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Financial Performance Analysis BUMN Banks and Private Foreign Exchange Banks Go Public on the IDX

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ARTICLEINFO ABSTRACT

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Keywords:

Bank Health Ratio Profitability Ratio Liquidity Solvability Bank Performance Bank is one of the financial institutions that have an important role in the economy of a country as a financial intermediary institution. Banks can be said to be the blood of a country's economy. Therefore the progress of a bank in a country can also be used as a measure of the progress of the country concerned. The more advanced a country is, the greater the role of banks in controlling the country, meaning that the existence of the banking world is increasingly needed by the government and society. For this role, an assessment tool for bank health is needed using the existing financial ratio approach. This study uses the measurement of banking financial ratios, namely the profitability ratio (earning ratios), liquidity ratios (liquidity ratios), and solvency ratios (capital ratios).

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1. INTRODUCTION

Indonesia's economy and financial system stability are currently experiencing pressures such as uncertainty due to reduced globalization and also increased risks on global financial markets. This is inseparable from the strong resilience of the banking industry which is supported by maintained profitability and controlled liquidity risk (KSK 34, 2020). Profitability can be influenced by several factors, such as Liquidity, Capital, Credit Risk, and Operational Efficiency. The data regarding the development of the financial ratios of BUMN Banks and Private Foreign Exchange Banks in Indonesia in 2015-2019 are presented in the following table:

Table 1. Development of Financial Ratios of BUMN Banks for the 2015-2019 period						
Variable	2015	2016	2017	2018	2019	
ROA (%)	3,31	2.77	2.98	3.08	2.81	
LDR (%)	88.58	88,69	88,67	92,83	94.17	
CAR (%)	19.31	21.05	21.09	20.88	21,18	
BOPO (%)	72.58	78,41	72.58	71,24	76,39	
Source: Indenseign Banking Statistics (SDI) and each bank's website (processed)						

Source: Indonesian Banking Statistics (SPI) and each bank's website (processed)

Based on the data obtained from the SPI and the website of each bank, we can see that the financial ratios of BUMN Banks change every year. This is shown in the 2015 ROA ratio of 3.31%, in 2016 it decreased to 2.77%, 2017-2018 it increased again from 2.98% to 3.08%. However, in 2019 it again decreased to 2.91%. Furthermore, the LDR ratio in 2015-2019 has increased except in 2017

it has decreased from 88.69% to 88.67%. Then the CAR ratio in 2015-2019 has increased except in 2018 it has decreased from 21.09% to 20.88%.

Based on the data obtained from the SPI and the website of each bank, we can see that the ratio of foreign exchange private banks also changes every year. This is shown in the 2015-2019 ROA ratio which has increased except in 2016 which has decreased to 1.65%. then for the 2015-2019 LDR ratio it also increased except in 2016 it decreased to 84.83%. Then the CAR ratio throughout 2015-2019 always increases. Furthermore, the BOPO ratio in 2015-2019 has always decreased, this indicates that the company is increasingly reducing its operational costs.

This study wanted to find out how much the profitability of banks, namely state-owned banks and foreign exchange private banks, was measured using bank financial ratios in the 2015-2019 period. The reason for choosing BUMN Banks and National Foreign Exchange Private Banks as research objects is because they have a very large role in the Indonesian economy so that it is hoped that the Bank will be able to maintain its profitability. The bank's financial performance is part of the bank's overall performance. The bank's overall performance is an illustration of the achievements of the bank in its operations, both in terms of finance, marketing, fundraising and distribution, technology, and human resources. One of the performance assessments that can be carried out is financial performance to determine the soundness of a bank. The soundness level of a bank to assess this performance uses many financial ratios as a calculation tool. Through financial ratios calculated from the bank's financial reports on a regular basis, it can show the quality of a bank. Financial reports on banks show the financial performance that has been achieved by banks at a time

2. RESEARCH METHODS

Research paradigm

The research to be carried out is a type of verification research with the research object being State-Owned Enterprise Banks (BUMN) and Private Foreign Exchange Banks that go public on the IDX. The population in this study were 48 banks and purposive sampling was used to determine the sample. The data collection technique used is by means of documentation and literature study **Types of research**

This study uses a sample research design, namely research that uses a sequence of samples from a population. While the method used in this research is selection research which is descriptive qualitative in nature, namely research that uses the presentation of answers from the results of analysis whose truth is natural

Research Sample

The sample for the research conducted was obtained using a purposive sampling technique, namely by determining the sample based on predetermined criteria. The purposive sampling criteria used in this study are as follows, (1) State-Owned Enterprises and Private Foreign Exchange Banking listed on the IDX,(2)Positive balance banking profits Based on the several criteria mentioned above, the sample determination process is as follows:

Table 2. Purposive Sampling Method				
No	Sample Selection Criteria	Amount		
1	State-Owned Banks and Foreign Exchange Private Banks	48		
2	Banks that are not listed on the IDX	(25)		
3	Negative balance banking profits	(4)		
	The number of samples of companies that pass the criterion test	19		
Tinano	sial Services Authority and Indonesia Stock Exchange			

Source: Financial Services Authority and Indonesia Stock Exchange

Data Types and Sources

The type of data that will be used in this research is secondary data. Secondary data is data sources that have been reported by other people first. The secondary data used in this study are financial reports from state-owned banks and foreign exchange private banks listed on the IDX. Where the financial statements are financial reports starting from 2018 to 2021. The data source for this research to be carried out is obtained from data published on the Indonesian Stock Exchange website, namely http://www.idx.co.id.

Variable Operational Definition

Operational definitions and variable measurements in the research to be conducted are as follows: Banking profitability is proxied using the Return On Assets (ROA) ratio. Profitability is the company's ability to generate profits or profits by using owned sources such as assets, capital or company sales (Sudana, 2011: 22). According to Wardiah (2017: 299) ROA serves to measure the company's effectiveness in obtaining profit by using its activities. Referring to research conducted by Wahyuningsih and Gunawan (2017), banking profitability is proxied using ROA with the following formula:

$$ROA = \frac{Laba\ setelah\ pajak}{Total\ Aktiva} x\ 100\%$$

Liquidity is proxied using the Loan To Deposit Ratio (LDR). According to Kasmir (2003: 268), the liquidity ratio is the ratio used to measure a bank's ability to meet its short-term obligations at maturity. The Loan to Deposit ratio (LDR) can be used to measure the composition of the amount of credit that has been given which is then compared with the amount of funds from the public and own capital used (Kasmir 2003:272). Referring to research conducted by Masdupi (2014), Liquidity is proxied using LDR with the following formula:

$$LDR = \frac{0.7 \text{ curr}}{Third - party funds} x \ 100\%$$

Capital is proxied using the Capital Adequacy Ratio (CAR). Capital is data from bank owners and shareholders added up with share premium and business results originating from bank business activities (Dendawijaya, 2009:67). CAR Is a financial ratio that can provide a sign of whether existing capital is sufficient to cover the risk of loss which will reduce capital (Wardiah, 2017: 297). Referring to research conducted by Robot et al (2018), Capital is proxied using CAR with the following formula:

$$CAR = \frac{Risk weighted assets}{Risk weighted assets} x 100\%$$

Operational efficiency is proxied using Operating Expenses and Operating Income (BOPO). According to Rindhatmono (2005), Operational Efficiency is very important for banking, which aims to find out whether the bank has operated properly as expected by shareholders. BOPO is a ratio used to measure a bank's ability to control operational costs to operating income (Spica and Herdiningtyas 2005). Referring to research conducted by Wahyuningsih and Gunawan (2017), Operational Efficiency is proxied using BOPO with the following formula:

$$BOPO = \frac{Bperational\ expenses}{Operating\ Income}$$

Qualitative Data Analysis Methods

According to Miles and Huberman, qualitative data analysis begins with data collection before carrying out data reduction, after which the data is presented, finally arriving at a conclusion. The process of data analysis begins with collecting data collected from various ways of collecting data, namely observation, interviews, questionnaires, and documentation. As with qualitative research, data is collected in accordance with the facts in the field or on the object of research. After that the researcher uses the data reduction method or includes the main things, focusing on the important things, so that the data can provide a clearer picture of the things being studied. After that, the researcher will present the data, which is arranged in the relationship pattern between the variables to be studied. The next step is drawing conclusions and verification which will answer the formulation of the problem, the conclusions from qualitative research are new findings that have never existed before. Findings can be in the form of descriptive or object descriptions that were not clear before so that they can answer problems and become material for analysis.

3. RESULTS AND DISCUSSIONS

Profitability (ROA)

Based on the calculations, it shows that the profitability variable (ROA) has an average value (mean) for 2015 to 2017 which tends to increase, but in 2018-2019 it has again decreased. at the end of the research year, namely in 2019, the mean value of the profitability variable (ROA) was 1.65. While the standard deviation for 2015-2016 has decreased, but in 2017-2019 it has again increased. at the end of the research year, namely in 2019, the standard deviation value of the

profitability variable (ROA) was 1.29. Furthermore, based on calculations, it is seen that the minimum data value Profitability (ROA) for 2015-2019 tends to always experience ups and downs. The minimum value of Profitability (ROA) in 2015 was 0.36, namely the ROA of Bank Ganesha (BGTG), in 2016 it was 0. 54, namely ROA Bank Bukopin (BBKP), in 2017 it was 0.09, namely ROA Bank Bukopin (BBKP), in 2018 it was 0.16, namely ROA Bank Ganesha (BGTG) and in 2019 it was 0.13, namely ROA from Bank Tabungan Negara (BBTN) and Bank Capital Indonesia (BACA). The lowest minimum value throughout the year of research was in 2017 which only reached 0.09, namely on Bank Bukopin's ROA (BBKP) meaning that Bank Bukopin in 2017 generated a small profit. Based on the table above, the maximum value for 2015-2017 has decreased but 2018-2019 has not changed. The maximum value of Profitability (ROA) in 2015 was 4.19, namely ROA for Bank Rakyat Indonesia (BBRI), in 2016 it was 4, namely ROA for Bank Central Asia (BBCA), in 2017 it was 3.9, namely ROA for Bank Central Asia (BBCA). The highest maximum value throughout the year of research was in 2019 it was 4, namely ROA for Bank Central Asia (BBCA). The highest maximum value throughout the year of research was in 2019 it was 4, namely ROA for Bank Central Asia (BBCA). The highest maximum value throughout the year of research was in 2015 of 4.19 which is the ROA of Bank Rakyat Indonesia. This means that BBRI in 2015 generated high profits.

Liquidity (LDR)

Based on calculations, it shows that the Liquidity variable (LDR) has a mean value for 2015-2019 which always increases except for 2016. At the end of the research year, namely 2019, the mean value for Liquidity (LDR) is 90.02368421. while the standard deviation for 2015-2019 has increased except for 2018. At the end of the research year, namely 2019, the standard deviation value of the Liquidity variable (LDR) was 12.7994072. However, based on the graph above, we can see that from 2015 to 2019 the mean value is always higher than the standard deviation value, which means that the results of the data distribution are quite good. The minimum liquidity data value (LDR) for 2015-2017 has decreased, but for 2018-2019 it has increased. The minimum value of Liquidity (LDR) in 2015 is 59. 78 namely LDR Bank Capital Indonesia (BACA), in 2016 it was 55.34 namely LDR Bank Capital Indonesia (BACA), in 2017 it was 50.61 namely LDR Bank Capital Indonesia (BACA), in 2018 it was 51.96 namely LDR Bank Capital Indonesia (BACA) and in 2019 it was 60.55. namely the LDR of Bank Capital Indonesia (BACA). The minimum value throughout the research year, namely 2015 to 2019, is the LDR from Bank Capital Indonesia (BACA) and during the research year, the lowest minimum value is in 2017, which is 50.61 and the LDR value is below the standard set by Bank Indonesia, namely the lower limit of LDR is 78%, meaning that Bank Capital Indonesia (BACA) is less effective in channeling its credit so that the profits to be obtained decrease due to the lack of profits derived from interest income. The maximum value in 2015 was 108.78, namely the LDR from the State Savings Bank (BBTN), in 2016 it was 102.66, namely the LDR from the State Savings Bank (BBTN), in 2017 it was 103.13, namely the LDR from the State Savings Bank, in 2018 it was 104.5, namely the LDR from Pan Indonesia Bank (PNBN), and in 2019 it was 115.26, namely the LDR from Pan Indonesia Bank (PNBN). The highest maximum LDR value throughout the year of research was in 2019 of 115.26, namely at Pan Indonesia Bank and the value exceeds the upper limit meaning that PNBN distributes a lot of credit to the community but by exceeding the predetermined limit makes banks have a high risk of bad credit so that this can reduce profits. Capital (CAR)

Based on the calculations, it shows that the Capital variable (CAR) has a mean value in 2015-2019 which always increases except in 2017. At the end of the research year, namely 2019, the mean value of the CAR variable is 22.221052263. Meanwhile, the standard deviation for 2015-2019 has always increased except for 2018. At the end of the research year, namely 2019, the standard deviation value of the capital variable (CAR) was 5.754833615. Furthermore, based on the calculations, it can be seen that the minimum data value for the Capital variable (CAR) for 2015-2019 tends to fluctuate. Capital (CAR) in 2015 was 11.15, then in 2016 it was 11.62, then in 2017 it was 10.52, in 2018 it was 13.41 and in 2019 it was 12.59. The minimum value of CAR throughout the research year is from Bank Bukopin (BBKP). The lowest minimum value throughout the research year was in 2017. This means that in 2017 Bank Bukopin had a low CAR because the increase in risky asset expansion was not matched by investment and decreased customer confidence. The maximum value of CAR in 2015 was 28.26, then in 2016 it was 35.12, then in 2017 it was 36.36, in 2018 it was 34.58 and in 2019 it was 38.6. The maximum value of CAR throughout the research year

is from Bank Mestika Darma (BBMD). The highest maximum value throughout the research year is in 2019.

Operational efficiency (BOPO)

Based on the calculations, it shows that the operational efficiency variable (BOPO) has a mean value for 2015-2017 which has decreased, but for 2018-2019 it has increased, at the end of the research year, namely in 2019, the mean value of the operational efficiency variable (BOPO) was 84.75. Meanwhile, the standard deviation for BOPO from 2015 to 2019 has always increased except for 2016. At the end of the research year, namely 2019, the standard deviation value was 14.69. The minimum operational efficiency (BOPO) data value from 2015-2018 has decreased only in 2019 which has increased. The minimum score for Operational Efficiency (BOPO) in 2015 was 63.2, in 2016 it was 60.4, in 2017 it was 58.6, in 2018 it was 58.2 and in 2019 it was 59.1. The minimum value throughout the 2015-2019 research year is from Bank Central Asia (BBCA). The lowest minimum value throughout the year of the study was 2018 which was only 58.2, meaning that this was at the standard set by Bank Indonesia, namely a maximum of 90%, meaning that Bank Central Asia carried out its operational activities efficiently and was able to reduce its operational costs so that the profit earned increased. The maximum value of BOPO in 2015 was 97.51, namely BOPO from Bank Ganesha (BGTG), in 2016 it was 94.36, namely BOPO from Bank Bukopin (BBKP), in 2017 it was 99.04, namely BOPO from Bank Bukopin (BBKP), in 2018 of 98.41, namely BOPO from Bank Bukopin (BBKP) and in 2019 it was 119.43, namely BOPO from Bank Sinarmas (BSIM). The highest maximum value of BOPO throughout the year of research was in 2019 of 119.43, namely the BOPO of Bank Sinarmas. This means that this exceeds the standard set by Bank Indonesia, which is a maximum of 90% which indicates that Bank Bukopin is less effective in carrying out its operational activities and is unable to reduce operational costs, so this makes the income earned by the banking sector decrease.

Bank Health Level

In terms of Loan to Deposit Ratio (LDR) only in 2019 the PAN and BTN banks were considered healthy while in 2015 to 2018 they were unhealthy, apart from that all banks were considered unhealthy for 5 consecutive years

The soundness level of the bank in terms of Capital Adequacy Ratio (CAR) or the capital of all banks is considered healthy

In terms of Return of Assets, BTN in 2018 and 2019 was unhealthy, the same was assessed at bank BNI Argoniaga in 2016 and 2017, Bank Bukopin and Bank Kapital Indonesia 5 consecutive years were unhealthy, Bumi Arta in 2015 and 2019 was considered unhealthy

PIn terms of Operating Expenses and Operating Income (BOPO) Bank Tabungan Negara and Agroniaga were considered unhealthy in 2019, things that were no better happened to Bank Bukopin from 2016 to 2019 which experienced an unhealthy assessment.

4. CONCLUSION

In terms of Loan to Deposit Ratio (LDR) only in 2019 the PAN and BTN banks were considered healthy while in 2015 to 2018 they were unhealthy, apart from that all the banks studied were considered unhealthy for 5 consecutive years Bank soundness in terms of Capital Adequacy Ratio (CAR) or the capital of all the banks studied are considered healthy

In terms of Return of Assets, BTN in 2018 and 2019 was unhealthy, the same was assessed at bank BNI Argoniaga in 2016 and 2017, Bank Bukopin and Bank Kapital Indonesia 5 consecutive years were unhealthy, Bumi Arta in 2015 and 2019 was considered unhealthy. In terms of Operating Expenses and Operating Income (BOPO) the state savings bank and agroniaga were considered unhealthy in 2019 things that were not better happened to bank bukopin 2016 to 2019

REFERENCES

Agustin, R. (2017). Penilaian Tingkat Kesehatan Perbankan Syariah Di Indonesia Dengan Metode RGEC. Jurnal Ekonomi Syariah dan Filantropi Islam, 1(1)

Ayu, I. G., Ambarawati, D., & Abundanti, N. (2018). PENGARUH CAPITAL ADEQUACY RATIO, NON PERFORMING LOAN, LOAN TO DEPOSIT RATIO TERHADAP RETURN ON ASEET Fakultas Ekonomi dan Bisnis Universitas Udayana, Bali, Indonesia Perekonomian secara keseluruhan mendapat manfaat dari keberadaan suatu bank. Menurut. *E-Jurnal Manajemen Unud*, 7(5), 2410–2441.

- APRIANI, S. D. D., & LOUSIANI, M. (2019). JEMPER (Jurnal Ekonomi Manajemen Perbankan) DI BURSA EFEK INDONESIA (BEI). *JEMPER (Jurnal Ekonomi Manajemen Perbankan, 1,* 86–94.
- Anik & Ningsih, S. (2020). Analisis Tingkat Kesehatan Bank Mandiri Syariah Dengan Metode Risk Profile, Good Corporate Governance, Earning and Capital. *Jurnal Ilmiah Ekonomi Islam,* 6(03).
- Ayu, I. G., Ambarawati, D., & Abundanti, N. (2018). PENGARUH CAPITAL ADEQUACY RATIO, NON PERFORMING LOAN, LOAN TO DEPOSIT RATIO TERHADAP RETURN ON ASEET Fakultas Ekonomi dan Bisnis Universitas Udayana, Bali, Indonesia Perekonomian secara keseluruhan mendapat manfaat dari keberadaan suatu bank. Menurut. *E-Jurnal Manajemen Unud*, 7(5), 2410–2441.
- Bernardin, D. E. Y. (2016). Pengaruh car dan ldr terhadap return on assets. Ecodemica, IV(2), 232-241.
- Dendawijaya, L. (2009). manajemen perbankan. Ghalia indonesia.
- Dewi, N. K. V. C., Cipta, W. dan, & Kirya, I. K. (2015). Pengaruh LDR, LAR, DER dan CR Terhadap ROA.
- Effendi Ihsan dan hariani prawidya (2020). Dampak Covid 19 Terhadap Bank Syariah. jurnal ilmu ekonomi dan studi pembangunan vol 20 no 2 hal 221-230 *Journal Bisma Universitas Pendidikan Ganesha*, *3*(1), 1–10. Gujarati, D. N. (2003). *basic econometric*. Mc. Grawhill, New York.
- Hartini, T. (2016). PENGARUH BIAYA OPERASIONAL DAN PENDAPATAN OPERASIONAL (BOPO) TERHADAP. *I-Finance*, 2(1), 20–34.
- Hartono, J. (2000). teori portofolio dan analisis investasi. Yogyakarta: BPFE.
- Husain, M. R. & Hikmah, N. & Chairina. (2018). Penilaian Tingkat Kesehatan Bnak Syariah Mandiri: Pendekatan Metode Rgec (Risk Profile, Good Corporate Governince, Earning dan Capital). Journal of Islamic Banking and Finance, 2(1)
- Indah, D., & Arief, P. (2016). PENGARUH NON PERFORMING LOAN (NPL) dan CAPITAL ADEQUACY RATIO (CAR) TERHADAP PROFITABILITAS. *Management Analysis Journal*, *5*(2), 110–115.
- Kasmir. (2003). Manajemen perbankan. Jakarta: PT Raja Grafindo Persada.
- Kasmir. (2014). Bank dan Lembaga Keuangan lainnya. Jakarta: PT Raja Grafindo Persada.
- Masdupi, erni. (2014). Pengaruh Efisiensi Operasional Terhadap Profitabilitas Sektor Perbankan. Pengaruh Efisiensi Operasional Terhadap Profitabilitas Sektor Perbankan, 3, 18.
- Natalia, P. (2015). Analisis Pengaruh Risiko Kredit, Risiko Pasar, Efisiensi Operasi, Modal, dan Likuiditas Terhadap Kinerja Keuangan Perbankan. *Jurnal Ekonomi, Manajemen Dan Perbankan*, 1(2), 62–73.
- Pinasti, W. F., & Mustikawati, R. I. (2018). Pengaruh Car, Bopo, Npl, Nim Dan Ldr Terhadap Profitabilitas Bank Umum Periode 2011-2015. *Nominal, Barometer Riset Akuntansi Dan Manajem*, 7(1).
- Paramartha, I. M. & Darmayanti, N. P. A. (2017). Penilaian Tingkat Kesehatan Bank Dengan Metode RGEC Pada PT. Bank Mandiri (Persero), Tbk. *Jurnal Manajemen Unud*, 6(02)
- Prasnanugraha, P. (2007). Analisis Pengaruh Rasio-rasio Keuangan Terhadap Kinerja Bank Umum di Indonesia (Studi Empiris Bank-bank Umum Yang Beroperasi Di Indonesia). *Tesis*, 1–65.
- Purwoko, D., & Sudiyatno, B. (2013). Faktor-faktor yang mempengaruhi kinerja bank (studi empirik pada industri perbankan di bursa efek indonesia). *Journal of Business Economics and Management*, *20*(1), 25–39.
- Robot, Clarasita; Rotinsulu, Tri; Mandeij, D. (2018). ANALISIS PENGARUH MARKET SHARE, CAPITAL ADEQUACY RATIO, DAN LOAN TO DEPOSIT RATIO TERHADAP PROFITABILITAS (Studi Pada Bank Milik Pemerintah di Indonesia Tahun 2013.I -2017.IV). *Jurnal Berkala Ilmiah Efisiensi*, *18*.
- Samanto, H., & Hidayah, N. (2020). Analisis Penilaian Tingkat Kesehatan Bank Dengan Metode RGEC Pada PT Bnak BRI Syariah (Persero) 2013-2018. *Jurnal Ilmiah Ekonomi Islam,* 6(03)
- Saputra, A., Arfan, M., & Saputra, M. (2018). PENGARUH CAPITAL ADEQUACY RATIO, NET INTEREST MARGIN, LOAN TO DEPOSIT RATIO DAN NON PERFORMING LOAN TERHADAP PROFITABILITAS BANK UMUM NON DEVISA DI INDONESIA PERIODE 2014-2016. Jurnal Perspektif Ekonomi Darussalam, 4(September), 199–212.
- Siamat, D. (2005). *Manajemen lembaga keuangan kebijakan moneter dan perbankan*. Jakarta: Lembaga penerbit fakultas ekonomi universitas indonesia.
- Spica, L., & Herdinigtyas, W. (2002). Kondisi Bermasalah Pada Lembaga Perbankan Perioda 2000-2002. November 1997, 131–147.
- Sudana, I. made. (2011). manajemen keuangan perusahaan teori dan praktek. Jakarta: Erlangga.
- Suryana. (2010). Metodologi penelitian (Model praktis penelitian kuantitatif dan kualitatif). Bandung: Universitas pendidikan indonesia.
- Wahyuningsih, D., & Gunawan, R. (2017). Pengaruh Tingkat Efisiensi (Bopo) Dan Kemampuan Likuiditas (Ldr) Dalam Menilai Kinerja (Roa) Perbankan Yang Terdaftar Di Bei. Jurnal Ilmiah Manajemen Dan Blsnis, 3(3), 420–431.
- Wardiah, M. lasmi. (2017). Dasar-dasar perbankan. CV Pustaka Setia.
- Widarjono, A. (2017). Ekonometrika (Pengantar dan Aplikasinya disertai panduan E-views). Yogyakarta: UPP STIM YKPN.
- Zeuspita, Ayu Chintya Arie; dan Yadnya, I. putu. (2019). 1 2 12. E-Jurnal Manajemen, 8(12), 7411–7430