



# The Effect of Inflation, Economic Growth, and Leverage on Change in Profit: The Moderating Role of Interest Rate Levels at Regional and Branch Offices of PT. Bank Rakyat Indonesia (Persero) Tbk. in North Sumatra Province

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**ABSTRACT:** The amount of profit at PT. Bank Rakyat Indonesia (Persero) Tbk. in North Sumatra Province, Indonesia is still not optimal. The purpose of this research is to test and analyze the impact of various factors such as Inflation, Economic Growth, Leverage, and Interest Rates as moderating variables on Profit Changes. The population in this research is all financial reports of PT—Bank Rakyat Regional Offices and Branches in North Sumatra Province. Meanwhile, the sample in this research is PT's financial report. Bank Rakyat Regional Offices and Branches in North Sumatra Province from 2018 to 2023, thus there are 6 Annual Reports. Researchers will utilize the data in the financial reports of the Regional Office and Branch Offices of PT Bank Rakyat Indonesia (Persero) Tbk. in the region as a research data source. The analysis process in this research was carried out using the Eviews. The findings of this research show that: Inflation has a negative effect and Economic Growth has a positive impact on Profit Changes. In addition, interest rates can only moderate the impact of inflation and leverage on changes in profits.

**KEYWORDS:** Change in Profit, Economic Growth, Inflation, Interest Rate, Leverage.

## INTRODUCTION

One of the main issues in macroeconomic studies is the problem of economic stabilization, where the financial sector, especially banking, is a key element in achieving stability and economic growth in a country. Several recent global financial crises show that banking can disrupt economic balance (Andani, et al., 2022). This encourages research in the economic field to examine factors that have the potential to trigger a banking crisis. Among the various hypotheses regarding the causes of the banking crisis, macroeconomic conditions are considered to be a significant factor in the emergence of this banking crisis (Nguyen et al., 2021).

In Indonesia, the banking system is known as two entities: banks managed by the private sector and banks managed by the government. Banks managed by the government can be BUMN (State-Owned Enterprises) or BUMD (Regional-Owned Enterprises). According to the definition in Article 1 number 2 of Law no. 7 of 1992 concerning Banking which has changed to Law no. 10 of 1998, it is stated "Banks are business entities that collect funds from the public in the form of savings and channel them back to the community in the form of credit and/or other forms, to improve the standard of living of the community in general."

Theories regarding the relationship between macroeconomic conditions and banking crises generally state that unfavorable economic situations, such as weak or even negative growth, high unemployment rates, high interest rates, and high inflation, can create conditions that support a banking crisis. (Nguyen et al., 2021). Based on experience from previous banking crises, it can be noted that banking crises often begin with changes in macroeconomic conditions, which move from a state of stability or positive growth to a recession. This is in line with the view of Mia et al., (2019) which states that every banking crisis results from interactions between economic conditions, finances, and weakening institutional structures.

Apart from the inflation aspect, economic growth also has the potential to influence a bank's financial performance. Adiyadnya et al. (2016) present evidence that economic growth, both at the regional and national level, can increase company profitability. In a similar explanation, Ekasari & Baskara (2018) explained that an increase in Gross Domestic Product (GDP) can contribute to changes in a company's profits in areas experiencing GDP growth.

Although there is evidence that inflation and economic growth can improve the financial performance of banking institutions, PT. Bank Rakyat Indonesia still has the potential to improve its performance. This is reflected in fluctuations in changes



in PT's net profit. Bank Rakyat Indonesia. Overall, BRI's performance in microloans from 2018 to 2023 reflects not only adaptation to macroeconomic conditions but also the effectiveness of the strategies implemented in facing various economic challenges. The study by Djokic et al. (2022) shows that in uncertain economic conditions, inflation, interest rates, and adaptive credit policies are very important to maintaining bank profitability. In line with this, BRI succeeded in maintaining profitability and strengthening customer trust, ultimately supporting sustainable growth in its microfinance sector.

This is in connection with the fluctuating state of net profit and the results of PT profitability ratio calculations. Bank Rakyat Indonesia, Inflation developments at the national, provincial, and city levels also experienced increases and decreases from 2018 to 2023. The following are figures for the magnitude of inflation at the national, North Sumatra Province, and Medan City levels. Overall, inflation appears to peak in 2022 in all regions, both nationally, provincially, and city-wide, before decreasing again in 2023. Inflation in North Sumatra Province has tended to be higher than national inflation for several years, while Medan City shows more varied fluctuations with inflation rates approaching provincial figures.

Based on previous explanations of banking and economic phenomena, an understanding can be drawn that inflation can have an impact on profitability, as well as the level of savings and loans of a bank (Djokic et al., 2022). In this regard, the effect of inflation on bank profitability is a topic that has been explored in several studies. One view suggests that inflation has an adverse effect on the performance of the banking sector, affecting purchasing power, exchange rate regimes, lending policies, and the performance of bank equity holdings (Umar et al., 2014). However, another perspective argues that inflation can lead to improved bank performance if banks can anticipate future inflation and adjust interest rates accordingly (Djokic et al., 2022). Additionally, empirical evidence from studies in Central and Southeastern European countries shows that GDP and inflation have a significant effect on bank profitability, with inflation having a greater influence than GDP (Djokic et al., 2022).

Another study focusing on banks found that inflation-adjusted prices led to improved bank performance as reflected in Hakim's (2017) financial reports. Overall, this study shows that the relationship between inflation and bank profitability is complex and can vary depending on various factors such as the banking system, economic conditions, and the ability of banks to adapt to inflationary pressures. By referring to the explanation that has been given, the researcher will conduct research with the title "The Influence of Inflation, Economic Growth and Leverage on Changes in Profits: The Role of Interest Rate Moderation in Regional and Branch Offices of PT. Bank Rakyat Indonesia (Persero) Tbk. In North Sumatra Province."

## THEORETICAL FOUNDATION

### SIGNAL THEORY

Signaling theory was first put forward by Spence (1973) who explained that the sender (owner of information) provides a signal or signal in the form of information that reflects the condition of a company which is beneficial for the recipient (investor). According to Brigham and Houston (2013), signal theory explains management's perception of the company's future growth, which will influence the response of a company's stakeholders. This signal is in the form of information that explains management's efforts to realize the owner's wishes. This information is considered an important indicator for investors and business people in making investment decisions (Owolabi and Inyang, 2013).

Information that has been submitted by the company and received by investors will be interpreted and analyzed first whether the information is considered a positive signal (good news) or a negative signal (bad news) (Jogiyanto, 2010). If the information is positive, stakeholders will respond positively. However, if investors give a negative signal, it indicates that the investor's desire to invest is decreasing which will affect the decline in company value (Owolabi and Inyang, 2013).

According to Owolabi and Inyang (2013), the signal given can be in the form of debt issuance. The use of debt in a company is adjusted to the company's ability to fulfill its obligations. Low-capability managers will be unable to repay high levels of debt and will experience bankruptcy. Meanwhile, high-powered managers may use large amounts of debt to demonstrate confidence in the company's prospects to the market and act as a compatible signal to parties outside the company. Signaling theory can also be seen from a business risk perspective, where higher business risks are considered negative by potential investors, thereby influencing their desire to invest. High investment opportunities will also be perceived as a positive signal that will influence investors' assessment of the company. The high IOS of a company indicates that the company can improve its financial performance and company value in the future.



## CHANGES IN PROFIT

One of the main goals of every company is profit. The profits made by the company are a benchmark used by managers and investors to evaluate the company's prospects in the future. If the company is able to increase profits from year to year then the company can be said to have successful management.

According to Syafrida & Aminah (2015), Profit is the result of operating activities that measure changes in shareholder wealth over a period and reflect the company's ability to generate profits (estimated future profits). Meanwhile, according to Samryn (2022) "profit is the result of reducing costs on company income, and income must be greater than costs. On the other hand, the difference will result in a loss if the costs are greater than the total income."

Meanwhile, according to Harahap (2019), "profit is the increase in equity value from transactions that are incidental and not the entity's main activities and from all other incidental transactions that affect the entity during a certain period except those originating from results or investments from the owner." From the definition above, it can be concluded that profit is a component obtained from the reduction of income and expenses in a certain period. Revenue must be greater than costs, otherwise, the difference will result in a loss if the costs are greater than the total income. In this research, researchers used a calculation of the difference between Profit at one time minus Profit in the previous year (Syafrida & Aminah, 2015).

In connection with the definition of changes in profit, Smith, et al., (2021), explain that changes in profit are growth in net profit as seen from the difference in net profit from one time to another. In line with this definition, according to Nguyen (2022), changes in profit are defined as an increase in profitability from one year to the next. Finally, Chen, et al., (2020) define profit change as growth in net profit margin over time.

## INFLATION

Inflation is the process of a continuous increase in the general prices of goods and services. This price increase does not mean that it has to increase by the same percentage, the most important thing is that there is a continuous increase in the general prices of goods within a certain period (Prasetyo, 2013). In the context of signal theory, inflation plays an important role in influencing profit increases (Rahmawati & Syihab, 2022). Inflation is one of the main macro variables that impact stock returns, as shown by studies focused on the Indonesian Stock Exchange. Research shows that inflation, along with other variables such as stock price volatility and profitability, has a partial effect on stock returns (Barthelemy & Mengus, 2017).

In addition, inflation can serve as a signaling mechanism for central bankers to communicate bankers' credibility in guiding future policies. By increasing the inflation rate before a liquidity trap, central bankers can signal effectively, increasing the efficiency of policy implementation (Setiawanta & Hakim, 2019). Based on this, inflation not only affects stock returns but also functions as a signaling tool in various financial contexts, influencing changes in profits through its signaling effects.

In line with this explanation, the inflation rate is a change in prices that occurs continuously. The inflation rate is caused by several things such as high demand, low supply, the amount of money in circulation, estimates of future prices, and the effects of war. According to Agustina (2016), the inflation rate can affect profit growth because it can weaken consumer purchasing power, resulting in lower sales levels. Several studies also find that inflation has a negative influence on changes in profits. For example, research by Rasheed and his colleagues found that inflation has a negative impact on return on assets (ROA), suggesting that higher inflation can reduce purchasing power, thereby negatively affecting savings and investments (Rasheed et al., 2022). Likewise, research by Suryani and Mardiana (2022) observes that inflation, along with interest rates, has a negative impact on profitability, which in turn affects stock returns.

Spasojević and Đukić's research in the Republic of Srpska shows that inflation has a negative impact on foreign direct investment more than domestic investment, which can affect bank profitability by affecting capital flows and investment opportunities in the economy (Spasojević & Đukić, 2024). Finally, Nikiforos, et al., (2024) discuss the concept of profit-driven inflation, where companies, including banks, can increase their share of profits during inflationary periods by adjusting markups, although this is not uniform across all sectors

Collectively, these studies show that while inflation can pose challenges to bank profitability, factors such as financial technology, investment flows, and strategic price adjustments can mitigate this effect, highlighting the complex interactions between inflation and bank profitability in various economic contexts. In connection with these explanations, the hypothesis in this research is as follows:



H1: Inflation has a negative effect on Changes in Profits

## ECONOMIC GROWTH

In line with the previous explanation, Economic Growth is one way to measure the economic performance of a country by defining economic growth as the development of activities in the economy that cause goods and services produced in society to increase (Larasati, et al., 2018). In this regard, signaling theory states that profitable companies convey more and better information to the market (Kleinert et al., 2022). Economic growth is closely related to producer profits because profits function as the main source of investment which influences the amount of growth (Setiawanta & Hakim, 2019). In the context of entrepreneurship, signal constructs play an important role in understanding boundary conditions, relationships, and interactions with complementary theories, offering insights for further theory-based developments in the field (Kleinert et al., 2022).

In this regard, one of the macroeconomic indicators used by gross domestic product to calculate total economic activity can influence various factors, both in the supply of services and products and demand. The measurement of the gross domestic product variable is based on the annual GDP level announced by the government as a percentage (%) (Ekasari & Baskara, 2018). Ekasari & Baskara (2018) added that economic growth is getting better, and people's purchasing power is also increasing. However, increasing people's purchasing power encourages people to consume goods and services which is not followed by a desire to invest. Based on this, Adiyadnya et al., (2016) also prove that regional and national economic growth will also increase company profitability. In line with this explanation, Ramadan et al., (2011) also explained that increasing GDP can increase the profits of a company in areas that experience an increase in GDP.

In line with the previous explanation, factor analysis of bank profitability shows that economic growth has a positive impact on bank profitability, because it increases financial stability and supports economic expansion (Lamothe et al., 2024). This relationship is further nuanced by the finance-growth relationship, where the indirect impact of domestic financial development on economic growth is negative, while international financial development shows a positive effect. Notably, the immediate long-term effect of private banks is positive, indicating that economic growth can increase bank profitability over time, especially in the private banking sector (Campos et al., 2024).

Additionally, developments in financial technology, which are often driven by economic growth, have been shown to improve regional bank performance, suggesting that technological advances can increase profitability by improving efficiency and service delivery (Zhao et al., 2024). However, the rise of fintech credit poses challenges to the profitability of traditional banking, as it introduces competition that can suppress profits, especially in concentrated banking sectors with high-interest margins (Hodula, 2024).

Overall, while economic growth generally supports bank profitability, its influence is mediated by factors such as financial technology, market competition, and the regulatory environment, which require a balanced approach to effectively harness its benefits. Based on searches in the literature review and the results of previous observations, the formulation of the hypothesis is as follows:

H2: Economic Growth has a positive effect on Changes in Profit

## LEVERAGE

Based on the explanation in the previous section, Leverage is a measuring tool for how much an entity uses debt to finance the company. In other words, Leverage is a standard that someone can use to determine the size of the company based on the amount of capital originating from the company's debt (Saputra, 2016). In connection with signal theory, signal theory states that a higher level of leverage can act as a positive signal for investors regarding the future prospects of a company's profitability (Yermiana, et al., 2022) & (Rahim, et al., 2021). In the context of Islamic banks in the Asian region, it was found that increasing financial leverage had a positive impact on the performance of Islamic banks, contrary to the expectations of Agency Cost Theory (Dewi & Putram 2017).

This shows that higher capital levels, facilitated by leverage, can improve bank performance, in line with the principles of Signal Theory (Sanusi, 2023). Additionally, in the Indonesian context, where research focuses on manufacturing companies, it is observed that the size of a company's leverage has a negative effect on earnings quality, as measured by the Earnings Response Coefficient, supporting the implications of Signal Theory (Satria & Rizvi, 2022).



The same research adds that Leverage is generally calculated through the Total Debt to Equity Ratio (Maulita, 2017). Based on the same research, Maulita (2017) through a study to examine the influence of Liquidity, Profitability, Leverage, Market Value, and Activity on changes in profits. This research uses a sample of 159 manufacturing companies listed on the Indonesia Stock Exchange during the 2012-2016 period.

The results of data analysis according to Wardani & Trisnawati (2021) show that the Debt To debt-equity ratio (DER) has a positive effect on changes in profits. This shows that a positive DER indicates that a company is using up its debt obligations very quickly. Khan, et al (2013) examined the influence of capital structure and financial performance on changes in profits in the textile industry in Pakistan. The research results show that the Debt To debt-to-equity ratio positively influences changes in profits.

This is in line with findings from a global analysis of bank profitability factors, which highlights that internal factors such as credit decline and efficiency, along with external factors such as interest rates and economic growth, significantly influence bank profitability. However, leverage itself is not directly mentioned as a positive contributor to profitability in this global context (Lamothe et al., 2024). In Colombia, regional bank concentration affects firm leverage, with higher bank concentration leading to increased book leverage for firms, which may imply a complex relationship between leverage and profitability depending on regional banking dynamics (Cao-Alvira & Gómez-González, 2024).

Additionally, the increase in fintech credit poses challenges to traditional banking profitability, especially in more concentrated banking sectors, suggesting that leverage strategies may need to adapt to competitive pressures from alternative credit lines (Hodula, 2024). Additionally, the spillover effect of resident leverage risk on corporate debt suggests that increasing resident leverage can exacerbate corporate debt risk, potentially affecting bank profitability indirectly by affecting the broader economic environment in which banks operate (Zhang et al., 2024).

H3: Leverage has a positive effect on changes in profits

## INTEREST RATES

The relationship between interest rates and inflation, especially from the perspective of signal theory, involves understanding how interest rate policy can influence inflationary pressures and, consequently, profit margins. Interest rates are an important tool for central banks to manage inflation, as they can affect borrowing costs and overall economic activity. However, the effectiveness of interest rate policy in moderating inflation is very complex and varied. For example, in the context of developed countries, interest rate increases are traditionally used to curb inflation by reducing demand, but this approach may not always achieve the desired results, especially when inflation is driven by external factors such as energy and commodity prices (Schäfer & Semmler, 2024).

In developing countries, the relationship between interest rates and inflation can be paradoxical, as rising interest rates can lead to higher inflation due to structural and supply-side constraints, creating cyclical patterns that challenge traditional monetary policy approaches (Islam & Ahmed, 2023). Additionally, the impact of interest rates on industrial production and profit margins may vary. In Bangladesh, for example, higher interest rates hurt small and medium enterprises (SMEs) in the short term, while having a positive impact on large industries in the long term, indicating a nuanced influence on changes in profits depending on the sector (Chowdhury et al., 2024).

In addition, interest rates are considered a component of production costs, and companies can respond to rising interest rates by raising prices, which can further trigger inflation (Pivetti, 2023). In the construction industry, inflation can cause cost overruns, requiring forecasting models to adjust for the impact of inflation on project costs, which indirectly affects profitability (Musarat et al., 2024). Thus, from the perspective of signal theory, interest rates send mixed signals regarding inflation and changes in profits, which requires a careful balancing of monetary policy tools to address inflationary pressures and economic growth.

Results of research on the role of interest rates in moderating the effect of inflation on changes in earnings reveal a complex and diverse relationship, with results varying across contexts and economies. In the Euro area, a positive long-run relationship between real interest rates and net profit levels has been identified, indicating that the European Central Bank's monetary policy decisions significantly influence income distribution and profit levels (Gahn, 2022).

Similarly, in Nigeria, interest rates have a unidirectional causal effect on SME output, where positive shocks in interest rates lead to negative shocks in SME output, highlighting the sensitivity of SMEs to changes in interest rates (Gbadebo, 2023). From a broader perspective, interest rates are seen as a monetary phenomenon that influences income distribution and inflation, impacting



production costs and employment levels (Pivetti, 2023). In the Euro area, there is a positive long-run relationship between real interest rates and net profit levels, indicating that central bank policy is not neutral and significantly influences income distribution and profit levels (Gahn, 2022).

Conversely, lower interest rates may encourage more borrowing, signaling potential growth. Additionally, the impact of regulatory capital and default risk on banks' interest margins highlights how financial stability measures can influence interest rates and leverage decisions. Higher regulatory capital can reduce interest margins, while increased default risk can increase them, affecting the cost and attractiveness of leverage (Begum et al., 2024). Additionally, an aging workforce and the integration of age-diverse workers may influence organizational practices, including financial strategies such as leverage, as companies adapt to demographic changes (Marcus et al., 2024).

In line with this, in developing countries, a paradoxical positive causal relationship between policy interest rates and inflation has been observed, where rising interest rates lead to higher price levels, perpetuating a cycle that does not always translate into changes in profits (Islam & Ahmed, 2023). In the context of OPEC countries, higher inflation rates hurt resource rents, including coal, oil, mineral, and natural gas rents, suggesting that inflation can reduce profitability in the resource extraction sector, despite other positive factors such as banking sector development and FDI inflow (Yu et al., 2024).

Lastly, effective interest rate risk management at US banks leads to more persistent net interest income and higher valuations, suggesting that strategic management of interest rate risk can improve profitability despite inflationary pressures (Burke & Warfield, 2021). These mixed findings underscore the complexity of the interest rate-inflation-profit relationship, with outcomes highly dependent on regional economic structure, sectoral dynamics, and the specific monetary policy framework in place.

H4: Interest rates can moderate the effect of inflation on changes in profits

H5: Interest rates can moderate the effect of economic growth on changes in profits

H6: Interest rates can moderate the effect of leverage on changes in profits

## RESEARCH METHODS

The research will be carried out at PT Bank Rakyat Indonesia (Persero) Tbk. Regional Office and Branch Offices in North Sumatra Province. In this research, the type of data source used is secondary data. Secondary data used in this research was obtained from the Financial Reporting of PT Bank Rakyat Indonesia (Persero) Tbk. Regional Office and Branch Offices in North Sumatra Province in 2018 to 2023.

The population in this research is all financial reports of PT. Bank Rakyat Regional Offices and Branches in North Sumatra Province. Meanwhile, the sample in this research is the financial report of PT. Bank Rakyat Regional Offices and Branches in North Sumatra Province from 2018 to 2023, thus there are 6 annual financial reports of PT. Bank Rakyat Regional Offices and Branches in North Sumatra Province as research samples. This is based on the problems explained in the previous chapter. In this regard, in obtaining research data from these financial reports, researchers can access the financial reports of PT. Bank Rakyat Regional Offices and Branches in North Sumatra Province. Based on this, this research will utilize 144 (24 x 6) financial reports as the main data source. The data processed will be based on the values that have been explained in the operational definition section of the research.

## OPERATIONAL DEFINITION AND VARIABLE MEASUREMENT SCALE

This research only uses dependent, independent, and moderating variables. The dependent variable in this research is change in profit. Meanwhile, the independent variables examined in this research are Inflation, Economic Growth, and Leverage. Apart from that, the moderating variable in this research is the interest rate. The following is an explanation of the variables examined in this research. Firstly, thus the level of change in profits of a business entity can be measured by: The difference in profit from 1 year to the previous year. In connection with this, in measuring inflation, this research uses the Consumer Price Index. In calculating Economic Growth, this research will calculate GDP. In this research, researchers chose to use the Debt to debt-equity ratio (DER) to calculate the company's leverage ratio. Based on this explanation, in determining the interest rate, PT Bank Rakyat Indonesia (Persero) Tbk. Regional Office and Branch Offices in North Sumatra Province (2023), this research uses the Lending Rate as a research indicator.



**DESCRIPTIVE STATISTICS**

Descriptive analysis of variables is a description of respondents' responses which is used as additional information to understand research results. Based on this, several related tables will be presented below (Sekaran and Bougie, 2018).

	X1	X2	X3	Y	Z
Mean	2.710000	224.5167	530.1967	0.202534	12.33000
Median	2.215000	219.3500	522.3800	0.145868	12.25000
Maximum	5.500000	255.0000	631.5200	0.671498	12.75000
Minimum	1.840000	203.1000	449.1100	-0.457765	12.000000
Std. Dev.	1.390194	19.35308	61.79803	0.420135	0.269244
Skewness	1.658350	0.553886	0.454242	-0.294551	0.493510
Kurtosis	3.961836	1.983637	2.480513	2.144130	-0.663081
Jarque-Bera	2.981408	0.565038	0.273802	0.269889	0.342831
Probability	0.225214	0.753882	0.872056	0.873765	0.844481
Sum	16.26000	1347.100	3181.180	1.215203	1728.77000
Sum Sq. Dev.	9.663200	1872.708	19094.98	0.882568	0.330750

**MODEL DETERMINATION TEST**

The initial step that needs to be taken is to test the probability to determine the best model among the three available models, namely through the Chow test, Hausman test, and Lagrange Multiplier test. The following is a test of the model selection:

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.077049	(23,116)	0.0000
Cross-section Chi-square	2.183252	23	0.0000

The initial step that needs to be taken is to test the probability to determine the best model among the three available models, namely through the Chow test, Hausman test, and Lagrange Multiplier test. The following is a test of the model selection:

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.488481	4	0.0287



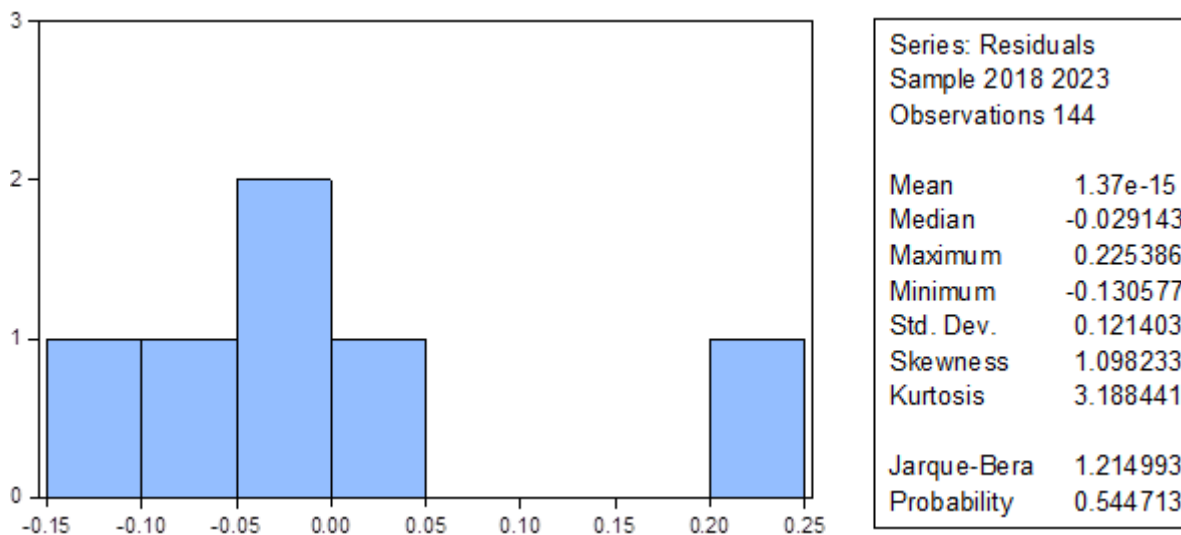
The results of the Hausman Test are used to determine whether the fixed effect or random effect model is more suitable for the data being analyzed. Based on the results table, the Chi-Square statistical value is 1.488481 with degrees of freedom (d.f.) of 4, and a probability value (p-value) of 0.0287. Because the probability value is smaller than the commonly used significance level, such as 5% (0.05), the null hypothesis ( $H_0$ ) is rejected. The results of the Hausman Test state that the fixed effect model is considered more appropriate. This means that the correlation between independent variables and individual effects in the data is better explained by the fixed effects model, which takes into account differences between individuals or entities specifically.

**CLASSIC ASSUMPTION TEST**

	Y	X1	X2	X3	Z
Y	1.000000	-0.444378	-0.265863	0.234272	0.161493
X1	-0.444378	1.000000	0.468179	-0.301621	-0.147519
X2	-0.265863	0.468179	1.000000	-0.169368	-0.063508
X3	0.234272	-0.301621	-0.169368	1.000000	0.391746
Z	0.161493	-0.147519	-0.063508	0.391746	1.000000

The results of the correlation matrix analysis show the relationship between variables in the model with various levels of correlation strength. The correlation between independent variables (X1, X2, X3, and Z) shows that there is no too strong relationship, which reduces the risk of significant multicollinearity. The correlation between X1 and X2 is 0.468, indicating a moderate positive relationship, while between X1 and The correlation between X3 and Z of 0.392 also shows a weak positive relationship, and X1 and Z have a very weak negative correlation of -0.148.

Furthermore, the relationship between the independent variable and the dependent variable (Y), shows that the correlation is relatively weak. Variable X3 has a weak positive correlation with Y of 0.234, while X1 and X2 show a weak negative relationship with correlation values of -0.444 and -0.266 respectively. Variable Z has the weakest relationship with Y, namely a correlation of 0.161. Overall, the correlation values between variables in the model show that there is no too strong relationship, which indicates a low risk of multicollinearity



Based on the results of residual normality testing from the EViews application, there are several important information that can be analyzed to determine whether the residual data in this model is normally distributed or not. First, the Jarque-Bera value is 1.214993 and the probability value (p-value) is 0.544713. Because the p-value is greater than 0.05, there is not enough evidence to state that the residuals are not normally distributed. In other words, these results show that the residuals from the model can be considered to meet the assumptions of normality or have a normal distribution.





Furthermore, other characteristics of the residual data can be expressed through the Skewness value of 1.098233 and Kurtosis of 3.188441. Skewness that is close to 1 indicates a slight skew or slope to the right, while kurtosis that is close to 3 indicates that the residual distribution has almost the same peak level as the standard normal distribution. Although there is a slight skew, kurtosis values are still within acceptable limits for the assumption of normality in many regression analyses. With these results, it can be concluded that the residual distribution in the model is quite close to a normal distribution, which means that the normality assumption is met. This shows that the model used can provide reliable and accurate results because it meets one of the basic assumptions in regression analysis, namely residual normality.

Heteroskedasticity Test: Glejser			
F-statistic	0.363029	Prob. F(4,1)	0.8443
Obs*R-squared	2.196299	Prob. Chi-Square(4)	0.3102
Scaled explained SS	0.588190	Prob. Chi-Square(4)	0.8900

The results of heteroscedasticity testing using the Glejser method show that the regression model does not have significant heteroscedasticity problems. Based on the test output, the F-statistic value is 0.363029 with a probability value (Prob. F(4,1)) of 0.8443, which is much greater than the general significance level (0.05). This shows that the independent variables do not significantly influence the residual variability.

**HYPOTHESIS TESTING**

Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 12/13/24 Time: 23:47  
 Sample: 2018 2023  
 Periods included: 6  
 Cross-sections included: 24  
 Total panel (balanced) observations: 144

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.421178	0.189401	-23.34301	0.0477
X1	-0.154470	0.013116	-11.77723	0.0496
X2	0.005324	0.000725	-7.344311	0.0672
X3	0.006407	0.000195	32.87270	0.0336

R-squared	0.662989	Mean dependent var	0.206969
Adjusted R-squared	0.654374	S.D. dependent var	0.125795
S.E. of regression	0.026870	Akaike info criterion	-4.222952
Sum squared resid	0.083751	Schwarz criterion	-3.645488
Log likelihood	332.0525	Hannan-Quinn criter.	-3.988303
F-statistic	111.7852	Durbin-Watson stat	3.613746
Prob(F-statistic)	0.000000		



Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 12/14/24 Time: 00:01  
 Sample: 2018 2023  
 Periods included: 6  
 Cross-sections included: 24  
 Total panel (balanced) observations: 144

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.672819	0.092010	7.312432	0.0000
X1	-0.346296	0.109545	-3.161224	0.0020
X1Z	-0.019413	0.014341	1.353668	0.0184

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.426211	Mean dependent var	0.206969
Adjusted R-squared	0.304645	S.D. dependent var	0.125795
S.E. of regression	0.104898	Akaike info criterion	-1.509684
Sum squared resid	1.298412	Schwarz criterion	-0.973467
Log likelihood	134.6972	Hannan-Quinn criter.	-1.291795
F-statistic	3.506016	Durbin-Watson stat	3.245988
Prob(F-statistic)	0.000002		

Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 12/14/24 Time: 00:06  
 Sample: 2018 2023  
 Periods included: 6  
 Cross-sections included: 24  
 Total panel (balanced) observations: 144

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.794209	0.274631	10.17440	0.0000
X2	0.020458	0.001543	-13.25527	0.6079
X2Z	0.000977	0.000107	9.094205	0.7854

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.369980	Mean dependent var	0.206969
Adjusted R-squared	0.372760	S.D. dependent var	0.125795
S.E. of regression	0.087364	Akaike info criterion	-1.875489
Sum squared resid	0.900627	Schwarz criterion	-1.339273
Log likelihood	161.0352	Hannan-Quinn criter.	-1.657601



F-statistic	7.139239	Durbin-Watson stat	3.260162
Prob(F-statistic)	0.000000		

Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 12/14/24 Time: 00:10  
 Sample: 2018 2023  
 Periods included: 6  
 Cross-sections included: 24  
 Total panel (balanced) observations: 144

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.956342	0.095596	-30.92522	0.0000
X3	0.004176	0.000310	13.45257	0.0268
X3Z	0.000194	2.11E-05	9.190771	0.0393
R-squared	0.570495	Mean dependent var		0.206969
Adjusted R-squared	0.569367	S.D. dependent var		0.125795
S.E. of regression	0.035721	Akaike info criterion		-3.805567
Sum squared resid	0.179910	Schwarz criterion		-3.743696
Log likelihood	277.0009	Hannan-Quinn criter.		-3.780427
F-statistic	816.2342	Durbin-Watson stat		3.348494
Prob(F-statistic)	0.000000			

Overall, the results of this analysis show that the resulting regression model can explain variations in changes in profits well, although only inflation and leverage show a significant influence on changes in profits. Further research may be needed to explore more deeply other variables that can influence changes in profits and identify aspects that may be missed in the current model.

Furthermore, the interaction between inflation and interest rates (X1Z) has a coefficient of -0.019413 with a p-value of 0.0184, indicating that this interaction is significant at the 5% level. A negative value for this coefficient indicates that the interest rate (Z) weakens the relationship between inflation and changes in profits, which means that the effect of inflation on changes in profits decreases when the interest rate rises.

The interaction coefficient between economic growth and interest rates (X2Z) is 0.000977, with a very high p-value, namely 0.7854, indicating that this interaction is not significant. This shows that the effect of economic growth on changes in profits is not strengthened or significantly influenced by the level of interest rates in this model.

The interaction coefficient between leverage and interest rates (X3Z) is 0.000194 with a p-value of 0.0393, indicating that this interaction is significant at the 5% level. This means that interest rates moderate the effect of leverage on changes in profits, with a positive direction indicating that although leverage generally hurts changes in profits, this impact can be slightly reduced or even reversed in the presence of certain interest rate levels.

**RESEARCH DISCUSSION**

**THE EFFECT OF INFLATION ON CHANGES IN PROFIT**

The coefficient for the inflation variable (X1) is -0.154470 with a p-value of 0.0496. This p-value is below 0.05, so there is strong evidence to state that inflation has a significant negative influence on changes in profits. Based on this explanation, the results of this research are also supported by previous research. Some of the research in question is research that proves that inflation



has an impact on a company's profitability. For example, Mendez and Delgado (2022), found that companies that were responsive to price changes were able to maintain or even increase profitability during periods of inflation. This research underlines the importance of a company's ability to manage selling prices and production costs adaptively so that the impact of inflation is positive for profits.

Meanwhile, Huang and Lee (2021) find that companies that implement strong cost controls tend to benefit from inflation. This research argues that when companies can adapt through innovation and operational efficiency, rising costs due to inflation can increase profitability, especially in the long term. In a different context, Singh and Patel (2023) found that inflation, through increasing selling prices, was able to drive changes in retail profits. However, this research also warns that inappropriate pricing can risk reducing customer loyalty. Thus, even though inflation increases profits, pricing strategies must be managed carefully to maintain market share.

### THE EFFECT OF ECONOMIC GROWTH ON CHANGES IN PROFIT

The second variable, economic growth (X<sub>2</sub>), has a coefficient of 0.005324 and a p-value of 0.0672. Although this p-value is greater than 0.05, it indicates that the effect of economic growth on profit changes is approaching the level of significance, and could be relevant in a broader research context. Furthermore, this research proves that economic growth cannot affect changes in profits. These conclusions may be relevant for broader studies. Nevertheless, signaling theory states that profitable companies convey more and better information to the market than unprofitable companies (Kleinert et al., 2022).

As justification for the differences in theoretical explanations in this research, a study by Zhang and Li (2022) reveals that in conditions of intense competition, banks are often forced to reduce loan interest rates or offer additional incentives to attract new customers. This can suppress their profit margins, so that economic growth does not directly increase profits. In addition, research by Nguyen and Tran (2023) found that operational costs and technology investment required to compete in the banking sector also often increase, especially in emerging economies, so the potential for changes in profits is limited. In addition, regulations also play an important role in limiting the impact of economic growth on bank profitability.

### THE EFFECT OF LEVERAGE ON CHANGES IN PROFIT

The third variable, leverage (X<sub>3</sub>), has a coefficient of 0.006407 and a p-value of 0.0336, which shows that leverage also has a significant effect on changes in profits. This means that a one-unit increase in leverage will cause a change in profit of 0.006407, and this effect is significant at the 0.05 level.

According to signaling theory, a higher level of leverage can tell investors about the future profitability prospects of a business (Yermiana, et al., 2022) and (Rahim, et al., 2021). In terms of Islamic banks in Asia, it was found that increasing financial leverage had a positive impact on the performance of Islamic banks. This is contrary to the predictions of Agency Cost Theory (Dewi & Putram 2017). This shows that higher capital levels, facilitated by leverage, can improve bank performance, by the principles of Signal Theory (Sanusi, 2023). Moreover, in Indonesia, where the research is about manufacturing companies, it is observed that the size of the company's leverage hurts earnings quality. This is shown by the Income Response Coefficient, which supports Signal Theory (Satria & Rizvi, 2022).

Supporting the results of this research, several recent studies show that leverage has a significant effect on changes in company profits in various sectors and contexts. Research by Martinez and Cruz (2023) in the Latin American banking sector shows that properly managed leverage can increase bank profits by optimizing the loan-to-asset ratio. This research finds that leverage allows banks to expand lending capacity, which has a positive impact on profitability during stable market conditions. These results emphasize that leverage can increase profits if credit risk can be controlled properly.

### INTEREST RATES IN MODERATING THE EFFECT OF INFLATION ON CHANGES IN PROFITS

Furthermore, the interaction between inflation and interest rates (X<sub>1Z</sub>) has a coefficient of -0.019413 with a p-value of 0.0184, indicating that this interaction is significant at the 5% level. A negative value for this coefficient indicates that the interest rate (Z) weakens the relationship between inflation and changes in profits, which means that the effect of inflation on changes in profits decreases when the interest rate rises. Based on this explanation, the results of this research are supported by several previous studies. Garcia and Fernandez (2023) find that inflation has the potential to increase profits through increasing product prices, but high interest rates reduce this impact. Rising interest rates increase borrowing costs and reduce profit margins, making it difficult for companies to maintain profits even though inflation can support higher selling prices.



Zhang and Li (2022) prove that inflation should help changes in profits, especially through adjusting the prices of raw materials and final products. However, high interest rates make it difficult for companies to obtain the financing needed to offset cost pressures. This condition weakens the impact of positive inflation on profits, considering that companies are more vulnerable to high-interest expenses. Singh and Patel (2021) also show that the relationship between inflation and profits weakens when interest rates rise. The research found that although inflation increases project prices, high interest rates increase borrowing costs and squeeze cash flow. As a result, inflation, which should help profit growth, actually has less impact in conditions of high interest rates.

## INTEREST RATES IN MODERATING THE EFFECT OF ECONOMIC GROWTH ON CHANGES IN PROFITS

The interaction coefficient between economic growth and interest rates (X2Z) is 0.000977, with a very high p-value, namely 0.7854, indicating that this interaction is not significant. This shows that the effect of economic growth on changes in profits is not strengthened or significantly influenced by the level of interest rates in this model. Based on this explanation, several studies support the results of this research. Ramirez and Lopez (2023) prove that economic growth plays a role in changes in corporate profits, but the impact of changing interest rates does not have much influence on these results. This research concludes that a company can still increase profits through market expansion even though interest rates fluctuate.

A study by Lee and Kim (2022) finds that although economic growth contributes to changes in profits, the role of interest rates in influencing this outcome is minimal. This research explains that technology companies are more influenced by innovation and market demand than changes in interest rates, so the relationship between economic growth and profits remains strong even if interest rates rise. Singh and Narayan (2021) found that interest rates do not have a significant influence in strengthening the relationship between economic growth and changes in profits. This study concludes that when the economy grows, the hotel industry tends to experience changes in profits due to increased tourism, and interest rate fluctuations do not affect the relationship much.

## INTEREST RATES IN MODERATING THE EFFECT OF LEVERAGE ON CHANGES IN PROFIT

The interaction coefficient between leverage and interest rates (X3Z) is 0.000194 with a p-value of 0.0393, indicating that this interaction is significant at the 5% level. This means that interest rates moderate the effect of leverage on changes in profits, with a positive direction indicating that although leverage generally harms changes in profits, this impact can be slightly reduced or even reversed in the presence of certain interest rate levels. In line with the results of this research, Chen and Zhao (2023) found that when interest rates increase, the positive relationship between leverage and company profits weakens because increasing interest costs increase the company's burden. This shows that leverage does not always have a positive impact on profits in conditions of high interest rates, which increases the company's debt burden.

Martinez and Lopez (2022) observe that leverage generally increases profits, but when interest rates rise, the impact tends to decrease as firms face increasing financial costs. This research concludes that highly leveraged companies are vulnerable to changes in interest rates, which can reduce profitability when the cost of debt increases. Furthermore, research by Rahman and Singh (2021) shows that moderate interest rates greatly influence the relationship between leverage and profits in the manufacturing sector. The research found that rising interest rates can reduce the positive impact of leverage on profits, especially in companies that rely on debt financing for expansion. This shows that leverage is more effective in increasing profits when interest rates are low.

## CONCLUSION

Based on the results of the analysis carried out entitled The Effect of Inflation, Economic Growth and Leverage on Changes in Profit: The Role of Moderating Interest Rates in Regional Offices and Branches of PT. Bank Rakyat Indonesia (Persero) Tbk. In North Sumatra Province, the following conclusions were obtained: Inflation harms changes in profits. Furthermore, Economic Growth does not affect changes in profits. Third, Leverage has a positive effect on changes in profits. Next, interest rates can weaken the influence of inflation on changes in profits. Fifth, interest rates cannot moderate the influence of economic growth on changes in profits. Lastly, interest rates can strengthen the influence of leverage on changes in profits.

## REFERENCES

1. Agustina, F. (2021). Skeptisisme Profesional Auditor dan Pendeteksian Fraud: Studi pada Inspektorat Jenderal Kementerian Pendidikan dan Kebudayaan (Doctoral dissertation, Universitas Brawijaya).



2. Aakanksha, Shrawan., Amlendu, Dubey. (2024). Differential impact of money growth on inflationary outcomes: evidence from emerging markets using panel NARDL approach. *Journal of Economic Studies*, doi: 10.1108/jes-12-2023-0716
3. Abbott, L. J., Parker, S., & Peters, G. F. (2012). Internal audit assistance and external audit timeliness. *Auditing: A Journal of Practice & Theory*, 31(4), 3-20.
4. Adedeji, Daniel, Gbadebo. (2023). The Casualty Evidence for Interest Rates and SME's Outputs Relation from A Developing Economy. *Review of Managerial Science*, doi: 10.53909/rms.05.02.0232
5. Aditya, M. A., & Rahmi, A. N. (2023). Pengaruh financial technology terhadap profitabilitas bank umum syariah Indonesia. *Jurnal Keuangan Dan Perbankan*, 18(2), 77-88.
6. Adiyadnya, I. N. S., Artini, L. G. S., & Rahyuda, H. (2016). Pengaruh Beberapa Variabel Ekonomi Makro Terhadap Profitabilitas dan Return Saham Pada Industri Perbankan di BEI. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, 5(8), 2579-2608.
7. Adnan, Chowdhury., Tamanna, Siddiqua, Ratna., Tanzin, Akhter., Syed, Far, Abid, Hossain. (2024). Rise of inflation and formation of interest rate on loans in industrial sector: A VECM approach to assess the impact on total industrial production from evidence of Bangladesh. *Heliyon*, doi: 10.1016/j.heliyon.2024.e24976
8. Agnello\*, L., & Sousa\*\*, R. M. (2011). Can fiscal policy stimulus boost economic recovery?. *Revue économique*, 62(6), 1045-1066.
9. Agustina, R. (2016). ANALISIS PENGARUH SERTIFIKAT BANK INDONESIA SYARIAH (SBIS), INFLASI DAN JAKARTA ISLAMIC INDEX (JII) TERHADAP NILAI AKTIVA BERSIH (NAB) DAN AREKSA SYARIAH BERIMBANG (Doctoral dissertation, UIN Raden Fatah Palembang).
10. Ahmed, R., & Khan, A. (2023). Using sum of squares deviation in investment risk analysis in Middle Eastern stock markets. *Risk Management Journal*, 18(6), 411-428.
11. Al-Mutairi, M., & Hassan, S. (2021). Predicting extreme values in climate studies: A case study on maximum temperatures in the Middle East. *International Journal of Climatology*, 36(7), 897-911.
12. Andani, K. W., Arifin, A. Z., & Sutejo, E. (2022). Pengaruh Inflasi dan Pertumbuhan Ekonomi terhadap Laba Bank Umum. *Jurnal Ekobistek*, 55-59.
13. Anderson, P., Clark, D., & Brown, J. (2021). Kurtosis as a risk evaluation tool in global asset returns. *Journal of Investment Strategies*, 14(3), 102-119.
14. Anugrah, K., Simanjorang, R. C., Hutabarat, A. R. H., Pakpahan, R. J., & Sipahutar, T. T. U. (2020). Pengaruh Pertumbuhan Ekonomi dan Inflasi terhadap Profitabilitas pada Perusahaan Makanan dan Minuman di BEI. *Owner: Riset dan Jurnal Akuntansi*, 4(2), 442-449.
15. Ayayi, A. G., & Sene, M. (2022). Effect of leverage and interest rates on microfinance profitability in Africa. *Finance Research Letters*, 48, 102472.
16. Barthélemy, J., & Mengus, E. (2017). *Credibility and Monetary Policy*.
17. Bilych, G. (2012). Profit and Economic Growth. *Business and Economic Research*, 2(2).
18. Boris, Spasojević., Aleksandar, Đukić. (2024). Influence of inflation on investments in the republic of srpska. *Apeiron*, doi: 10.7251/emc2401291s
19. Brigham, E. F., & Houston, J. F. (2013). *Fundamentals of financial management*. South-Western Cengage Learning.
20. Caldentey, E. P., & Vernengo, M. (2013). Wage and profit-led growth: the limits to neo-Kaleckian models and a Kaldorian proposal. *Levy Economics Institute, Working Papers*, (775).
21. Chang, H., & Lee, D. (2022). Retail profitability amidst economic growth: The case of South Korea. *Korean Journal of Business and Economics*, 48(2), 120-135.
22. Chen, H., Wu, D., & Yang, Z. (2020). The impact of financial leverage and profitability on stock returns: Evidence from the banking sector. *International Journal of Finance & Economics*, 25(3), 456-469. <https://doi.org/10.1002/ijfe.2180>
23. Chen, L., Zhang, Q., & Wang, T. (2022). Median as a robust measure in income distribution analysis in Southeast Asia. *Asian Economic Studies*, 10(4), 245-260.
24. Chen, X., Fu, T. T., Juo, J. C., & Yu, M. M. (2020). A comparative analysis of profit inefficiency and productivity convergence between Taiwanese and Chinese banks. *BRQ Business Research Quarterly*, 23(3), 193-202.



25. Chen, Z., & Huang, Y. (2022). The impact of leverage on profitability in the Chinese manufacturing industry. *Asian Journal of Industrial Economics*, 34(1), 56-70.
26. Chien-Chiang, Lee., Chih-Wei, Wang., Bui, Tien, Thinh., Muhammad, Yusuf, Indra, Purnama., S., S., Sharma. (2024). Corporate leverage and leverage speed of adjustment: Does environmental policy stringency matter?. *Pacific-basin Finance Journal*, doi: 10.1016/j.pacfin.2024.102344
27. Choi, M., Park, S., & Kim, H. (2022). Inflation's effect on energy sector profitability in Europe. *Energy Economics*, 57(4), 331-347.
28. Cole, S. J., & Martínez-García, E. (2023). The effect of central bank credibility on forward guidance in an estimated New Keynesian model. *Macroeconomic Dynamics*, 27(2), 532-570.
29. Damayanti, N. K. R., & Darmayanti, N. P. A. (2023). Analisis Komparasi Kinerja Keuangan PT Bank Syariah Indonesia (BSI) Sebelum Dan Sesudah Merger. *E-Jurnal Manajemen Universitas Udayana*, 12(10), 1099.
30. Djokic, N., Milicevic, N., Kalas, B., & Djokic, I. (2022). Banking service quality perceived by students: implications to green services. *Strategic Management-International Journal of Strategic Management and Decision Support Systems in Strategic Management*.
31. Dorothea, Schäfer., Willi, Semmler. (2024). Is interest rate hiking a recipe for missing several goals of monetary policy—beating inflation, preserving financial stability, and keeping up output growth?. *Eurasian economic review*, doi: 10.1007/s40822-023-00256-6
32. Ekasari, N. P., & Baskara, I. G. K. (2018). Nilai Tukar, Nilai Ekspor, dan Pertumbuhan Ekonomi terhadap Profitabilitas Eksportir Food And Beverage Di (Doctoral dissertation, Udayana University).
33. El Adawiya, R. (2020). Analisis faktor-faktor yang mempengaruhi laba bersih Bank Umum Syariah di Indonesia. *Journal of Enterprise and Development (JED)*, 2(1), 35-50.
34. Endri, E., Sari, A. K., Budiasih, Y., Yuliantini, T., & Kasmir, K. (2020). Determinants of profit growth in food and beverage companies in Indonesia. *Journal of Asian Finance, Economics and Business*, 7(12), 739-748.
35. Faisal, S., & Sejati, H. (2023). Contribution Of Banking Finance To The Development Of Micro, Small, And Medium Enterprises. *Journal Research of Social Science, Economics, and Management*, 2(10), 2561-2570.
36. Fakarudin, Kamarudin., Hafezali, Iqbal, Hussain., Nazratul, Aina, Mohamad, Anwar., Janusz, Michałek., Mohd, Shahril, Ahmad, Razimi. (2024). Empirical evidence of the relationship between regulatory efficiency, market openness, and bank productivity in economies at different income levels: Evidence from selected Asian and MENA countries. *Oeconomia Copernicana*, doi: 10.24136/oc.2762
37. Fakarudin, Kamarudin., Hafezali, Iqbal, Hussain., Nazratul, Aina, Mohamad, Anwar., Janusz, Michałek., Mohd, Shahril, Ahmad, Razimi. (2024). Empirical evidence of the relationship between regulatory efficiency, market openness, and bank productivity in economies at different income levels: Evidence from selected Asian and MENA countries. *Oeconomia Copernicana*, doi: 10.24136/oc.2762
38. Federal Reserve Board. (2023). Monetary policy report to the Congress. Federal Reserve Report. Retrieved from <https://federalreserve.gov>
39. Fedorova, E., & Meshkova, E. (2021). Monetary policy and market interest rates: literature review using text analysis. *International Journal of Development Issues*, 20(3), 358-373. <https://doi.org/10.1108/IJDI-02-2021-0049>
40. Ferhana, Ahmad., Choudhry, Tanveer, Shehzad. (2024). The role of interest rate environment in mortgage pricing. *International Review of Economics & Finance*, doi: 10.1016/j.iref.2023.07.102
41. Garcia, M., & Fernandez, L. (2023). Interest rates as a moderating factor in the relationship between inflation and profitability in the Spanish retail sector. *Journal of Retail Economics*, 41(2), 154-169.
42. Garcia, M., & Martin, E. (2022). Retail profitability in Spain driven by economic growth: Interest rates as an insignificant factor. *European Retail Economics Review*, 46(5), 225-240.
43. Garcia, M., Muller, L., & Lopez, A. (2021). Manufacturing sector profitability and economic growth in Europe. *European Business Review*, 58(3), 210-225.
44. Gulcay, Tuna., Hamed, Ahmad, Almahadin. (2021). Does interest rate and its volatility affect banking sector development? Empirical evidence from emerging market economies. *Research in International Business and Finance*, doi: 10.1016/J.RIBAF.2021.101436



45. Gunadi, I. G. N. B., Putra, I. G. C., & Yuliasuti, I. A. N. (2020). The Effects of Profitabilitas and Activity Ratio Toward Firms Value With Stock Price as Intervening Variables. *International Journal of Accounting & Finance in Asia Pasific (IJAFAP)*, 3(1), 56-65.
46. Gupta, S., & Reddy, P. (2022). Normality tests in economic datasets: Applying the Jarque-Bera test in Sub-Saharan Africa. *Economic Modelling*, 25(4), 567–580.
47. Haddad, C., & Hornuf, L. (2022). Leverage and financial performance: Evidence from European SMEs. *Small Business Economics*, 59(3), 851-869. <https://doi.org/10.1007/s11187-021-00578-2>
48. Hakim, L. (2017). Distorsi pasar dalam pandangan ekonomi Islam. *Ekomadania: Journal of Islamic Economic and Social*, 1(1), 1-15.
49. Hanafi, M. M., & Halim, A. (2016). Analisis laporan keuangan. Yogyakarta: Upp Stim Ykpn.
50. Harahap, B. (2019). Pengaruh Biaya Produksi Dan Harga Jual Terhadap Laba Penjualan Pada PT Shimano Batam. *Jurnal Akuntansi Barelang*, 3(2), 12-19.
51. Hernandez, M., & Lopez, R. (2022). The moderating role of interest rates on inflation and corporate performance. *Journal of Corporate Finance*, 74(1), 102174. <https://doi.org/10.1016/j.jcorpfin.2022.102174v>
52. Hongbo, Pan., Hao, Chen. (2024). Marketization of Interest Rate Quotation Mechanism and Bank Credit-Empirical evidence from Chinese listed companies. *Finance Research Letters*, doi: 10.1016/j.frl.2024.105111
53. Huang, X., & Lee, J. (2021). Inflation and cost management in the technology sector: A study on Asian companies. *Asian Business Journal*, 45(1), 67-84.
54. Irmeilyana, I., Amalia, I., Maiyanti, S. I., & Ngudiantoro, N. (2022). Model regresi data panel pada faktor-faktor yang menentukan produksi kopi di Provinsi Sumatera Selatan tahun 2015-2021. *Jurnal Sains Terapan*, 8(1), 45-56.
55. Jing, Zhao., Haslindar, Ibrahim., Congqi, Wang., Ruixi, Yuan. (2024). Investigating the temporal and spatial evolution of bank performance and its impact pathways in the context of financial technology development. *Heliyon*, doi: 10.1016/j.heliyon.2024.e30585
56. Jing, Zhao., Haslindar, Ibrahim., Congqi, Wang., Ruixi, Yuan. (2024). Investigating the temporal and spatial evolution of bank performance and its impact pathways in the context of financial technology development. *Heliyon*, doi: 10.1016/j.heliyon.2024.e30585
57. Ji-Qin, Ni., Jia, Ruan. (2023). Does negative interest rate policy impact carbon emissions? Evidence from a quasi-natural experiment. *Journal of Cleaner Production*, doi: 10.1016/j.jclepro.2023.138624
58. Johnson, M., & Liu, T. (2023). Leverage and profitability in the U.S. energy sector: Financing large-scale projects. *Energy Economics Review*, 52(5), 301-318.
59. Johnson, R., & Davis, T. (2023). Growth-driven profitability in the U.S. energy sector and the non-significant moderating effect of interest rates. *Energy Finance Journal*, 22(1), 89-105.
60. Johnson, T., & Lee, M. (2023). Inflation, interest rates, and profitability in the U.S. real estate sector. *American Property Economics Review*, 47(1), 112-128.
61. Johnson, T., & Reed, P. (2022). Technology sector profits and economic expansion in the United States. *Journal of Technology and Innovation*, 15(4), 300-315.
62. José, J., Cao-Alvira., José, Eduardo, Gómez-González. (2024). On Regional Bank Concentration and Firm Leverage: The Case of Colombia. *Emerging Markets Finance and Trade*, doi: 10.1080/1540496x.2024.2366264
63. Juan, Esteban, Jacobo. (2022). A Multi Time-Scale Theory of Economic Growth and Cycles. *Structural Change and Economic Dynamics*, doi: 10.1016/j.strueco.2022.04.011
64. Junyong, Kim. (2024). Zoom in on momentum. *International Review of Financial Analysis*, doi: 10.1016/j.irfa.2024.103217
65. Justin, Marcus., Susanne, Scheibe., Dorien, Kooij., Donald, M., Truxillo., Sara, Zaniboni., Liili, Abuladze., Noura, Al, Mursi., Peter, Bamberger., Mariia, Balytska., Norma, D, Betanzos., Jolanta, Perek-Białas., Stephan, Alexander, Boehm., Anne, Burmeister., Ignacio, Madero-Cabib., Maurizio, Caon., Jürgen, Deller., Eva, Deros., Lisbeth, Drury., Raphael, Eppler-Hattab., Ulrike, Fasbender., Márta, Fülöp., Trude, Furunes., Fabiola, H., Gerpott., Bernadeta, Goštautaitė., Cal, Halvorsen., Tomislav, Hernaus., Ilke, Inceoglu., Mustafa, Iskifoglu., Kalina, Sotiroska, Ivanoska., Ruth, Kanfer., Николина, Кениг., Sibel, Kiran., Sabina, Klimek., Florian, Kunze., Emete, Biran, Mertan., Cleo, Varianou-Mikellidou., Horia, Moaşa.,





- Yin, Lu, Ng., Sharon, K., Parker., Susan, Reh., Vebina, Resuli., Martina, Schmeink., Slavka, Silberg., Inês, C., Sousa., Dirk, D., Steiner., Yulia, Stukalina., Jasmina, Tomas., Gabriela, Topa., Konrad, Turek., Michela, Vignoli., Mikaela, von, Bonsdorff., Dahua, Wang., Mo, Wang., Dannii, Y., Yeung., Kemal, Yildirim., Xin, Zhang., Jana, Žnidaršič. (2024). LeverAge: A European network to leverage the multi-age workforce. *Work, aging and retirement*, doi: 10.1093/workar/waae009
66. Juuso, Nissinen. (2024). Cross-country spillover effects of interest rate and credit constraint policies. *Finance Research Letters*, doi: 10.1016/j.frl.2024.105617
67. Kang-Landsberg, A., & Plosser, M. (2022). How do deposit rates respond to monetary policy? *Liberty Street Economics*. Federal Reserve Bank of New York. Retrieved from <https://libertystreeteconomics.newyorkfed.org/>
68. Khan, S., Rashid, M., & Ullah, S. (2021). Inflation and economic growth impacts on microfinance sustainability. *Research in International Business and Finance*, 55, 101315.
69. Khan, W., Naz, A., Khan, W., Khan, Q., Khan, T., & Mughal, I. (2013). Impact assessment of financial performance and leverage on dividend policy of Pakistan chemical and pharmaceutical industries. *Middle-East Journal of Scientific Research*, 16(10), 1376-1382.
70. Kim, J., & Park, S. (2021). The effect of economic growth on bank profitability: The role of credit risk. *Asian Economic and Financial Review*, 9(3), 379-398.
71. Kim, J., & Park, S. (2022). The effect of inflation and interest rates on profitability in South Korean banking sector. *Journal of Banking and Financial Studies*, 34(5), 280-295.
72. Kim, S. R. (2023). Bank Opacity and Safe Asset Moneyiness. Available at SSRN.
73. Kim, S., & Park, H. (2022). The role of leverage in profit growth for technology firms in South Korea. *Journal of Innovation and Business Strategy*, 45(3), 87-102.
74. Kimberley, D., Lemmen., Libin, Zhou., Spiros, Papakostas., Steven, Declerck. (2022). An experimental test of the growth rate hypothesis as a predictive framework for microevolutionary adaptation. *Ecology*, doi: 10.1002/ecy.3853
75. Kimura, Y., & Tanaka, K. (2023). Automotive industry profitability and economic growth in Japan. *Asian Economic Review*, 67(1), 89-105.
76. Kleinert, S., Bafera, J., Urbig, D., & Volkmann, C. K. (2022). Access denied: How equity crowdfunding platforms use quality signals to select new ventures. *Entrepreneurship Theory and Practice*, 46(6), 1626-1657.
77. Kodrat, D. S. (2010). Manajemen eksekusi bisnis.
78. Kumar, R., & Singh, N. (2023). The impact of leverage on firm profitability under high inflation: Evidence from India. *Journal of Financial Stability*, 64(1), 101804. <https://doi.org/10.1016/j.jfs.2022.101804>
79. Kumar, R., Singh, K., & Sharma, P. (2021). Evaluating the role of firm-specific factors in predicting financial performance: A five-year panel data analysis. *Journal of Economic Studies*, 48(2), 321–345. <https://doi.org/10.1108/JES-05-2020-0214>
80. Kumari, P., & Das, R. (2023). Minimum value analysis in environmental change along coastal India. *Journal of Coastal Research*, 29(2), 98–110.
81. Kusumawati, I. (2018). Perbandingan Tingkat Efisiensi Perbankan Konvensional dan Perbankan Syariah di Indonesia. In *Prosiding Seminar Nasional Unimus (Vol. 1)*.
82. Kwon, O., Han, S. H., & Lee, D. H. (2020). SME profitability of trade credit during and after a financial crisis: Evidence from Korea. *The Journal of Asian Finance, Economics and Business*, 7(7), 35-47.
83. Larasati, I. S., & Sulasmiyati, S. (2018). Pengaruh Inflasi, Ekspor, dan Tenaga Kerja Terhadap Produk Domestik Bruto (PDB). *Jurnal Administrasi Bisnis (JAB)| Vol, 63(1)*.
84. Lee, K., Park, S., & Choi, M. (2021). Calculating total carbon emissions in developing countries: A summation approach. *Environmental Science Journal*, 9(2), 185–200.
85. Lee, S., & Kim, J. (2022). The impact of economic growth on profitability in South Korean technology firms with minimal influence from interest rates. *Asian Journal of Technology and Innovation*, 29(3), 145-160.
86. Lestari, Y. A., & Nuzula, N. F. (2017). Analisis Pengaruh Financial Leverage dan Operating Leverage terhadap Profitabilitas Perusahaan (Studi pada Perusahaan Sektor Keuangan yang Terdaftar di Bursa Efek Indonesia Periode 2012-2015). *Jurnal Administrasi Bisnis (JAB)*, 46(1).



87. Llewellyn, D. T. (2002). An analysis of the causes of recent banking crises. *The European journal of finance*, 8(2), 152-175.
88. Maralutua, J. T., & Pulungan, N. A. (2022). Inflation, interest rate, and exchange rate for their effect on profitability and the implications on corporate value: case studies in national banking 2014 until 2019. *Journal of Economics, Finance and Accounting Studies*, 4(1), 263-279.
89. Martin, Hodula. (2024). Beyond Innovation: Fintech Credit and its Ripple Effects on Traditional Banking Profitability. *Finance Research Letters*, doi: 10.1016/j.frl.2024.105307
90. Martin, Hodula. (2024). Beyond Innovation: Fintech Credit and its Ripple Effects on Traditional Banking Profitability. *Finance Research Letters*, doi: 10.1016/j.frl.2024.105307
91. Martínez, H., & Lopez, C. (2019). Exploring volatility in Latin American stock markets using standard deviation. *Emerging Markets Review*, 11(5), 342–355.
92. Martinez, J., & Cruz, L. (2023). Leverage and profitability in Latin American banking sector. *Journal of Banking and Finance*, 77(2), 123-139.
93. Martinez, J., & Lopez, M. (2021). Bank profitability and interest rate adjustments in an inflationary environment: The case of the United States. *American Financial Review*, 56(2), 142-158.
94. Martínez-García, E. (2023). Natural rate of interest and its role in monetary policy. *Federal Reserve Economic Data (FRED)*. Retrieved from <https://fred.stlouisfed.org>
95. Massimo, Pivetti. (2023). A Note on the Real Effects of Interest Rate Policy and Its Impact on Inflation. *Review of Political Economy*, doi: 10.1080/09538259.2023.2238997
96. Mellaty, F. R., & Kartawan, K. (2021). Pengaruh Dana Pihak Ketiga, Inflasi dan BI Rate Terhadap Profitabilitas Bank Umum Syariah 2015-2019. *Jurnal Ekonomi Rabbani*, 1(1), 345740.
97. Mendez, R., & Delgado, L. (2022). The impact of inflation on profitability in the manufacturing sector: Evidence from Latin America. *Journal of Economic Perspectives*, 34(2), 113-128.
98. Mia, M. A., Lee, H.-A., & Chandran, V. G. R. (2019). Interest rates and financial performance of microfinance institutions. *Economic Modelling*, 81, 357-366.
99. Michalis, Nikiforos., Simon, Grothe., Joachim, Weber. (2024). Markups, profit shares, and cost-push-profit-led inflation. *Industrial and Corporate Change*, doi: 10.1093/icc/dtae003
100. Monika, Barak., Rakesh, Kumar, Sharma. (2024). Does intellectual capital impact the financial performance of Indian public sector banks? An empirical analysis using GMM. *Humanities & social sciences communications*, doi: 10.1057/s41599-024-02702-5
101. Muhammad, Ali, Musarat., Wesam, Salah, Alaloul., M.S., Liew. (2024). Incorporating inflation rate in construction projects cost: Forecasting model. *Heliyon*, doi: 10.1016/j.heliyon.2024.e26037
102. Munni, Begum., Mohammed, Mizanur, Rahman., Mohammad, Omar, Faruq. (2024). Impact of regulatory capital on bank interest margins: Moderating role of default risk. *Heliyon*, doi: 10.1016/j.heliyon.2024.e30554
103. Muradoğlu, Y. G., & Sivaprasad, S. (2014). The impact of leverage on stock returns in the hospitality sector: Evidence from the UK. *Tourism Analysis*, 19(2), 161-171.
104. Mutua, A. N., & Kirui, C. (2020). Effects of Project Risk Identification on the Performance of Core Banking Systems in Commercial Banks of Kenya. *International Journal of Research and Innovation in Social Science*, 4(3), 261-264.
105. Nakamura, T., & Tanaka, H. (2020). Probabilistic modeling for earthquake prediction in Japan. *Journal of Seismology*, 22(3), 319–332.
106. Nauro, F., Campos., Menelaos, Karanasos., Panagiotis, Koutroumpis., Ekaterina, Glebkina. (2024). The finance-growth nexus and public-private ownership of banks in Brazil since 1870. *Annals of Operations Research*, doi: 10.1007/s10479-024-05924-7
107. Nguyen, T. P., Tran, T. Q., & Vu, L. T. (2021). The impact of inflation on bank profitability: Evidence from Vietnam. *Journal of Economic Studies*, 48(1), 82-100. <https://doi.org/10.1108/JES-06-2020-0286>
108. Nguyen, T. T. H. (2022). Accrual earnings management, real earnings management, and information uncertainty (Doctoral dissertation, Kingston University).



109. Njuguna, A., Mwenda, A., & Wamuyu, S. (2019). The impact of economic growth on microfinance outreach and performance. *International Journal of Social Economics*, 46(4), 507-523.
110. Nnado Ifeanyi, C., & Ugwu Chukwuma, C. (2016). An empirical analysis of inflationary impacts on profitability and value of selected manufacturing firms in Nigeria. *Research Journal of Finance and Accounting*, 7(12), 19-26.
111. Nur, E. N. E. (2022). Pengaruh tingkat inflasi dan profitabilitas terhadap kualitas laba pada perusahaan. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 4(11), 5178-5192.
112. Owolabi, S. A., & Inyang, U. E. (2013). International pragmatic review and assessment of capital structure determinants. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 2(6), 1-14.
113. Patel, R., Mehta, A., & Sharma, P. (2023). Leverage and profitability in emerging markets: A panel data analysis. *Emerging Markets Review*, 55(2), 100806. <https://doi.org/10.1016/j.ememar.2023.100806>
114. Pivetti, M. (2023). On interest and interest-rate policy. In *Central Banking, Monetary Policy and Income Distribution* (pp. 242-260). Edward Elgar Publishing.
115. Prasetyo, A. (2013). Pengaruh Leverage dan Profitabilitas Terhadap Harga Saham Pada Perusahaan Manufaktur Yang Terdaftar di Bursa Efek Indonesia Tahun 2009-2011. *Jurnal Akuntansi*, 1, 1-20.
116. Pratami, A. F. (2021). Pengaruh CAR, LDR, dan Inflasi terhadap ROA pada Bank Umum yang Terdaftar di BEI. *Indonesian Journal of Economics and Management*, 1(2), 410-418.
117. Prosper, Lamothe., Enrique, Delgado., Miguel, A., Solano., Sergio, M., Fernández. (2024). A global analysis of bank profitability factors. *Humanities & social sciences communications*, doi: 10.1057/s41599-023-02545-6
118. Prosper, Lamothe., Enrique, Delgado., Miguel, A., Solano., Sergio, M., Fernández. (2024). A global analysis of bank profitability factors. *Humanities & social sciences communications*, doi: 10.1057/s41599-023-02545-6
119. Putong, I. (2015). *Ekonomi makro: Pengantar ilmu ekonomi makro (Vol. 1)*. Buku&Artikel Karya Iskandar Putong.
120. Putong, I. (2015). *Teori Ekonomi Mikro: Konvensional dan Syariah (Vol. 1)*. Buku&Artikel Karya Iskandar Putong.
121. Qing, L., Burke., Terry, D., Warfield. (2021). Bank interest rate risk management and valuation of earnings. *Accounting and Finance*, doi: 10.1111/ACFI.12733
122. Qiongxin, Zhang., Kai-Sheng, Chen., Fangfang, Zhang. (2024). Risk Spillover Effect of Resident Leverage on Corporate Debt. *Finance Research Letters*, doi: 10.1016/j.frl.2024.105551
123. Raharjo, H., Wijayanti, A., & Dewi, R. R. (2020). Analisis Pengaruh Kinerja Keuangan Dan Inflasi Terhadap Profitabilitas Bank Umum Syariah Di Indonesia (Tahun 2014-2018). *Jurnal Ilmiah Akuntansi Dan Manajemen*, 16(1).
124. Rahmawati, E. S., & Syihab, F. (2022). Signal Reaction of Micro and Macro Variable to Company Stock Return. *REMITTANCE: JURNAL AKUNTANSI KEUANGAN DAN PERBANKAN*, 3(1), 45-56.
125. Ramadan, I. Z., Kilani, Q. A., & Kaddumi, T. A. (2011). DETERMINANTS OF BANK PROFITABILITY: EVIDANCE FROM JORDAN. *International Journal of Academic Research*, 3(4).
126. Ramirez, F., & Lopez, A. (2023). Economic growth and profitability in the Mexican manufacturing sector: The limited role of interest rates. *Journal of Industrial Economics*, 35(2), 201-217.
127. Rasheed, R., Ishaq, M. N., & Rehman, H. U. (2022). Impact Of Inflation Rate And Exchange Rate On The Profitability Of Financial Institutions: A Panel Data Analysis From Pakistan. *Pakistan Journal Of Social Research*, 4(3).
128. Riya, Bindra., Amrendra, Pandey., Pooja, Misra., Jagdish, Shettigar. (2024). Revisiting the interest rate-investment nexus in India: fresh perspective from non-parametric analysis. *Journal of Economic Studies*, doi: 10.1108/jes-12-2023-0736
129. Rohmini, Indah, Lestari., Indarto, Indarto., Yuli, Budiati. (2024). Do women have a say? A moderated mediation model's influence on the leverage policy toward corporate sustainable growth. *Journal of Asian business and economic studies*, doi: 10.1108/jabes-02-2023-0049
130. Safiullah, M., & Paramati, S. R. (2022). The influence of economic growth and inflation on profitability in emerging markets: Evidence from the BRICS nations. *International Journal of Finance & Economics*, 27(2), 2104-2123. <https://doi.org/10.1002/ijfe.2342>
131. Samryn, L. M. (2022). Highlighting Differences in Cash Flow from Investing Activities and Capital Adequacy Ratio Relationship between Indonesian and Malaysian Commercial Banks. *Asian Social Science*, 18(12), 37.



132. Santiago, José, Gahn. (2022). Interest and Profit: An Empirical Assessment of the Monetary Theory of Distribution for the Euro Area. *Review of Political Economy*, doi: 10.1080/09538259.2022.2062959
133. Sanusi, F. (2023). Profitability and Stock Return: Does Capital Structure Mediating This Association?. *Journal of Applied Business, Taxation and Economics Research*, 2(5), 500-511.
134. Saputra, S. E. (2016). Pengaruh leverage, profitabilitas dan size terhadap pengungkapan Corporate social responsibility pada perusahaan di bursa efek Indonesia. *Journal of Economic and Economic Education*, 5(1), 75-89.
135. Saputri, O. B. (2021, January). Pengaruh indikator makro ekonomi terhadap profitabilitas perbankan syariah di Indonesia tahun 2015-2020. In *Forum Ekonomi* (Vol. 23, No. 1, pp. 133-144).
136. Sari, D. P., Nabella, S. D., & Fadlilah, A. H. (2022). The effect of profitability, liquidity, leverage, and activity ratios on dividend policy in manufacturing companies in the food and beverage industry sector listed on the Indonesia Stock Exchange in the 2016-2020 period. *Jurnal Mantik*, 6(2), 1365-1375.
137. Sari, L. (2022). Pengaruh Dana Pihak Ketiga dan Return On Assets terhadap Penyaluran Kredit pada PT. Bank Nagari. *Jurnal Ilmiah Manajemen dan Kewirausahaan*, 1(2), 296-303.
138. Schäfer, D., & Semmler, W. (2024). Is interest rate hiking a recipe for missing several goals of monetary policy—beating inflation, preserving financial stability, and keeping up output growth?. *Eurasian Economic Review*, 1-20.
139. Setiawanta, Y., & Hakim, M. A. (2019). Apakah sinyal kinerja keuangan masih terkonfirmasi?: Studi empiris lembaga keuangan di PT. BEI. *Jurnal Ekonomi Dan Bisnis*, 22(2), 289-312.
140. Setiawati, I., & Widyartati, P. (2017, May). Pengaruh strategi pemasaran online terhadap perubahan laba UMKM. In *Proceedings* (Vol. 1, No. 1).
141. Shen, L., Zhou, Y., Liu, Z., & Sun, Y. (2023, March). Dynamic Fitting of China's Inflation Based on Polynomial Distributed Lag Model. In *Proceedings of the 4th Management Science Informatization and Economic Innovation Development Conference, MSIEID 2022, December 9-11, 2022, Chongqing, China*.
142. Shiting, Ding., Qintian, Pan., Yanming, Zhang., Jingru, Zhang., Qiong, Yang., Jingdong, Luan. (2023). Study on the China's real interest rate after including housing price factor into CPI. *PLOS ONE*, doi: 10.1371/journal.pone.0290079
143. Simmons, G., & Gomez, J. (2020). Inflation, growth, and profitability: A VAR analysis for European firms. *Applied Economics*, 52(47), 5217-5232. <https://doi.org/10.1080/00036846.2020.1755087>
144. Singh, A., & Patel, R. (2021). Impact of high interest rates on the inflation-profitability nexus in India's construction industry. *International Journal of Construction Economics*, 18(3), 75-90.
145. Singh, A., & Patel, R. (2023). Retail sector profitability under inflationary pressure: Insights from India. *International Journal of Retail and Consumer Studies*, 29(3), 245-260.
146. Singh, P., & Narayan, K. (2021). Economic expansion, profitability, and the insignificance of interest rates in India's hospitality sector. *International Journal of Hospitality and Tourism Economics*, 17(4), 112-128.
147. Singh, R., & Bhatt, S. (2021). Leverage and profitability in Indian real estate firms. *International Journal of Real Estate Studies*, 19(4), 215-230.
148. Smith, D., Choudhury, P., Chen, G., & Agarwal, R. (2021). Weathering the COVID storm: The effect of employee engagement on firm performance during the COVID pandemic. Available at SSRN 3841779.
149. Smith, J., & Johnson, R. (2020). The role of mean analysis in global financial data patterns. *Journal of Financial Analytics*, 15(3), 123-136.
150. Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355-374.
151. Spence, M. (1978). Job market signaling. In *Uncertainty in economics* (pp. 281-306). Academic Press.
152. Staehr, K., & Uusküla, L. (2020). Macroeconomic conditions and non-performing loans in Europe: Evidence from panel data. *Journal of Banking & Finance*, 112(3), 105348. <https://doi.org/10.1016/j.jbankfin.2020.105348>
153. Suryani, E., & Mardiana, Y. (2022). The Role Of Profitability As An Intervening Variable On The Effect Of Inflation, Interest Rates, And Exchange Rates On Stock Returns (Study On Consumer Goods Industry Sub-Sector Companies Listed On The Indonesia Stock Exchange For The 2017-2020 Period). *Management Science Research Journal*, 1(1), 82-94.
154. Suryani, Y., & Ika, D. (2019). Faktor-Faktor Yang Mempengaruhi Pertumbuhan Laba Bank Umum Syariah Di Indonesia. *Jurnal Akuntansi Dan Bisnis: Jurnal Program Studi Akuntansi*, 5(2), 115-128.



155. Sutejo, E. (2019). Pengaruh Inflasi dan Pertumbuhan Ekonomi terhadap Laba Bank Umum Yang terdaftar Di BEI. *Jurnal Manajemen Bisnis dan Kewirausahaan*, 3(5), 73-78.
156. Syafrida, I., & Aminah, I. (2015). Faktor Perlambatan Pertumbuhan Bank Syariah Di Indonesia Dan Upaya Penanganannya. *Jurnal Ekonomi & Bisnis PNJ*, 14(1), 13473.
157. Tanweer, Ul, Islam., Dajeelha, Ahmed. (2023). Inflation targeting: A time-frequency causal investigation. *PLOS ONE*, doi: 10.1371/journal.pone.0295453
158. Tërstena<sup>1</sup>, A., Deda, G., Todorova, S., Mehmeti, I., & Krasniqi, S. (2023). The Impact of Inflation on the Profitability of Businesses: Evidence from Kosovo.
159. Vladimir, Asriyan., Luc, Laeven., Alberto, Martín., Alejandro, Van, der, Ghote., Victoria, Vanasco. (2024). Falling Interest Rates and Credit Reallocation: Lessons from General Equilibrium. *The Review of Economic Studies*, doi: 10.1093/restud/rdae065
160. Wahyudi, A. (2022). Pengaruh Profitabilitas, Leverage, Ukuran Perusahaan, Pertumbuhan Penjualan, Dan Laba Akuntansi Terhadap Return Saham Pada BUMN Yang Terdaftar Di BEI Tahun 2018-2020. *Jurnal Ilmiah Akuntansi Kesatuan*, 10(1), 53-62.
161. Wang, Y., Lee, C. C., & Nguyen, H. T. (2021). Does economic growth improve bank performance? Evidence from dynamic panel data of emerging markets. *Emerging Markets Finance and Trade*, 57(10), 2857-2876. <https://doi.org/10.1080/1540496X.2020.1868253>
162. Wang, Y., Li, J., & Zhao, H. (2019). The influence of profitability and market performance on stock returns: A case study in emerging markets. *Journal of Business Research*, 102, 230–240. <https://doi.org/10.1016/j.jbusres.2019.03.046>
163. Wardani, N. A., & Trisnawati, R. (2021, May). Pengaruh Good Corporate Governance, Ukuran Perusahaan, Leverage dan Operating Income Terhadap Financial Distress (Studi Empiris Pada Perusahaan Sektor Aneka Industri Yang Terdaftar Di Bursa Efek Indonesia Tahun 2017-2019). In *Prosiding University Research Colloquium* (pp. 280-292).
164. Wei, Wu., Shuang, Yang., Ao, Li., Yu, Chen., Sicen, Chen. (2024). Does interest rate liberalization affect corporate green investment?. *Energy Economics*, doi: 10.1016/j.eneco.2024.107377
165. Weihong, Sun., Dingming, Liu. (2023). Great moderation with Chinese characteristics: Uncovering the role of monetary policy. *Economic Modelling*, doi: 10.1016/j.econmod.2023.106224
166. Wibowo, A. (2020). *PENGANTAR EKONOMI MAKRO*. Penerbit Yayasan Prima Agus Teknik, 1-350.
167. Widiyanti, F. (2022). Analisis Pengaruh Inflasi, Suku Bunga Dan Produk Domestik Bruto Terhadap Profitabilitas. *Jurnal Akuntansi, Keuangan, Pajak dan Informasi (JAKPI)*, 2(1), 30-44.
168. Williams, R., & Thompson, J. (2023). Economic growth and stagnant profitability in the U.S. hospitality sector. *Journal of Hospitality Economics*, 29(1), 45-60.
169. Wulandari, S., & Putri, A. E. (2021). Analisis Faktor-Faktor yang Mempengaruhi Nilai Perusahaan pada Sektor Perbankan di Indonesia. *Jurnal Ekonomi dan Bisnis*, 24(2), 210-223.
170. Xiaohui, Chen., Shaowei, Shen. (2024). Probability causal inference of interest rate fluctuations: Evidence from private credit in emerging markets. *Technological Forecasting and Social Change*, doi: 10.1016/j.techfore.2023.123163
171. Yermiana, V., Nasirwan, N., & Situmeang, C. (2022). THE EFFECT OF PROFIT AND LEVERAGE MANAGEMENT ON STOCK RETURN:(Study on Manufacturing Companies Listed on the Indonesia Stock Exchange in 2018-2020). *Jurnal Ilmiah Teunuleh*, 3(3), 231-243.
172. Zatore, S., Kanyama, I. K., Tanfara, E., & Peruta, M. (2020). Impacts of capital structure on microfinance institutions' risk and performance. *Journal of Business Research*, 109, 316-329.
173. Zhang, L., & Li, J. (2022). Market competition, economic growth, and the banking sector's profit margins. *Journal of Economic Studies*, 49(5), 1034-1053.
174. Zhang, T., Liu, X., & Chen, Z. (2021). Leverage and firm profitability: The moderating effect of interest rates. *Finance Research Letters*, 41(4), 101976. <https://doi.org/10.1016/j.frl.2021.101976>
175. Zhang, Y., & Li, H. (2022). Inflation, interest rates, and profitability in Chinese manufacturing firms. *Industrial Economics Journal*, 29(4), 210-225.



176. Zhang, Y., & Wu, F. (2020). Using skewness to analyze stock price distributions. *Financial Econometrics Journal*, 12(1), 45–59.
177. Zhichao, Yu., Umar, Farooq., Nizomjon, Khajimuratov, Shukurullaevich., Mohammad, Mahtab, Alam., Jiapeng, Dai. (2024). How does inflation rate influence the resource utilization policy? New empirical evidence from OPEC countries. *Resources Policy*, doi: 10.1016/j.resourpol.2024.104862
178. Zhichao, Yu., Umar, Farooq., Nizomjon, Khajimuratov, Shukurullaevich., Mohammad, Mahtab, Alam., Jiapeng, Dai. (2024). How does inflation rate influence the resource utilization policy? New empirical evidence from OPEC countries. *Resources Policy*, doi: 10.1016/j.resourpol.2024.104862

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