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By Richna Handriyani

The Impact of Interest Rates and Inflation Rates on Increasing the Number of Customers Saving (Study At One of The Banks in Medan)

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ABSTRACT

This research investigates the impact of interest rates and inflation on the customer base of PT. Medan Independent Bank in terms of savings. The present study aims to examine the impact of interest rates and inflation on the customer base of Bank Mandiri (Persero) Medan. This study aims to examine the impact of interest rates and inflation on the customer base of Bank Mandiri (Persero) Medan in terms of savings. This study used a causal-comparative research design, which is a type of research that examines the cause-and-effect relationship between two or more variables. This study employs many data analysis approaches, including Validity and Reliability Tests, classical assumption tests, multiple linear regression, hypothesis testing, simultaneous tests, and the Coefficient of Determination (R2). The statistical findings show a significant relationship between the interest rate and the number of customers. This conclusion is based on the t-test (partial), where the calculated t-value of 5.039 exceeds the critical t-value of 2.920, and the significance level of 0.001 is less than the predetermined threshold of 0.05. Therefore, each interest rate significantly impacts the number of customers. Based on the obtained results, inflation substantially influences customer numbers. This conclusion is drawn from the t-test (partial) analysis, where the calculated t-value of 4.051 exceeds the critical t-value of 2.920 at a significance level of 0.001, which is lower than the conventional threshold of 0.05. Hence, individually and independently, inflation significantly impacts the number of customers. Based on the statistical findings, interest rates, and inflation substantially influence customer numbers. This assertion is supported by the F (simultaneous) test, where the F-count value of 18.348 exceeds the critical F-table value of 9.55, and the significance level of 0.000 is less than the predetermined threshold of 0.05. Hence, both interest rates and inflation significantly impact the number of customers concurrently.

Keywords: Interest Rates and Inflation Against Number of Customers

INTRODUCTION

Banks, functioning as service-oriented institutions within the capital structure, primarily operate as intermediaries that gather funds from the general public through savings and subsequently allocate them to the community in the form of credit or other means to enhance the overall quality of life for numerous individuals. (I.J. et al., 2021) According to Delis & Kouretas, (2011) posits that financial institutions encompass entities operating within the financial sector that collect and disseminate funds to the general public, with a particular emphasis on facilitating investments by corporate entities. Or an intermediary for parties who have excess funds (surplus of funds) with parties who lack and need funds (funds). Along with the increasing number of banks in Indonesia, this can lead to very tight competition between these banks. (Beutler et al., 2020) In line with the growth of the banking business world, which is increasingly full of challenges and competition, of course the management of these banks must make new breakthroughs so that it can maintain its existence, especially in the economic and banking fields.

Bank Mandiri (Persero) Tbk is the largest government-owned bank in Indonesia. This bank has a very large number of customers who save, which continues to increase every year even though the increase fluctuates, which is influenced by external and internal bank factors. This can be seen from the data on interest rates, inflation and the number of customers saving at Bank Mandiri (Persero) Tbk in the last five years can be seen in Table I.1 as follows:

Table 1. Data on Interest Rates, Inflation and Number of Customers Saving

Year	Interest Rates %	Inflation %	Number of Customers Who Save
2016	0.92	5.37	8.175.435
2017	0.82	4.26	8.852.080
2018	0.59	6.96	10.162.140
2019	0.83	6.42	10.887.857
2020	1.14	6.32	12.142.712

Source: Processed by Bank Mandiri (Persero) Tbk 2020

Data on interest rates, inflation, and the number of customers saving show that there has been a decline in interest rates but the number of customers saving has increased. Meanwhile, the increase in inflation has not been accompanied by a decrease in the number of customers, instead it has increased.

Interest is a financial obligation incurred by borrowing funds, typically denoted as a proportionate percentage of the principal amount borrowed. Interest rates refer to the percentage representation of the cost of borrowing or the return on investment over a specific duration, typically expressed monthly or annually. (Augustin et al., 2021) Interest is a quantifiable representation of the cost associated with the utilization of resources by a debtor, which necessitates payment to creditors. As van Binsbergen et al., (2022) states, the remuneration for using borrowed capital from external entities is commonly referred to as interest. The term "interest rate" refers to the percentage of capital expressed as interest. The interest rate refers to the percentage of the principal amount borrowed from external sources that must be paid back. (Andrade et al., 2018) Interest rates refer to the remuneration received by individuals who supply surplus funds or excess spending units for temporary use by individuals in need, who employ the funds to address deficits or engage in deficit spending. (Hidi & Renninger, 2020) A bank is a commercial institution that gathers finpublices from the general public through savings and subsequently allocates them to the community in the form of credit and other financial instruments, to enhance the overall quality of life for individuals. The banking industry encompasses three primary activities, specifically the collection of funds, the allocation of funds, and the provision of additional financial services. The primary functions of a bank encompass the collection and allocation of funds, with ancillary services offered in a supportive capacity. The magnitude of interest rates fluctuates in accordance with the debtor's capacity to offer a rate of return to lenders. The interest rate is a crucial factor for investors when making decisions regarding returns on investments in the capital market. (Blanchard, 2019) The market capital, serving as an alternative investment vehicle, provides a rate of return commensurate with a specific amount of risk. Inflation refers to a sustained and general rise in the prices of goods and services over a specific period. (Lin et al., 2023) The classification of inflation cannot be attributed to a mere price increase in one or two commodities unless such an increase is pervasive and leads to a subsequent rise in the prices of other goods. (Aparicio & Bertolotto, 2020) The task of conducting inflation calculations in Indonesia is entrusted to the Central Bureau of Statistics (BPS). The Bureau of Economic Analysis (BEA) conducts a comprehensive survey to gather price data for a diverse range of goods and services deemed to be representative of public consumption spending. The data is subsequently utilized to compute the inflation rate by comparing current prices with those from preceding eras. In its early conceptualization, inflation was characterized as the augmentation of the monetary base or the amplification of liquidity inside an economic system. (Lacheheb & Sirag, 2019) This description pertains to the overall symptoms resulting from a rise in the money supply, which is believed to have led to an escalation in prices.

In subsequent advancements, inflation is characterized as a persistent escalation in overall prices inside an economy, according to Gimeno & Ibáñez, (2018). As per the provisions of Law No. 10 of 1998, which pertains to the fundamental principles of banking, Article 1 defines clients in the following manner: Customers refer to individuals or entities that avail themselves of the services offered by a financial institution, such as a bank. Depositors refer to individuals who entrust their funds to a bank using deposit transactions per the contractual arrangement established between the bank and the respective customer.

METHOD

This study used a causal-comparative research design, a research methodology that examines the relationship between two or more variables regarding causation. Comparative causal research can be classified as an ex post facto research design, as it aims to analyze events that have already occurred. This research can be categorized as quantitative research, explicitly research where data is represented numerically. The population refers to a comprehensive set of measures or observational data obtained from individuals, entities, or geographical locations. The provided sample represents a subset of the larger population. The study's population consisted of consumers who held savings accounts at Bank Mandiri Medan. In contrast, the study's sample comprised a randomly selected group of Bank Mandiri customers chosen to participate as respondents. To ascertain the appropriate sample size, one might employ the Slovin formula.

This study aims to explore the complex dynamics of the financial environment, specifically examining the influence of interest rates and inflation on the customer base of PT. Medan Independent Bank, with a particular focus on Bank Mandiri (Persero) Medan. The primary focus of this study is to examine the intricate relationship between interest rates, inflation, and the saving habits of clients within the financial organization.

In order to establish a clear direction, we have selected a causal-comparative study design as our methodological approach. This option aims to uncover the causative linkages between interest rates, inflation, and the level of consumer participation in savings. The scope of our study includes individuals who hold savings accounts at Bank Mandiri (Persero) Medan, representing a varied range of people. We will employ a rigorous random sampling method to ensure a comprehensive sample. Our objective is to obtain a representative subset of this heterogeneous community.

The complex character of our inquiry necessitates the adoption of a dual methodology for data acquisition. To commence our study, we shall diligently collect historical data about interest rates and inflation from reputable financial records and economic papers to establish a solid foundation for a thorough examination. Simultaneously, the collection of primary data will be facilitated by the administration of surveys and conducting interviews. This approach will allow us to directly obtain insights from consumers, revealing their viewpoints, saving habits, and the various elements that influence their decision-making process regarding saving.

The foundation of our study rests upon three crucial variables: interest rates and inflation, which serve as independent variables, and the number of customers saving, which acts as the dependent variable. In order to enhance the reliability and validity of our research outcomes, we have developed a meticulously prepared survey and interview protocol. This comprehensive approach allows us to capture and analyze both quantitative and qualitative aspects of client experiences and views.

The process of analysis involves a sequence of methodological procedures. The process of doing descriptive analysis involves extracting significant findings from consumer demographics and saving behaviors, which will serve as the foundation for later hypothesis testing. By subjecting our primary data to rigorous assessments of validity and reliability, our objective is to enhance the integrity of the data. The classical assumption tests aim to critically examine the assumptions that form the foundation of multiple linear regression, which is a crucial component of our research.

As the inquiry progresses, the assumptions concerning the individual importance of interest rates and inflation will undergo thorough examination through t-tests. Concurrently, the F-test will provide a comprehensive assessment, evaluating the combined influence of these economic variables on the quantity of customers engaging in saving activities. The

Coefficient of Determination (R2) will serve as a guiding principle, shedding light on the percentage of variance in client savings that can be accounted for by the interaction between interest rates and inflation.

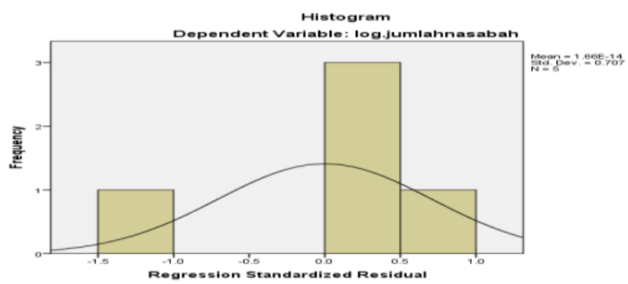
In adherence to ethical principles, we commit to maintaining the utmost respect for privacy and confidentiality during our data collection procedure. Acknowledging potential constraints such as using historical data and the contextual dependence of economic variables, we approach this study with a scholarly mindset, prepared to offer significant observations regarding the complex interplay among interest rates, inflation, and customer savings at PT. Medan Independent Bank.

RESULT AND DISCUSSION

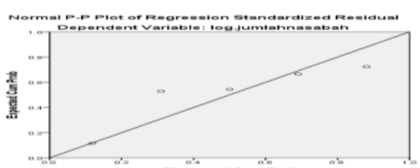
Classic assumption test

Normality Test

The normality test aims to test whether the research carried out is normal or not. While the normality test results can be seen based on the results.



Based on Figure above, the graph contained in the histogram image is all about curved lines. The histogram test shows that the interest rate and inflation variables and customer variables are normally distributed.



The observations in the Figure above tend for the data points to disperse about and converge towards the diagonal line inside the P-plot. Consequently, it can be inferred that the residual values conform to a normal distribution. The data indicates that the independent variables, namely interest rates and inflation, and the dependent variable, the number of consumers that save, exhibit a normal distribution.

The multicollinearity test aims to assess the presence of interrelationships among the items within variable X. An ideal model should exhibit a need for more correlation among the independent variables. In order to ascertain the presence or absence of multicollinearity in the regression model, one can examine two key indicators: the tolerance value and the Variance Inflation Factor (VIF) (1). A common value to indicate the presence of multicollinearity is a tolerance value > 0.1 or the same as a VIF value < 10, as can be seen in Table 1 below:

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	6.595	.222		29.712	.001		
Tingkatsuk bunga	.230	.222	.489	5.039	.001	.912	1.097
inflasi	.032	.032	.471	4.051	.002	.912	1.097

a. Dependent Variable: log.jumlahnasabah

Based on the provided table, it is evident that the tolerance value of 0.912 exceeds the threshold of 0.10, while the VIF value of 1.907 falls below the threshold of 10. Consequently, the independent variable does not exhibit multicollinearity.

1. Multiple Regression Results

Multiple Linear Regression Test Results

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	6.595	.222		29.712	.001		
Tingkatsuk bunga	.230	.222	.489	5.039	.001	.912	1.097
inflasi	.032	.032	.471	4.051	.002	.912	1.097

Simultaneous Test Results (Test F)

Simultaneous test (F test) was conducted to determine the effect of interest rates and inflation on the number of customers saving at Bank Mandiri (Persero) throughout Indonesia, which was calculated using SPSS which can be seen in Table 2 as follows:

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.012	2	.006	18.348	.000[b]
	Residual	.008	2	.004		
	Total	.020	4			

a. Dependent Variable: log. number of customers

b. Predictors: (Constant), inflation, interest rates

Source: Processed by SPSS version 20

Result Coefficient of Determination (R2)

The coefficient of determination (R2) is carried out to see how much influence interest rates and inflation have on the number of customers saving, a determination test is carried out using SPSS and the results can be seen in the following table:

Result Coefficient of Determination (R2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.773[a]	.597	.583	.06397	1.791

a. Predictors: (Constant), inflasi, tingkatsukubunga

b. Dependent Variable: log.jumlahnasabah

a notable drawback of utilizing the coefficient of determination is its inclination towards the number of independent variables incorporated within the model. Including an additional independent variable in a regression model is expected to increase the coefficient of determination (R2), irrespective of the statistical significance of the variable's effect on the dependent variable (as indicated by a significant t-value or lack thereof). Hence, numerous scholars advocate using the Adjusted R2 metric when assessing the optimal regression model.

The present discourse aims to engage in a discussion on the given topic.

The findings of the data analysis conducted in this research indicate that:

The impact of interest rates on client volume.

Based on the statistical analysis conducted using the SPSS version 20 software, interest rates significantly influence the number of customers. This conclusion is supported by the t (partial) test, which yielded a t-count value of 5.039, surpassing the critical t-table value of 2.920. Furthermore, the p-value of 0.001, which is less than the significant level of 0.05, further confirms the significant impact of interest rates on customer numbers.

The impact of inflation on client volume.

Based on the statistical analysis conducted using the SPSS version 20 software, it can be concluded that there is a significant relationship between inflation and the number of customers. This conclusion is based on the t (partial) test, where the calculated t-value of 4.051 exceeds the critical t-value of 2.920 at a significance level of 0.001, which is lower than the conventional threshold of 0.05. Therefore, inflation has a significant impact on the number of customers.

The impact of interest rates and inflation on client volume.

Based on the statistical analysis conducted using the SPSS version 20 software, interest rates and inflation significantly influence the number of customers. This conclusion is supported by the F-test results, where the calculated F-value of 18.348 exceeds the critical F-value of 9.55 at a significance level of 0.000, less than the predetermined threshold of 0.05. Hence, interest rates and inflation collectively have a statistically significant impact on the number of customers.

CONCLUSION

In summary, the data analysis findings support the notion that the interest rate exerts a substantial influence on the quantity of consumers engaged in saving activities. A positive correlation exists between interest rates and customers' inclination to participate in savings endeavors, whereby an increase in interest rates leads to a heightened motivation for individuals to engage in such activities. This phenomenon highlights the necessity for financial institutions and regulators to prioritize interest rate policies to incentivize customers to enhance their savings actively.

Moreover, the results indicate that the inflation rate benefits the quantity of customers engaging in saving activities. Customers respond by boosting their savings when presented with an economic climate with more excellent inflation rates. This finding illustrates the influence of economic dynamics' influence on customers' propensity to save, specifically inflation rates.

Nevertheless, it is crucial to acknowledge that this study possesses certain constraints. For instance, the model fails to account for several external variables that could impact consumer behavior, such as worldwide economic circumstances or governmental regulations about the financial industry. Hence, it is imperative to exercise prudence when interpreting the findings of this study, and other investigations may be pursued to enhance comprehension of extraneous variables that could impact the correlation between interest rates, inflation, and consumer saving behavior.

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