

The Use of Financial Ratios in Predicting Changes in Profit at The Savings and Loans Cooperative in Denpasar City

Ida Bagus Badjra¹, I Gusti Agung Ketut Gede Suasana², I Made Dana³

¹Faculty of Economics and Business, Udayana University Denpasar Bali

²Faculty of Economics and Business, Udayana University Denpasar Bali

³Faculty of Economics and Business, Udayana University Denpasar Bali

ABSTRACT: The financial ratio component is generally different in large companies with savings and loan cooperatives (KSP). In general, the KSP was unable to do so, due to limited resources. This study examines the usefulness of 49 financial ratios from 105 sample KSP in Denpasar City. The data were analyzed by using the stepwise model of multiple regression. The research objective explains the use of financial ratios as predictors of changes in earnings (SHU) for the next one, two and three years. The results show that partially and simultaneously; The significant and positive ratio predicting changes in SHU one year ahead is the OPPBT and CANS ratio, the significant and negative ratio predicting changes in SHU in the next two years is the WCFA ratio, and the significant and positive ratio predicting changes in SHU in the next three years is the TLCA ratio. and CATL. The results of this study are consistent with previous findings, although individually they still appear to be inconsistent. The differentiator that can be found is that the financial ratios are also significant in predicting changes in the SHU KSP for the next one, two, and three years.

KEYWORDS: credit union, changes in profit, financial ratios.

I. INTRODUCTION

Savings and loan cooperatives (KSP) are small-scale business entities that definitely need profits for business sustainability and welfare (Sumantri and Permana, 2017). The KSP activity unit is engaged in the non-bank financial services business. The data shows that in 2017, the number of KSP in Bali was 924 businesses and most (27.1 percent) were in Denpasar City (BPS Bali, 2018). So, KSP is an alternative financial institution whose performance needs to be continuously improved so that it becomes healthy, strong and independent (Kemenkop and UKM, 2016; Yasa, 2018). On the other hand, the resources owned by KSP are not adequate to implement financial analysis ideally to measure business progress (Bappenas, 2013; Sa'adah et al., 2017; Suwandi, 2018).

Measures commonly used in financial analysis are known as ratio analysis (Helfert, 2001: 95; Syaifuddin, 2008: 317; Riyanto, 2012:237). One of the popular analysis techniques used is financial ratios as the arithmetic term of financial statement data. This analysis is a company performance appraisal instrument that explains the various relationships between financial indicators (Kamaludin and Indriani, 2020:41). This is intended to show changes in the company's operating performance, and at the same time explain the trend of change and risks and opportunities. The predictive value shows accounting information as listed in financial reporting (Syaifuddin, 2008:318; Kieso et al., 2011:86). Financial ratios show the relationship of various elements in financial statements as a basis for interpreting the company's performance and operating results (Syaifudin, 2008:331). The actual usefulness of any financial ratio is determined by the specific objectives of the analysis. Financial ratios are not an absolute criterion (Helfert, 2001:95). Ratio analysis also does not provide many answers, except to provide signs of what should be expected (Friedlob and Plewa, 1996; Herispon, 2020:32).

The meaning and usefulness of financial ratios in business practice is, in fact, subjective depending on what for and in what context the analysis is applied (Helfert, 2001:37; Horne and Wachowicz, 2009:135). Many studies related to corporate finance that link financial ratios with certain phenomena have been carried out to find various uses objectively. However, most research focuses only on established companies with certain ratios that are likely to be considered important. Meanwhile, ratio analysis to KSP is still rare and difficult to find.

The results of the study prove that the analysis of 49 financial ratios, only seven proved to be significant predictors of changes in earnings one year to come (Warsidi and Pramuka, 2000). Individually, the financial

ratios found in this study still show inconsistencies. Other empirical evidence also proves that the results of statistical tests on 47 financial ratios are only useful for predicting earnings no more than one year ahead (Machfoedz, 1994; Arif, 2006; Junaidi, 2015; Kurniawati, 2016). The meaning that can be learned from these findings is that not all financial ratios can significantly be used to predict profit growth. Hapsari (2007), Sulisty (2011), Mahaputra (2012), Febrianty and Divianto (2017), Yetty et al. (2018).

Broadly speaking, there are five dimensions of financial ratios; liquidity, solvency, activity, profitability and investment ratios (Rahardjo, 2007:104; Horne and Wachowicz, 2008:135; Koetter, et al., 2014; Grant et al., 2016). However, in this study, nine dimensions of financial ratios and activities were tested, referring to Warsidi and Pramuka's research (2000); Helfert (2001); and Gissel et al. (2007). These dimensions, namely; liquidity, solvency, leverage, profitability, productivity, equity, investment intention, indebtedness, and return on investment, are used as predictors of changes in profits (*SHU*) of *KSP* in Denpasar City. This phenomenon becomes interesting to research and prove empirically in *KSP*, if it is related to the usefulness of financial ratios as a predictor of changes in earnings (*SHU*) in the next one, two and three years. There are three hypotheses proposed in this study, namely; at least one financial ratio has a significant effect on changes in earnings for the next year (H_1), at least one financial ratio has a significant effect on changes in earnings for the next two years (H_2), and at least one financial ratio has a significant effect on changes in earnings for the next three years (H_3).

II. METHODOLOGY

The data source uses secondary data, obtained from the respondents' *KSP RAT* reports and through the Cooperative and *UKM* Offices in Denpasar and Bali Province. This research is an empirical study, to test the hypothesis that has been formulated, namely to prove the usefulness of financial ratios in predicting future changes in earnings (*SHU*) before tax. This study basically examines the linear relationship between the independent variables, namely financial ratios and changes in earnings (*SHU*) before tax for one year, two years, and three years to come as the dependent variable. So that the prediction model can be formulated as follows:

$$DEt_i = b_0 + b_1 DFr1i + b_2 DFr2i + \dots + b_k DFrki + e_i \dots \dots \dots (1)$$

Description:

- DEt = change in earnings for period t
- $DFr_{1,2,\dots,k}$ = changes in relative financial ratios 1st, 2nd, ..., k
- b_0 = intercept, changes in earnings if assumed are not associated with changes in relative financial ratios
- $b_{1,2,\dots,k}$ = coefficient of financial ratio regression direction 1, 2, ..., k
- e = residual
- i = 1st observation data.

The number of indicators observed were 49 ratios of the nine dimensions of financial ratios. The historical data used as the basis for predictions is five years from 2014 to 2018 for 19 sample *KSPs* in Denpasar. So, the overall observed indicators are 4,655 ratios. Data analysis using multiple regression method with a stepwise approach.

III. RESULT AND DISCUSSION

In general, it is found that there are four dimensions of financial ratios that can be used as good predictors of *SHU* changes in savings and loan cooperatives. The four dimensions of the ratio are the ratio of solvency, profitability, investment intention and indebtedness. The research results can be said to be consistent with some of the findings of previous studies. Even so, it can also be admitted that individually the financial ratios found in this study still show inconsistencies with these findings. This result is almost in line with the research; Machfoedz (1994), Warsidi & Pramuka (2000), Widiasih (2006), Trihastuti (2008), Sulisty (2011), Cahyaningrum and Haryanto (2012), Batara (2013), Frandiko (2016). Several differences can be found here that the financial ratios are also significant in predicting changes in *SHU* (profit) in savings and loan cooperatives for one year, two years and three years to come. Meanwhile, most researchers focus their research on financial ratio analysis on non-cooperative companies with relatively large business scales. In line with Machfoedz (1994), the results of the study also show that the financial ratio components for predicting *SHU* of savings and loan cooperatives are different from industrial enterprises, especially in medium and large scale of businesses. Statistical evidence using the application of stepwise regression in each prediction period, illustrates that two significant financial ratios are used as predictors of changes in *SHU* one year to come.

The results of statistical tests show that the most suitable ratios used to predict changes in earnings within the next one year are only two ratios. These ratios are OPPBT and CANS. The two ratios together or simultaneously proved significant to be able to explain the *SHU* change of 51.4 percent and the rest was explained by other factors that were not included in the model. This means that the increase in *SHU* before tax

in the next one year is 51.4 percent in the *KSP* in Denpasar, determined simultaneously by the increase in the ratio of OPPBT and CANS. Another result found that changes in *SHU* for the period of one year ahead were positively and significantly affected, where partially the dominant influence came from the profitability ratio, namely OPPBT with a significant positive coefficient of 2.134. This means that the increase in *SHU* before tax at *KSP* in Denpasar in the next one year is 213.4 percent, influenced by the increase in the OPPBT ratio. Meanwhile, the partial effect of the investment intention ratio in the form of CANS was found to have a positive and significant effect with a coefficient of 0.730. This means that the increase in *SHU* before tax at *KSP* in Denpasar was 73 percent, due to an increase in the CANS ratio. When viewed from the descriptive analysis, it is found that the OPPBT industry average is 126.16 percent with an average growth of 5.15 percent. Unfortunately, most of the *KSP* are still below this average. Likewise with CANS, it was found that the resulting industry ratio was 552.5 percent with an average growth of 11.76 percent.

In the next two years, the most appropriate ratio is used to simultaneously predict changes in earnings only one ratio. The ratio is WCFA as part of the investment intensiveness ratio with R-Square = 0, 486. This ratio simultaneously proved significant to be able to explain changes in *SHU* of 48.6 percent and the rest was explained by other factors that were not included in the model. This means that in the next two years, the increase in *SHU* changes before tax in the *KSP* in Denpasar is 48.6 percent, determined simultaneously by the increase in the WCFA ratio. Partially, it is found that changes in *SHU* for the next two years are influenced by WCFA with a significant negative β coefficient of -0.535 and the rest is due to other variables not included in the model. This means that the increase in *SHU* before tax at the *KSP* in Denpasar City is 53.5 percent, as a result of the decrease in the WCFA ratio. If you look at the results of descriptive analysis, it is found that the industry average ratio is 1419.53 percent with an average growth of 37.17 percent and only a small proportion have a ratio and growth above the industry ratio. Meanwhile, the most suitable financial ratios used to predict changes in earnings within the next three years are two ratios. These ratios are part of the indebtedness ratio, namely TLCA and part of the solvency ratio, namely CATL. The two ratios simultaneously proved positive and significant to be able to explain changes in *SHU* of 72 percent and the rest was explained by other factors that were not included in the model. These results mean that simultaneously the increase in TLCA and CATL is able to increase the change in profit before tax at *KSP* in Denpasar by 72 percent. Partially, it was found that changes in *SHU* for the next three years were also positively and significantly affected by the respective financial ratios. The change in *SHU* for the next three years is influenced by the CATL ratio with a coefficient of = 4.750. The meaning of this result is that the increase in *SHU* in the next three years is determined by the 475 percent increase in CATL. The results of the descriptive analysis found that the TLCA industry ratio reached 112.98 percent, with a growth of 5.43 percent, and most of the *KSP* was below the average and the industrial ratio growth. The higher the percentage value of the solvency ratio indicates that the company's ability to pay its long-term obligations is getting worse, and in various literatures it is stated that the maximum value limit is 200 percent. The TLCA ratio affects changes in *SHU* before tax with a coefficient of 2.282. This means that if the *SHU* before tax in the next three years at the *KSP* in Denpasar increases by 228.2 percent, then this will be a result of the increase in TLCA. If we look at the descriptive analysis results, it is found that the indebtedness ratio in TLCA reaches 98.30 percent, with a growth of -3.31 percent. This ratio is still high, but most of it is below the industry average and growth ratio.

IV. CONCLUSION

The regression results found that the most suitable ratios used to predict changes in *SHU* before tax in savings and loan cooperatives in Denpasar, within the next one year are OPPBT and CANS. Both ratios, as a component of profitability and investment intensiveness, where R-Square = 0, 514. Simultaneously the two ratios proved significant to be able to explain changes in *SHU* of 51.4 percent and the rest was explained by other actors who were not included in the model. The most appropriate ratio is used to predict changes in *SHU* before tax in savings and loan cooperatives in Denpasar, in the next two years there is only one ratio. The ratio is WCFA as a component of the investment intention ratio, resulting in R-Square = 0, 486. This ratio simultaneously proved significant to be able to explain changes in *SHU* of 48.6 percent and the rest was explained by other factors that were not included in the model. This means that in the next two years, the increase in *SHU* changes before tax in the *KSP* in Denpasar is 48.6 percent, determined simultaneously by the increase in the WCFA ratio. The most suitable financial ratios to be used to predict changes in earnings over the next three years are two ratios. These ratios are components of the indebtedness ratio, namely TLCA and the solvency ratio, namely CATL with the result of R-Square = 0, 720. The two ratios simultaneously proved significant to be able to explain changes in *SHU* by 72 percent and the rest was explained by other factors that were not included in the model. This means that in the next three years, the increase in *SHU* changes before tax in the *KSP* in Denpasar will be determined simultaneously by the increase in the ratio of TLCA and CATL. The statistical results show that the ratios that affect *SHU* changes for the next one year, two years and three years show quite a large influence, so that management should continue to concentrate on maintaining and controlling

these ratios consistently.

V. IMPLICATIONS

The manager of the savings and loan cooperative should be able to increase their understanding of the financial ratios that affect the increase in *SHU* changes. It can be seen from the results of this study that only a few financial ratios are suitable for predicting changes in *SHU* in the next one to three years. If a savings and loan cooperative wants to prepare a plan related to the acquisition of *SHU*, then the competent parties to the cooperative, at least must be able to control what ratio components must be controlled. If not, then the planning, application and control will be increasingly unfocused. *SHU* or profit is the dream of all members and managers of savings and loan cooperatives. In relation to these findings, at each *RAT*, all parties must be careful in making any business decisions.

VI. LIMITATIONS

Financial statistical data is relatively difficult to obtain from the savings and loan cooperatives studied, because there are still some who are not willing to provide financial data, so the number of respondents is limited to active KSP with certain criteria. The KSP bookkeeping system studied was not uniform and not standardized, therefore researchers had to adjust the grouping of respondent financial data according to the theory and needs of the variables studied. The analysis does not include factors outside the variables studied, such as macro factors, especially various government policies that also play a role in the progress of cooperatives.

REFERENCES

- [1] Arif, A. (2006). Analisis Rasio Keuangan dalam Memprediksi Pertumbuhan Laba pada Perusahaan Manufaktur yang Terafiliasi di Bej. *Jurnal Informasi Perpajakan, Akuntansi dan Keuangan Publik*, Vol. 1, No. 1, h 15-27
- [2] Aziz & Rusland (2009). Peranan BI dalam mendukung pengembangan usahamikro kecil dan menengah. *Seri Kebanksentralan*, Pusat Pendidikan dan Studi Kebanksentralan (PPSK), Bank Indonesia, Jakarta
- [3] Bappenas (2013). *Warta KUMKM: Daya Saing Koperasi dan UMKM*. Edisi III-Semester I, Vol.1.No1, Direktorat Pemberdayaan Koperasi dan UMKM, Kementerian Perencanaan Pembangunan Nasional, Jakarta.
- [4] BPS. Bali (2018). *Banyaknya Koperasi, KUD, dan Non KUD Menurut Jenis Usaha, Menurut Kabupaten/Kota dan Jenis Koperasi*, 2017.
- [5] Riyanto, B. (2013). *Dasar-Dasar Pembelian Perusahaan*. Edisi Keempat, BPFE-Yogyakarta, Yogyakarta
- [6] Febrianty & Divianto (2017). Pengaruh Rasio Keuangan Terhadap Pertumbuhan Laba Perusahaan Perbankan. *EKSIS*, Vol 12, No 2, p 109-125, <http://ejournal.stiedewantara.ac.id/index.php/001/article/view/84>
- [7] Friedlob & Plewa (1996). *Understanding balance sheet*. USA: John Wiley and sons.
- [8] Gissel, J.L., Giacomino, D.E. & Akers, M.D. (2007). A Review of Bankruptcy Prediction Studies: 1930 to Present, *Journal of Financial Education*, Vol. 33 (Winter 2007): pp.1-42.
- [9] Grant, T.J., Ingram, T.L. & Deas, D.D. (2016). Financial health indicators: an analysis of financial statement information to determine the financial health of DoD contractors. *Thesis and Dissertation Collection*, The NPS Institutional Archive. Dudley Knox Library, Naval Postgraduate School, Monterey, California
- [10] Hapsari, E.A. (2007). Analisis Rasio Keuangan untuk Memprediksi Pertumbuhan Laba (Studi Kasus: Perusahaan Manufaktur yang Terafiliasi di Bursa Efek Jakarta). *Tesis*, Program Studi Magister Manajemen, Program Pasca Sarjana, Universitas Diponegoro, Semarang
- [11] Helfert, E.A. (2001). *Financial Analysis: Tools and Techniques. A Guide for Managers*. Copyright 2001 The McGraw-Hill Companies, Inc.
- [12] Herispon (2020). *Analisis Laporan Keuangan (Financial Statement Analysis)*. Buku Ajar, Akademi Keuangan & Perbankan Riau (Akbar), Pekanbaru
- [13] Horne, V. and Wachowicz, J.F.Jr. (2009). *Fundamentals of Financial Management*. 13th edition, Prentice Hall, Inc., Pearson Education Limited 2009
- [14] Junaidi (2015). Laba dan Arus Kas dalam Memprediksi Laba dan Arus Kas Masa Mendatang dan Pola Harga Saham. *Jurnal Akuntansi dan Keuangan*, Vol. 17, No. 2, November 2015, 97-107
- [15] Kamaludin & Indriani, R. (2020). *Manajemen Keuangan: Konsep Dasar dan Penerapannya*. Edisi Revisi, Bengkulu, CV. Mandar Maju
- [16] Kemenkop dan UKM. (2016). *Laporan Kinerja Instansi Pemerintah Kementerian Koperasi dan Usaha Kecil dan Menengah Republik Indonesia*. 2015. Kantor Kemenkop dan UMK RI, Jakarta
- [17] Kieso, D.E., Weygandt, J.J. & Warfield, T.D. (2012). *Intermediate Accounting*, 14th Edition Ebook, USA., John Wiley & Sons, Inc.

- [18] Koetter, N.J., Krause, D.J. & Liptak, C.S. (2014). Determining Relevant Financial Statement Ratios in Department of Defense Service Component General Fund Financial Statements, *Submitted in Partial Fulfillment of the Requirements for the Degree of, Master of Arts in Management, Naval Postgraduate School*
- [19] Kurniawati, W. (2016). Prediksi Laba di Masa yang akan Datang dengan Rasio Keuangan pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2010–2014. *JPSB*, Vol.4 No.1, p 44-59
- [20] Machfoedz, M. (1994). Financial Ratios Analysis and the Earnings Changes in Indonesia, *Jurnal Kelola*, 7/III/1994, p114-137
- [21] Munawir, S. (2014). *Analisis Laporan Keuangan*. Yogyakarta: Liberty
- [22] Panjaitan, D.K. & Muslih, M. (2019). Manajemen Laba: Ukuran Perusahaan, Kepemilikan Manajerial dan Kompensasi Bonus. *Jurnal Aset (Akuntansi Riset)*, 11 (1), 2019, 1-20
- [23] Rahardjo, B. (2007). *Keuangan dan Akuntansi*. Graha Ilmu, Yogyakarta
- [24] Sa'adah, K., Sitawati, R. & Subchan (2017). Pengaruh Kompetensi Sumber Daya Manusia dan Sistem Pengendalian Intern terhadap Kualitas Informasi Laporan Keuangan dengan Moderasi Pemanfaatan Teknologi Informasi. *Jurnal Ilmu Manajemen dan Akuntansi Terapan (JIMAT)*, Volume 8 Nomor 2: 64-79
- [25] Sulistyono (2011). Analisis Rasio Keuangan dalam Memprediksi Laba yang akan datang pada Perusahaan Manufaktur Di Bursa Efek Indonesia. *Jurnal Ekonomi Modernisasi*, Vol. 7:73-93, DOI:10.21067/jem.v7i1.48
- [26] Sumantri, B.A. dan Permana, E.P. (2017). *Manajemen Koperasi dan Usaha Mikro Kecil dan Menengah (UMKM): Perkembangan Teori, Praktik, dan Strategi*, Kediri Jatim, Penerbit: Fakultas Ekonomi Universitas Nusantara PGRI Kediri
- [27] Suwandi (2018). Respon Anggotanya terhadap Pelayanan Koperasi Simpan Pinjam. *Journal of Entrepreneurship, Management, and Industry (JEMI)*, Vol. 1, No. 01, pp.29-33
- [28] Syaifuddin, D.T. (2008). *Manajemen Keuangan; Teori dan Aplikasi*, UNHALU Press, Kendari, Sulawesi Tenggara.
- [29] Warsidi & Pramuka, B.A. (2000). Evaluasi Kegunaan Rasio Keuangan dalam Memprediksi Perubahan Laba di Masa yang Akan Datang: Suatu Studi Empiris pada Perusahaan yang Terdaftar di BEJ, *Jurnal Akuntansi, Manajemen dan Ekonomi*, Vol. 2 No. 1
- [30] Yasa, A. (2018). Peran Koperasi Simpan Pinjam Terus Ditingkatkan, <https://ekonomi.bisnis.com/read/>, Jakarta, diakses Januari 2018
- [31] Yetty, N.M, Assih, P. & Apriyanto, G. (2018). Rasio Keuangan dalam Memprediksi Pertumbuhan Laba Perusahaan Tambang Minyak dan Gas Bumi Yang Terdaftar Di Bursa Efek Indonesia, Periode 2012-2016. *Jurnal Riset Inspirasi Manajemen Dan Kewirausahaan*, Vol. 2 No. 1, p 46-50
- [32] Yetty, NM, Assih, P. & Apriyanto, G. (2018). Financial Ratios in Predicting Profit Growth of Oil and Gas Mining Companies Listed on the Indonesia Stock Exchange, 2012-2016 Period. *Journal of Management Inspiration and Entrepreneurship Research*, Vol. 2 No. 1, p 46-50