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# The Capital Adequacy Ratio in Pension Funds

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**Abstract:- This research was conducted to analyze the calculations and factors that affect the adequacy ratio of capitals. Capital adequacy ratio is a ratio that represents the ability and obligations of a pension fund company in providing funds that are used to overcome pension program fulfillment for its participants. The data used are secondary data from PT Aneka Tambang for the 2014-2017 periods. The data analysis method applied is a quantitative descriptive approach. The results show that the capital adequacy ratio continues to increase every year and the factors that influence it are the wealth for funding, actuarial liabilities, and company net assets.**

***Keywords:-*** *Actuarial liabilities; Capital Adequacy Ration; Net Asset; Pension Funds.*

## I. INTRODUCTION

According to the Law of the Republic of Indonesia Number 11 of 1992, the Pension Fund is a legal entity that manages and operates a pension program that promises pension benefits [1]. So that with the Pension Fund, there is the possibility to form an accumulated fund that can be used during retirement, which is obtained from various contributions.

According to the Statement of Financial Accounting Standards No. 18 There are two types of Pension Funds, namely Financial Institution Pension Funds and Employer Pension Funds. In this case, the Aneka Tambang Pension Fund is an employer pension fund that operates a defined benefit pension program that promises the amount of pension benefit payments to participants under the provisions of the pension benefit formula stipulated in the Pension Fund Regulation [2]. This formula is influenced by years of service, the factor of appreciation per year of service, and basic pension income. The program implemented by the Aneka Tambang Pension Fund starts from the activities of collecting (contributions), managing, and developing funds. In managing and developing their funds, the manager of the Aneka Tambang Pension Fund makes investments. The investment yield is one of the sources of wealth for the Pension Fund.

Managing pension funds is not an easy job, because pension funds are not only required to secure the funds they manage but are also required to ensure that these funds are not idle for nothing. Pension Fund managers must be able to manage funds into various types of investments to get returns to improve the welfare of pension participants [3]. In managing these funds, investment managers of Pension Funds are always faced with a classic problem in fund management, namely how to get the highest return with the least risk.

Pension Fund assets are collected from participant contributions, employer contributions, investment returns (development), and transfers of funds from other employer pension funds. Therefore, to be able to pay definite benefits to participants, the Aneka Tambang Pension Fund must be able to manage and develop Pension Fund contributions in investment activities, where the investment returns have an impact on wealth for Pension Fund funding which is used to pay pension benefits to pension participants [4]. In developing a number of these funds the Pension Fund must comply with the investment directions that have been set by the founder and the prevailing laws and regulations regarding pension funds. Pension funds that come from these contributions will be managed and developed in the form of investments in the form of securities such as stocks, bonds, and deposits. Therefore, the Pension Fund's assets must be managed very well to fulfill the Pension Fund's obligations to pension participants. The performance of investments made by pension funds can be seen through the ratio of return on investment (ROI) and return on assets (ROA) where the two ratios can describe the total net investment return compared to the total average investment made by the Pension Fund, as well can describe the total net investment return compared to the overall average net assets of the Pension Fund.

To measure whether or not the pension fund obligations to pension participants can be achieved, it can be seen through the quality of pension fund funding [5]. To have a good quality of funding, a pension fund must maintain its assets for funding to exceed its actuarial obligations. This can be seen through its capital adequacy ratio by comparing wealth for funding to the pension fund's actuarial liabilities. Capital adequacy ratio is some pension fund assets that must fulfill their responsibilities to customers in the form of pension funds, now and in the future [6].

In this study, the author will present the calculation of 3 (three) financial ratios for investment which can show whether there is an influence between investment performance on the capital adequacy ratio, and the author also describes other factors that can affect the capital adequacy ratio.

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## II. LITERATURE REVIEW

### *A. Pension Fund Theory*

According to Indonesia Law No. 11 of 1992 pension fund is a legal entity that manages and runs pension programs that promise pension benefits [1]. According to that law, the type of pension fund is divided into two, namely, first, employer pension fund which is a pension fund which is formed by a person or entity that employs employees, as the founder, to organize a defined benefit pension program or defined contribution pension plan, for the benefit of part or all of its employees as participants, and which creates obligations to the employer. Second, a financial institution pension fund is a pension fund established by a bank or life insurance company to administer a defined contribution pension program for individuals, both employees and independent workers, which is separate from the employer pension fund for employees of the bank or life insurance company concerned.

Pension programs generally have two types, namely the Defined Benefit Pension Plan and the Defined Contribution Pension Plan [8]. Defined Benefit Pension Program is a pension program whose pension benefits have been stipulated in the Pension Fund Regulations, while the amount of the employer's contribution from time to time is uncertain, depending on the adequacy of funds to meet the pension benefit obligations.

### *B. Investment Theory*

Investment direction according to POJK no. 3 / POJK.05 / 2015 are investment policies and strategies set by the Founders or Founders and the Supervisory Board, which must be used as guidelines by the Management in carrying out investments [9].

In the investment direction, at least the following must be stated, among others: annual investment yield target in quantitative form which must be achieved by the Management; the maximum limit on the proportion of Pension Fund assets that can be placed for each type of investment; the maximum limit on the proportion of Pension Fund assets that can be placed in one party; investment objects that are prohibited from placing the assets of the Pension Fund; provisions on minimum liquidity for Pension Fund investment portfolios to support the availability of funds for pension benefit payers and Pension Fund operations; provisions that state the obligation to carry out an adequate assessment for the placement and disposal of investment; investment management monitoring and reporting system; provisions concerning the use of experts, advisors, financial institutions and other services used in investment management; and sanctions that the Pension Fund will apply to the Management for violating the provisions concerning investment stipulated in the Pension Fund Law and its implementing regulations.

Return on investment (ROI) is the return on investment of all investment assets in the form of a percentage over a certain time, the investment results obtained are one of the efforts to develop wealth to obtain additional sources of funds for the availability of sufficient funds to ensure continuity of payment of pension benefits for all participants. pension. Thus, the higher the return on investment obtained, it illustrates that the more investment returns will be obtained so that the additional funds to be invested will also increase.

Return on assets (ROA) shows how much the ability of the funds invested in total assets to generate profits. Return on assets does not have a certain percentage as a target set out in the Investment Direction or other regulations. For pension funds, return on assets has the same meaning as return on investment, because if the results of the investment business increase so that the income also increases, then there is a possibility that the return on assets will also increase but it also depends on the total net assets which is the divider in the calculation. percentage of return on assets. According to the Decree of the Director-General of Financial Institutions (KEP-2345 / LK / 2003) dated April 14, 2003, return on assets is the ratio between investment returns and the average total net assets measured by percentage.

Funding becomes so important because funding determines to what extent the ability of the pension fund to be able to fulfill and realize the objectives of its establishment, namely: to pay pension benefits following what has been promised, and the continuity of the Pension Program itself. As an indicator to determine and measure the effectiveness of the Founder's performance in managing the number of funds that have been invested, one of the financial ratios for investment can be used, namely the capital adequacy ratio. The capital adequacy ratio shows the adequacy of funds and the ability of the pension fund to fulfill its obligations, namely to pay pension benefits at present and in the future.

## III. METHODOLOGY

The data used are secondary data from the financial report of PT Aneka Tambang for the 2014-2017 period [10]. The data analysis method applied is a quantitative descriptive approach. The quantitative descriptive research method is research that has the aim of describing a phenomenon, event, symptom, and incident that occurs factually, systematically, and accurately [11].

The formula used to calculate return on investment by Aneka Tambang Pension Fund Regulation No.8.P / 0255 / DAT / 2003 is as follows [12]:

$$return\ on\ investment = \frac{total\ investment}{average\ of\ investment} \times 100\%$$

The calculation of the total investment return can be from:
Total Investment Return = Investment Return - Investment Expense + Unrealized [13]

The average total investment can be obtained from: In 2014 and 2015 the calculations for the average total investment by the Aneka Tambang Pension Fund Regulation No.8.P / 0255 / DAT / 2003 are as follows [12]:

Average Total Investment = (Initial Total Investment + Total Final Investment) ÷ 2

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In 2016 and 2017 there were changes to the formula in the calculation for the average total investment by the Aneka Tambang Pension Fund Regulation No.8.P / 0255 / DAT / 2003, which are as follows [12]:

$$invest\ average = \sqrt[12]{x_1.x_2 \ldots .x_{12}}$$

Note :
$x_1, x_2, x_3 \ldots, x_{12}$ = total investment per month

Return on assets is calculated according to the formula under Aneka Tambang pension fund regulation No.8.P / 0255 / DAT / 2003: The total return on investment is calculated using the same formula as the calculation in return on investment, While to find the average net asset the formula is: Average Net Assets = (Beginning of Year Net Assets + End of Year Net Assets) ÷ 2

The capital adequacy ratio is calculated based on the following formula under Aneka Tambang's pension fund regulation No.8.P / 0255 / DAT / 2003 [12]:

$$Capital\ adequacy = \frac{wealth\ fund}{actuarial\ liabilities} \times 100\%$$

In calculating the capital adequacy ratio, wealth for funding can be calculated from total net assets minus wealth is in dispute, sues arrears more than 3 months from maturity, assets placed abroad, other receivables, and other assets, The difference in investment value over the limit per party, the difference in investment value over limit per type [13]. Meanwhile, actuarial liabilities are calculated based on actuarial calculations [14].

## IV. RESULT AND DISCUSSION

Pension Fund Management aims to fulfill obligations to participants both in the short and long term [13]. A portfolio is a combination or combination of a set of assets, both in the form of real assets in the form of purchasing productive assets, establishing factories, opening mining, opening plantations, and financial assets carried out in the money market and the capital market.

A portfolio can be said to be efficient if the portfolio when compared to other portfolios has the largest expected return with the same risk or provides the smallest risk with the same expected return. Portfolio formation aims to reduce risk by diversifying, namely by allocating some funds to various investment alternatives with negative correlation. This research emphasizes the discussion on the effect of investment on the wealth of pension funds for funding which can be seen from the profitability ratio (return on investment), return on assets, and the adequacy ratio of funds. Based on data obtained from the Aneka Tambang Pension Fund which is the object of this research, it can be seen that the form of the portfolio that is compiled is as follows:

Table 1. Aneka Tambang Pension Fund Investment Portfolio as of 31 December 2014-2015 (in billion Rupiah)

| **Type of Investment** | **Maximum Investment** | **Investment Realization** | | | |
|---|---|---|---|---|---|
| | | **2014** | **%** | **2015** | **%** |
| Bonds issued by the government | 100% | 29,5 | 2,79% | 35.9 | 3,42% |
| Conventional | | | | | |
| Sharia | | | | | |
| Deposit on call | 100% | 20 | 1,89% | 9.6 | 0,91% |
| Time deposit | 100% | 123 | 11,63% | 70 | 6,66% |
| Stock | 30% | 94.3 | 8,91% | 69.9 | 6,66% |
| Bond | 100% | 323.7 | 30,61% | 398.6 | 37,94% |
| Mutual Fund Participation Units | 10% - 20% | 19.9 | 5,07% | 22.3 | 5,74% |
| Direct Placement in Shares | 15% | 54.5 | 5,15% | 54.6 | 5,20% |
| Land and Buildings | 15% - 20% | 392.6 | 37,13% | 389.4 | 37,07% |
| **Total** | | **1.057.3** | **103%** | **1.050.5** | **104%** |

Table 2. Aneka Tambang Pension Fund Investment Portfolio as of 31 December 2016-2017 (in billion Rupiah)

| **Type of Investment** | **Maximum Investment** | **Investment Realization** | | | |
|---|---|---|---|---|---|
| | | **2016** | **%** | **2017** | **%** |
| Bonds issued by the government | 100% | 228.8 | 21,33% | | |
| Conventional | | | | 317.7 | 27,47% |
| Sharia | | | | 20 | 1,73% |
| Deposit on call | 100% | 2.5 | 0,23% | 20.5 | 1,77% |
| Time deposit | 100% | 85 | 7,92% | 75 | 6,49% |
| Stock | 30% | 76 | 7,09% | 25.8 | 2,23% |
| Bond | 100% | 201.7 | 18,80% | 87.8 | 7,59% |
| Mutual Fund Participation Units | 10% - 20% | 30.8 | 2,86% | 99.3 | 8,59% |
| Direct Placement in Shares | 15% | 58.7 | 5,47% | 58.9 | 5,10% |
| Land and Buildings | 15% - 20% | 389.4 | 36,30% | 451.4 | 39,04% |
| **Total** | | **1.072.9** | **100%** | **1.156.5** | **100%** |

Based on Table 1, in 2014 the investment direction of the Aneka Tambang Pension Fund provides a slightly different investment limit from the following years because it refers to the Minister of Finance Regulation number 199 / PMK.010 / 2008 dated December 5, 2008 [13]. Then amended by the Minister of Finance Regulation number 19 / PMK.010 / 2012 dated 17 October 2012 concerning Pension Fund investment [7]. Whereas for 2015 to 2017 the investment direction refers to the Financial Services Authority Regulation number 3 / POJK.05 / 2015 dated 31 March 2015 concerning Pension Fund investment.

During the 2014-2017 period, investment in land and buildings of the Aneka Tambang Pension Fund exceeded the investment direction limit, in 2014 with a maximum investment limit of 15%, investment in land and buildings exceeded 22.13% or IDR 233,963,827,247, in 2015 exceeding 17.07% or IDR 179,311,390,211 with a maximum investment limit of 20%, in 2016 it exceeded 16.30% or IDR 174,843,985,385, and in 2017 it exceeded 19.04% or IDR 220,074,245,509. The discrepancy in land and building investment was due to an assessment by an Independent Appraiser. Assessment by an Independent Appraiser is carried out every 3 (three) years, in the Aneka Tambang Pension Fund appraisal occurred in 2014 and 2017, the value of land and buildings in 2015 and 2016 did not increase because there was no assessment in that year. In addition to allocating its investment funds in land and buildings, in 2014 and 2015 the Aneka Tambang Pension Fund also allocated a lot of it in bond investment, while in 2016 and 2017 a lot was allocated to investment in Government Securities based on table 2.

The composition and form of investment portfolios are very important for pension funds because the portfolios that are formed can be seen what decisions and strategies are implemented and what results are expected to be achieved. Factors that influence the size of the percentage of Return on investment obtained as an indicator of returns from the results of wealth development efforts can also be analyzed from the form of the selected investment portfolio. An investment portfolio that is structured in such a way also influences the amount of return obtained on some wealth and funds invested in developing wealth to achieve sufficient funds to be able to pay pension benefits to all pension participants.

Other factors that influence the size of the return on investment are macroeconomic factors, an increase in the inflation rate which also affects stock prices or certain events and seasons that also affect the state of the economy so that it affects stock prices and money market and capital market products.

Net investment returns consist of investment returns, investment returns that have not been realized, and investment expenses. Aneka Tambang Pension Fund's investment returns in the form of interest, dividends, profit/loss on disposal, and others. The net investment returns on the Aneka Tambang Pension Fund from year to year can be seen in Table 3 below:

Table 3 2014-2017 Aneka Tambang Pension Fund Net Investment Result (in Billion Rupiah)

| ***Year*** | **Investment Return** | **Investment Expenses** | **Unrealized Investment Returns** | **Total** |
|---|---|---|---|---|
| *2014* | 70.9 | 2.1 | 284.2 | 352.9 |
| *2015* | 83.9 | 6.3 | ( 49.2) | 28.3 |
| *2016* | 85.6 | 2.7 | 7.1 | 89.9 |
| *2017* | 85.7 | 2.6 | 71.3 | 154.4 |

Source: The author's calculations are based on the 2014-2017 Aneka Tambang Pension Fund Investment Report

Based on table 3, in 2015 there was a deficit in unrealized investment returns of IDR 49,266,553,007, this was due to the very high appraisal value of land and buildings in 2014 and in 2015 there was no appraisal assessment on land and buildings. pension fund. This has resulted in significant unrealized differences in investment returns.

The net investment yield in 2014 was very high because the value of land and buildings appraised every 3 years fell in 2014. Therefore there was a drastic decline in the following year, namely 2015 because in 2014 the value of land and buildings appraised was IDR. 267,887,106,406 and in 2015 the value of land and buildings was IDR 12,508,067,787. In 2017 there was also an appraisal on land and buildings which made the value of land and buildings in 2017 amounting to IDR.70,729,989,026, although there was an appraisal this year but not as high as when it was in the appraisal in 2014.

The following is table 4 which shows the average return on investment calculated based on the investment value at the end of each month in a period of one year from the Aneka Tambang Pension Fund in 2014-2017 as follows:

Table 4. Investment Average of Aneka Tambang Pension Fund in 2014 - 2017 (in billion rupiahs)

| Month | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|
| **01-Jan** | 663 | 1.057.3 | 1.054.5 | 1.056.7 |
| **31-Jan** | 665.2 | 1.065.6 | 1.067 | 1.079.9 |
| **28-Feb** | 674.4 | 1.086.5 | 1.074.8 | 1.144.9 |
| **31-Mar** | 698.5 | 1.078.9 | 1.064 | 1.074 |
| **30-Apr** | 731.5 | 1.067.1 | 1.071 | 1.026.4 |
| **31-May** | 735.4 | 1.071.7 | 1.064.6 | 1.123.6 |
| **30-Jun** | 736.7 | 1.062.5 | 1.105.5 | 1.137.7 |
| **31-Jul** | 758.9 | 1.055.2 | 1.089.2 | 1.134.3 |
| **31-Aug** | 766.6 | 1.043 | 1.090.6 | 1.136.2 |
| **30-Sep** | 759.6 | 1.029.6 | 1.092.4 | 1.126.8 |
| **31-Okt** | 772.4 | 1.049.9 | 1.066.8 | 1.153.3 |
| **30-Nov** | 779.2 | 1.049.7 | 1.072.9 | 1.156.5 |
| **31-Des** | 1.057.4 | 1.050.6 | 1.076 | 1.111.8 |
| **Investment Average** | 860.2 | 1.053.9 | 1.054.5 | 1.056.7 |

Source: The author's calculations are based on the 2014-2017 Aneka Tambang Pension Fund Investment Report

In 2016 and 2017 there were changes to the formula in the calculation for the average total investment by the Aneka Tambang Pension Fund regulation:

$$invest\ average = \sqrt[12]{x_1.x_2 \ldots.x_{12}}$$

Where x is an investment every month.

By knowing the investment return and the average total investment, the authors can compare the two and get the 2014-2017 Aneka Tambang Pension Fund Return on investment. The return on investment in 2014-2017 is as follows:

Table 5 Return on investment for the 2014-2017 Aneka Tambang Pension Fund

| Year | *Return on investment* |
|---|---|
| 2014 | 41,03% |
| 2015 | 2,68% |
| 2016 | 8,36% |
| 2017 | 13,89% |

Source: The author's calculations are based on the 2014-2017 Mining Pension Fund Financial Statements

From Table 5 it can be seen that in 2014 the ratio was very high reaching 41.03% and experienced a drastic decline in 2015 to reach 2.68%, after the decline in 2015 the ratio continued to increase, in 2016 the ratio was 8.36%, and in 2017 it increased again to 13.89%. The ratio in 2014 was very high due to unrealized investment returns of IDR 284,194,370,649. The unrealized investment yield itself is calculated using the following formula:

$$unreliazed = SPI\ year\ end - SPI\ year\ start$$

SPI is the investment appraisal difference calculated from a fair value less cost. This is because in 2014 there was an independent appraisal of land and building investment which made the fair value of land and buildings very high, namely IDR. 392,567,165,200. and compared to the acquisition cost of land and building investment of IDR. 28,313,470,553, there was a significant increase in investment value. This causes the investment appraisal difference to be high as well.

In 2015, the Return on investment was 2.68% due to the minus unrealized investment yield of IDR 49,266,553,007. Unrealized which is minus causes a reduction in investment returns, therefore Return on investment this year is classified as low. In 2016 and 2017, Return on investment has increased and in 2017 Return on investment reached 13.89%. This figure has exceeded the Return on investment set out in the

Aneka Tambang Pension Fund investment direction, which is 9%. It can be seen that after the 2014 period, Return on investment has always increased, but only in 2017 did Return on investment meet the targets stated in the investment direction. This is because investment assets continue to grow every year which has an impact on the average total investment as a divider for investment returns for calculating Return on investment.

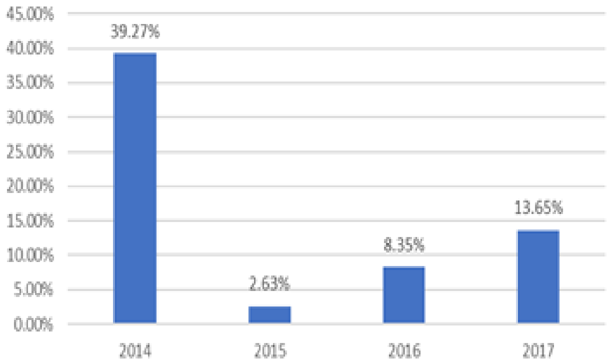


Figure 1 Return on Assets of Aneka Tambang Pension Fund in 2014-2017

Source: The author's calculations are based on the 2014-2017 Aneka Tambang Pension Fund Financial Statements

From Figure 1, it can be seen that in 2015, Return on assets decreased significantly, Return on assets in 2014 reached 39.27%, while in 2015 it was only 2.63%. This decrease was due to a decrease in net investment returns in 2015 and a significant increase in average net assets as the divisor. In 2016 the investment return has increased while the average net assets have decreased. In 2017, the return on assets increased again due to an increase in investment returns and the divider, namely the average net assets also increased.

Fund adequacy ratio is calculated based on the ratio of assets to funding to actuarial liabilities. Wealth for funding is the number of net assets reduced by wealth in dispute, dues arrears more than 3 months from maturity, assets placed abroad, other receivables and other assets, the excess of investment value from the per party limit, and the difference in investment value over the limit per type. Wealth for Aneka Tambang's Pension Fund Funding always increases every year. In the 2014 to 2017 period, there were 2 deduction factors in the Aneka Tambang Pension Fund, namely other receivables and/or other assets and the difference in investment value over the limit per type. The excess investment value from the limit per type is derived from the excess investment value in land and buildings. In 2014 the limit for investment in land and buildings was set by the Aneka Tambang Pension Fund investment direction of 15%, this is different from the following years which have a limit on land and building investment of 20%. This excess of investment value in land and buildings occurs due to the large number of independent appraisals conducted by the Independent Appraiser every 3 (three) years. Starting in 2014, the value of land and buildings that have been assessed by the Independent Appraiser has continued to increase, resulting in a difference of more investment than the limit per typeset by the Founder. This includes a deduction factor for the Aneka Tambang Pension Fund's net assets and also has an impact on its assets for funding.

Based on the calculation of independent actuaries in the Aneka Tambang Pension Fund actuary report, the following is table 6 shows the amount of Aneka Tambang Pension Fund's Actuarial Liabilities for 2014 to 2017

Table 6. Actuarial Liabilities of Aneka Tambang Pension Fund for 2014-2017 in Billion Rupiah

| Year | Actuarial Liabilities |
|---|---|
| 2014 | 898.3 |
| 2015 | 900.1 |
| 2016 | 897.9 |
| 2017 | 922.4 |

Source: The author's calculations are based on the 2014-2017 Mining Pension Fund Financial Statements

Actuarial liabilities are calculated by independent actuaries, based on the actuarial assumptions that each independent actuary uses. Calculation of actuarial liabilities in 2014 and 2015 was carried out by PT KAIA Magna Consulting Aktuaria, in 2016 by PT Quattro Asia Consulting actuarial, and in 2017 by PT Binaputera Jaga Hikmah with predetermined actuarial assumptions. Based on Figure 2, it can be seen that in 2017, Aneka Tambang Pension Fund's Actuarial Liabilities increased significantly from the previous year, namely IDR 24,427,634,146 due to a change in the assumed actuarial interest rate from 9% to 8.75% as determined by the actuary, there was a change in pension fund regulations regarding the addition of additional benefits of IDR. 500,000, - for each participant who received pension benefits for the first time, there was a decrease in basic pension income from 8% to 6% and in terms of membership, the number of participants who took benefits the pension is simultaneously reduced and causes the calculation of actuarial obligations for participants who do not take pension benefits at the same time increasing.

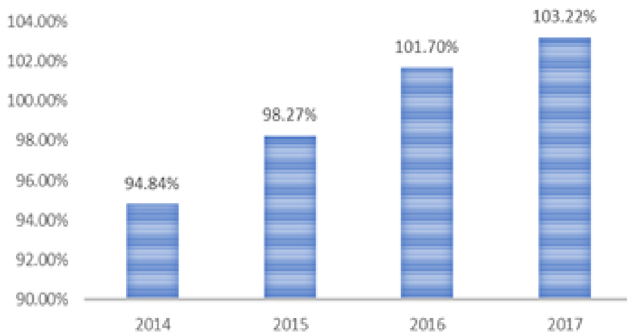


Figure 2. Capital Adequacy Ratio in Aneka Tambang Pension Fund in 2014-2017

Source: The author's owned analysis based on the 2014-2017 Aneka Tambang Pension Fund Financial Statements

Based on Figure 2, it can be seen that the adequacy ratio of funds always increases every year. Even though in 2014 and 2015 the fund adequacy ratio was still below 100%, which means that wealth for funding was still smaller than its actuarial obligations, but in 2016 and 2017 there was an increase in the ratio to more than 100%, which means that Aneka Tambang pension fund managed to maintain wealth for funding beyond its actuarial liabilities.

The quality of funding in pension funds can be seen from the capital adequacy ratio, based on Figure 2 in 2014 the capital adequacy ratio was 94.84%, which means it is in the second level. The quality of funding at the second level means the wealth for pension fund funding is less than the actuarial obligations but not less than the solvency obligations. In 2015 the quality of funding was still at the second level even though the ratio had increased to reach 98.27%. In 2016, the capital adequacy ratio continued to increase to more than 100%, which means that pension funds are in a fulfilled fund state where the wealth for funding is more than their actuarial obligations and makes pension funds for various mines at first-level funding quality. In 2017, various mining pension funds remained at the first level where the adequacy ratio of funds was 103.22%.

## V. CONCLUSION

Several things affect the capital adequacy ratio, including wealth for funding, actuarial liabilities, and net assets. The fund adequacy ratio continues to increase every year, 2014 the fund adequacy ratio was still at 94.84% which means it is still at the second level of funding quality, in 2015 the quality of pension fund funding was still at the second level with a ratio of 98, 27%. But in 2016 the fund adequacy ratio exceeded 100%, which means that wealth for pension fund funding has exceeded its actuarial obligations, which means that pension funds are also able to pay pension benefits to pension participants. In 2017, pension funds further improved the performance of their wealth for funding with a fund adequacy ratio of 103.22%. In 2017, the pension fund is in a fulfilled fund condition, which means that the wealth for funding has exceeded the actuarial obligations of the pension fund.

## REFERENCES

[1]. Law of the Republic of Indonesia No. 11, 1992 concerning Pension Funds Decree of the Director-General of Financial Institutions (KEP-2345/LK/2003)
[2]. Statement of Indonesian Financial Accounting Standards No. 18 (PSAK 18) regarding Pension Fund accounting
[3]. Dana Pensiun Aneka Tambang, Accounting Guidelines/Policies, (Jakarta: Dana Pensiun Aneka Tambang)
[4]. Regulation of the Chairman of the Capital Market and Financial Institution Supervisory Agency Number PER-05 / BL / 2012, Indonesian Pension Fund Association, Compilation of Pension Fund Legislation, (Jakarta: Indonesian Pension Fund Association)
[5]. Dana Pensiun Aneka Tambang, The actuarial guidelines/policies, and Aneka Tambang's pension fund funding, (Jakarta: Dana Pensiun Aneka Tambang)
[6]. Sunaryo, Sunaryo & Santoni, Alvia & Piliang, Endri & Harahap, Muhammad. (2020). Determinants of Capital Adequacy Ratio for Pension Funds: A Case Study in Indonesia. International Journal of Financial Research. 11. 203. 10.5430/ijfr.v11n4p203.
[7]. Indonesian Ministry of Finance. 2002. Minister of Finance Decree Republik Indonesia No.113/PMK.05/2005 regarding amendments to the decree of the Minister of Finance No.510/KMK.06/2002
[8]. Zulaini Wahab, Dana Pensiun dan Jaminan Sosial Tenaga Kerja di Indonesia, (Bandung: PT. Citra Aditya Bakti, 2001)
[9]. Financial Services Authority Regulation Number 3 / POJK.05 / 2015 concerning Pension Fund Investment, 2015
[10]. Dana Pensiun Aneka Tambang, Defined Benefit Pension Plan Financial Statements and Independent Auditor's Report, 2017
[11]. Umi Narimawati, Metodologi Penelitian Kualitatif dan Kuantitatif, Teori dan Aplikasi, (Bandung: Agung Media, 2008)
[12]. Dana Pensiun Aneka Tambang, Pension Fund Regulations No.8.P/0255/DAT/2003, (Jakarta: Dana Pensiun Aneka Tambang)
[13]. Indonesian Ministry of Finance. 2002. Minister of Finance Decree Republik Indonesia Number 510/KMK.06/2002
[14]. Aneka Tambang. Actuarial Report of Pension Funds PT Antam (Persero) Tbk, 31 December 2015.