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# FACTORS AFFECTING THE FINANCIAL PERFORMANCE OF CREDIT UNION IN INDONESIA

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**ABSTRACT**

*The research aims to find out a number of things in terms of macro and micro data that affect the condition of the financial performance of Credit union in all provinces in Indonesia both in terms of internal factors and external factors both in terms of microeconomics and macroeconomics. Therefore, the assessment of the financial performance of Credit union throughout Indonesia has an important role to play in terms of profitability ratios which are influenced by a number of variables. Empirical evidence in this study shows that the total assets, the age of the cooperative and the number of members have a positive and significant relationship to the profitability ratio of return on assets of credit union in Indonesia. In addition, Number of Branches, Merger Activities have a negative influence and a significant relationship to the financial performance of credit union. Meanwhile, macroeconomic variables such as provincial GRDP do not have a significant relationship and influence on the activity performance of the return on asset profitability ratio of credit union. This finding has an important role in improving services to credit cooperative members who are SMEs so that they can increase their contribution to the percentage of economic growth.*

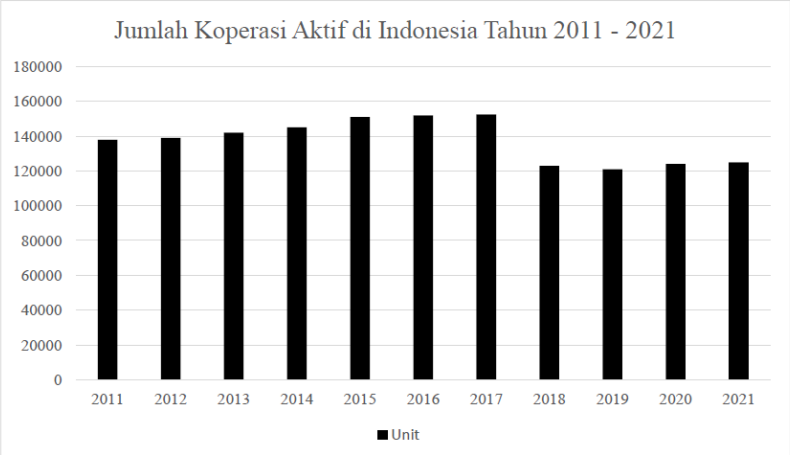
## INTRODUCTION

The Indonesian economy experienced a national growth of 3.69% (yoy) in 2021. Indonesia's GDP per capita has increased to IDR 62.2 million (or the equivalent of US$ 4,349.5) where the position of this growth rate is in a higher position when compared to GDP per capita in 2019 is 59.3 million. The achievement of this percentage increase categorizes Indonesia into the category of countries that have an upper middle-income country. This classification category becomes a barometer in driving national economic recovery as well as a stimulus for structural reforms to be able to find a way out of the trap at the middle class/middle income trap category level. Gross Regional Domestic Product (GRDP) data, either based on current prices or constant prices, is one of the indicator points in knowing an economic condition in an area within a certain period of time. (BPS, 2021). GRDP at constant national prices shows a decline that occurred throughout 2018 to 2020 with a decrease in growth of -126% and an increase in growth in 2021 of + 437%. (BPS, 2022)

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**Figure 1.** Active Indonesian Cooperatives in 2011-2021




Savings and Loans Cooperatives in particular have an entity in the form of a Credit Cooperative which has the function of helping the credit needs of members, who really need it with light conditions, Educating members to actively save regularly so as to form their own capital and increase knowledge about cooperatives (Widiyawati, 2013). Credit Cooperative is a type of Cooperative that has a focus on the scale of the Savings and Loans Business unit. Credit union have an important role in providing financial services to the agribusiness sector. Location factors and environmental conditions of credit union have an influence on the capacity of credit union in driving operational performance. Significantly, this can be seen where credit cooperative branch offices look less representative when compared to banking branch offices which are located far from urban areas. targeting the segmentation of customers in the middle and upper economic class who have high incomes (Quarter, 2016).

Credit union are entities that are quite widely established as part of the financial system in most countries in the world where the need for financing by members is very high but is not supported by large enthusiasm from members' savings. This has relevance to the variables of available cooperative capital, the basic principles of cooperatives, gender issues and economic conditions in a country (Choez & Mart 2022). The Takera Credit Cooperative in Canada has a fairly high non-performing loan (NPL) ratio of 6.6 percent, which is measured in terms of financial ratios in measuring the performance of the cooperative. This is in line with looking at several factors such as the performance evaluation variable of the Takera Credit Cooperative based on the

Balanced Scorecard approach and alternative credit cooperative internal policies influencing the rate of loan repayments by members of the Takera Credit Cooperative in order to reduce Non Performing Loans (NPL) below 5 percent. Loans are given to members using a group-by-group model so that this maximizes the return on loans and investment assets. (Rasyidi et al, 2015). Analysis of the relationship between credit risk and credit cooperative efficiency indicates that the greater the credit risk score, the lower the operational efficiency score. In certain economic periods of a country, credit union have also succeeded in maintaining their existence in the market and diversifying loan products so that efficiency scores become higher and produce greater benefits for members (Bressan et al., 2020).

There are institutions similar to credit union, namely the main cooperative banks operating under the provisions of the 1949 banking regulations incorporated in the Cooperative Societies (AACS), there are findings between the linkage of debt to asset ratios and the scale of operations affecting the financial performance of cooperatives, based on a combined data sample for three years from 140 well-distributed cooperative banks, showing significant differences between capital adequacy, leverage and net interest margin (NIM). However, banks with higher leverage ratios benefit in terms of return on equity (Srivastava, 2022) This is also the case with microfinance institutions that always provide financial services to low-income people and banking customers with minimal savings. In addition, the percentage of female loan members has a higher contribution to the existence of microfinance institutions due to the higher loan repayment ratio compared to men. So that microfinance institutions deliberately go through a policy mechanism for selecting members with female gender status along with an increase in credit facilities provided to female borrowers which has a positive influence on the performance and performance of microfinance institutions (Fadikpe et al, 2022). Based on some of these studies, the authors can see that there is a research gap that there are several variable factors that can influence the financial performance of a credit cooperative so that research related to factors that influence financial performance in the credit cooperative industry in Indonesia will be further investigated.

## METHOD

This research data uses secondary data types. Secondary data was taken from the credit cooperative annual report data from the Ministry of Cooperatives and SMEs Regency/Municipal Cooperative and SMEs Office, Provincial Cooperative and SMEs Office and KUMKM Revolving Fund Management Institution. In addition, macroeconomic secondary data came from data from the Central Bureau of Statistics. The data in this study is secondary data which presents information related to the profile and annual financial reports of credit union starting from financial ratios, total assets, number of branches, number of members, age of credit cooperative legal entities, merger activity and provincial GRDP. The unit of analysis in this research is credit union spread throughout 33 provinces with a data period spanning 2021 of 270 credit union using a cross section data model. Researchers used six independent variables (X) and one dependent variable (Y). with an explanation of the definition of each variable is as follows:

**Table 1.** Research Variables

| Independent Variable | Definition | Indicator | Unit | Literature |
|---|---|---|---|---|
| Asset Total (X1) | The overall wealth owned by the credit cooperative. The amount of asset value in the balance sheet financial statements 2021 | The amount of asset value in the balance sheet financial statements known book 2021 | Rupiah | Hessou & Lai, 2017 |
| Member Total (X2) | Number of members of the kreedit cooperative in 2021 the amount of asset value in the balance sheet financial statements 2021 | The amount of asset value in the balance sheet financial statements 2021 | Nominal | Pille & Paradi, 2002 |
| Branch Total (X3) | The number of branches to expand the segmentation of the reach of members so that this also has an influence. Number of branches owned by a credit cooperative | Number of branches owned by a credit cooperative | Nominal | Hessou & Lai, 2017 |
| Legal Entities of Credit Cooperatives' Age (X4) | The age of the legal entity of the credit cooperative based on the deed of establishment as the number of years that the credit cooperative started to run the operational business in the year of establishment of the credit cooperative according to the deed of establishment | Year of establishment of the credit cooperative according to the deed of establishment | Year | Hessou & Lai, 2017 |
| Provincial GDRP (X6) | Indicators are important for knowing the economic conditions in a region in a certain period, both on the basis of prevailing prices and on the basis of constant prices in each province | | Percent | Hessou & Lai, 2017 |
| Merger Activity (X6) | Merger or merger activities between credit cooperatives within the last 3 years and if credit cooperatives that carry out merger or merger activities between | | 1 = Merger 0 = Not Merger | Fried et al., 1999 |

| | | | | |
|---|---|---|---|---|
| | cooperatives have joined in the last three years | | | |
| **Dependent Variable** | **Definition** | **Indicator** | **Unit** | **Literature** |
| Return On Asset (Y) | A ratio that can measure a Company's Ability can look for profit levels. Profitability in this study uses the return on asset ratio, which shows the amount of asset contribution in creating net profit. ROA = Net Profit/Total Assets | ROA = Net Profit/Total Assets | Percent | Hessou & Lai, 2017 |

The analytical method is used to determine the effect of the dependent variable with two or more independent variables using the multilinear regression equation formula. To answer the research questions, the researcher adopted the approach of Hessou & Lai (2017). The dependent variable is the return on assets or the ratio of net income in a certain period (t) to the total value of credit cooperative assets. Xi is the independent variable that includes credit union (i). N represents the total number of independent variable factors which the authors consider against each credit cooperative. i is cross-sectional data collected at one time on many credit cooperative entities, considering that the purpose of this research is to find significant factors that can affect the performance of credit union, the authors use cross-sectional data analysis in the 2021 timeframe to obtain a significant relationship statistically between independent variable factors and return on assets as a financial performance matrix in 270 credit cooperative entities as a research sample. Multilinear regression test using cross section data in this study aims to determine the effect of independent variables consisting of financial ratios, total assets, number of branches, number of members, age of credit cooperative legal entity, merger activity, percentage of productive loans, interest rates and variables macroeconomic GRDP of the Province on the dependent variable return on assets of credit cooperative entities. The multilinear regression model in this study is formulated with the following equation:

$$Y_ROA_i = \alpha + \beta_{Aset} X_{Aset} + \beta_{Usia} X_{Usia} + \beta_{Anggota} X_{Anggota} + \beta_{Cabang} X_{Cabang} + \beta_{PDRBProvinsi} X_{PDRBProvinsi} + \beta_{Merger} X_{Merger} + e$$

Information :
Y = ROA (Return On Assets)
α = Constant
β = Regression Coefficient
X1 = Total Assets
X2 = Number of Members
X3 = Number of Branches
X4 = Age of Credit Cooperative Legal Entity

X5 = Provincial GRDP
X6 = Merger Activity
e = Error terms
i = Data Cross Section

## RESULT AND DISCUSSION

Based on the table, information is obtained about the research variable, namely the Return On Assets (ROA) variable which has a maximum value of 3.98 percent and a minimum value of 0.13 percent, with an average value (Mean) of 1.765 percent and a standard deviation value of 1. 017933 of the total research data as many as 270 data. The highest Return On Assets percentage is owned by the Mandiri Soax Credit Cooperative located in Sanggau Regency, West Kalimantan Province, while the lowest Return On Assets percentage is owned by the Karya Bakti CU Credit Cooperative located in Pematang Siantar Regency, North Sumatra Province. The Total Assets variable has a maximum value of IDR 75,420,000,000 and a minimum value of IDR 100,000, with an average/mean value of IDR 5,140,000,000 and a standard deviation value of IDR 9,430,0000,000 with a total of all data research as much as 270 data. The lowest total assets are owned by the Manaekat Credit Savings and Loans Cooperative, Ngada Regency, East Nusa Tenggara Province while the lowest total assets are owned by the CU Koperasi Kredit Bersatu in Manado City, North Sulawesi Province. In the variable Age of Cooperative Legal Entity there is a maximum value of 61 years and a minimum value of 11 years with an average value (mean) of 19.13 years and a standard deviation value of 9.49 years with a total of 270 research data. The oldest Cooperative Legal Entity is owned by the Imogiri KKGI Guru Credit Cooperative located in Bantul Regency, Yogyakarta Province, while the youngest Cooperative Legal Entity is owned by the Village Credit Agency Microfinance Services Cooperative located in Bojonegoro Regency, East Java Province.

The Number of Members variable has a maximum value of 226,337 members and a minimum value of 2 people, with an average (Mean) value of 5,295 members and a standard deviation value of 17,200 members with a total of 270 research data. The highest number of members is owned by the Mandiri Soax Credit Cooperative located in Sanggau Regency, West Kalimantan Province, while the lowest number of members is owned by the South Sulawesi Bekatigade Credit Cooperative Center in Makassar City, South Sulawesi Province. The Number of Branches variable has a maximum value of 16 branches and a minimum value of 0 branches, with an average (mean) value of 1.403704 and a standard deviation value of 2.401205 with a total of 270 research data. The largest number of branches, 16, are owned by the Manaekat Savings and Credit Cooperative, Ngada Regency, East Nusa Tenggara Province, while there are several small-scale Credit union spread throughout Indonesia that do not have branches. The provincial GRDP variable has a maximum value of 2,914,581 billion and a minimum value of 48,564 billion with an average value (mean) of 978181.2 and a standard deviation value of 962220.9 with a total of 270 research data. Meanwhile, DKI Jakarta Province has the highest provincial GRDP with 13 credit union and the lowest provincial GRDP is Maluku Province with 2 credit union. The Merger

Activity variable has a maximum value of 1 and a minimum value of 0, with an average (mean) value of 0.0148148 and a standard deviation value of 0.1210355 with a total of 270 research data. This illustrates that most credit cooperative entities rarely process merger activities

The results of the T Statistical Test in this study obtained several conclusions consisting of the Total Assets Variable (X1) obtained a t-count value of 3.15 with a P-value of 0.002 which means it is smaller than the significance value (0.05). Thus H1 is accepted so that it can be concluded that the total asset variable has a significant effect on the Return On Assets variable. The Cooperative Age variable (X2) obtained a t-count value of 3.34 with a P-value of 0.001 which is smaller than the significance value (0.05). Thus H2 is accepted so that it is concluded that the Cooperative Age variable has a significant effect on the Return On Assets variable. Then the Number of Members Variable (X3) based on the results obtained from the t test obtained a t-count value of 3.56 with a P-value of 0.000 which means it is smaller than the significance value (0.05). Thus H3 is accepted so that it is concluded that the Number of Members variable has a significant effect on the Return On Assets variable. The number of branches variable (X4) obtained a t-count value of -3.37 with a P-value of 0.001 which means it is smaller than the significance value (0.05). Thus H4 is accepted so that it is concluded that the number of branches variable has a significant effect on the variable Return On Assets. The Provincial GRDP variable (X5) is based on the acquisition of a t-count value of 0.53 with a P-value of 0.595 which means it is greater than the significance value (0.05), thus H5 is rejected so that it is concluded that the Provincial GRDP variable has no significant effect on the Return On Assets variable. Then in the Merger Activity Variable (X6) a t-count value of -0.16 is obtained with a P-value of 0.871 which means that it is greater than the significance value (0.05) thus H6 is rejected so that it is concluded that the Provincial GRDP variable has no significant effect on the Return On Assets variable.

This research further looks at whether all the independent variables contained in the model have a simultaneous (together) influence on the dependent variable through the F Statistical Test Results where the probability value (Prob > F) = 0.000 <0.05, it can be concluded that Assets (X1), Cooperative Age (X2), Number of Members (X3), Number of Branches (X4), Provincial GRDP (X5) and Merger Activities (X6), simultaneously or jointly affect Return on Assets (Y). Then how far the model's ability to explain the dependent variables is measured using the Coefficient of Determination Test (R2) which obtains a coefficient of determination (R-squared) of R^2=0.1260. Test Results for the Coefficient of Determination (R2) The coefficient of determination test (R2) was carried out with the aim of measuring how far the ability of the model is to explain the dependent variables. In this study the R2 test (R-square) was used to determine the Assets, Cooperative Age, Number of Members, Number of Branches, Merger Activities, and Provincial GRDP on Return on Assets. The coefficient of determination can be seen in table 4.11 below. Based on Figure 4.4, it is known that the value of the coefficient of determination (R-squared) is R^2=0.1260. This value can be interpreted as Assets (X1), Cooperative Age (X2), Number of Members (X3), Number of Branches (X4), Provincial GRDP (X5) and Merger Activity (X6) simultaneously or jointly affect ROA (Y) of 12.6%, the rest is influenced by other factors outside the model and variables studied. According to Chin (1998), the R-Square value is categorized as

strong if it is more than 0.67, moderate if it is more than 0.33 but lower than 0.67, and weak if it is more than 0.19 but lower than 0.33. The value of the coefficient of determination is between 0 and 1. If the value is close to 1, it means that the independent variable provides almost all the information needed to predict the dependent variable. However, if the value of R2 is getting smaller, it means that the ability of the independent variable to explain the dependent variable is quite limited.

The analytical method used in this study is multiple linear regression analysis using data for the 2021 timeframe by taking data on credit union of 270 credit union as research samples.

**Figure 2.** The Result of Multiple Linear Regression Analysis

| Source | SS | df | MS | Number of obs | = | 270 |
|---|---|---|---|---|---|---|
| | | | | F(6, 263) | = | 6.32 |
| Model | 35.1236773 | 6 | 5.85394622 | Prob > F | = | 0.0000 |
| Residual | 243.610873 | 263 | .926277082 | R-squared | = | 0.1260 |
| | | | | Adj R-squared | = | 0.1061 |
| Total | 278.73455 | 269 | 1.03618792 | Root MSE | = | .96243 |

| Y_ROA | Coefficient | Std. err. | t | P>\|t\| | [95% conf. | interval] |
|---|---|---|---|---|---|---|
| ln_X1_Aset | .0706037 | .0224178 | 3.15 | 0.002 | .0264626 | .1147448 |
| X2_Usia | .0210661 | .0063109 | 3.34 | 0.001 | .0086399 | .0334923 |
| X3_Anggota | .000014 | 3.94e-06 | 3.56 | 0.000 | 6.26e-06 | .0000218 |
| X4_Cabang | -.1068664 | .0316962 | -3.37 | 0.001 | -.1692769 | -.0444558 |
| ln_X5_PDRBP~i | .0253802 | .0476982 | 0.53 | 0.595 | -.0685388 | .1192992 |
| X6_Merger | -.0999866 | .6132281 | -0.16 | 0.871 | -1.307448 | 1.107475 |
| _cons | -.8600718 | 1.676437 | -0.51 | 0.608 | -4.161019 | 2.440875 |

Based on the test results in the table above, the following equation is obtained.

$$Y_ROA = -0.86 + 0.07Asset + 0,021CooperativeAge + 0,000014MemberTotal - 0,106BranchTotal +0,253ProvincialGDRP – 0,099MergerActivity$$

Based on the regression equation above, the value of the constant shows a number of -0.86, which means that if the independent variables, namely Total Assets, Age of Cooperative, Number of Members, Number of Branches, Province GRDP and Merger Activities are worth 0, then the magnitude of the value variable Return On Assets will decrease by 0.86 percent. Then the coefficient value of the Asset variable shows the number 0.07060, which means that every increase in assets by one percent will increase the Return On Assets by while the Cooperative Age shows the number 0.021 which means that every one year increase in age will increase the Return On Assets ratio by 2.1 percent. and the variable Number of Members shows the number 0.000014 which means that each additional member will increase the Return On Assets ratio by 0.0014 percent. then the coefficient value on the Number of Branches variable shows the number -0.10686, which means that every addition of one branch will reduce the Return On Assets ratio by 10.6 percent and have no significant effect. Then the coefficient value of the Provincial GRDP

variable shows a number of 0.02538 which means that every one percent increase in the Province's GRDP value will increase the Return On Assets ratio by 2.5 percent and has no significant effect. The Merger Activity variable shows the number 0.099, which means that if a merger activity occurs, it will reduce the return on assets ratio by 9.9%.

**Interpretation of Research Results**

Based on the research above, several things can be interpreted, such as assets having a positive and significant effect on Return On Assets where the results of this study are in line with Almehdawe et al. (2020) which states that total assets have an effect on return on assets. This is due to the company's ability to generate profit for one year by using the company's assets, both current and fixed in production activities. Without profit, companies cannot attract external capital sources to invest their funds in the company. Companies with high returns on investment will use relatively low debt. Then the age of the cooperative has a positive and significant effect on return on assets where the results of this study are in line with Hessou & Lai (2017) which states that the age of credit union has an effect on return on assets. This is because the longer the credit cooperative operates in the middle of the market, the more it influences the contribution of return on assets. Credit union as time goes by, the experience in managing risk management is getting better so that they have a higher capital adequacy ratio and have a higher interest rate than credit union that have only been operating on the market in a relatively short time. The effect of the number of members has a positive and significant effect on return on assets where the results of this study are in line with Almehdawe et al. (2020) which states that the number of members has an effect on return on assets. This is because credit union are different from banking where credit union have a focus on good service quality for several existing members compared to maximizing the number of members in each branch. Based on this philosophy, credit union are characterized by rapid development in every dense population in a settlement when compared to bank financial institutions which are growing rapidly in urban centers. In addition, several credit union that have a member empowerment segmentation in the agribusiness sector will tend to have a higher variable return on assets.

The effect of the number of branches also has a negative and significant effect on return on assets where the results of this study are in line with Almehdawe et al. (2020) which states that the number of branches has a negative effect on return on assets. This is because these factors, namely costs, selling prices, and the volume of operational and non-operating costs, will cause expenses that can reduce the assets and equity of credit union. Then the Total Provincial GRDP has a negative and insignificant effect on Return On Assets where the results of this study are in line with Almehdawe et al. (2020) which states that total has no effect and is not partially significant to Return On Assets. Economic growth and inflation do not have a partial and simultaneous effect on profitability. Observations using two macroeconomic variables so that in subsequent observations using different variables that can affect the profitability of the company. Economic growth does not directly affect the level of profitability of credit union. Meanwhile, provincial GRDP influences economic activity but does not determine profitability ratios such as return on

assets. Then Merger Activity has a negative and significant effect where the results of this study are in line with Almehdawe et al. (2020) which states that the amount of merger activity has no effect and has no partial significance on return on assets. The process of merger activity will generate operational costs thereby reducing the percentage of return on assets profitability ratio.

## CONCLUSION

Based on the results of data analysis and interpretation of the results of research that has been done previously, it can be concluded that credit union that have large amounts of assets will be linear with an increase in financial performance in terms of return on investment. Credit union that are able to increase the number of assets owned will have a better influence on financial performance than the cooperative itself. This is supported by the legal age of the Credit Cooperative which goes hand in hand with the relatively sustainable operational business age with a high rate of return on investment. the cooperative itself. The above is also supported by the presence of members who are shareholders of credit cooperative entities who also participate in improving the financial performance of cooperatives through contributions from member loans, principal savings, mandatory savings and voluntary savings and time deposits against capital flows.

Some of these things contradict with the element of increasing the number of branches which will actually reduce the performance of the financial ratios of return on assets due to high operating expenses by not carefully considering the output rather than the expansion process of opening branches. This is also in line and linear with the merger activity process and will also lead to a decrease in the ratio of return on assets where in the case of the merger activity process it will also increase operational costs without being based on careful planning by credit union, this is due to the absence of a target number of candidates definite members and unverified member segmentation as well as qualified governance in managing branches. In addition, indirectly, from a macroeconomic perspective, the provincial GRDP will contribute to an increase in the financial performance of a credit cooperative, but indirectly due to the high GRDP value in a province where the credit cooperative is located, it can indicate that the production of goods and services in a province is high so that this will affect the absorption of workers who carry out production activities and will stimulate credit loans to MSMEs through credit union

For credit cooperative entities, it is hoped that they can maximize governance efficiently and effectively in order to increase Member Income by providing competency stimulus in the field of SMEs that are carried out so that members who are SMEs can become classed in terms of capital and enter the industrial world so as to create value added for the credit cooperative itself which is expected to become an institution driving the people's economy in the future.

Decisions on opening branches and merger activities have no effect on increasing the return on assets of credit union, so it is necessary to have policies that are more targeted internally at credit union, such as increasing the number of qualified human resources and specializing in tasks and functions to be able to have a better effect on increasing the profitability ratios for credit cooperative.

The researchers hope that this study can become a reference for future studies. More factors regarding the financial performance and credit union are expected to emerge in subsequent research to enrich public's knowledge.

## REFERENCE

Almehdawe, E., Khan, S., Lamsal, M., & Poirier, A. (2020). Factors affecting Canadian credit unions' financial performance. *Agricultural Finance Review, 81*(1), 51-75.

Arnold, M. (2012). *Top ten marketing trends every credit union should know*. On the Mark Strategies.

Bauer, K. J., Miles, L. L. & Mishikawa, T. (2009). The effect of mergers on credit union performance, *Journal of Banking and Finance, 33*(12).

Bishop, K. (2022). *Ensuring portfolio health in an inflation economy.* ALM Credit Union Times.

BPS. (2022). *Produk domestik regional bruto provinsi*. Badan Pusat Statistik.

Canadian Credit Union Association. (2017). *The largest 100 credit unions*. Toronto.

Chillengerian, N. (2021). *Credit union help business as economy heals.* ALM Credit Union Times.

Christensen, K., Bellefontaine, C., & Peters, T. (2016). *Current trends in the Canadian credit union sector.* FASKEN.

DBRS. (2014). *Rating Canadian credit union centrals and Desjardins group*. DBRS Morningstar.

Desai, V. S., Crook, J. N., & Overstreet Jr, G. A. (1996). A comparison of neural networks and linear scoring models in the credit union environment. *European journal of operational research, 95*(1), 24-37.

DPR RI. (2022). *Rancangan undang-undang pengembangan dan penguatan sektor keuangan.* DPR RI.

Fried, H. O., Lovell, C. K., & Eeckaut, P. V. (1993). Evaluating the performance of US credit unions. *Journal of Banking & Finance, 17*(2-3), 251-265.

Fried, H. O., Lovell, C. K., & Yaisawarng, S. (1999). The impact of mergers on credit union service provision. *Journal of Banking & Finance, 23*(2-4), 367-386.

Goddard, J., McKillop, D., & Wilson, J. O. (2008). The diversification and financial performance of US credit unions. *Journal of banking & finance, 32*(9), 1836-1849.

Gomez-Biscarri, J., López-Espinosa, G., & Mesa-Toro, A. (2021). The risk implications of the business loan activity in credit unions. *Journal of Financial Stability, 56*, 100932.

Hassan, M. K., Brodmann, J., Rayfield, B., & Huda, M. (2018). Modeling credit risk in credit unions using survival analysis. *International Journal of Bank Marketing*.

Hessou, H. (2017). Basel III capital buffer requirements and credit union prudential regulation: Canadian evidence. *Journal of Financial Stability, 30*, 92-110.

Karels, G. V., & McClatchey, C. A. (1999). Deposit insurance and risk-taking behavior in the credit union industry. *Journal of Banking & Finance, 23*(1), 105-134.

Kementerian Koperasi dan UKM. (2022). *Jumlah unit usaha UMKM tahun 2015-2019*. Kementerian Koperasi dan UKM.

Maskara, P. K., & Neymotin, F. (2021). Do Credit Unions Serve the Underserved?. *Eastern Economic Journal*, *47*, 184-205.

McKee, G., Kagan, A., & Ghosh, A. (2019). Small asset credit union executive succession concerns. *Journal of Co-operative Organization and Management*, *7*(1), 26-33.

McKillop, D. G., Glass, J. C., & Ferguson, C. (2002). Investigating the cost performance of UK credit unions using radial and non-radial efficiency measures. *Journal of Banking & Finance*, *26*(8), 1563-1591.

McKillop, D., & Wilson, J. O. (2011). Credit unions: A theoretical and empirical overview. *Financial Markets, Institutions & Instruments*, *20*(3), 79-123.

Nguyen, L. H., Wilson, J. O., Le, T. Q., Luu, H. N., Nguyen, T. A., & Vo, V. X. (2022). Deposit insurance and credit union lending. *Journal of Financial Stability*, *60*, 101003.

Parrales Choez, C. G., Valls Martínez, M. D. C., & Martín-Cervantes, P. A. (2022). Longitudinal Study of Credit Union Research: From Credit-Provision to Cooperative Principles, the Urban Economy and Gender Issues. *Complexity*, 2022.

Pille, P., & Paradi, J. C. (2002). Financial performance analysis of Ontario (Canada) Credit Unions: An application of DEA in the regulatory environment. *European Journal of Operational Research*, *139*(2), 339-350.

Power, C., O'Connor, R., McCarthy, O., & Ward, M. (2014). Merging into the mainstream? An empirically based discussion of the potential erosion of competitive advantage in a restructured Irish credit union movement. *Journal of Co-operative Organization and Management*, *2*(2), 55-64.

Rasyidi, A., Firdaus, M., & Sasongko, H. (2016). The factors that influence the loan repayments of credit union members and performance analysis on credit union. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, *22*(1), 1-15.

Santos, L. S. Z., Bressan, V. G. F., Moreira, V. R., & Lima, R. E. D. (2021). Credit risk and technical efficiency in Brazilian credit unions. *Cadernos EBAPE. BR*, *18*, 956-973.

Unda, L. (2022). Cooperative values and the development of the credit union movement in Australia. *Journal of Management History*, (ahead-of-print).

Unda, L. A., & Ranasinghe, D. (2021). To pay or not pay: Board remuneration and insolvency risk in credit unions. *Pacific-Basin Finance Journal*, *66*, 101128.

van Rijn, J. (2022). The cooperative identity at US credit unions. *Journal of Co-Operative Organization and Management*, *10*(1), 100152.

Walker, D. A., & Smith, K. I. (2019). Credit unions' acquisitions of banks and thrifts. *Journal of Financial Economic Policy*, *11*(3), 306-318.

Wheelock, D. C., & Wilson, P. W. (2013). The evolution of cost-productivity and efficiency among US credit unions. *Journal of Banking & Finance*, *37*(1), 75-88.