FINANCIAL PERFORMANCE ANALYSIS OF LIFE INSURANCE COMPANY FOR THE 2016-2023 PERIOD: COMPARATIVE ANALYSYS OF PRE-PANDEMIC AND PANDEMIC ERA

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Abstract

The COVID-19 pandemic caused major disruptions in the life insurance industry, leading to a 5.2% market decline in 2020 due to the economic slowdown. This study examines the financial performance of Prudential Life Insurance and Allianz Life from 2019 to 2023. Using secondary data from company websites and the Indonesia Stock Exchange, financial statements from 2016 to 2023 were analyzed with eight financial ratios. Statistical tests, including the Shapiro-Wilk test for normality and either a paired sample t-test or Wilcoxon signed-rank test, were performed using IBM SPSS Statistics 27 to assess significant differences in performance before and after the pandemic.

CHAPTER 1

- Background Research
- Company Profile
- Research Problem
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- Research Objectives
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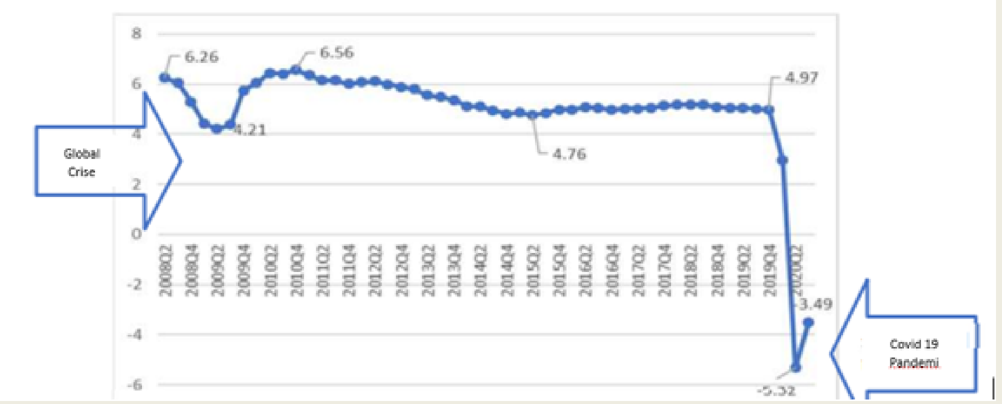
1.1 BACKGROUND RESEARCH

Impact of COVID-19 on the Indonesian Economy and Insurance Industry

COVID-19 emerged in late 2019 and significantly impacted Indonesia starting in early March 2020 (Seftarita et al., 2022)

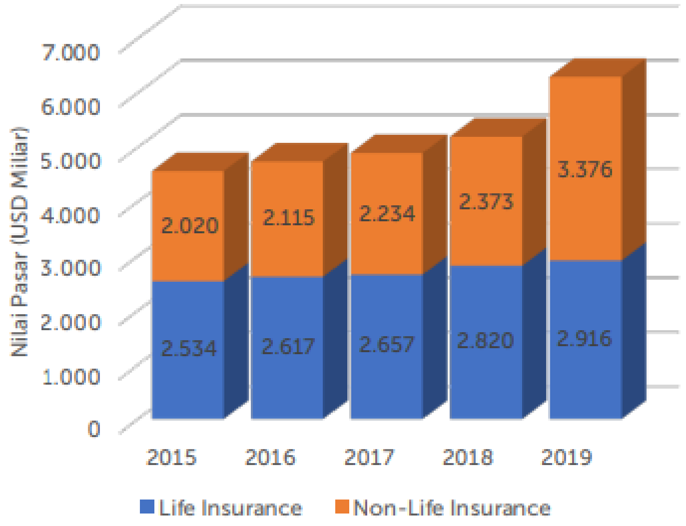


. Economic Growth Before and After the Covid 19 Pandemic
Source : Bank Indonesia, 2008 - 2020

- **Economic Contraction** : Severe economic contraction in Q2 and Q3 of 2020, with negative growth rates of -5.32% and -3.49% respectively (Bank Indonesia, 2008-2020).
- **Comparison to Past Crises**: These figures represent the lowest levels compared to the 2008/2009 global financial crisis and the 2015 European crisis.

Insurance Industry Challenge

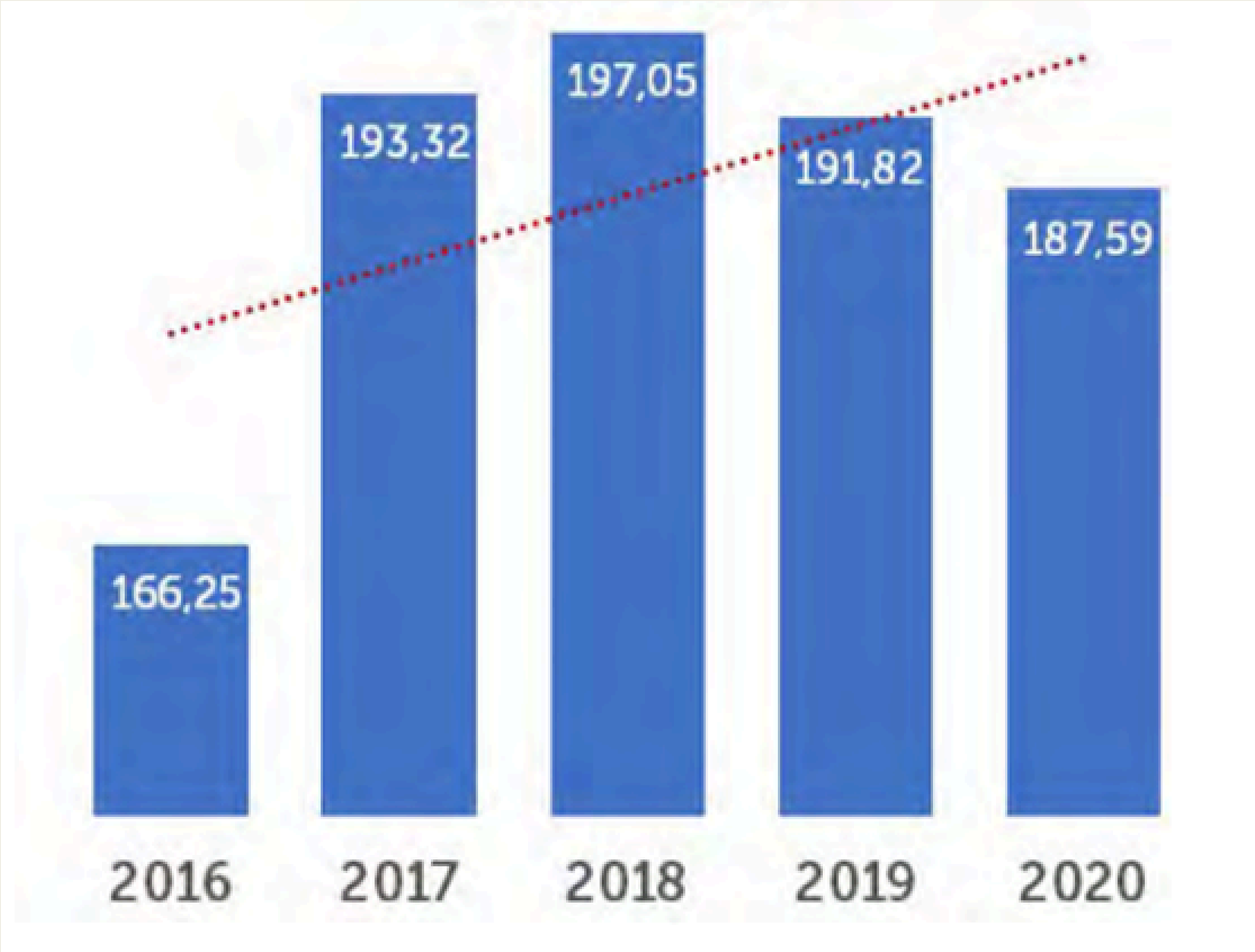
The COVID-19 pandemic significantly altered the insurance industry's dynamics, impacting economic growth projections (Sitepu et al., 2022).



Market Share Global Insurance
Source : World Insurance 2015-2019, Swiss Re Institute

- **Market Value (2019)** : USD 6.292 trillion, 8% CAGR from 2015, contributing 7.2% to global GDP (Swiss Re Institute, 2015-2019).
- **Decline in 2020** : Significant decline of USD 128.9 billion due to the pandemic's global economic impact.

Indonesian Life Insurance Sector



Life Insurance Premium Income (IDR Trillion)
Source : Roadmap Industri Asuransi Jiwa, 2021

- **Growth (2016-2020)** : Positive premium income growth with a 3.1% CAGR. Significant growth in 2017 driven by bancassurance distribution channel.
- **Pandemic Impact (2020)** : 2.2% decline in premium income due to the economic slowdown.

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1.1 BACKGROUND RESEARCH

Prudential Life Insurance Performance

Year	Premium Income (In millions of IDR)	Claim and Benefit Expenses(In (millions of IDR)
2018	IDR 24.665.103	IDR 10.352.023
2019	IDR 24.239.782	IDR 15.837.921
2020	IDR 22.819.246	IDR 8.469.806
2021	IDR 22.505.004	IDR 14.216.960
2022	IDR 19.281.361	IDR 16.491.183

Premium Income and Claim and Benefit Expenses Report for Prudential Life Insurance, 2018 - 2022
Source : Financial Report Prudential Life Insurance, 2018-2022

Allianz Life Insurance Performance

Year	Premium Income (In millions of IDR)	Claim and Benefit Expenses(In (millions of IDR)
2018	IDR 9.983.611	IDR 6.008.806
2019	IDR 12.465.035	IDR 9.815.989
2020	IDR 18.812.729	IDR 12.697.836
2021	IDR 19.900.477	IDR 12.456.954
2022	IDR 13.055.697	IDR 9.976.089

Premium Income and Claim and Benefit Expenses Report for Prudential Life Insurance, 2018 - 2022
Source : Financial Report Allianz Life Insurance, 2018-2022

Allianz and Prudential showed distinct financial performance trends. Allianz experienced a sharp increase in premium income early in the pandemic but faced significant fluctuations in its claims ratio, highlighting challenges in claims management. Conversely, Prudential's revenue declined gradually but maintained a stable claims ratio, indicating better management of premium income and claims expenses. Overall, Prudential demonstrated more consistent financial stability compared to Allianz's variability.

OVERVIEW

1.2 COMPANY PROFILE : PRUDENTIAL LIFE INSURANCE

PRUDENTIAL

Prudential Plc, founded in England in 1848, entered Indonesia in 1995 as PT Prudential Life Assurance. It has led in investment-linked insurance since 1999 and Sharia insurance since 2007. Headquartered in Jakarta, it operates six major offices and 356 independent offices, with over 150,000 marketers serving 2.3 million customers through 408 offices.

MISSION AND STRATEGY

- **Mission** : "To be the best retail financial services company in Indonesia.
- **Focus Areas**:
  - Exceptional customer service.
  - Excellent returns for shareholders.
  - Development and training of top talent.
- **Four Pillars** :

Striving for excellence

Cohesive teamwork

Learning opportunities

Integrity and fairness

KEY PRODUCTS

- Prulink Assurance Account (PAA)
- Prulink Investor Account (PIA)
- Prulink Protection Plus
- Prulink Smart Saver
- Prudential Health Protection
- Prudential Retirement Plan
- Prudential Education Plan
- Sharia-compliant Products

OVERVIEW

1.2 COMPANY PROFILE : Allianz Life Indonesia

Allianz

Allianz manages €714 billion in assets for insurance clients, with an additional €1.7 trillion managed by PIMCO and Allianz Global Investors. Leading insurance company in the Dow Jones Sustainable Index.

ALLIANZ IN INDONESIA

- **Establishment :**

1. 1989: PT Asuransi Allianz Utama Indonesia (general insurance).
2. 1996: PT Asuransi Allianz Life Indonesia (life, health, and pension insurance).
3. 2006: Entered the sharia insurance business.
4. 2023: PT Asuransi Allianz Life Syariah Indonesia launched as a separate entity.

- **Market Presence** :
  - Over 1,000 employees and 40,000 marketers.
  - More than 10 million insureds.

RESEARCH PROBLEM AND RESEARCH QUESTIONS

1.3 RESEARCH PROBLEM

- **Financial Disruption** : The COVID-19 pandemic has severely disrupted Life Insurance's financial stability and performance.
- **Operational Challenges** : Prudential Life Insurance and Allianz Life Insurance has faced significant operational challenges due to the pandemic.
- **Strategic Response** : There is a need to understand how Prudential and Allianz Life Insurance has managed and adapted its strategies in response to the pandemic.
- **Performance Comparison** : A critical analysis is required to compare Prudential's and Allianz's financial performance before and during the pandemic.
- **Future Resilience** : Identifying effective strategies to improve Prudential's and Allianz's resilience and sustainability in the life insurance sector post-pandemic.

1.4 RESEARCH QUESTIONS

1. How does the financial performance of Allianz and Prudential Life Insurance in the pre-pandemic era compare in terms of liquidity, solvency, activity, and profitability ratios?
2. How does the financial performance of Allianz and Prudential Life Insurance in the pandemic era compare in terms of liquidity, solvency, activity, and profitability ratios?
3. Are there any differences in the financial performance ratios of Allianz in the pre-pandemic and pandemic era, specifically regarding liquidity, solvency, activity, and profitability?
4. Are there any differences in the financial performance ratios of Prudential in the pre-pandemic and pandemic era, specifically regarding liquidity, solvency, activity, and profitability?

RESEARCH OBJECTIVES AND LIMITATION STUDY

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1.5 RESEARCH OBJECTIVES

1. To assess and compare the financial performance of Allianz and Prudential Life Insurance in the pre-pandemic era, focusing on liquidity, solvency, activity, and profitability ratios.
2. To assess and compare the financial performance of Allianz and Prudential Life Insurance in the pandemic era, focusing on liquidity, solvency, activity, and profitability ratios.
3. To determine if there are significant differences in the financial performance ratios of Allianz in the pre-pandemic and pandemic era, specifically regarding liquidity, solvency, activity, and profitability.
4. To determine if there are significant differences in the financial performance ratios of Prudential Life Insurance in the pre-pandemic and pandemic era, specifically regarding liquidity, solvency, activity, and profitability.

1.6 SCOPE AND LIMIATION STUDY

- **Scope Limitation** : Research is restricted to Prudential and Allianz Life Insurance, potentially limiting applicability to other companies or industry-wide trends.
- **Timeframe Restriction** : Analysis is confined to the period of 2016-2023, excluding potential long-term effects beyond this timeframe.
- **Pandemic Impact** : Focuses on the pandemic’s immediate effects, potentially overlooking long-term financial impacts and ongoing consequences.
- **Financial Ratios Limitation** : Reliance on liquidity, solvency, activity, and profitability ratios may omit other critical financial indicators.

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Previous Research of the Study

Author & Title of Research	Methodology	Results
Wiwiek Nardawiyah Daryanto and Dety Nurfadilah : Financial Performance Analysis Before and After the Decline in Oil Production: Case Study in Indonesian Oil and Gas Industry. INA: International Journal of Engineering and Technology.	This study uses financial ratio analysis and paired sample t-test to compare financial performance before (2011-2012) and after (2014-2015) the oil and gas production decline.	Despite losses, Indonesia's largest oil and gas companies maintained strong financial conditions. Significant differences were found in the current ratio and return on equity before and after the production decline.
Oktafia Harini and Wiwiek Mardawiyah Daryanto : Analysis Financial Performance of Pt. Unilever Indonesia Tbk Before and After Economy Crisis 2017 – 2022	This study uses the paired t-test to analyze PT Unilever Indonesia Tbk's financial performance before (Q1 2017–Q4 2019) and after (Q1 2020–Q4 2022) the economic crisis using data from financial statements.	The study finds no significant change in UNVR's financial performance, showing stable liquidity and minimal pandemic impact.
Wiwiek Mardawiyah Daryanto Jessica Wijaya Regina Renatauli : Financial Performance Analysis of PT. Ace Hardware Indonesia, TBK. Before and After The Launch of Ruparupa.com	This study uses financial ratio analysis and paired t-test to evaluate PT. Ace Hardware Indonesia Tbk's performance before and after launching ruparupa.com, based on 2014-2019 annual financial reports.	Results show no significant changes in current ratio and debt-to-equity ratio, but profitability and efficiency declined significantly as indicated by return on assets and total asset turnover during the pandemic.

Previous Research of the Study

Author & Title of Research	Methodology	Results
Rachmatullah Haliah and Kusumawati : Analysis of Financial Performance Before and After the Pandemic Covid-19 : Automotive and component sub-sector companies	This study uses financial ratio analysis and paired sample t-tests to assess the financial performance of automotive and component companies listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic. Data were collected from financial statements and literature reviews.	The results show no significant differences in the current ratio and debt to equity ratio. However, there are significant differences in the return on assets and total asset turnover, indicating a decline in profitability and efficiency during the pandemic.
Nabilla Rashqia Tsany, Shinta Budi Astuti, Mira Munira : Analysis of Financial Performance Before and During the Covid-19 : A Case Study of Selected Cosmetics and Household Companies	This study uses financial ratio analysis and the paired sample t-test to evaluate financial performance differences before and during the Covid-19 pandemic in food and beverage sector companies listed on the Indonesia Stock Exchange (2019-2020). A purposive sampling method selected 30 companies. Descriptive statistical analysis and the Kolmogorov-Smirnov test were used to analyze the data.	The results show no significant differences in the current ratio, debt to total assets ratio, net profit margin ratio, and price-earnings ratio. However, there is a significant difference in the total assets turnover ratio before and during the Covid-19 pandemic.

1.7 RESEARCH GAP AND NOVELTY

- **Use of T-Test for Analysis** : This study uniquely employs the t-test to quantitatively analyze financial performance, providing a rigorous statistical comparison between 2016-2019 and 2020-2023.
- **Detailed Financial Examination** : It offers a detailed examination of significant changes in key financial metrics, enhancing the understanding of financial stability and performance.
- **Strategic Response Assessment** : The research combines financial analysis with an evaluation of Prudential Life Insurance's strategic responses to the pandemic, offering insights into resilience and adaptation.
- **Practical Recommendations** : By providing practical recommendations based on the analysis, the study aims to contribute to sustainability and robustness in the life insurance sector.

CHAPTER 2

Theoretical Framework
Research Framework
Hypothesis Development

FINANCIAL RATIO ANALYSIS

Financial ratios are calculated using financial statements, which serve as tools to evaluate the company's financial condition and performance by comparing figures from different periods (Hery, 2018)

PROFITABILITY RATIO

- Profitability ratios are a set of ratios that assess the outcomes of asset and debt management by a company (Brigham and Houston, 2018)

Return on Equity (ROE)

$$ROE = \frac{Income\ After\ Tac}{Shareholder's\ Equity} \times 100\%$$

(Daryanto, Maharani, & Wiradjaja, 2021)

Return on Assets (ROA)

$$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$$

(Daryanto, Maharani, & Wiradjaja, 2021)

LIQUIDITY RATIO

- Liquidity Ratio illustrates the relationship between a company's current assets and current liabilities in managing maturing debts (Brigham and Ehrhardt (2014)

Current Ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\%$$

(Daryanto, Maharani, & Wiradjaja, 2021)

Cash Ratio

$$\text{Cash Ratio} = \frac{\text{Cash+cash equivalents}}{\text{Current Liabilities}} \times 100\%$$

(Daryanto, Rizki, & Mahardika, 2021)

FINANCIAL RATIO ANALYSIS

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Financial ratios are calculated using financial statements, which serve as tools to evaluate the company's financial condition and performance by comparing figures from different periods (Hery, 2018)

ACTIVITY RATIO

- Activity ratio is used to measure a company's effectiveness in utilizing its assets. (Sianipar, 2015).

Total Assets Turnover

$$Total\ Assets\ Turnover = \frac{Sales\ Revenue}{Total\ Asset} \times 100\%$$

(Daryanto, Maharani, & Wiradjaja, 2021)

Collection Periods

$$Collection\ Periods = \frac{Account\ Receivable}{Sales} \times 100\%$$

(Daryanto, Maharani, & Wiradjaja, 2021)

SOLVENCY RATIO

- The solvency ratio is a metric used to measure the extent to which a company can meet its obligations. This ratio can be measured through the **Risk Based Capital Ratio (RBC) and Net Premium Growth** (Amalia et al., 2020). A financial indicator called the Risk-Based Capital (RBC) Ratio is used to evaluate how well a financial institution's capital matches its risk profile. In the banking and insurance industries, where it helps guarantee that organizations have enough capital to cover possible losses, it is especially important.

Determine A Statistical Test

PAIRED AND UNPAIRED SAMPLE

Paired Sample → Paired samples involve related groups, such as measuring the same individuals before and after an intervention. (Xu & Harrar, 2012).

Unaired Sample → Unpaired samples involve unrelated groups, used to compare distinct populations, such as students from different schools (Xu & Harrar, 2012).

NORMALLY DISTRIBUTED AND NON-NORMALLY DISTRIBUTED

Normally distributed variables—parametric tests

Parametric tests can be used if the data are normally distributed at the endpoint. An endpoint refers to the measured outcome value for each patient in a trial.

Not Normally distributed variables— non parametric tests

Non-parametric tests are used when the data is not normally distributed but can be ranked or ordered.

Assessing Normality of Distribution

Deviations from normality can affect the validity of results. Methods for evaluating normality include:

Visual Inspection : Histograms and Q-Q plots help determine if data resembles a normal distribution. In Q-Q plots, data points should align with a reference line if normally distributed.

Statistical Tests:

- Shapiro-Wilk Test: Tests if data follows a normal distribution. A p-value > 0.05 suggests normality, while a p-value < 0.05 indicates deviations.
- Kolmogorov-Smirnov Test: Compares sample distribution to a normal distribution. Significant results indicate deviations.
- Anderson-Darling Test: Similar to Kolmogorov-Smirnov but focuses more on distribution tails, useful for detecting outliers.

Descriptive Statistics : Skewness (asymmetry) and kurtosis (peakedness) offer insights into distribution shape. For normal data, skewness should be near zero, and kurtosis close to 3.

Hypothesis Testing

Purpose: To determine if data support or refute a claim about a population, ensuring findings are significant and not due to chance.

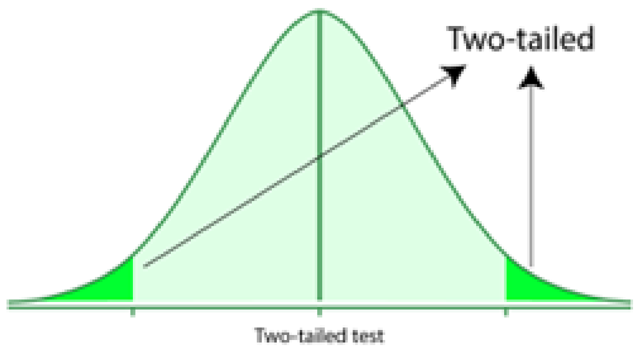
Types of Hypotheses:

Null Hypothesis (H_0): → Assumes no effect or relationship.

Alternative Hypothesis (H_1) → Suggests an effect or relationship exists

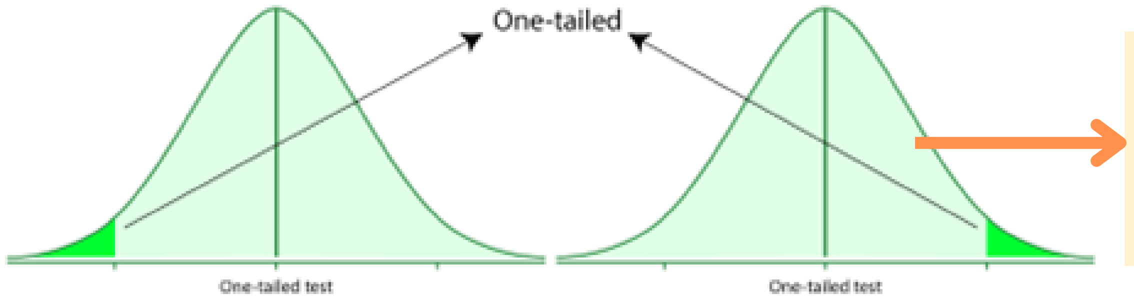
Types of Hypotheses:

One Tailed



→ The rejection region is concentrated on one side of the distribution, either positive or negative

Two Tailed



→ The rejection region is split between both sides of the distribution, with each side having a 2.5% boundary, resulting in a total significance level of 5%.

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T-test for Dependent and Independent Samples

Paired T-Test

The paired t-test compares the means of two related groups to determine if there is a significant difference, reducing variation unrelated to the test.

Unpaired T-Test

The unpaired t-test, or independent t-test, compares the means of two independent groups to determine if there is a significant difference between them.

One Sample T-Test

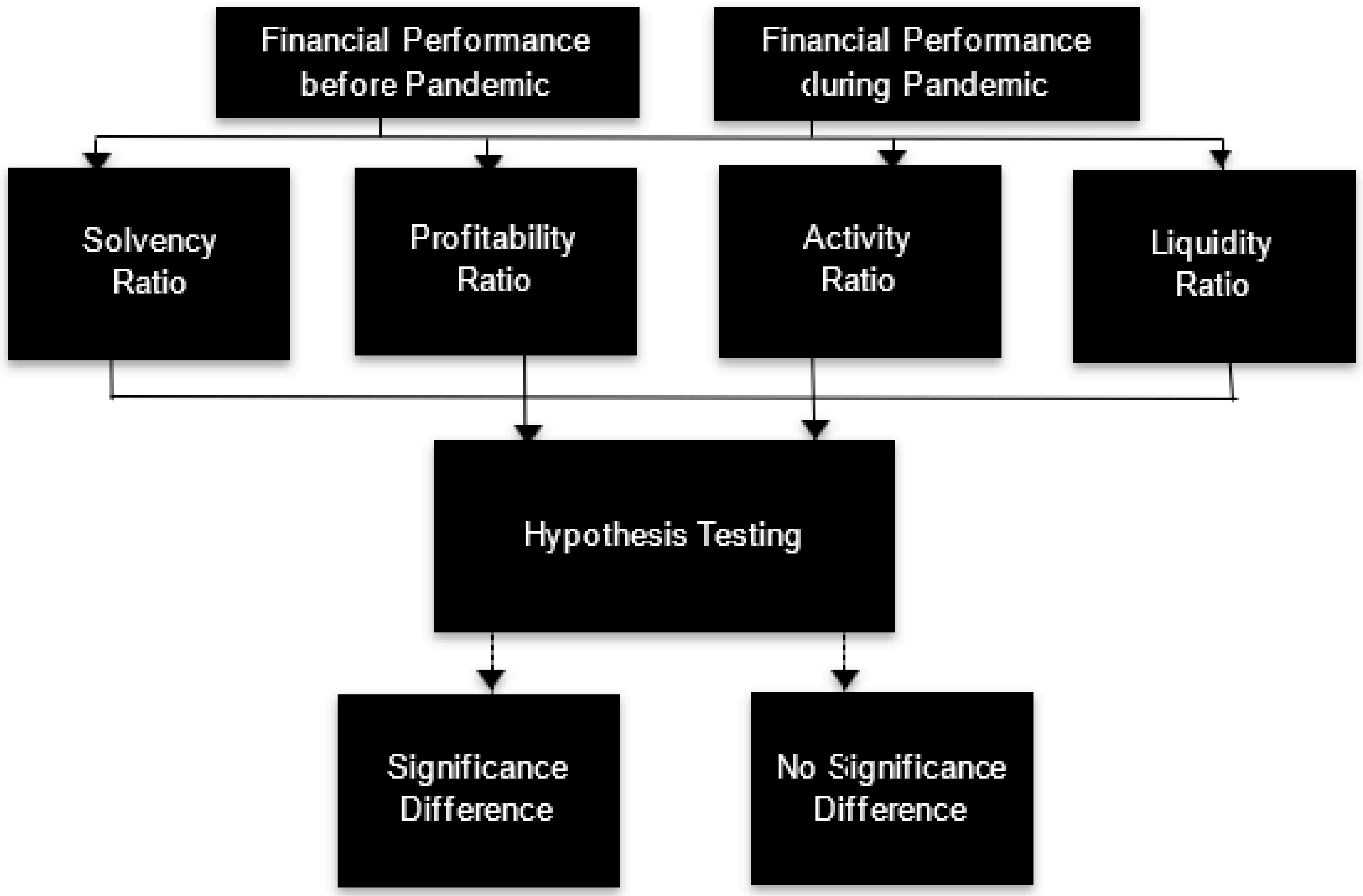
The one-sample t-test is a statistical method used to determine if the mean of a single sample significantly differs from a known population mean or an expected mean value.

Wilcoxon Matched-Pairs Signed-Ranks Test

- The Wilcoxon Matched-Pairs Signed-Ranks Test is a **non-parametric method used to assess significant differences between two related samples** or matched pairs, particularly when data do not meet the normality assumption required for parametric tests.

- This test is ideal for **ordinal data or small samples with non-normal distributions.**

2.2 Research Framework



The figure illustrates the study's conceptual framework, adapted from Wiwiek M. D and Dety N. (2018). It outlines the research procedure, linking concepts, empirical research, and theories (Dickson A., 2018). This study applies financial ratio analysis (FRA) and the paired sample t-test to compare Prudential and Allianz Life Insurance's financial performance before (2019) and during (2020-2023) the COVID-19 pandemic. Data from annual reports will be analyzed for profitability, liquidity, activity, and solvency ratios to assess significant differences in performance across these periods.

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2.3 Hypotesis Development

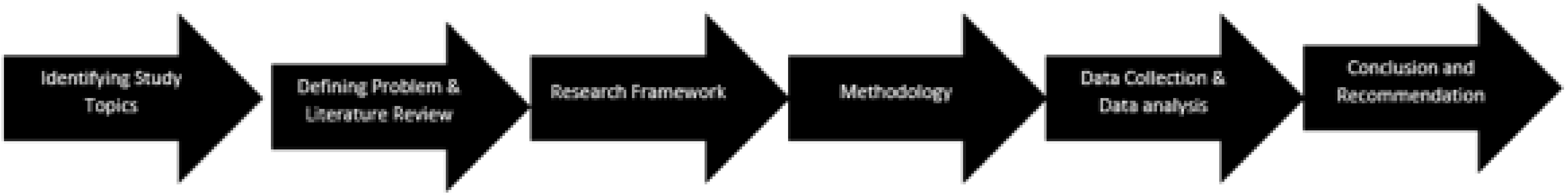
The COVID-19 pandemic, starting in late 2019, deeply impacted the global economy and the life insurance sector, causing disruptions in financial metrics like profitability, liquidity, and solvency. This study proposes the following hypotheses to assess the financial performance of life insurance companies before and during the pandemic:

H1: There is a difference in Return on Equity in the Profitability Ratio between the pre-pandemic and pandemic era.
H2: There is a difference in Return on Assets in the Profitability Ratio between the pre-pandemic and pandemic era.
H3: There is a difference in Current Ratio in the Liquidity Ratio between the pre-pandemic and pandemic era.
H4: There is a difference in Cash Ratio in the Liquidity Ratio between the pre-pandemic and pandemic era.
H5: There is a difference in Risk Based Capital in the Solvency Ratio between the pre-pandemic and pandemic era.
H6: There is a difference in Net Premium Growth in the Solvency Ratio between the pre-pandemic and pandemic era.
H7: There is a difference in Total Assets Turnover Ratio in the Activity Ratio between the pre-pandemic and pandemic era.
H8: There is a difference in Collection Period in the Activity Ratio between the pre-pandemic and pandemic era.

CHAPTER 3

Research Design
Data Collection
Research Procedure
Distribution Normality Test
Hypothesis Testing

3.1 Research Design



This study evaluates Prudential's and Allianz’s financial performance before and during the COVID-19 pandemic using eight financial ratios. The Financial Ratio Analysis (FRA) method was chosen due to limited literature on the Indonesian life insurance market. FRA assesses a company's operational effectiveness, profitability, liquidity, and solvency through various financial ratios (Brigham & Ehrardt, 2013). While it identifies key financial insights, be mindful of potential subjectivity and accounting variations (Johnson, 1979).

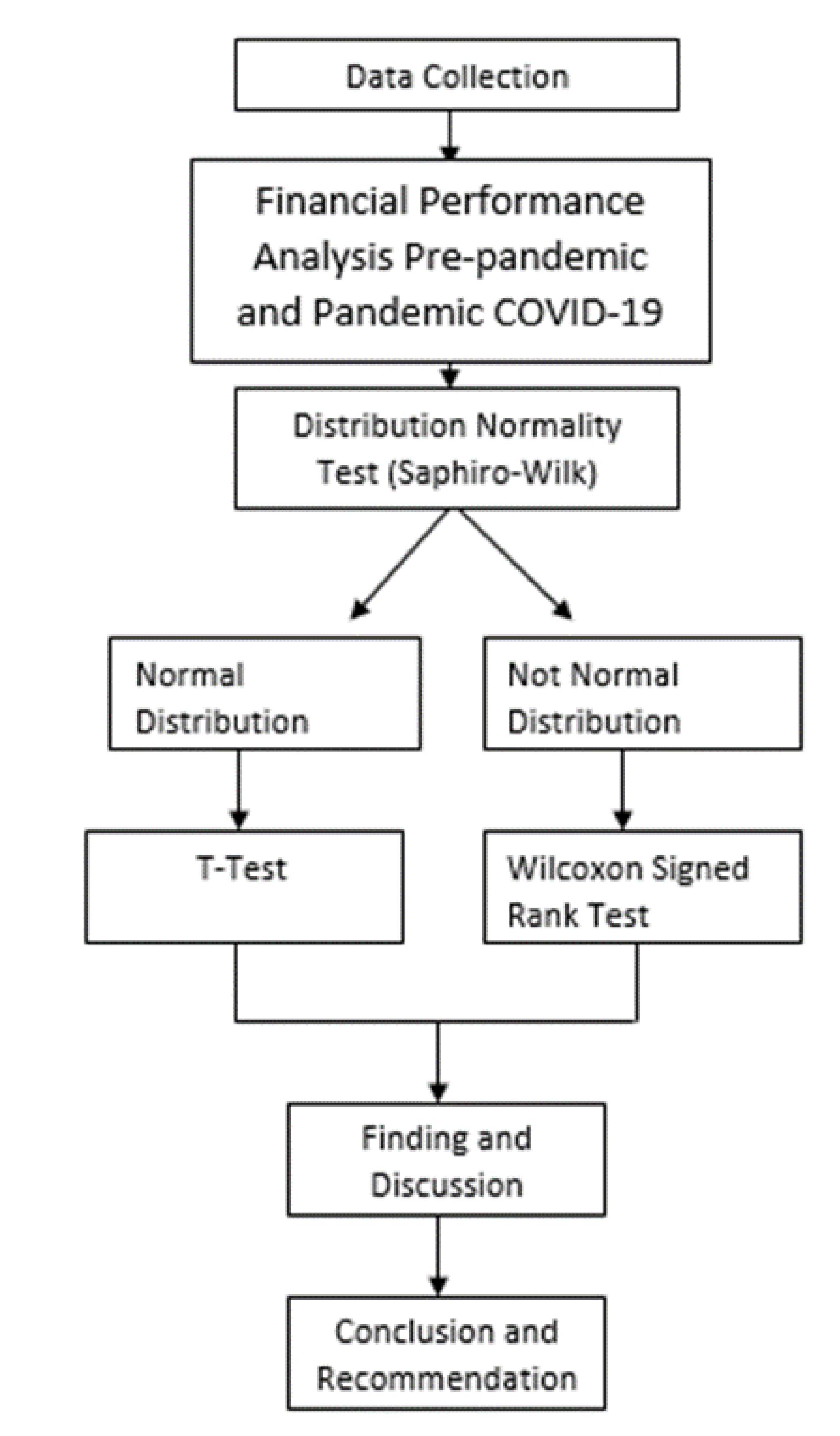
3.2 Data Colllection

Secondary data for the study were sourced from company websites and the Indonesia Stock Exchange, covering financial statements from 2016 to 2023. Eight financial ratios were calculated using this data. The analysis uses quantitative data, with the first quarter of 2020 marking the start of the COVID-19 pandemic. Financial performance is measured using Prudential's quarterly statements from Q2 2016 to Q4 2023.

Financial Performance							
2016	2017	2018	2019	2020	2021	2022	2023
	Q1	Q1	Q1	Q1	Q1	Q1	Q1
Q2	Q2	Q2	Q2	Q2	Q2	Q2	Q2
Q3	Q3	Q3	Q3	Q3	Q3	Q3	Q3
Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4

3.3 Research Procedure

This study analyzes Prudential's and Allianz's financial performance pre-pandemic and the COVID-19 pandemic using financial ratios from quarterly statements (2016-2023). The process involves two steps: collecting 30 quarterly statements to measure financial ratios and conducting a Shapiro-Wilk test for normality. Subsequently, a right-tailed two-dependent sample hypothesis test will assess if financial performance improved during the pandemic.



3.4 Distribution Normality Test

A normality test assesses if data follows a normal distribution. This study uses the Shapiro-Wilk test, which is suitable for small to medium samples. It calculates a W statistic; a low W value suggests a deviation from normality.

H0 = data are normally distributed.
Ha = data are not normally distributed.

H0 is rejected if the **p-value < 0.05**, to conclude that the samples are not normally distributed.

Two Dependent Sample Test

- H0 = δ ≤ 0, or μ2 ≤. μ1
- Ha = δ > 0, or μ2 >μ1

- If the p-value is less than 0.05, the null hypothesis (H0) will be rejected.
- If the p-value is greater than 0.05, the null hypothesis (H0) will be accepted.

Chapter 4
Result and Discussion

Return on Asset (ROA)

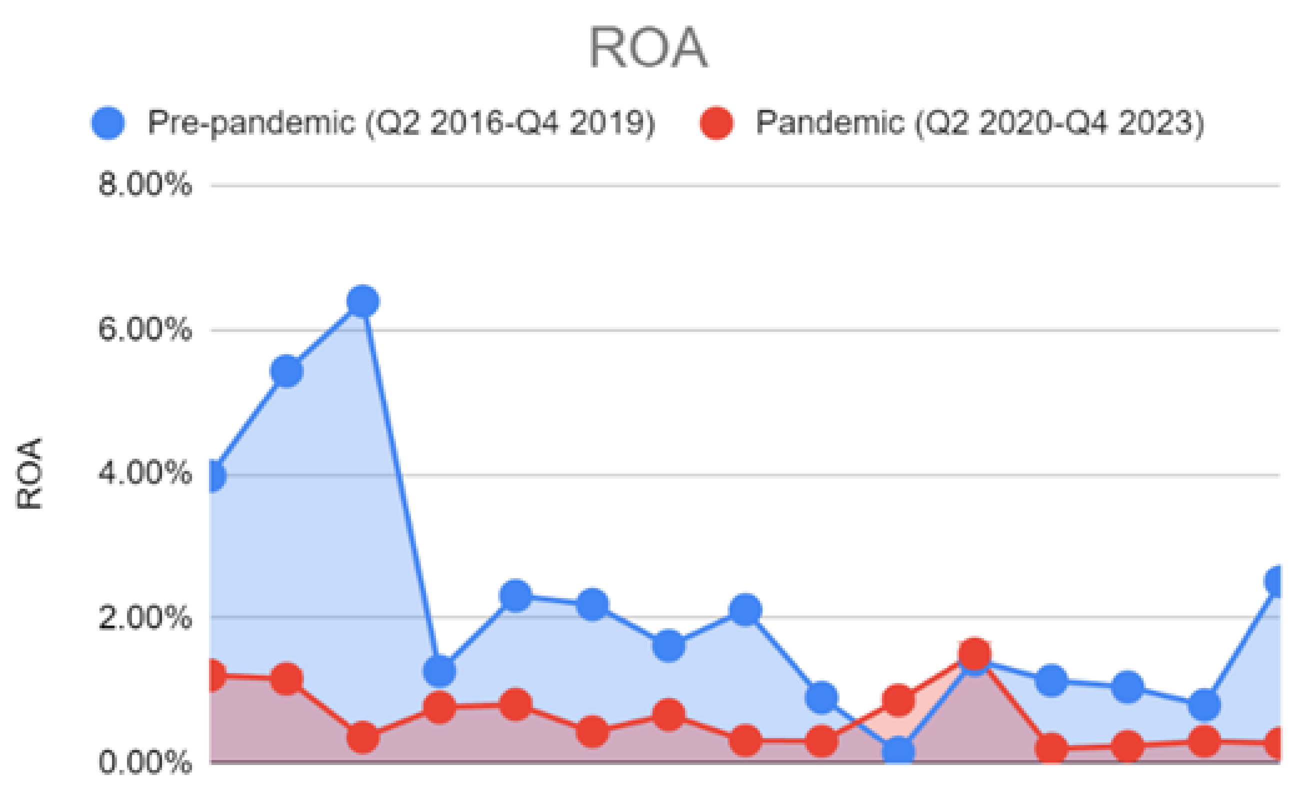


Figure 4. 1 Analysis of Return on Assets (ROA) for Allianz Life Insurance

Pre-Pandemic (Q2 2016 - Q4 2019)

- ROA showed fluctuations but maintained a stable trend.
- Peak ROA at 6.39% in Q4 2016.
- Stronger asset profitability compared to later years.

Pandemic Era (Q2 2020 - Q4 2023)

- Significant decline in ROA, starting at 1.22% in Q2 2020.
- Minimal recovery, with ROA ranging from 0.20% to 1.52%.
- Pandemic severely impacted asset profitability.

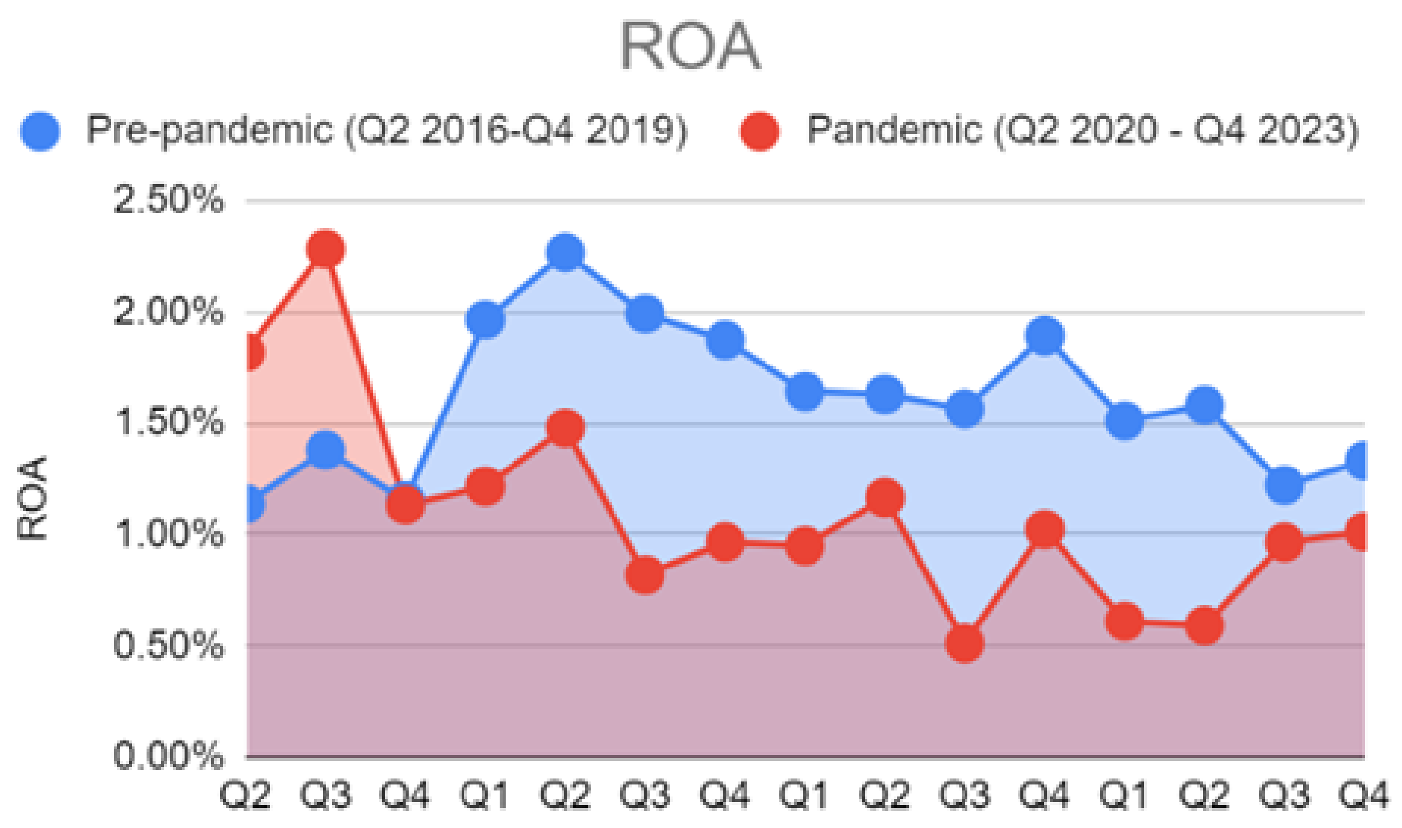


Figure 4. 2 Analysis of Return on Assets (ROA) for Prudential Life Insurance

Pre-Pandemic Era (2016-2019)

- 2016-2017: ROA fluctuated, peaking at 2.27% in Q2 2017.
- 2018-2019: ROA remained above 1.5% but trended downward, ending at 1.33% in Q4 2019.

Pandemic Era (2020-2023)

- 2020: Sharp volatility, with a peak at 2.28% in Q3, then a drop to 1.13% in Q4.
- 2021-2023: Declining trend with minor improvements; Q4 2023 at 1.01%, lower than pre-pandemic levels.

Return on Equity (ROE)

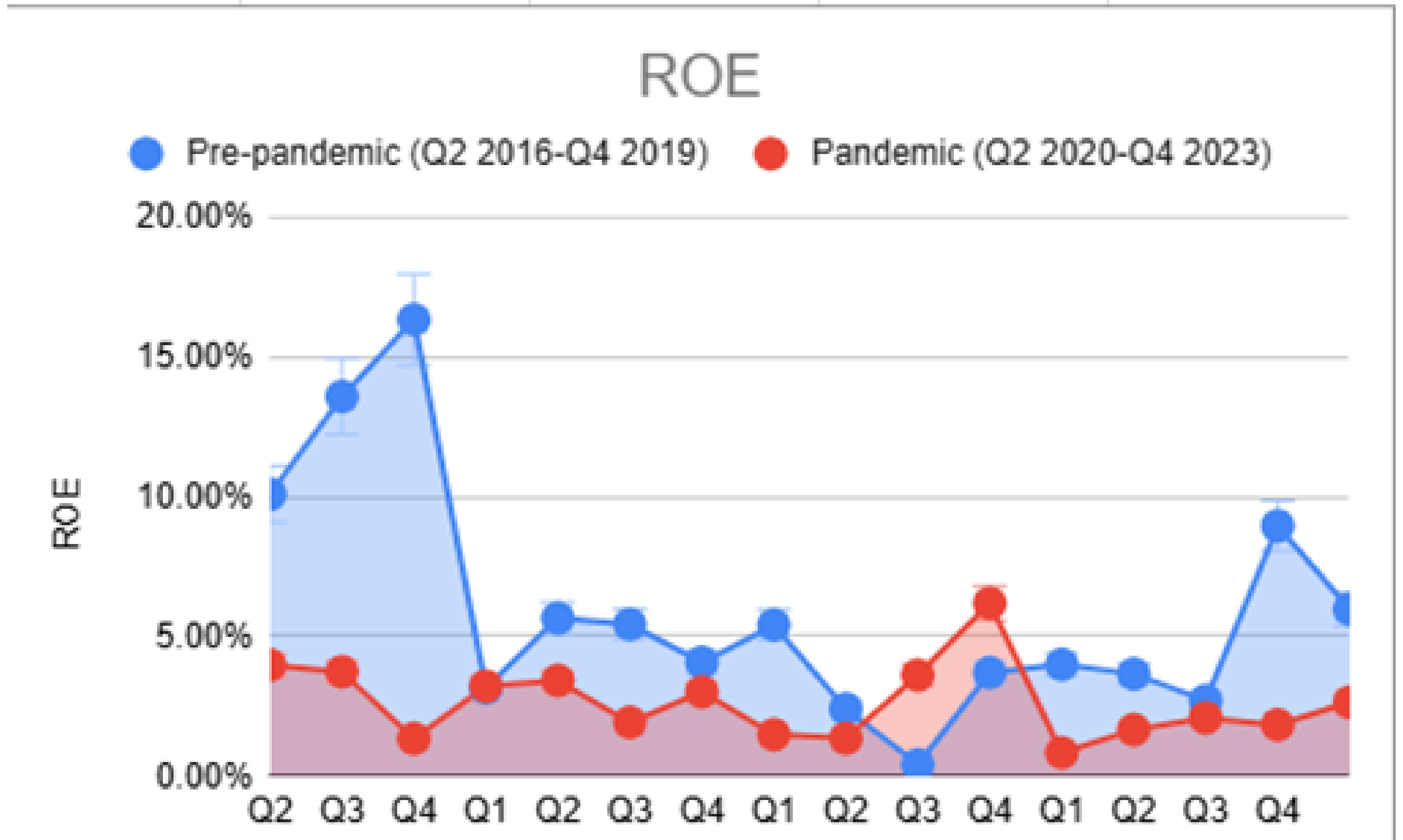


Figure 4.3 Analysis of Return on Equity for Allianz Life Insurance

Pre-Pandemic Era (2016-2019)

- 2016-2017: ROE fluctuated, peaking at 16.33% in Q4 2016, then declined steadily in 2017.
- 2018-2019: ROE reached a low of 0.41% in Q3 2018 but improved to 8.96% by Q4 2019, averaging 5.97%.

Pandemic Era (2020-2023)

- 2020: Sharp drop in ROE to 1.35% by Q4.
- 2021-2023: Declining trend with minor improvements; Q4 2023 at 1.84%, much lower than pre-pandemic average, reflecting the pandemic's impact on profitability.

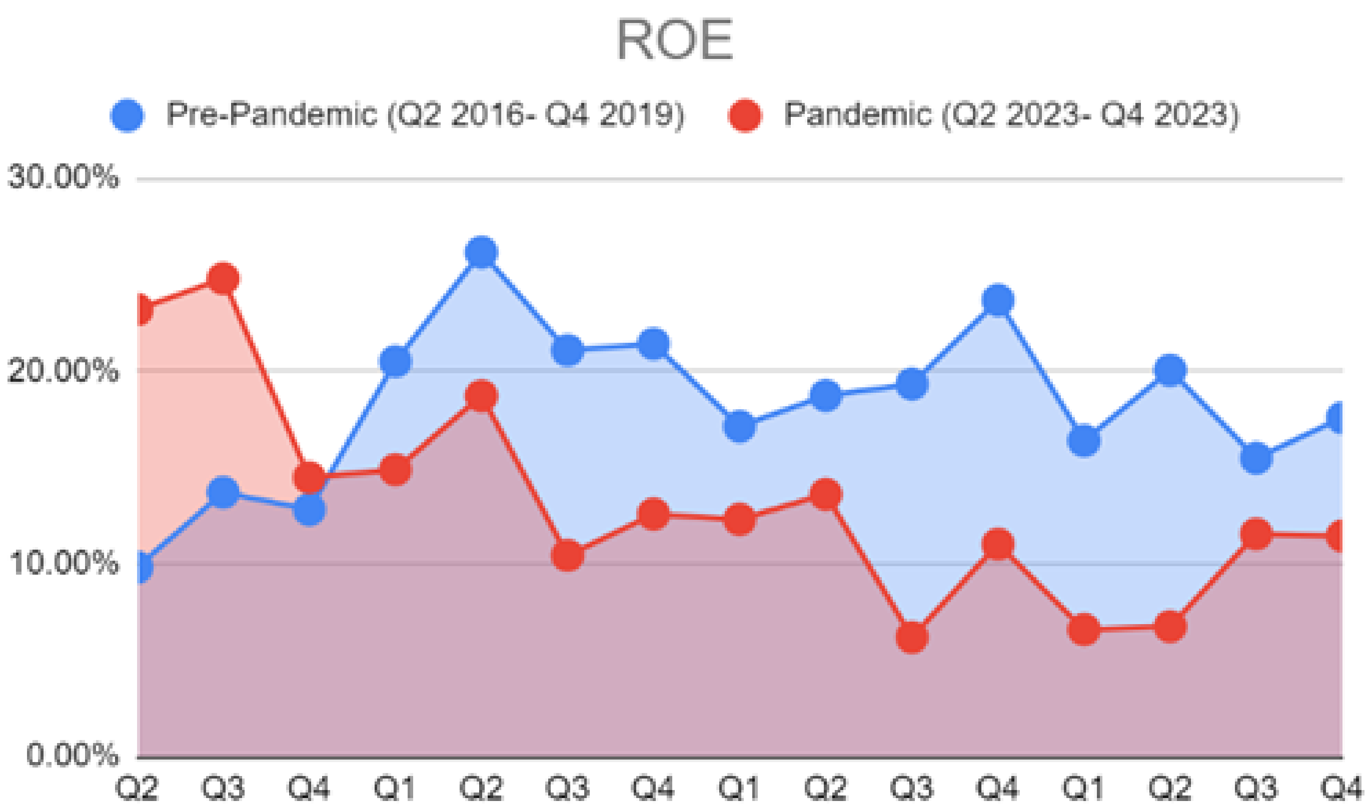


Figure 4. 4 Analysis of Return on Equity for Prudential Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- ROE Stability: Strong, stable performance with peak at 26.16% in Q2 2017.
- Range: Mostly 15-20% after mid-2017, showing consistent profitability.

Pandemic Era (Q1 2020 - Q4 2023)

- Initial Resilience: Highest ROE at 24.79% in Q3 2020.
- Downward Trend: ROE declined from 2021, ranging 10-15% through 2022.
- 2023 Decline: Steep drop from 6.59% in Q1 to 11.45% in Q4, highlighting pandemic impact on profitability.

Total Asset Turnover

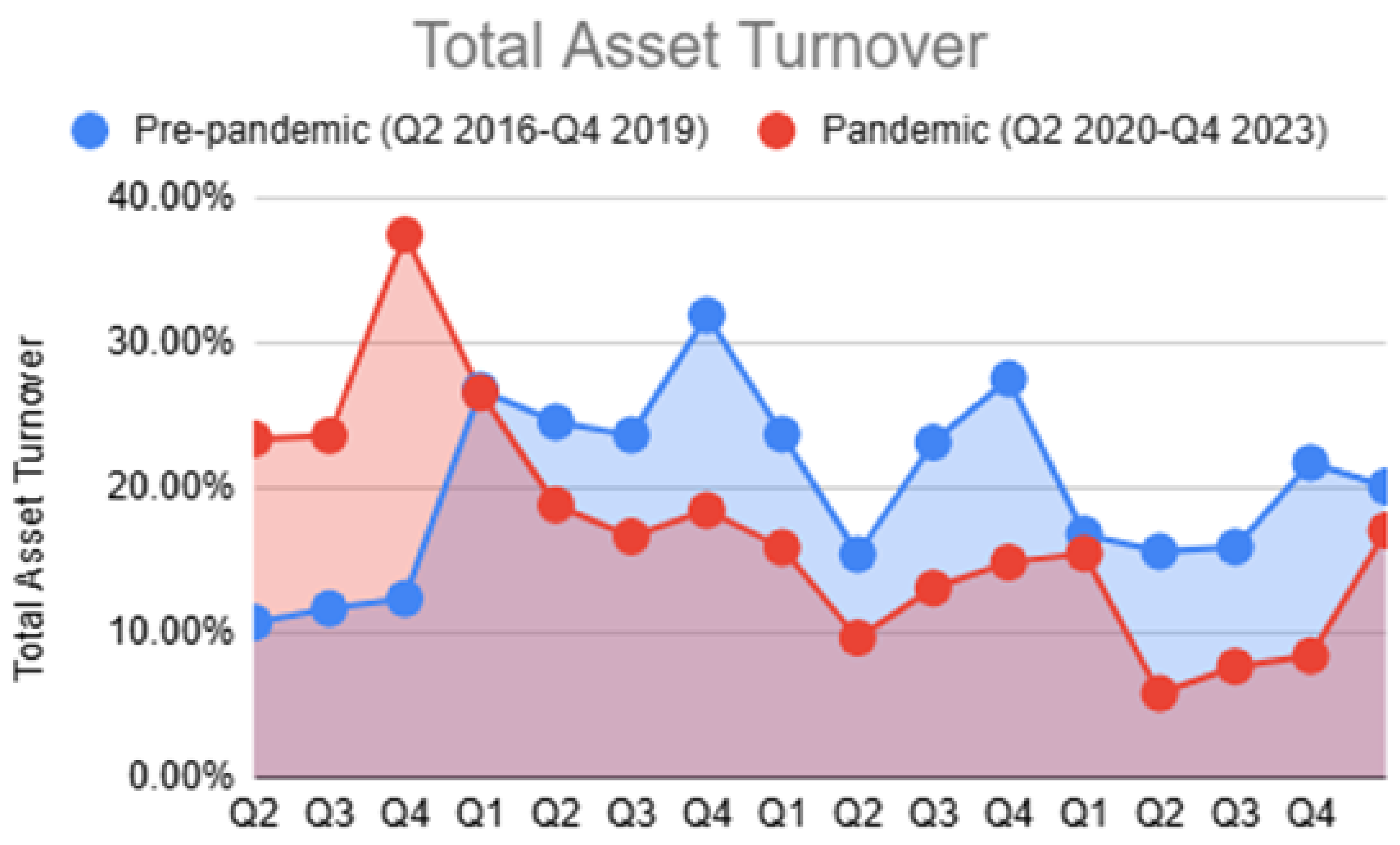


Figure 4. 5 Analysis of Total Asset Turnover for Allianz Life Insurance

Pre-Pandemic Era (2016-2019)

- Turnover Asset Ratio Fluctuations: Significant highs and lows, with peaks at 26.77% in Q1 2017 and 27.58% in Q4 2018.
- Stable Growth: Average ratio indicates healthy growth, ending with 21.77% in Q4 2019.

Pandemic Era (2020-2023)

- Initial Increase: Peak of 37.51% in Q4 2020.
- Continuous Decline: Ratio fell steadily from 18.86% in 2021 to a low of 5.85% in Q2 2023, showing pandemic impact on asset turnover.

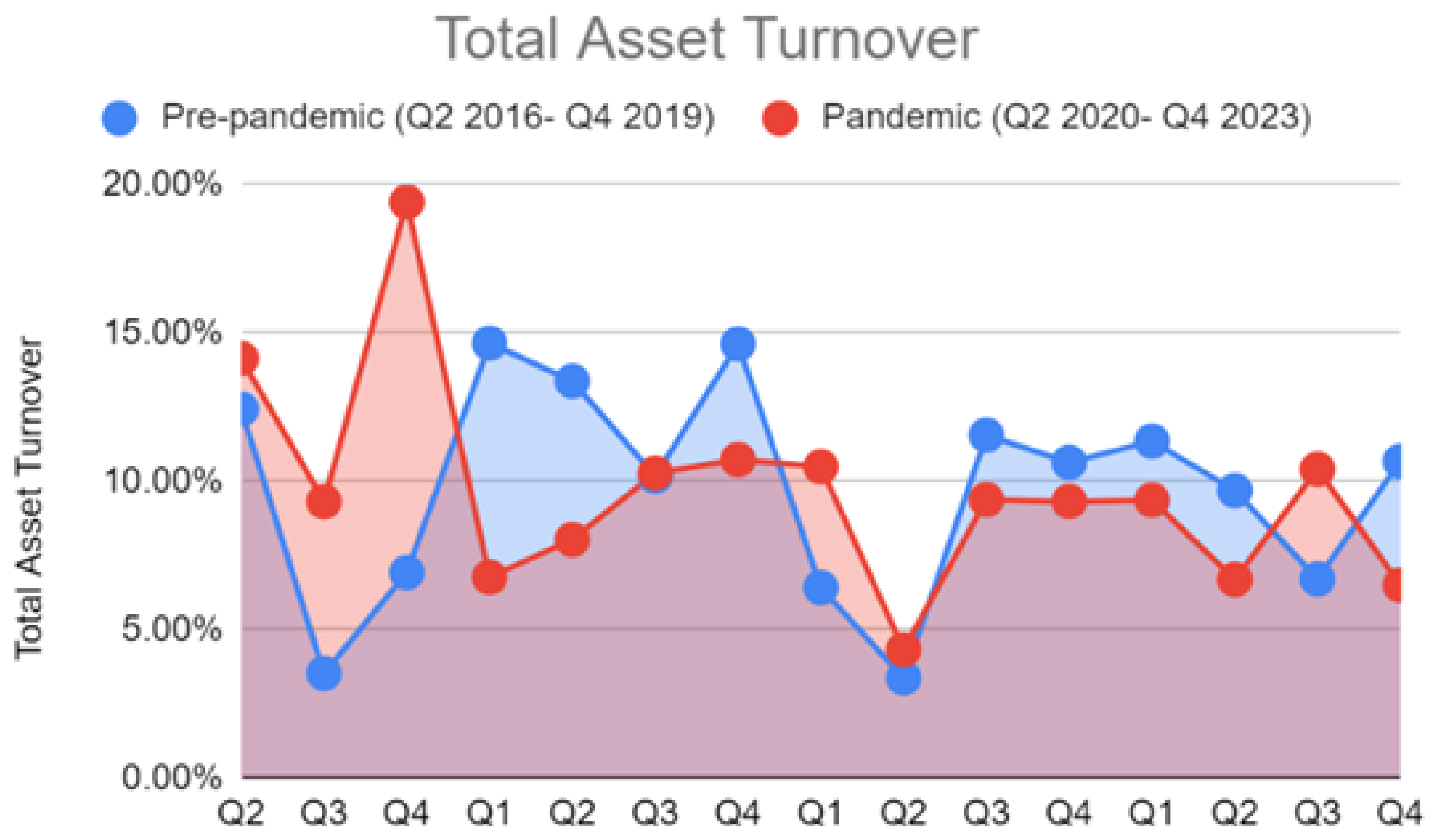


Figure 4. 6 Analysis of Total Asset Turnover for Prudential Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Stable Asset Turnover: Generally ranged from 5% to 15%, peaking in Q1 2017 (14.65%) and Q4 2017 (14.62%).
- Better Asset Utilization: Fluctuations were fewer, reflecting stable and efficient asset use.

Pandemic Era (Q2 2020 - Q4 2023)

- Initial Volatility: Recovery peaks in Q2 2020 (14.13%) and Q4 2020 (19.40%), followed by a lower, stable range.
- Stabilized at Lower Levels: Asset turnover settled at around 6-10%, reflecting pandemic impact on utilization and volatility.

Collection Period

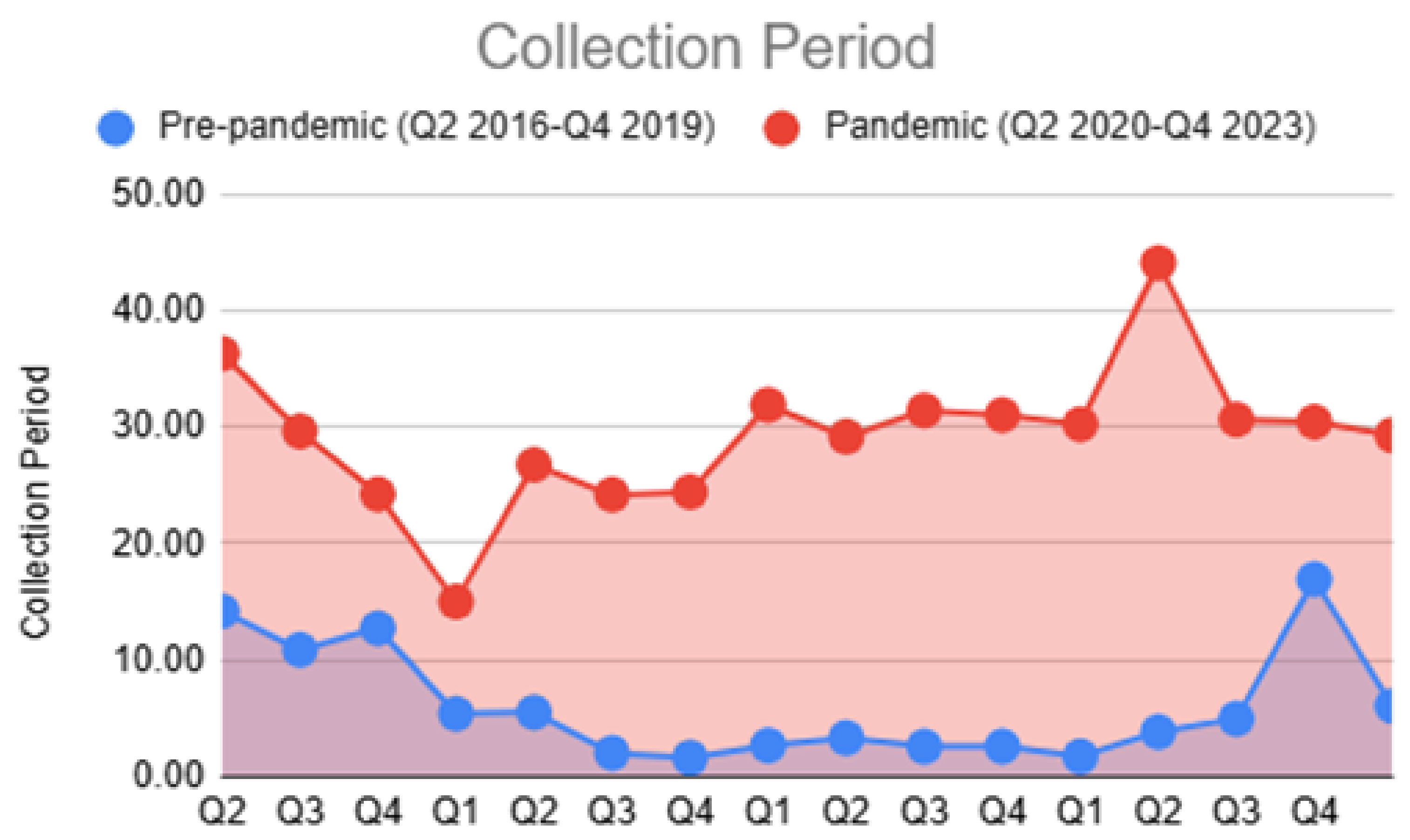


Figure 4. 7 Analysis of Collection Period for Allianz Life Insurance

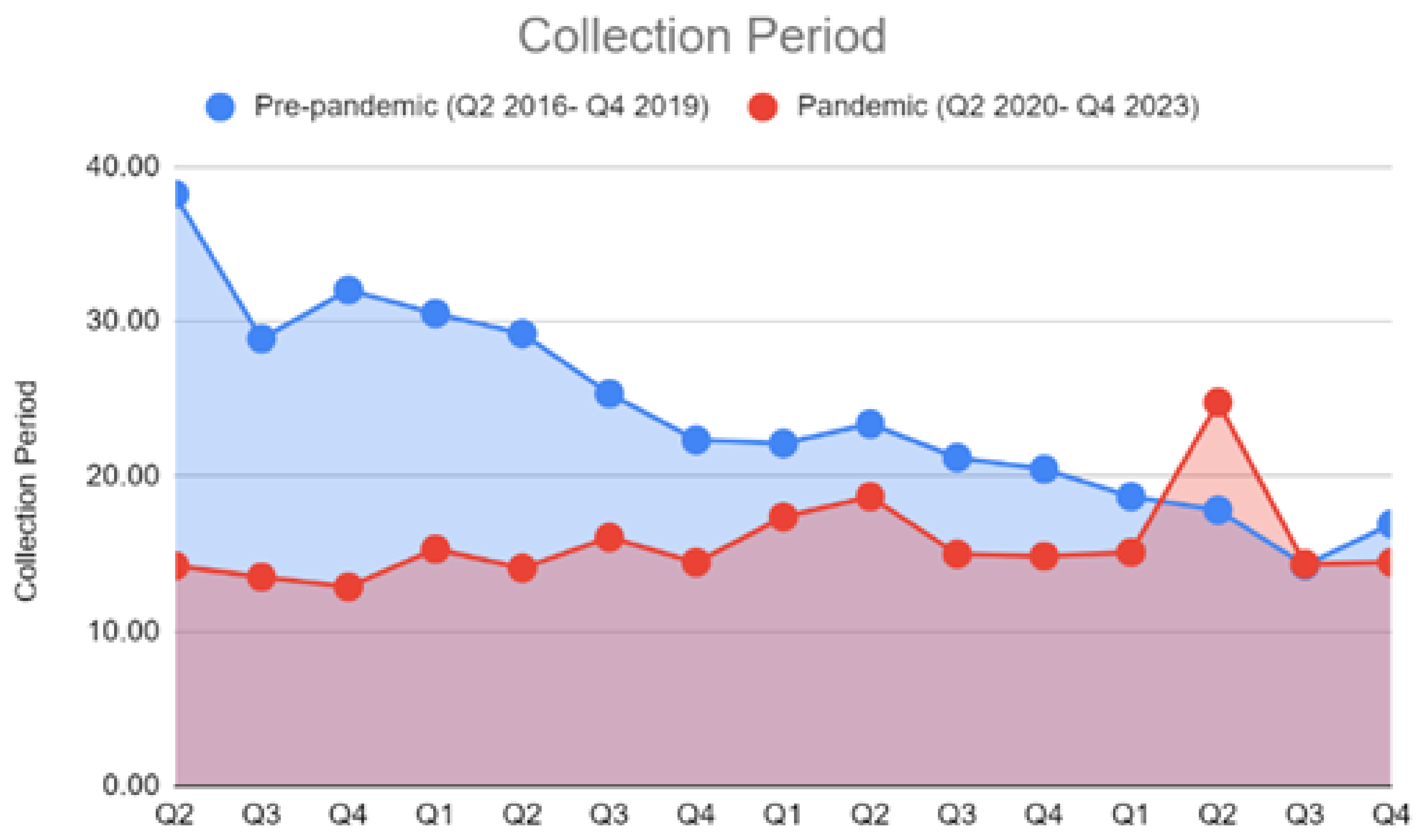


Figure 4. 8 Analysis of Collection Period for Prudential Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Collection Period Trend: Started at ~35 days, gradually decreased to ~10 days by the end.
- Improved Efficiency: Reflects shorter collection times and higher collection rates.

Pandemic Era (Q2 2020 - Q4 2023)

- Longer Collection Period: Began around 30 days, mostly ranged from 25-30 days.
- Volatility: Significant spike to ~40 days before stabilizing.

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Downward Trend: Collection period reduced from 38.21 days in Q2 2016 to 16.94 days in Q4 2019.
- Stabilization: Stabilized around 22-25 days from 2017 to 2019, reflecting improved collection efficiency.

Pandemic Era (Q2 2020 - Q4 2023)

- Lower, Stable Levels: Collection period averaged around 14-15 days, starting at 14.86 days in Q1 2020.
- Minor Fluctuations: Remained stable with small variances, e.g., 14.84 days in Q4 2021, indicating continued efficiency.

Risk-Based Capital

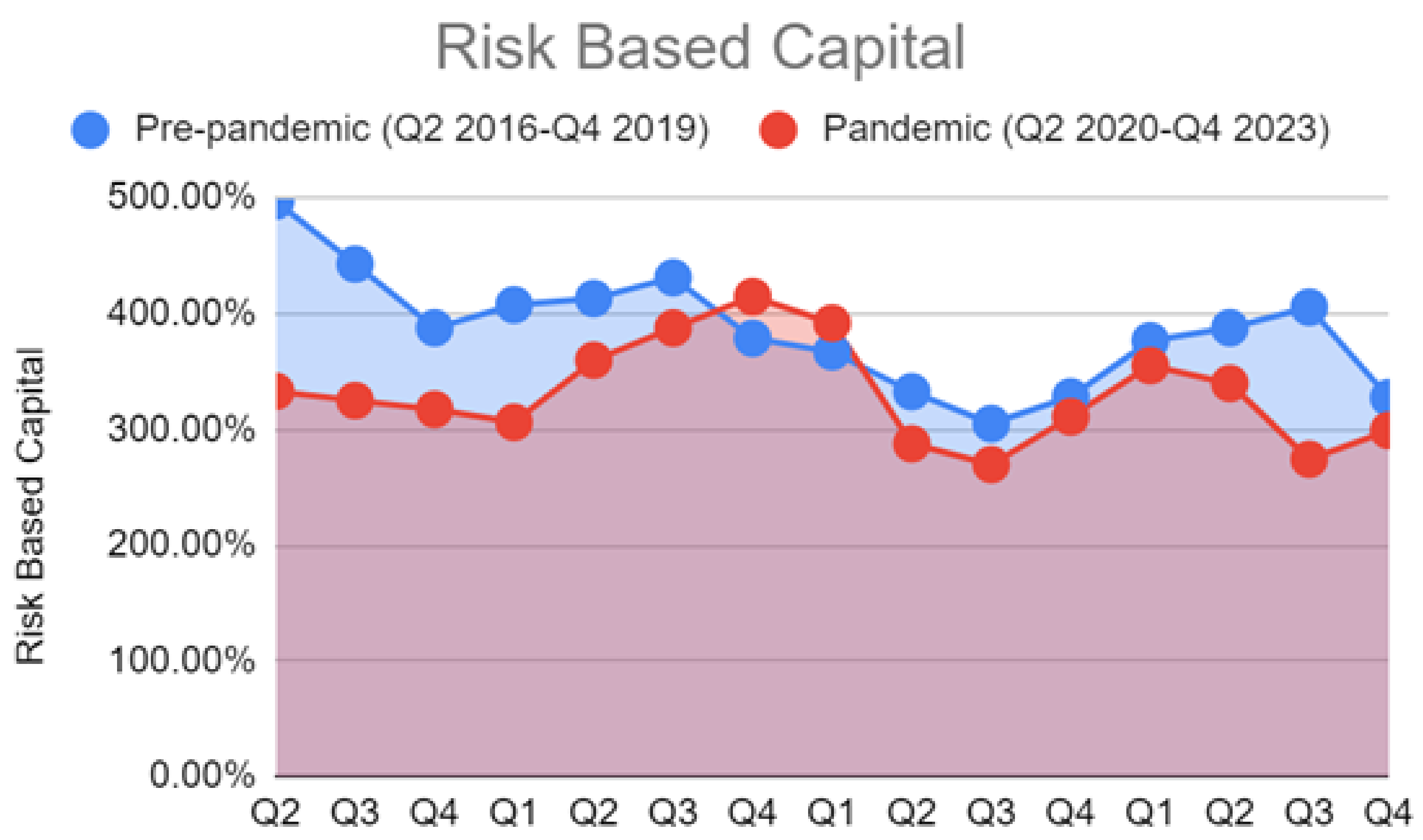


Figure 4. 9 Analysis of Risk Based Capital for Allianz Life Insurance

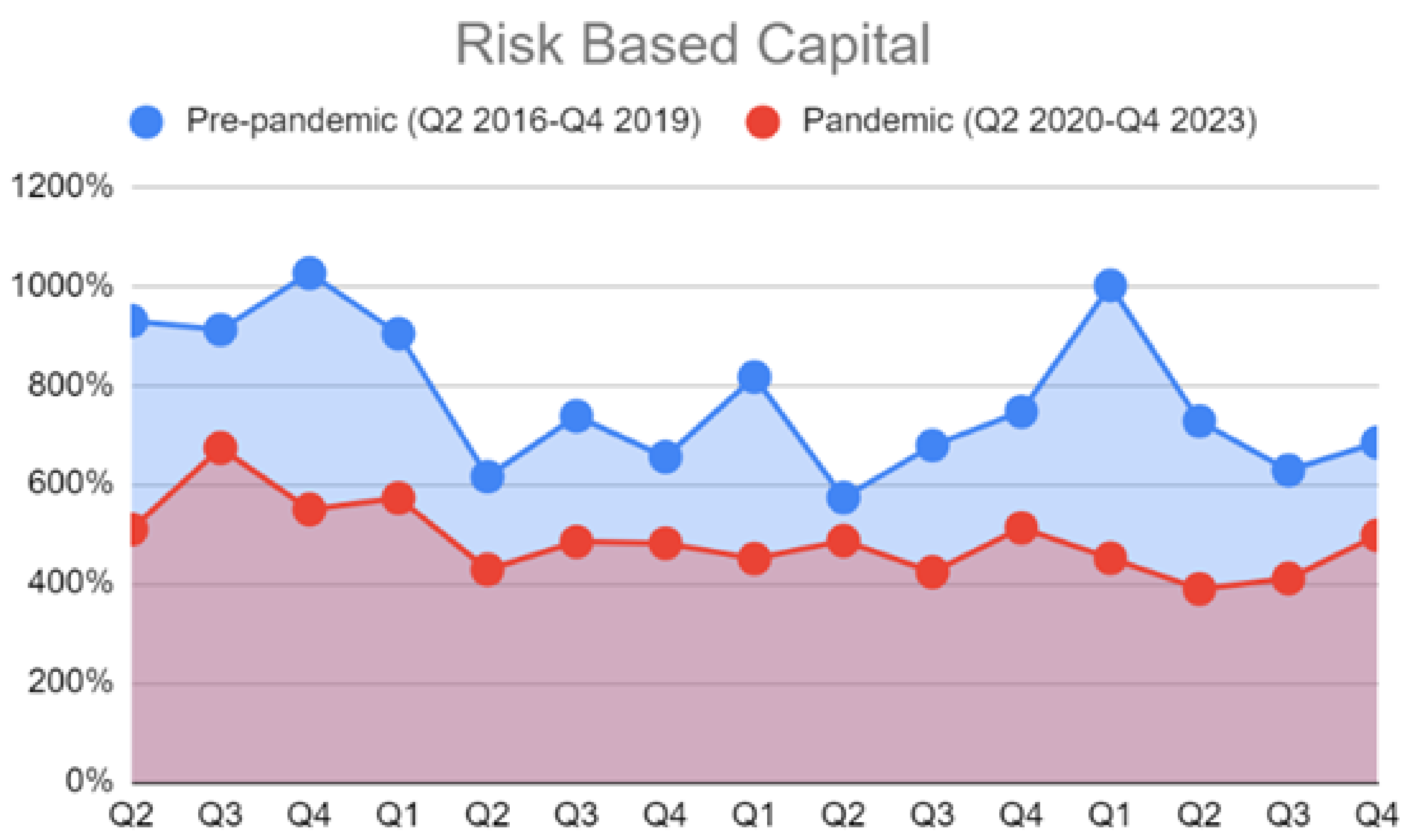


Figure 4. 10 Analysis of Risk Based Capital for Prudential Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Higher RBC Ratios: Started above 400% and gradually decreased, consistently maintaining values above 300%.
- Financial Stability: Indicates a strong ability to maintain capital levels during this period.

Pandemic Era (Q2 2020 - Q4 2023)

- Consistently Lower Ratios: RBC ratios often hovered around 300%, with noticeable fluctuations.
- End of Pandemic Stabilization: Ratios stabilized but remained lower than pre-pandemic levels.

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Significantly Higher Ratios: Often exceeded 600%, indicating strong capital buffers.
- Financial Stability: Reflects robust capital management before the pandemic.

Pandemic Era (Q2 2020 - Q4 2023)

- Lower Ratios: Stabilized around 400-500%, suggesting tighter capital reserves.
- Increased Risk Exposure: Indicates potential financial strain in the industry, possibly due to increased risk or reduced capital requirements..

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Net Premium Growth

4. 1. 4 Solvency Ratio

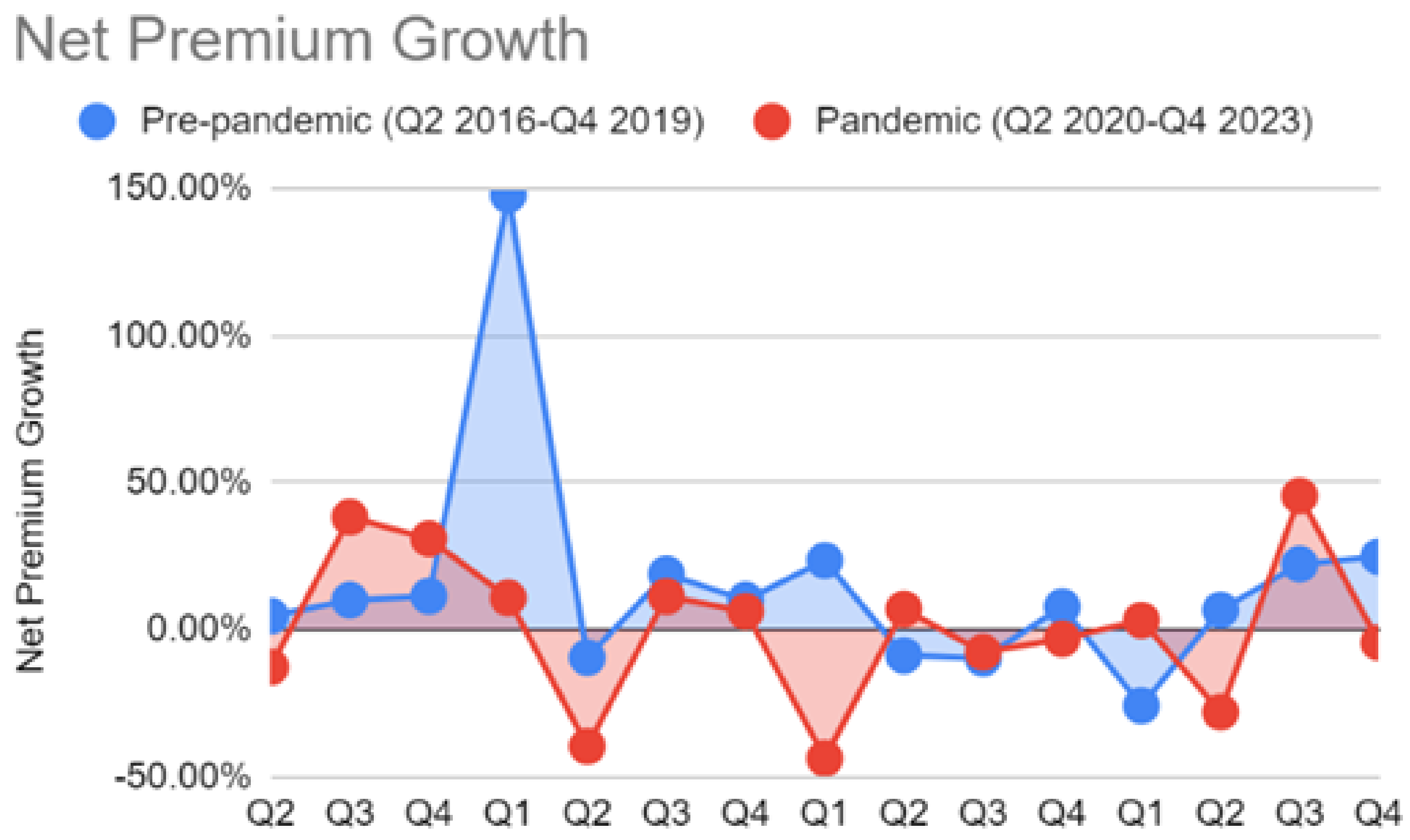

Figure 4. 11 Analysis of Net Premium Growth for Allianz Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Varied Growth: Experienced fluctuations, with highs like 147.91% in Q1 2017 and 23.51% in Q1 2018.
- Declines: Notable drop of -25.89% in Q3 2018, reflecting normal business volatility.

Pandemic Era (Q2 2020 - Q4 2023)

- Erratic Growth Patterns: Sharp increases, including 42.45% in Q1 2020 and 45.53% in Q3 2023.
- Significant Declines: Noteworthy drop of -43.78% in Q1 2022, illustrating the pandemic's disruptive impact on Allianz's business.

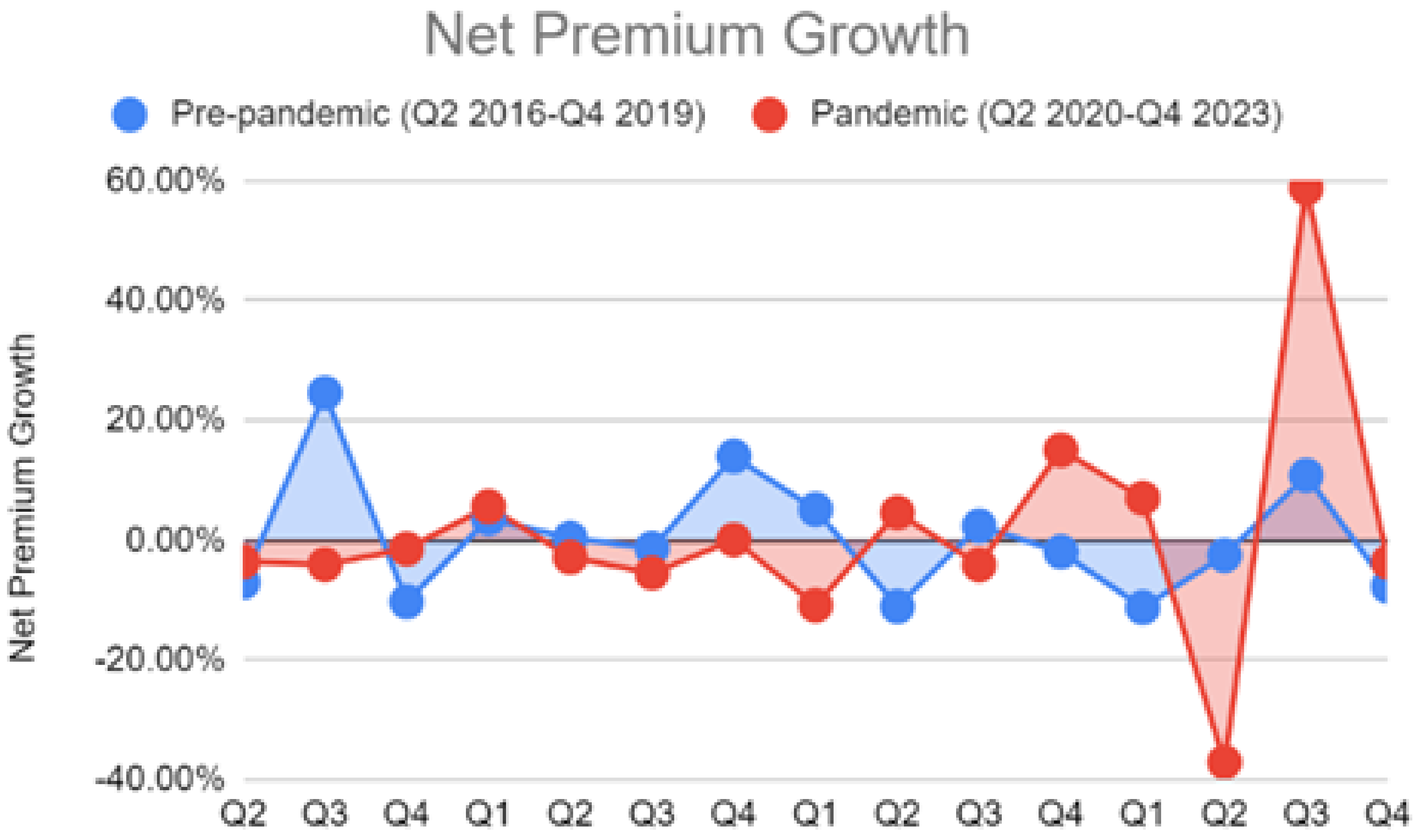

Figure 4. 12 Analysis of Net Premium Growth for Prudential Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019)

- Inconsistent Growth: Fluctuated significantly, with notable gains like 24.58% in Q3 2016 followed by sharp declines.
- Negative Trends: Predominantly negative growth from 2018 to 2019, including -11.07% in Q3 2018 and -7.71% in Q4 2019.

Pandemic Era (Q2 2020 - Q4 2023)

- Challenging Conditions: Started with a -3.60% decline in Q1 2020, continuing the negative trend throughout the year.
- Remarkable Rebound : Strong recovery with net premium growth reaching 58.78%, driven by increased sales from 3 trillion to 4 trillion rupiah.

Cash Ratio

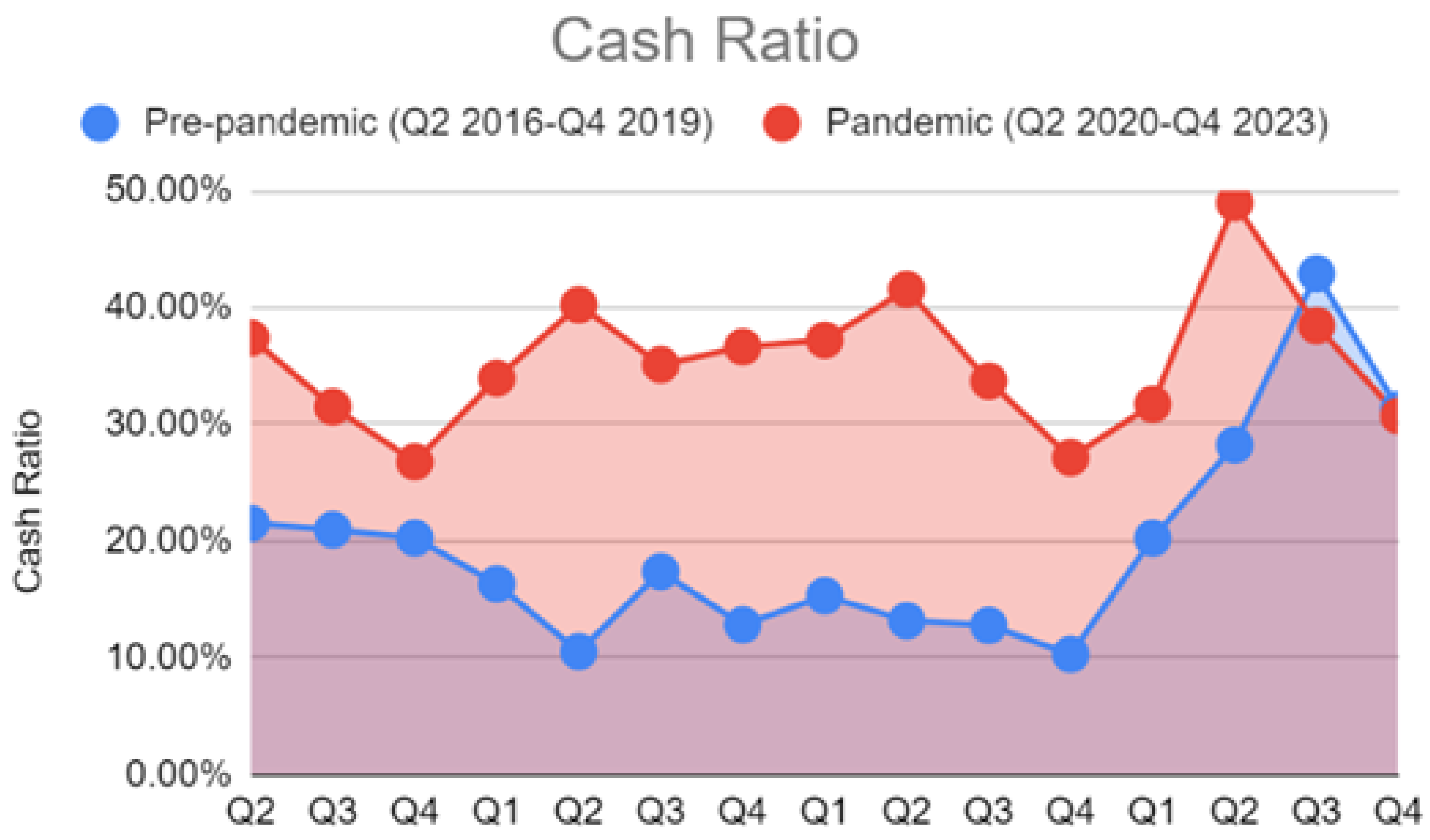

Figure 4 .13 Analysis of Cash Ratio in Allianz Life Insurance

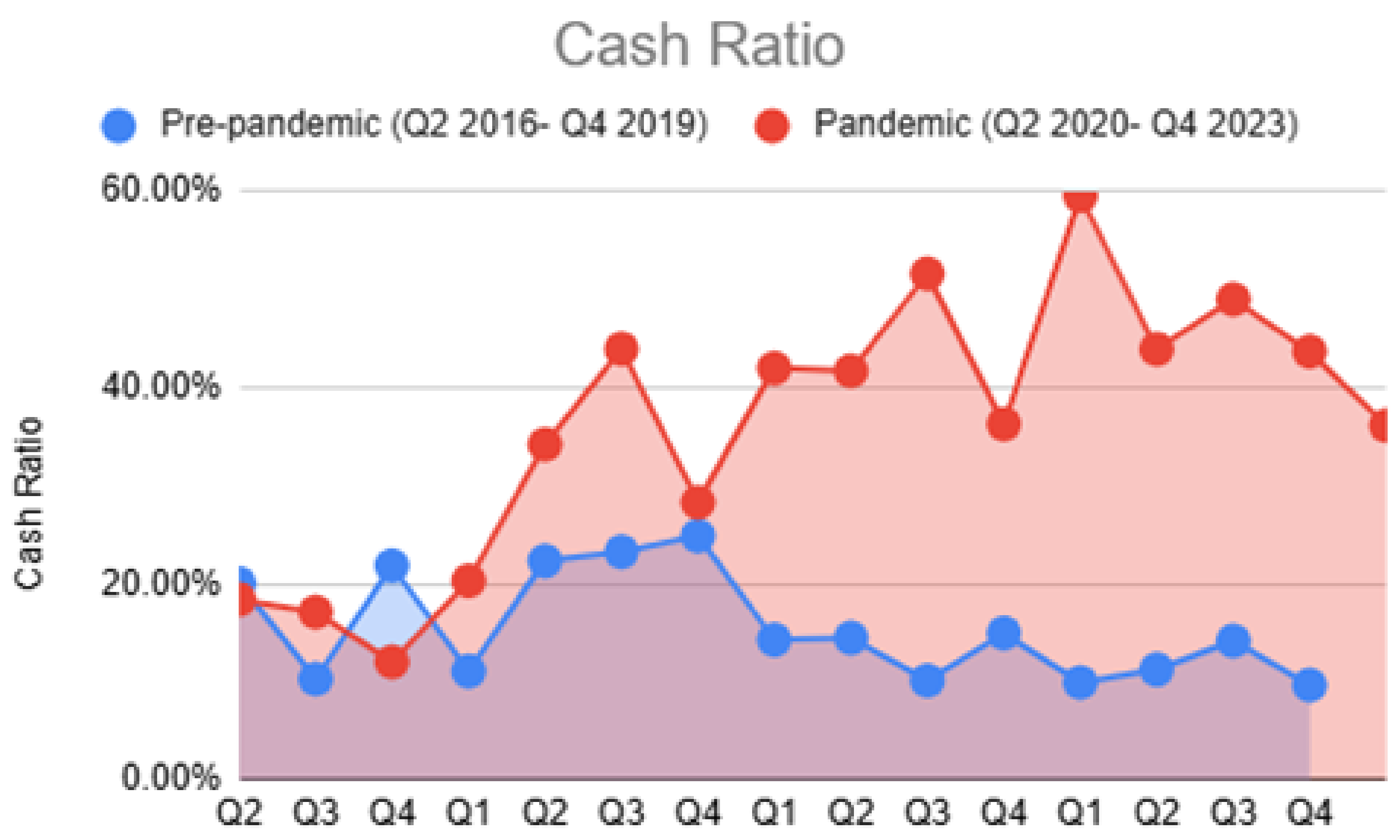

Figure 4 .14 Analysis of Cash Ratio in Prudential Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019):

- Cash Ratio ranged between 10% to 25%.
- Fluctuations generally stayed below 30%.
- Some quarters experienced a significant drop to around 10%.

Pandemic Era (Q2 2020 - Q4 2023):

- Cash Ratio increased to between 25% to 50%.
- Significant spike in Q3 2022, reaching 45% to 50%, the highest peak.
- Gradual decline observed in Q4 2023, dropping to around 30%.

Pre-Pandemic Era (Q22016 - Q4 2019)

- 2016: Started at 20.02% (Q2), dropped to 10.28% (Q3), rebounded to 21.85% (Q4).
- 2017-2019: Peaked at 24.87% in Q4 2017, followed by a steady decline, reaching a low of 9.63% by Q4 2019.

Pandemic Era (Q2 2020 - Q4 2023)

- 2020: Initial impact of the pandemic; cash ratio dropped from 20.47% in Q1 to 12.01% in Q4.
- 2021-2022: Steady recovery in liquidity, with the cash ratio rising to 43.95% by Q4 2021 and peaking at 51.62% in Q2 2022.
- 2023: Continued upward trend, reaching 59.57% in Q1

Current Ratio

4. 1. 5 Liquidity Ratio

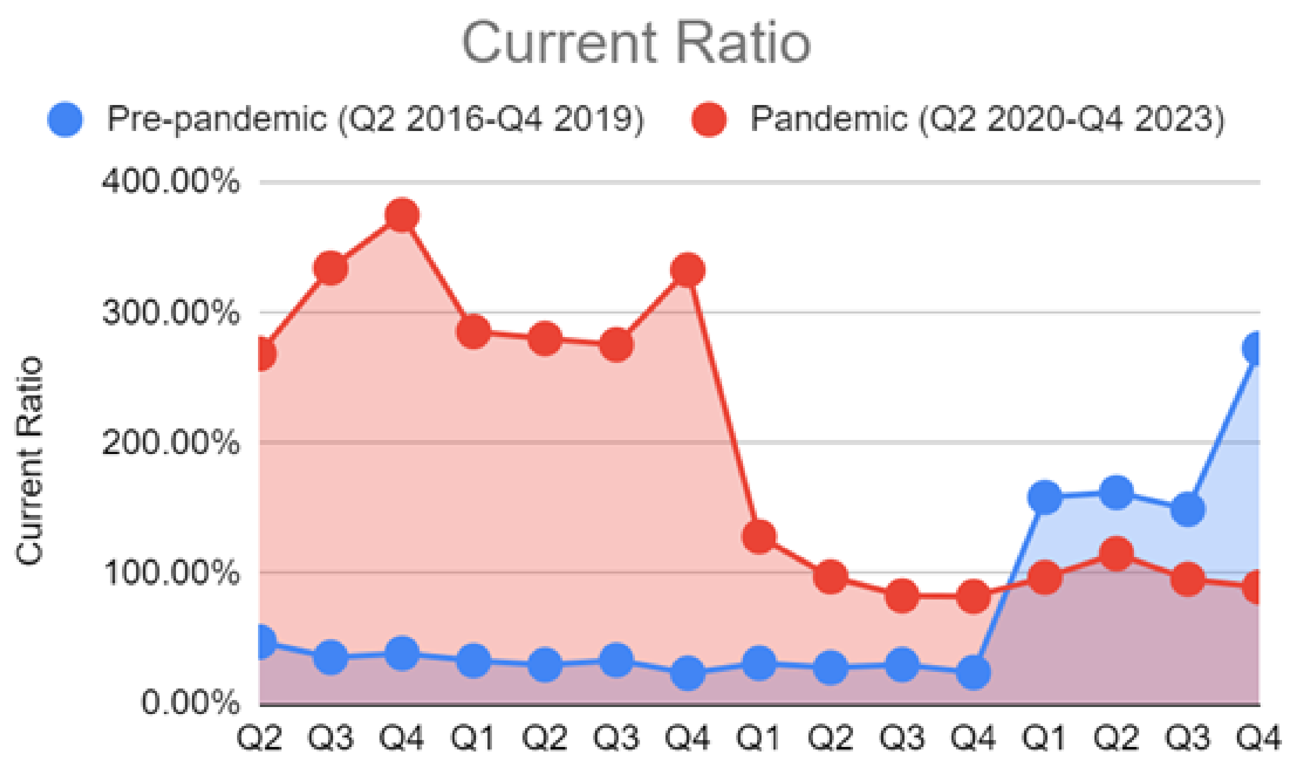

Figure 4 .15 Analysis of Current Ratio in Allianz Life Insurance

Pre-Pandemic Era (Q2 2016 - Q4 2019):

- Current Ratio remained stable at around 100%, indicating balanced liquidity.
- Fluctuations are mild, but generally stable.

Pandemic Era (Q2 2020 - Q4 2023):

- Current Ratio jumped significantly, reaching around 300% in the initial quarter, reflecting conservative cash management.
- Gradual normalization post-pandemic, with slightly higher levels compared to the pre-pandemic era, indicating a more cautious approach to liquidity.

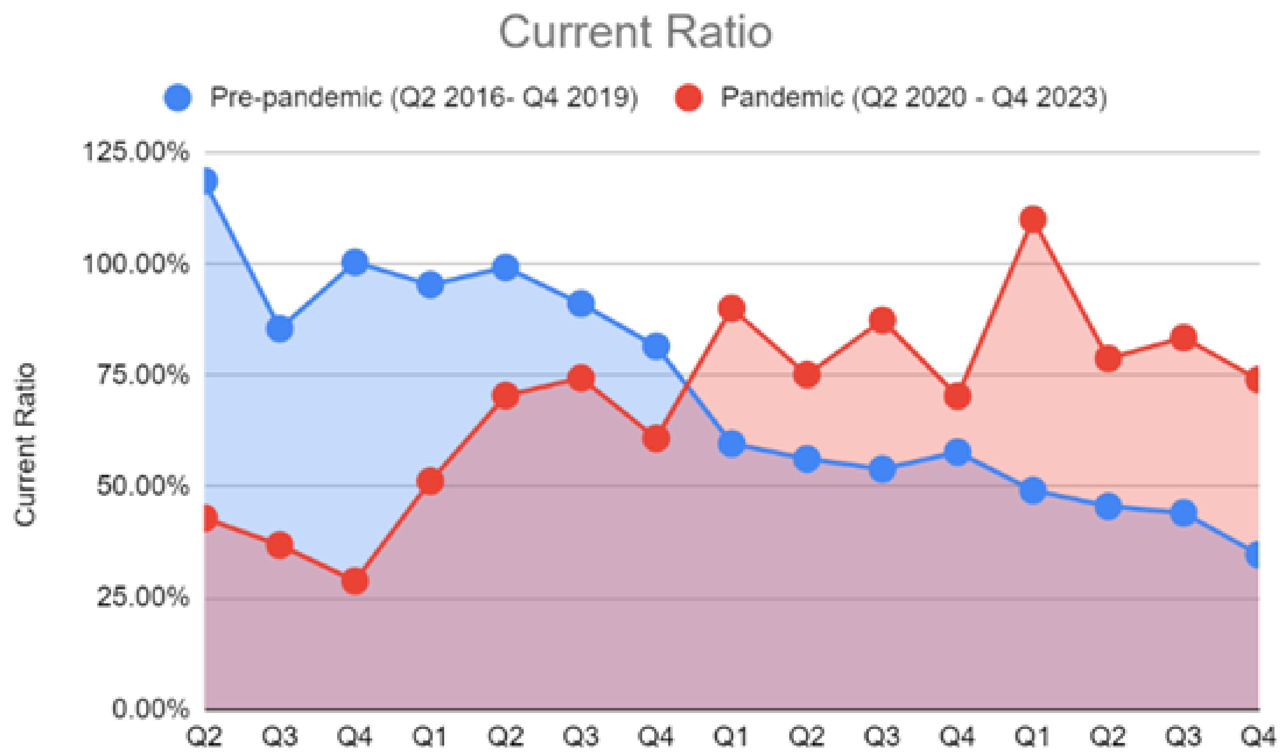

Figure 4 .16 Analysis of Currenth Ratio in Prudential Life Insurance

Pre-Pandemic Era (Q22016 - Q4 2019)

- The Current Ratio is relatively stable, often above 75%, demonstrating Prudential's strong liquidity and ability to cover short-term liabilities.

Pandemic Era (Q2 2020 - Q4 2023)

- The Current Ratio fluctuated more significantly, often dropping below 75%, indicating challenges in maintaining the same level of liquidity.
- The decline towards the end of the period reflects a more stressed short-term financial position compared to pre-pandemic stabilit

Normality Test

Normality Test Allianz				
Saphiro-Wilk				
ROA	PRE-PANDEMIC	0.016	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.035	Not normally Distribution	
ROE	PRE-PANDEMIC	0.029	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.078	Normal Distribution	
CURRENT RATIO	PRE-PANDEMIC	<0.001	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.006	Not normally Distribution	
CASH RATIO	PRE-PANDEMIC	0.027	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.55	Normal Distribution	
TOTAL ASSET TURNOVER	PRE-PANDEMIC	0.387	Normal Distribution	Paired T-test
	PANDEMIC	0.307	Normal Distribution	
COLLECTION PERIOD	PRE-PANDEMIC	0.004	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.194	Normal Distribution	
RISK BASED CAPITAL (RBC)	PRE-PANDEMIC	0.806	Normal Distribution	Paired T-test
	PANDEMIC	0.712	Normal Distribution	
NET PREMIUM GROWTH	PRE-PANDEMIC	<0.001	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.754	Normal Distribution	

Normality Test in Allianz

- The Shapiro-Wilk test results show that most of Allianz's financial ratios, especially in the pre-pandemic period, are not normally distributed. Ratios such as ROA, ROE, Current Ratio, and Collection Period had significant deviations from normality. This distribution mismatch affects statistical analysis, as some tests, such as the t-test, assume normally distributed data. For non-normalized data, alternative tests such as the Wilcoxon Signed Rank Test are more appropriate.

Normality Test Prudential				
Saphiro-Wilk				
ROA	PRE-PANDEMIC	<0.001	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	<0.001	Not normally Distribution	
ROE	PRE-PANDEMIC	0.998	Normal Distribution	Paired T-test
	PANDEMIC	0.163	Normal Distribution	
CURRENT RATIO	PRE-PANDEMIC	0.257	Normal Distribution	Paired T-test
	PANDEMIC	0.764	Normal Distribution	
CASH RATIO	PRE-PANDEMIC	0.015	Not normally Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.421	Normal Distribution	
TOTAL ASSET TURNOVER	PRE-PANDEMIC	0.388	Normal Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.047	Not normally Distribution	
COLLECTION PERIOD	PRE-PANDEMIC	0.739	Normal Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	<0.001	Not normally Distribution	
RISK BASED CAPITAL (RBC)	PRE-PANDEMIC	0.216	Normal Distribution	Paired T-test
	PANDEMIC	0.228	Normal Distribution	
NET PREMIUM GROWTH	PRE-PANDEMIC	0.178	Normal Distribution	Wilcoxon Signed Rank Test
	PANDEMIC	0.002	Not normally Distribution	

Normality Test in Prudential

- The normality test results for Prudential show that several financial ratios are not normally distributed, particularly pre-pandemic. This means their data points are not evenly spread out around the mean, but instead skewed to one side or the other. However, some ratios, like ROE, Current Ratio, and Risk Based Capital (RBC), exhibit normal distribution both pre-pandemic and pandemic era.

Hypothesis Testing

Wilcoxon Signes Rank Test in Prudential Life Insurance

WILCOXON SIGNED RANK TEST PRUDENTIAL			
FORMULA	RESULT	CONCLUSION	
ROA	0.021	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
CASH RATIO	0.002	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
TOTAL ASSET TURNOVER	0.571	H0 Rejected, H1 Accepted (p-value > 0.05)	H7: There is a difference in Total Assets Turnover Ratio in the Activity Ratio between the pre-pandemic and pandemic era.
NET PREMIUM GROWTH	0.91	H0 Rejected, H1 Accepted (p-value > 0.05)	H6: There is a difference in Net Premium Growth in the Solvency Ratio between the pre-pandemic and pandemic era.
COLLECTION PERIOD	0.004	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.

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Paired T-Test Prudential Life Insurance

PAIRED T-TEST PRUDENTIAL			
FORMULA	RESULT	CONCLUSION	
ROE	0.16	H0 Rejected, H1 Accepted (p-value > 0.05)	H1 : There is a difference in Return on Equity in the Profitability Ratio between the pre-pandemic and pandemic era.
CURRENT RATIO	0.011	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
RISK BASED CAPITAL (RBC)	0.002	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.

From the statistical analysis using paired t-test and Wilcoxon test, only 3 out of 8 hypotheses are supported by Prudential Life Insurance data. The accepted hypotheses are as follows:

- H1: There is a significant difference in Return on Equity in the Profitability Ratio between the pre-pandemic and pandemic eras. This result highlights changes in profitability measures, suggesting that the pandemic may have affected overall returns for shareholders.
- H6: There is a statistically significant difference in Net Premium Growth in the Solvency Ratio between the pre-pandemic and pandemic eras.
- H7: There is a significant difference in the Total Assets Turnover Ratio in the Activity Ratio when comparing the pre-pandemic and pandemic periods. This finding indicates a shift in how effectively companies are utilizing their assets to generate sales in the pandemic era.

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Wilcoxon Signes Rank Test in Allianz Life Insurance

WILCOXON SIGNED RANK ALLIANZ			
FORMULA	RESULT	CONCLUSION	
ROA	0.004	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
ROE	0.015	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
CURRENT RATIO	0.013	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
CASH RATIO	0.001	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
COLLECTION PERIOD	<0.001	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.
NET PREMIUM GROWTH	0.268	H0 Rejected, H1 Accepted (p-value > 0.05)	H6: There is a difference in Net Premium Growth in the Solvency Ratio between the pre-pandemic and pandemic era.

Paired T-Test Allianz Life Insurance

PAIRED T-TEST ALLIANZ			
FORMULA	RESULT	CONCLUSION	
TOTAL ASSET TURNOVER	0.316	H0 Rejected, H1 Accepted (p-value > 0.05)	H7: There is a difference in Total Assets Turnover Ratio in the Activity Ratio between the pre-pandemic and pandemic era.
RISK BASED CAPITAL	0.002	H0 Accepted, H1 Rejected (p-value < 0.05)	H0 accepted : There is no difference of financial performance in the pre-pandemic era than pandemic era.

Based on the analysis of Allianz, we observed that only 2 out of the 8 proposed hypotheses received empirical support from the data. The hypotheses that were validated are as follows:

- H6: There is a statistically significant difference in Net Premium Growth in the Solvency Ratio between the pre-pandemic and pandemic eras.
- H7: There is a statistically significant difference in the Total Assets Turnover Ratio in the Activity Ratio between the pre-pandemic and pandemic eras.

Chapter 5
Conclusions and Recommendations

To assess and compare the financial performance of Allianz and Prudential Life Insurance in the pre-pandemic era, focusing on liquidity, solvency, activity, and profitability ratios.

- Prudential's ROE is Better and Stable than Allianz in the Pre-Pandemic Era
- Prudential's ROE is Better and Stable than Allianz in the Pre-Pandemic Era
- Allianz Has More Effective Asset Management Performance Than Prudential in the Pre Pandemic Era
- Allianz's collection period is better than Prudential in the Pre-Pandemic Era
- Prudential's Risk-Based Capital performance in the pre-pandemic era is significantly stronger and more stable than Allianz's
- Prudential's net premium growth before the pandemic is significantly stronger and more stable than Allianz's
- Allianz's cash ratio in the pre-pandemic era is higher overall than Prudential's, though Prudential demonstrated more stable performance
- Allianz's current ratio in the pre-pandemic era is higher than Prudential.

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To assess and compare the financial performance of Allianz and Prudential Life Insurance in the pandemic era, focusing on liquidity, solvency, activity, and profitability ratios.

- Prudential's ROE is Better and Stable than Allianz in the Pandemic era
- Prudential's ROA is Better and Stable than Allianz in the Pandemic era
- Allianz Has More Effective Asset Management Performance Than Prudential in the Pandemic era
- Prudential's collection period is better than Allianz's in the Pandemic era
- Prudential's Risk-Based Capital performance in the pandemic era is significantly stronger and more stable than Allianz's
- Allianz's net premium growth in the pandemic era is significantly stronger and more stable than Allianz's
- Allianz's cash ratio in the pre-pandemic era is higher overall than Prudential's, though Prudential demonstrated more stable performance
- Allianz's current ratio in the pandemic era is higher than Prudential.

To determine if there are significant differences in the financial performance ratios of Allianz in the pre-pandemic and pandemic era, specifically regarding liquidity, solvency, activity, and profitability.

Analysis using paired t-test and Wilcoxon test showed that the pandemic had a mixed impact on Allianz's financial performance. Only two hypotheses were accepted, namely significant differences in net premium growth and total asset turnover ratio. This suggests that external market conditions during the pandemic affected Allianz's ability to generate net premiums and its asset utilization efficiency.

To determine if there are significant differences in the financial performance ratios of Prudential Life Insurance during the pre-pandemic and pandemic era, specifically regarding liquidity, solvency, activity, and profitability.

Statistical analysis with paired t-test and Wilcoxon test showed that only three out of eight hypotheses were supported by Prudential Life Insurance data. There were significant differences in Net Premium Growth, Total Asset Turnover, and Return on Equity between the pre-pandemic and pandemic periods, indicating the impact of the pandemic on Prudential's financial performance in terms of premium growth, asset utilization, and shareholder returns.

Research Limitation

- The study focuses only on eight descriptive financial ratios and fully utilizes secondary data from the companies' annual reports. The analysis does not link financial performance to marketing activities, product portfolios, pricing strategies, or other internal and external market dynamics not mentioned in the official reports. Given the small sample size (two companies' performance from 2016 to 2023) and the limited number of insurance companies, it is recommended that more extensive research be conducted with a longer time period and more company coverage to validate the consistency of the results.

Recommendation

- Prudential needs to improve efficiency in asset management and receivables collection to maintain stable profitability.
- Implementation of better risk management strategies and efficient collection systems can accelerate Prudential's cash flow.
- Prudential can capitalize on the strength of its superior profitability ratios (ROE and ROA) in the pre-pandemic era to attract more premiums.
- Allianz needs to focus on stable and sustainable premium recovery, especially by presenting more diversified products and innovative marketing strategies.
- Allianz can use its success in liquidity and asset management during the pandemic as a basis to deal with future uncertainties.
- Both companies are advised to conduct regular monitoring and evaluation of financial performance using ratio analysis.
- Collaboration and sharing of best practices between Prudential and Allianz could be a strategy to strengthen positions in the insurance industry.
- These steps help both companies remain competitive and meet customer needs in the future.

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