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Indonesia's Rupiah Redenomination Prospects: Forecasting Inflation Stability and Economic Readiness over 2015-2024

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Abstract

Currency redenomination is frequently proposed as a means of simplifying transactions and reinforcing confidence in the national currency. However, international experience indicates that such reforms require strong macroeconomic foundations to avoid temporary inflationary disruptions. This study investigates Indonesia's readiness to implement Rupiah redenomination by examining the response of inflation to a broad set of domestic and external determinants. Using quarterly data for 2015 to 2024 obtained from Bank Indonesia, BPS-Statistics Indonesia, and the World Bank, the analysis estimates inflation against exchange rate volatility across eleven currencies, fiscal performance, export and import activity, and the Political Index. The empirical framework applies the ARDL bounds testing approach with HAC standard errors to identify both short-run and long-run relationships. The findings suggest that Indonesia is not yet prepared for redenomination. Exchange rate pass-through and fiscal expansion exert significant inflationary effects in the short run, while the Political Index signals weak institutional stability and limited long-run credibility.

Keywords: Rupiah redenomination, Macroeconomic stability, Inflation expectations.

INTRODUCTION

Rupiah redenomination has been discussed in Indonesia for many years because the currency has a very large nominal value, which can make daily transactions, bookkeeping, and financial reporting less practical, especially when prices are written in very long numbers. Redenomination policy can only work properly when macroeconomic

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conditions are stable, inflation is low, and the central bank has enough credibility to keep public trust. Indonesia has shown relatively stable inflation in recent years under Bank Indonesia's inflation targeting framework, which makes the topic relevant for further study because it suggests that the country may be entering a better period for policy discussion. The main question in this article is whether Indonesia is ready to implement redenomination without creating new inflation expectations or reducing public confidence in the rupiah.

Previous studies have already shown that redenomination may improve transaction efficiency, reduce nominal complexity, and support financial reporting, but they also stress that success depends on public understanding and careful communication. Research on Indonesia has found that redenomination is considered feasible, yet the policy still faces risks if people misunderstand it as devaluation or if rounding practices lead to price increases during the transition period. Other studies also show that the main challenges are not only technical, but also psychological, because public perception can affect trust in money and shape inflation expectations. This means that the literature has explained the benefits of redenomination quite well, but it has not fully a nswered how Indonesia's current macroeconomic stability and inflation performance support the policy in a more practical way. That gap is important because a policy that looks good on paper may still fail if the public does not accept it or if the transition is not managed carefully.

The relevance of redenomination in Indonesia must also be understood within the broader context of exchange rate stability and external balance. Exchange rate movements affect domestic inflation through pass-through effects, particularly when depreciation increases the cost of imported fuel, food, and capital goods. In an open economy such as Indonesia, persistent trade surpluses and stronger export performance can help reduce pressure on the rupiah and support price stability, while heavy dependence on imports may increase vulnerability to external shocks. Recent empirical evidence shows that Indonesia's external sector has remained relatively resilient in several periods, especially after the pandemic, which has helped support foreign exchange earnings and strengthen macroeconomic confidence (BPS, 2024; Bowdler, 2005).

Public perception remains a critical channel in any redenomination process because households and firms may associate the reform with a loss of value rather than a change in nominal units. If communication is unclear, the policy may trigger precautionary price setting, wage adjustments, or delayed transactions, all of which can

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create short-term inflationary pressure even when the reform is intended only to simplify the currency. This risk is especially important in Indonesia, where inflation expectations remain sensitive to exchange rate movements and broader political-economic uncertainty. Therefore, redenomination should be treated as a policy that requires not only technical preparation, but also trust, coordination, and clear institutional.

This pattern means that inflation in Indonesia is still fluctuating and influenced by many factors, such as exchange rate changes, global conditions, and trade activities. Because of this, prices in the economy are not always stable and can change quite quickly in certain periods. the redenomination plan, this fluctuation is important because unstable inflation can create risks when the policy is implemented. For example, people may feel uncertain and sellers might increase prices due to rounding or misunderstanding, which can push inflation higher in the short term. Therefore, before redenomination is applied, it is better if inflation becomes more stable and controlled, so the policy will not create extra inflation pressure and public trust in the currency can be maintained.



Figure 1: Inflation 2015-2024
Source: BPS Indonesia (Proceed Data)

Indonesia is sufficiently prepared to implement redenomination without disturbing inflation expectations and public confidence. This study is important because it links redenomination to the wider conditions that sustain monetary stability, including infla tion

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control, exchange rate management, trade performance, and policy credibility. Rather than treating redenomination as a simple change in currency notation, the article argues that it should be assessed as a structural reform that requires a stable macroeconomic environment and effective public communication. If these foundations are present, redenomination may improve efficiency and simplify transactions without harming trust in the rupiah. If they are absent, however, the reform may generate uncertainty and weaken the very stability it is meant to support (Bank Indonesia, 2024; Central Bank Credibility and Monetary Policy in Indonesia, 2006).

OBJECTIVES

This article intends

1. To assess Indonesia's readiness for Rupiah redenomination by examining inflation stability over 2015 to 2024.To recognize the dire need for negotiation techniques in the world of business
2. To analyze the effects of exchange rate movements, fiscal conditions, and trade activity on inflation in Indonesia.To understand the factors that impact the negotiation
3. To evaluate whether political stability and institutional credibility support the implementation of Rupiah redenomination
4. To determine the macroeconomic conditions required for redenomination to be implemented safely and effectively in Indonesia

This article examines Indonesia's readiness for Rupiah redenomination by assessing how inflation is shaped by exchange rate movements, fiscal conditions, trade activity, and political stability during 2015 to 2024. It aims to show whether current macroeconomic and institutional conditions are strong enough to support redenomination without creating inflationary pressure or weakening public confidence in the rupiah.

DISCUSSION

This study uses a quantitative research approach because the main objective is to analyse the relationship between macroeconomic variables and inflation in Indonesia, especially in the context of potential rupiah redenomination, and this approach is chosen since it allows the researcher to examine data patterns over time in a more structured and measurable way, rather than relying on subjective interpretation, so the results can be more objective and easier to compare with previous studies (Sugiyono, 2018).

The main analytical method applied in this research is the Autoregressive Distributed Lag (ARDL) model, which is considered suitable because the data used in this

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study consist of time series variables that may have different levels of integration, either stationary at level or first difference, and this method is also able to capture both short-run and long-run relationships between variables, which is important when analysing inflation dynamics in a developing country like Indonesia (Pesaran, Shin, & Smith, 2001).

The research uses quarterly data from 2015 to 2024 so that it can capture a full range of economic conditions rather than only one specific episode. By covering these different phases, the dataset reflects how Indonesian inflation reacts under both calm and turbulent conditions, which is important for assessing the risks of redenomination. These variables are then organised into a time-series framework and tested for stationarity before model estimation, ensuring that the statistical properties of the data are suitable for long-run analysis. The chosen sample period also matches recent policy discussions on redenomination, which have intensified again in the 2025 to 2029 strategic plan, so the evidence produced remains directly relevant for current decision-making.

In this model, inflation is linked with exchange rate movements, fiscal policy, institutional quality, and export and import activity, because all of these parts work together in one open economic system. The exchange rate part reflects the idea of exchange rate pass-through, where a weaker currency raises the price of imported goods and then pushes inflation higher. The fiscal part shows that higher government spending can lift total demand and create more price pressure in the economy. Institutional quality, such as WGI, matters because stable policy and public trust help keep inflation under control. Export and import variables also matter because a more open economy can affect inflation through both demand and supply channels, especially in countries like Indonesia. In this way, the model gives a fuller picture of how inflation forms in an open economy. It also shows why policy stability is very important in keeping inflation from rising too fast. For this reason, the model is useful for understanding inflation in Indonesia and other developing economies.

$$INF_t = \alpha + \beta_1 . FXt + \beta_2 FISCALt + \beta_3 WGIt + \beta_4 EXIMt + \varepsilon t$$

Information:
INF_t : CPI growth rate (%)
α : Baseline inflation
t : Time
FXt : Exchange Rate
Fiscalt : Fiscal

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WGIt : Politic Index
EXIMt : X-M
β_1-β_4 : Regression Coefficient
ε_t : standard error

In terms of data collection technique, this study uses documentation methods by compiling time series data from published reports and official databases, and then the data are processed and transformed into quarterly format to ensure consistency across variables, because some data are originally available in monthly or annual form, so adjustment is needed to make the dataset more suitable for econometric analysis (Sugiyono, 2018).

Long Run and Bound Test Results

The results from the long run bound test show that not all variables have a strong effect on inflation, but some variables clearly stand out as significant in explaining price movements in Indonesia. From the table, GBP, CHF, SGD, AUD, fiscal, export, and import variables are statistically significant, while others like USD, JPY, EUR, and political index are not significant in the long run. This means that inflation in Indonesia is not influenced equally by all external and internal factors, but only by selected variables that have stronger transmission effects in the economy. (Pesaran et al., 2001)

Looking deeper, the exchange rate variables show mixed results, where some currencies like GBP and AUD have a positive and significant effect on inflation, while SGD shows a negative and significant relationship, which suggests that exchange rate pass-through does not move in the same direction for all currencies. This can happen because Indonesia trades differently with each country, so the impact on domestic prices also varies depending on trade structure and import dependency. This finding is in line wit h the idea that exchange rate movements can influence inflation through import prices and cost channels (Annazah, 2018; Goldberg & Knetter, 1997).

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Levels Equation
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
USD	-0.000164	0.000179	-0.918029	0.3753
JPY	-0.000191	0.000138	-1.380438	0.1907
GBP	0.000275	6.21E-05	4.421552	0.0007
CHF	0.000252	9.34E-05	2.697753	0.0183
SGD	-0.001715	0.000508	-3.376699	0.0050
MYR	0.000807	0.000611	1.321556	0.2091
HKD	-0.000170	0.000490	-0.346620	0.7344
AUD	0.000992	0.000251	3.955728	0.0016
CAD	0.000144	0.000217	0.662908	0.5190
EUR	-8.63E-05	0.000165	-0.522745	0.6099
FISCAL	1.42E-06	3.70E-07	3.837260	0.0021
POLITIC_INDEX	0.530910	0.546374	0.971697	0.3489
EXPORT	2.42E-06	1.08E-06	2.237188	0.0434
IMPORT	-1.16E-05	3.04E-06	-3.828550	0.0021
C	-28.32059	31.26423	-0.905846	0.3815

Figure 2: ARDL Long Run Form and Bound Test
Source: BPS Indonesia, Satu Data Kemendag(Processed data Eviews 12)

LM Test Results

The result of the Breusch-Godfrey Serial Correlation LM test shows that the probability value is 0.0089, which is lower than the 0.05 significance level, and this means that the model still has a serial correlation problem in the residuals. In simple words, the error terms in the model are still related to each other over time, so the model may not fully capture all the important information in the data. This condition suggests that the model needs further improvement to make the estimation more reliable.

F-statistic	7.481.795	Prob. F(2,11)		0.0089
Obs*R-squared	2.247.686	Prob. Chi-Square(2)		0.0000

Figure 2: Breusch-Godfrey Serial Correlation LM Test
Source: Eviews 12 Proceed data, 2026

Based on the results, it can be concluded that although the model provides useful insights about inflation, the presence of serial correlation shows that the analysis is not yet perfect, and this supports the idea that redenomination should not be implemented without strong and robustness, because inflation stability must be clearly understood first.

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Therefore, improving the model and ensuring better statistical results become important steps before using the findings as a basis for economic policy (Aisen & Frank, 2014).

Heterokedasticity

The result of the heteroskedasticity test using Breusch-Pagan-Godfrey shows that the probability values are all above 0.05, where the Prob. F value is 0.7773 and the Obs*R-squared probability is 0.6066, which means the null hypothesis cannot be rejected. In simple terms, this indicates that there is no heteroskedasticity problem in the model, so the variance of the error terms is constant. This result shows that the model has passed one important classical assumption. The absence of heteroskedasticity means that the spread of residuals is stable across observations, so the model does not suffer from unequal variance problems that could disturb the estimation results. This condition is important in time series analysis because unstable variance can make the m odel less reliable and difficult to interpret, especially when analysing macroeconomic variables like inflation.

F-statistic	0.709312	Prob. F(25,13)		0.7773
Obs*R-squared	2.250.296	Prob. Chi-Square(25)		0.6066
Scaled explained SS	1.672.966	Prob. Chi-Square(25)		10.000

Figure 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey
Source: Eviews 12 Proceed data, 2026

Based on this result, it can be concluded that the model is statistically acceptable in terms of variance stability, which supports its use in further analysis of inflation and redenomination scenarios, although it should still be combined with other diagnostic tests for a more complete evaluation. Therefore, this finding strengthens the overall model quality and provides a more solid basis for policy discussion related to redenomination in Indonesia (Aisen & Frank, 2014).

Normal Test Results

The histogram and normality test results show that the residual data are distributed quite normally, where the Jarque-Bera probability value is 0.624, which is

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higher than 0.05, and this means the null hypothesis of normal distribution cannot be rejected. In simple terms, the error terms in the model do not show extreme deviation, and the distribution is relatively balanced around zero, which can also be seen from the mean value that is very close to zero. This result indicates that the model already meets one important classical assumption. he skewness value is slightly positive and the kurtosis is close to 3, which means the data distribution is quite symmetrical and not too peaked or too flat. This suggests that the model does not have serious problems related to abnormal data behaviour, and most of the observations are spread in a reasonable range without extreme outliers.

Statistical validity is not only a technical point, but also a real support for making careful economic decisions. A model with normal residuals also shows that the result is more stable and less disturbed by large errors in the data. For a policy like redenomination, this is useful because its effects may happen slowly through price behaviour and public confidence. In Indonesia, this issue is very important because inflation stability depends a lot on trust in monetary policy and the overall economy.

The model has passed the normality test and shows a fairly good performance in explaining inflation behaviour, although it still needs to be supported by other diagnostic tests for a more complete evaluation. Therefore, this result supports the use of the model in analysing redenomination scenarios, but policymakers should still consider other economic factors before making final decisions, especially those related to stability and public confidence (Aisen & Frank, 2014).

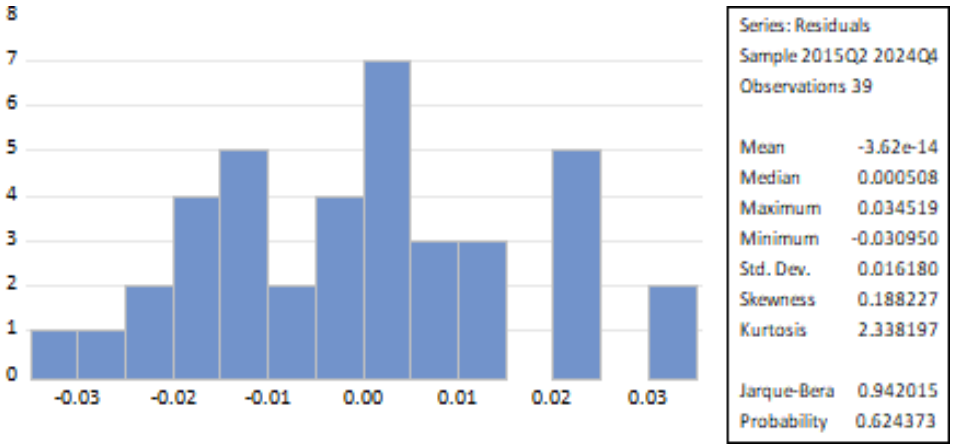


Figure 4: P Value Graphic
Source: Eviews 12 Proceed data, 2026

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HAC test Results

The coefficient of INFLATION(-1), which is 0.658651 and highly significant, meaning that current inflation still carries a large effect from the previous quarter. This result supports the idea that inflation is persistent, so price pressure does not disappear quickly once it appears. The model is also jointly significant, as shown by the Prob(F-statistic) of 0.000000, which means the explanatory variables as a group help explain inflation quite well. In addition, the very high R-squared and adjusted R-squared show that the model fits the data closely, although these values should still be read carefully because a very high fit in time series models can sometimes reflect strong persistence in the dependent variable. By contrast, several currencies such as USD, EUR, and CAD are not significant, so not every exchange rate variable has the same influence on inflation during the sample period.

The Durbin -Watson statistic of 2.441047 also suggests that serial correlation is not severe in the final corrected o utput, which supports the stability of the inference. Even so, the note in the table should still be respected, because the reported p-values do not fully account for model selection. Taken together, the HAC output gives a stronger and more careful basis for discussing the short-run behaviour of inflation.

Indicator	Value
R-squared	0.9996
Adjusted R-squared	0.9989
F-statistic	1362.753
Prob. (F-statistic)	0.0000
Durbin-Watson Statistic	2.441

Figure 5: Heteroskedasticity and Autocorrelation Consistent
Source: Eviews Data Proceed, 2026

The estimated inflation process in Indonesia appears to be persistent, policy sensitive, and partly shaped by external exposure, rather than being driven by a single monetary factor. The significant political index terms, with a negative current effect and a positive lagged effect, may be read as a sign that governance and confidence conditions affect inflation through timing and adjustment effects, which is in line with the broader literature that links policy credibility and market expectations to macroe conomic stability. Overall, the table supports the argument that inflation management in Indonesia depends

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on credible policy, careful fiscal discipline, and stable trade and exchange rate conditions, while the asymmetric and selective significance across variables also suggests that inflation transmission is neither simple nor uniform across channels.

The findings of this study reveal several important insights regarding the determinants of inflation in Indonesia and their implications for redenomination readiness. A notable result is the insignificant long-run effect of the US dollar exchange rate on inflation. This finding differs from previous studies, particularly Annazah (2018), which reported that fluctuations in the USD consistently influenced domestic inflation. The discrepancy suggests that the relationship between exchange rates and inflation may have evolved over time and is influenced by changing economic conditions.

One explanation for this result lies in the structural transformation of the Indonesian economy during the last decade. Indonesia has gradually diversified its export destinations and strengthened domestic demand as a source of economic growth. As a consequence, economic activities are no longer as heavily dependent on USD-denominated transactions as in previous periods. The expansion of trade relationships with a wider range of countries may have reduced the relative importance of the US dollar, while increasing the relevance of other exchange rates in influencing domestic prices. This supports the argument that inflation in an open economy is shaped by multiple external factors rather than by a single dominant currency (Obstfeld & Rogoff, 1996).

Another important finding concerns the political stability index, which does not exhibit a significant long-run effect on inflation. At first glance, this result appears inconsistent with theories emphasizing the role of institutions and governance in shaping inflation expectations. However, Indonesia's inflation-targeting framework, implemented by Bank Indonesia, may have contributed to anchoring public expectations more effectively. As a result, inflation appears to respond more directly to observable economic factors than to broader perception-based indicators. Nevertheless, political and institutional factors may still influence inflation indirectly through fiscal discipline, investment conditions, and policy coordination, which are not fully captured in the model (Kaufmann et al., 2010; Blanchard, 2016).

The diagnostic tests further strengthen the credibility of the model. The absence of heteroskedasticity and the presence of normally distributed residuals indicate that the estimated coefficients are relatively reliable and free from major statistical distortions. These results provide confidence in the interpretation of the relationships identified in the analysis.

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Despite these strengths, serial correlation remains a limitation. The presence of autocorrelated residuals suggests that inflation may still be influenced by past values or by factors omitted from the model. This issue is common in time-series analysis and indicates that inflation dynamics may be more complex than the current specification can fully capture. Therefore, the findings should be interpreted with caution and viewed as part of a broader effort to understand inflation behavior.

From a policy perspective, the results imply that Indonesia's readiness for redenomination should not be assessed solely through low and stable inflation. Policymakers must also consider the complexity of inflation transmission mechanisms and the persistence of inflationary pressures. The selective impact of exchange rates suggests that inflation control requires monitoring multiple channels simultaneously. Furthermore, because redenomination can affect public expectations and pricing behavior, maintaining policy credibility and effective communication is essential. Overall, while Indonesia demonstrates encouraging macroeconomic conditions, strengthening economic fundamentals and public confidence remains crucial before implementing redenomination.

CONCLUSION

This study shows that inflation in Indonesia is influenced by selected factors such as exchange rate, fiscal, and trade balance, while some variables are not significant, which means inflation behaviour is more complex than expected. However, the model still has limitations, especially serial correlation, so the results should be interpreted carefully. In terms of policy, redenomination should only be implemented when inflation is stable and public trust is strong. In the future should improve the model by adding more variables and better lag structure. Personally, this study shows that economic policy needs not only data, but also strong public understanding. The role of the political index in the decision-making process of redenomination. A strong political environment, reflected in high political stability and effective governance, supports better policy implementation and increases public confidence. The political index becomes a key factor that connects economic policy with institutional credibility. In practice, countries with higher political index values are more likely to implement redenomination successfully because their policies are perceived as consistent and reliable. Political integration factors into the analysis of redenomination, which is often discussed only from a macroeconomic perspective. This finding suggests that policymakers should not rely solely on economic indicators but also consider institutional quality when planning redenomination. In this

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way, redenomination can function not only as a monetary reform but a lso as a signal of broader economic and political stability.

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