cooperatives experienced an increase in their ability to cover default loans > 12 months with their risk reserve funds. The results of P1 in 2018 showed a result of 254.47% meaning that every Rp1 loan default > 12 months guaranteed by a risk reserve fund of Rp.2.54. This increase was due to an increase in the risk reserve fund of Rp84,839,312 and a decrease in the number of non-performing loans > 12 months by

Rp6,020,000. In 2019 cooperatives again experienced an increase in their ability to cover default loans > 12 months with their risk reserve funds. The results of P1 in 2019 showed a yield of 483.05% meaning that every Rp1 default loan > 12 months guaranteed by a risk reserve fund of Rp.4.83. This was due to an increase in the amount of risk reserve funds of Rp.95,992,354 and a decrease in the number of default loans > 12 months by Rp.63,320,000

b. Availability of risk reserve funds to cover 1-12 months of default loans (P2)

Table 4. Risk Reserve Fund to Cover Default Loans 1-12 Months Negligent

Year	Risk Reserve Fund	Default Loans > 12 months	Loan 1-12 months	P2
2017	Rp362,551,699	Rp181,830,000	Rp356,951,000	50.63%
2018	Rp447,391,011	Rp175,810,000	Rp352.166,000	77.12%
2019	Rp543,383,365	Rp112,490,000	Rp313,577,000	137.41%

Source : processed data (2020)

The results of the calculation of the P2 ratio continue to increase every year. In 2017 it showed a yield of 50.63%, meaning that every Rp.1 of a loan default of 1-12 months is guaranteed by a risk reserve fund of Rp0.50. In 2018 cooperatives experienced an increase in their ability to cover 1-12 month default loans with their risk reserve funds. In 2018 the results of P2 showed a yield of 77.12%, meaning that every Rp.1 of a loan default of 1-12 months is guaranteed by a risk reserve fund of Rp0.77. This increase was due to an increase in risk reserve funds of Rp84.839.312, a decrease in the number of default loans > 12 months by Rp6.020.000 and a decrease in 1-12 months default loans of Rp4,785,000.

In 2019 cooperatives experienced an increase in their ability to cover 1-12 month default loans with their risk reserve funds. In 2019 the results of P2 showed a result of 137.41%, meaning that every Rp1 loan defaulted for 1-12 months was guaranteed by a risk reserve fund of Rp1.37, this was due to an increase in the amount of risk reserve funds of Rp95.992.354, a decrease in the number of default loans > 12 months by Rp63.320.000 and a decrease in 1-12 months default loans by Rp38.589.000

2. Effective financial structure

This aspect is needed to achieve a level of security, certainty of achieving goals, and certainty of achieving profits.

a. Ratio of outstanding receivables (E1)

Table 5. Calculation of Outstanding Receivable Ratio

Year	Total outstanding receivables	Risk reserve fund	Total assets	E1
2017	Rp1,803,540,400	Rp362,551,699	Rp2,092,316,513	68.87%
2018	Rp2,159,480,400	Rp447,391,011	Rp2,518.008,526	67.99%
2019	Rp2,251,680,400	Rp543,383,365	Rp2,618,056,776	65.25%

Source : processed data (2020)

The results of the E1 calculation continue to decline every year. In 2017 the calculation of E1 showed a result of 68.87%. In 2018 the results of the E1 calculation showed a result of 67.99%, this percentage decreased compared to the percentage in 2017. The decline in the percentage in 2018 was due to an increase in risk reserve funds of Rp84.839.312 accompanied by an increase in total assets of Rp100.048.250. In 2019 the results of the E1 calculation showed a result of 65.25% where this percentage decreased compared to the percentage in 2018. The decline in the percentage in 2019 was due to an increase in risk reserve funds of Rp95.992.354 accompanied by an increase in total assets of Rp100.048.250.

sebagai dasar untuk menilai

b. Ratio non-share deposits (E5)

Table 6. Calculation of Non-Share Savings Ratio

Year	Total outstanding receivables	Risk reserve fund	E5
2017	Rp245,603,893	Rp2,092,316,513	11.74%
2018	Rp203,617,231	Rp2,518,0008,526	8.09%
2019	Rp223,305,980	Rp2,618,056,776	8.53%

Source : data processed (2020)

In 2017 the results of the E5 calculation show a result of 11.74%

meaning that every Rp.1 of total assets is funded by members' non-share

deposits of Rp0.11. In 2018 the calculation value of E5 shows a value of 8.09%, meaning that every Rp.1 of total assets is funded by members' non-share deposits of Rp0.08. The percentage value of E5 in 2018 has decreased compared to the value in 2017. This decrease was due to a decrease in member non-share deposits by Rp41.986.662 and the total value of assets owned by cooperatives increased by Rp425.692.013. In 2019,

dan memprediksi prospek

the calculated value of E5 increased to 8.53%, meaning that for every Rp1 of the total assets funded by members' non-share deposits of Rp0.08. The percentage of E5 value in 2019 has increased when compared to 2018 but is not better than 2017. The increase in the value of E5 in 2019 was influenced by an increase in the number of members' non-share deposits of Rp19.688.749.

c. The ratio of loans to outsiders (E6)

Table 7. Ratio of Loans to Outside Parties

Year	Debt to outsiders	Total assets	E6
2017	Rp80,000,000	Rp2,092,316,513	3.82%
2018	Rp300,000,000	Rp2,518,0008,526	11.91%
2019	Rp180,000,000	Rp2,618,056,776	6.88%

Source : data processed (2020)

In 2017 the results of the E6 calculation show a result of 3.82%, which means that every Rp1 of the total assets owned by the cooperative is funded by debt to outsiders of Rp0.03. In 2018 the results of the E6 calculation showed a result of 11.92%, which means that for every Rp1 of the total assets owned by the cooperative,

it is funded by debts to outside parties of Rp0.11. This year 2018 when compared to 2017 the number has increased due to the increase in the number of cooperative debts to other parties amounting to Rp.220.000.000. In 2019 the results of the E6 calculation showed a result of 6.88%, which means that every Rp1 of the

total assets owned by the cooperative is funded by debts to outside parties of Rp0.06. 2019 is compared with in 2018 the figure decreased due to the

cooperative managed to pay off its debt by Rp.120.000.000

d. Net institutional capital ratio (E9)

Table 8. Capital Ratio Calculation Institution Net

Year	Capital institutions	Fund reserve risk	Loan negligent > 12 months	Loans negligent 1 -12 months	Non-earning	Assets Total assets	E9
2017	334,055,760	362,551,699	181,830,000	356,951,000	288,776,113	2,092,316,513	32.43%
2018	349,994,513	447,391,011	175,8110,000	352,166,000	358,528,126	2,518.008,526	34.03%
2019	359,690,000	543,383,365	112,490,000	313,577,000	366,376,376	2,618,056,776	40.00%

Source : processed data (2020)

The results of the E9 calculation in 2017 yielded a value of 32.43%. In 2018 the results of the E9 calculation resulted in a value of 34.03% meaning that this value increased from 2017. The increase in the value of E9 was due to an increase in institutional capital of Rp15.938.753 an increase in risk reserve funds of Rp84.839.312 a decrease in default loans > 12 month amounting to Rp6.020.000, a decrease in 1-12 months negligent loans of Rp4.785.000. In 2019 the results of the

E9 calculation resulted in a value of 40.00%, meaning that this value has increased compared to 2018, this value is the highest value achieved by the cooperative during 2017, 2018 and 2019. The increase in the value of E9 was due to an increase in institutional capital of Rp9.695.487, an increase in risk reserve funds of Rp95.992.354, a decrease in default loans > 12 months by Rp63.320.000, a decrease in 1-12 months negligent loans of Rp38.589.000

3. Asset quality

a. The ratio of total negligent loans to total receivables (A1)

Table 9. Calculation of the Ratio of Total Negligent Loans to Total Receivables

Year	Total defaulted loans	Total outstanding receivables	A1
2017	Rp538,781,000	Rp1,803,540,400	29.87%
2018	Rp527,976,000	Rp2,159,480,400	24.45%
2019	Rp426,067.000	Rp2,251,680,400	18.92%

Source : processed data (2020)

The results of the A1 calculation in 2017, 2018 and 2019 always decreased. In 2017 the results of the A1 calculation showed 29.87%. In 2018 the A1 value decreased to 24.45%. This is due to a decrease in the number of outstanding loans of Rp10.805.000 and an increase in the

number of outstanding receivables of Rp355.940.000. In 2019 the A1 value decreased to 18.92%, this was due to a decrease in the number of non-performing loans by Rp101.909 million and an increase in the number of outstanding loans by Rp92.200.000

b. Ratio of non-productive assets to total assets (A2)

Table 10. Calculation of the Ratio of Non-Producing Assets to Total Assets

Years	Total non-earning Assets	Total assets	A2
2017	Rp 288,776,113	Rp 2,092,316,513	13.80%
2018	Rp 358,528,126	Rp 2,518,0008,526	14.24%
2019	Rp 366,376. 376	Rp 2,618,056,776	13.99%

Source : data processed (2020)

In 2017 the results of the A2 calculation showed a result of 13.80%. In 2018 the value of A2 increased to 14.24%, this increase was due to the increase in the total value of non-productive assets of Rp69.752.013. In

2019 the value of A2 decreased to 13.99%, the decrease was due to the increase in the total value of assets by Rp100.048.250

4. Rates of return and cost

a. Ratio of operating expenses/average assets (R9)

Table 11. Calculation of the Ratio of Operational Costs/Average Assets

Year	Total operating costs	Total assets until the end of this year	Total assets until the end of last year	R9
2017	Rp282,535,240	Rp2,092,316,513	Rp2,269,127,906	12.96%
2018	Rp282,944,487	Rp2,518,008,526	Rp2,092,316,513	12.27%
2019	Rp274,460,000	Rp2,618,056,776	Rp2,518,008,526	10.69%

Source : processed data (2020)

The results of the R9 calculation in 2017 showed a value of 12.96%. In 2018 there was a decrease in the value of R9 to 12.27%. This was due to the increase in total assets in 2018 of Rp425.692.013. In 2019 the value of R9 again decreased to

10.69%, this was influenced by a decrease in operating costs of Rp8.484.487, an increase in assets in 2019 of Rp100.048.250 and an increase in assets in 2018 of Rp425.692.013.

penting bagi pengguna laporan

b. Ratio of income to average assets (R12)

Table 12. Calculation of Income Ratio/Average Savings of Members

Year	SHU	Total assets until the end of this year	Total assets until the end of last year	R12
2017	Rp304,035,760	Rp2,092,316,513	Rp2,269,127,906	13.94%
2018	Rp319,974,513	Rp2,518,008,526	Rp2,092,316,513	13.88%
2019	Rp329,670,000	Rp2,618,056,776	Rp2,518,008,526	12.84%

Source : Data processed (2020)

R12 calculation results in 2017 shows a value of 13.94%. In 2018 there was a decrease in the value of

R12 to 13.88%. This is due to the increase in total assets in 2018 of Rp425.692.013. In 2019, the value of

R12 again decreased to 12.84%. This is influenced by an increase in SHU of Rp9.695.487, an increase in assets in

2019 of Rp100.048.250 and an increase in assets in 2018 of Rp425.692.013

5. Liquidity

a. Ratio of liquidity to deposits (L1)

Table 13. Calculation of liquidity ratio to deposit

Year	investments illiquid	liquid assets do not result in	debt short-term	Total deposits of non-stock	L1
2017	Rp -	Rp 77,884,661	Rp 223,904,307	Rp 245,603,893	-59.45%
2018	Rp -	Rp 185,170,477	Rp 233,552,379	Rp 203,617,231	-23.76%
2019	Rp -	Rp 228,560,530	Rp 207,196,009	Rp 223,305,980	9.57%

Source : processed data (2020)

The results of the L1 calculation in 2017 show a value of -59.45%. In 2018 it increased to -23.76%. This was due to an increase in non-yielding liquid assets of Rp. 105,285,816 and a decrease in non-

share deposits of Rp. 41,986,662. In 2019 the L1 value increased to 9.57, this was due to an increase in non-yielding liquid assets of Rp.43,390.053 and a decrease in short-term debt of Rp.26,356,370

dalam mengambil keputusan

6. Signs of growth

a. Member growth ratio (S10)

Table 14. Calculation of Member Growth Ratio

Year	Number of members in the current year	Number of members last year	S10
2017	350	406	-13.79%
2018	336	350	-4.00%
2019	322	336	-4.17%

Source : data processed (2020)

The result of the calculation of the member growth ratio (S10) in each year always decreases. In 2017, the calculation results showed a figure of -13.79%, which means that the number of members in 2017 decreased by 13.79% from 2016 or as many as 46 employees from 406 people dropped to 350 people. In 2018, the calculation results show a number of -4.00%,
 (Singh & Singh, 2014).

which means that in 2018, the number of members decreased by 4.00% from 2017 or as many as 14 people from 350 employees to 336 people. In 2019, the calculation results show a number of -4.17%, which means that in 2018 the number of members decreased by 4.17% from 2018 or as many as 14 people from 336 employees to 322 people.

b. Total asset growth ratio (S11)

Table 15. Growth Ratio Calculation Total Assets

Year	Total Assets Current Year	Total Assets Last Year	S11
2017	Rp 2,092,316,513	Rp 2,269,127,906	-7,79%
2018	Rp 2,518,008,526	Rp 2,092,316,513	20,35%
2019	Rp 2,618,056,776	Rp 2,518,008,526	3,97%

Source : data processed (2020)

The calculation of the total asset growth ratio (S11) in 2018 increased from 2017 but in 2019 decreased from 2018. In 2017 the calculation showed a figure of -7.79%. In 2018, the S11 calculation shows a value of 20.35%, this is influenced by the increase in assets owned by cooperatives amounting to

Rp.425.692.013, from Rp. 2,092,316,513 to Rp.2,518,008,526. In 2019, the value of S11 decreased to 3.97%. This is influenced by the increase in assets in 2018 owned by cooperatives amounting to Rp.425,692,013 from Rp. 2,092,316,513 to Rp.2,518,008,562

4.2 Discussion

1. Protection

a. Availability of risk reserve fund to cover bad loans > 12 months (P1)

Table 16. Performance Assessment Ratio of Availability of Risk Reserve Fund to Cover Bad Loans > 12 months

Year	Ideal Standard	P1	Performance
2017	≥ 100%	199.39%	Ideal
2018		254.47%	Ideal
2019		483.05%	Ideal

Source : data processed (2020)

Based on the results of P1 calculations in 2017, 2018 and 2019, it can be concluded that the value is always in the ideal category according to the PEARLS method because it is disusun sesuai dengan Standar

above the standard, namely 100%. The value of P1 each year also always means increased performance, improved cooperation in covering the bad loans > 12 months

b. Availability of reserve funds to cover the risk of default loans 1-12 months (P2)

Table 17. Performance Assessment Availability Rate Risk Reserve Fund To Cover Loan Default 1- 12 Months

Year	Ideal Standard	P2	Performance
2017	35%	50.63%	Not Ideal
2018		77.12%	Not Ideal
2019		137.41%	Not Ideal

Source : data processed (2020)

Based on the results of P2 calculations in 2017, 2018 and 2019 it can be concluded that the value is always experienced an increase but always in a category that is not ideal according to the PEARLS method

because the value is above the standard of 35%. Value P2 above the standard means that the reserve fund risk cooperative too high if only allocated to cover loan defaults

2. *Effective financial structure*

a. Ratios of receivables outstanding (E1)

Table 18. Calculation of Ratio Receivables Outstanding

Year	Ideal Standard	E1	Performance
2017	70% - 80%	68,87%	Not Ideal
2018		67.99%	Not Ideal
2019		65.25%	Not Ideal

Source : data processed (2020)

Based on the results of E1 calculations in 2017, 2018 and 2019 E1 values always decline and it can be concluded that the financial performance of cooperatives in a state of not ideal because the value is below

the ideal standard of the PEARLS method which is 70%- 80%. Value E1 under ideal standards PEARLS means that of the total assets owned by the cooperative, generating assets of accounts receivable is still low

b. Rate of deposits of non-stock (E5)

Table 19. Performance Assessment Ratio Deposits Non shares

Years	Ideal Standard	E5	Performance
2017	70 % - 80%	11.74%	Not Ideal
2018		8.09%	Not Ideal
2019		8.53%	Not Ideal

Source : data processed (2020)

Based on all the results of E5 calculations in 2017, 2018 and 2019 the value is fluctuating due to a decline in 2018 and experienced decline in 2019 as well as always in the non-ideal category according to the PEARLS

method due to its value being less than 70%-80%. The low value of E5 This means that of the total assets of the cooperative, few are derived from the savings of non-stock member

c. Rate loans to external parties (E6)

Table 20. Performance Assessment Rate Loans to The Outside

Year	Ideal Standard	E6	Performance
2017	≤ 5%	3.82%	Ideal
2018		11.92%	Not Ideal
2019		6.88%	Not Ideal

Source: data processed (2020)

Based on all the results of E6 calculations in 2017, 2018 and 2019 show fluctuating values due to an increase in 2018 and a decrease in 2019. In 2017, the performance of the cooperative was in the ideal category because its value was ≤ 5%, meaning that the cooperative's assets were

funded by loans to small outside parties. In 2018 and 2019 the value of E6 is in a non-position because its value is above 5%, meaning that the assets owned by the cooperative are largely funded by loans to outside parties.

d. Net institutional capital ratio (E9)

Table 21. Performance Assessment of Net Institutional Capital Ratio

Year	Ideal Standard	E9	Performance
2017	≥ 10%	32.43%	Ideal
2018		34.03%	Ideal
2019		40.00%	Ideal

Source : data processed (2020)

E9 calculation results at Trisula Sejahtera Bersatu Women's Cooperative in 2017, 2018 and 2019 its value has always increased and always in the ideal category according to the PEARLS method because the

value is always above 10%. This condition indicates that the assets owned by the cooperative mostly come from the capital of the cooperative itself, this indicates the independence

of the cooperative in terms of capital
 in its activities

3. *Asset quality*

a. Total ratio of default loans to total receivables (A1)

Table 22. Performance Assessment

Year	Ideal Standard	A1	Performance
2017	≤ 5%	29.87%	Not Ideal
2018		24.45%	Not Ideal
2019		18.92%	Not Ideal

Source : data processed (2020)

A1 calculation results from 2017 to 2019 continue to decline meaning cooperatives are increasing ability to manage outstanding receivables so that the amount of default loans can be reduced. However according to the method PEARLS

financial performance of cooperatives in 2017, 2018 and 2019 are always in a category which is not ideal because the values are above 5% means that of the total debt outstanding, the loan default is still high.

b. Ratio of assets that do not generate to total assets (A2)

Table 23. Performance Assessment of the Ratio of Non -Producing Assets to Total Assets

Year	Ideal Standard	A2	Performance
2017	≤ 5%	13.80%	Not Ideal
2018		14.24%	Not Ideal
2019		13.99%	Not Ideal

Source : data processed (2020)

Calculation result A2 in 2017, 2018 and 2019 the value is fluctuating due to an increase in 2018 and a decrease in 2019. However, the value

of A2 in 2017 to 2019 in the United Prosperous Trisula Women's Cooperative shows a number that is far from the ideal value according to the

PEARLS Method because the value is above 5%. The non-ideal category

indicates that too many non-productive assets are owned by the cooperative.

4. Rates of return and cost

a. Operating cost/average asset ratio (R9)

Table 24. Performance Assessment Operating Cost/Average Asset Ratio

Year	Ideal Standard	R9	Performance
2017	≤ 5%	12.96%	Not Ideal
2018		12.27%	Not Ideal
2019		10.69%	Not Ideal

Source : data processed (2020)

The results of R9 calculations in 2017, 2018 and 2019 continue to decline meaning it shows better performance because cooperatives have succeeded in cost efficiency operations that are released but the

value remains in the category is not ideal because the value is above 5%. This indicates that the operating costs incurred by the cooperative each year are still too high.

b. Performance Assessment Income Ratio/Average Assets

Table 25. Calculation of Income Ratio/Average Member Savings

Year	Ideal Standard	R12	Performance
2017	≥ 10%	13.94%	Ideal
2018		13.88%	Ideal
2019		12.84%	Ideal

Source : data processed (2020)

The results of the calculation of R12 in 2017, 2018 and 2019 continue to decline. The value of R12 is always in the ideal category because it is above 10%. Values that are above the

standard indicate that the income generated from the total assets owned is relatively high.

1. *Liquidity*

Table 26. Performance Assessment Liquidity to savings ratio

Year	Ideal Standard	L1	Performance
2017	15%	-58.64	Not Ideal
2018		-23.76	Not Ideal
2019		9,57	Not Ideal

Source : data processed (2020)

From the results of L1 calculations show that in 2017, 2018 and 2019 always experienced an increase in performance marked by the value of L1 which is always increasing but according to PEARLS method the financial performance of cooperatives in 2017, 2018 and 2019 in the category

is not ideal because the value is always below the PEARLS standard of 15% which means the amount of non-productive liquid assets owned by the cooperative is low and not enough if there are members who at any time take non-stock deposits.

6. *Signs of growth*

a. Member ratio (S10)

Table 27. Calculation of Member Growth Ratio

Year	Ideal Standard	S10	Performance
2017	> 12%	-13.79%	Not Ideal
2018		-4.00%	No Ideal
2019		-4.17%	Not Ideal

Source : data processed (2020)

The results of S10 calculations in 2017, 2018 and 2019 in cooperatives show nonperformance because the value is below standard pengguna laporan keuangan

and also has a negative value. The negative value is due to the decrease in the number of members.

b. Total asset growth ratio (S11)

Table 28. Performance Assessment Asset Growth Ratio

Year	Ideal Standard	S11	Performance
2017	> inflation 3.61%	-7.79%	Not Ideal
2018	> inflation 3.13%	20.31%	Ideal
2019	> inflation 2.72%	3.97%	Ideal

Source : data processed (2020)

For the standard inflation each year comes from www.bi.go.id. The results of the S11 calculation in 2017 show that the performance is not ideal because the value is below the standard and even negative means that there is a decrease in assets owned by the cooperative. The years 2018 and 2019 show ideal performance because the value is above

5. Conclusion

The results of the calculation of 13 PEARLS indicators based on financial statements and additional data of the Trisula sejahtera bersatu Women's Cooperative in 2017, 2018 and 2019 show that the cooperative is in poor condition because of the 13 indicators studied only 3 indicators show the ideal category in 3 consecutive years while 8 indicators are always in a non-

ideal state and the other 2 indicators are only ideal in certain years.

Table 29
 Cooperative Financial Performance

Ratio	2017	2018	2019
P1	Ideal	Ideal	Ideal
P2	Not Ideal	Not Ideal	Not Ideal
E1	Not Ideal	Not Ideal	Not Ideal
E5	Not Ideal	Not Ideal	Not Ideal
E6	Ideal	Not Ideal	Not Ideal
E9	Ideal	Ideal	Ideal
A1	Not Ideal	Not Ideal	No Ideal
A2	Not Ideal	Not Ideal	Not Ideal
R9	Not Ideal	Not Ideal	Not Ideal
R12	Ideal	Ideal	Ideal
L1	Not Ideal	Not Ideal	Not Ideal
S10	Not Ideal	Not Ideal	Not Ideal
S11	Not Ideal	Ideal	Ideal

Source : data processed (2020)

From table 29 above it can be seen that:

- a. Ratios that are always in the ideal category: P1, E9 and R12

- b. Ratios that are always in the non -ideal category: P2, E1, E5, A1, A2, R9, L1 and S10
- c. Ratios that are in the ideal category only in certain years: E6 and S11

From the results above, the researchers were able to give advice to the Trisula sejahtera bersatu Women's Cooperative including:

- a. Cooperatives are expected to streamline the number of outstanding receivables
- b. Cooperatives are expected to be able streamline the risk reserve fund budget to cover losses borne by the cooperative
- c. Cooperative is expected to be able to finance the loan amount to external parties

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IMPLEMENTATION OF PEARLS ANALYSIS TO MEASURE THE FINANCIAL PERFORMANCE OF COOPERATIVES (A case study on the Trisula Sejahtera Bersatu Women's Cooperative, Pamekasan Regency)

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