

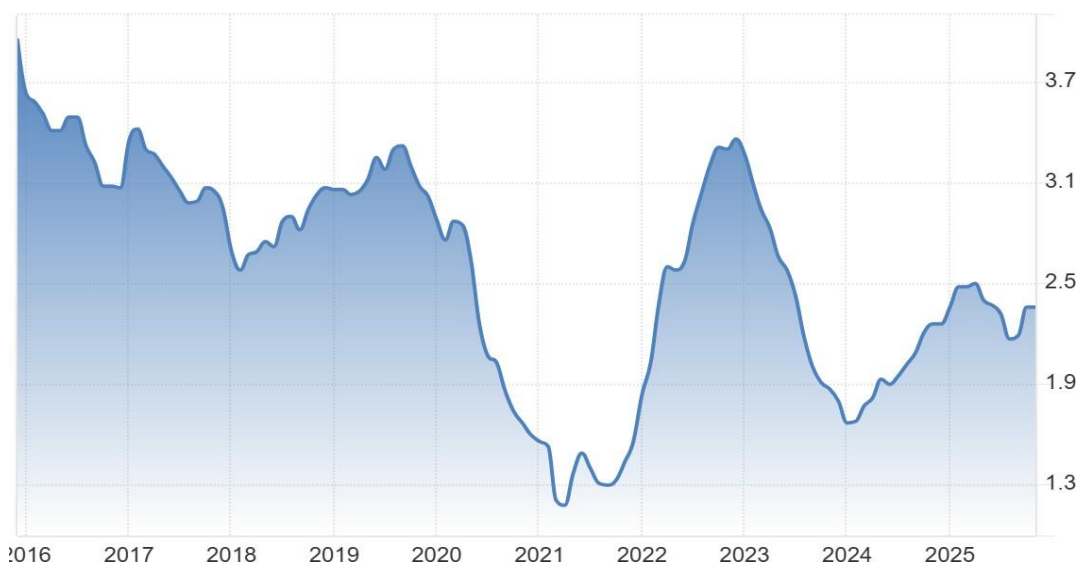
# CHAPTER I

## INTRODUCTION

### 1.1 Research Background

Inflation is one of the most important macroeconomic indicators because it directly affects price stability, people's purchasing power, and the long-term growth of an economy. Simply put, inflation is a condition where the prices of goods and services keep rising over a certain period of time. This phenomenon is often used as a tool to measure the health of a country's economy. A sign of a healthy economy is when inflation stays within the target set by the central bank. However, when inflation goes out of control, the impact is not just a drop in purchasing power, it can also disrupt the overall economic stability of a country. (Permata Sari et al., 2023)

**Figure 1. 1 Indonesia's Core Inflation (2016-2025)**



Source: [tradingeconomics.com](https://tradingeconomics.com) | Central Bank of Indonesia

The data above shows that over the past several years, the development of core inflation in Indonesia has been strongly shaped by both global and domestic conditions. Based on the chart, core inflation showed a declining trend starting from 2016 and reached its lowest point in August 2020 at 1.33%, as the pandemic significantly weakened economic activity and reduced public demand. However, the situation shifted once Indonesia began to enter the recovery phase. Core inflation gradually climbed again from July 2021 until it peaked in September 2022 at 5.95%.

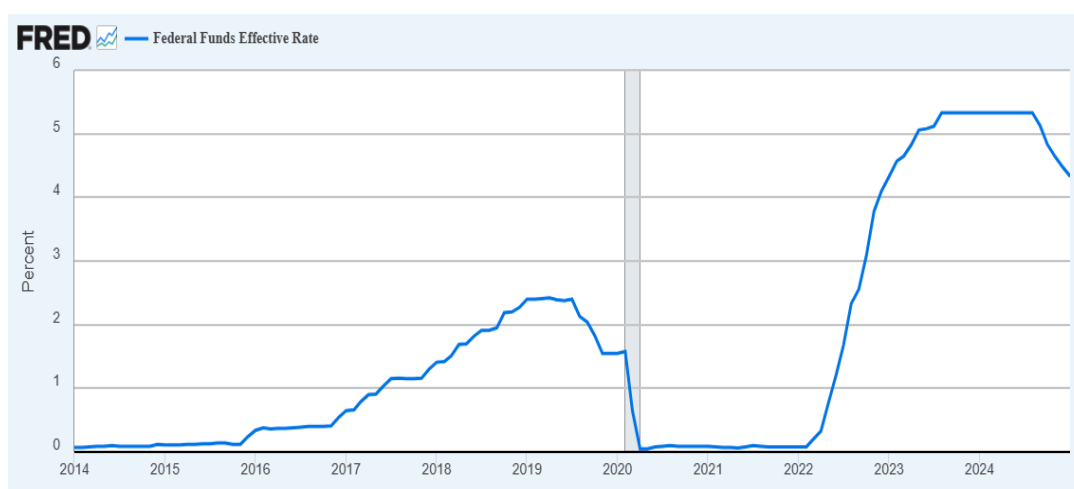
This sharp increase was driven by several factors, including a rebound in demand following the pandemic, rising global energy prices, domestic fuel price adjustments, and a weakening Rupiah caused by the United States' monetary tightening policy (Beirne et al., 2024). After declining again toward the end of 2023, core inflation gradually rose and stabilized in the range of 2.4–2.6% throughout 2024 to 2025. This up-and-down pattern shows that Indonesia's inflation is quite sensitive to changes in global economic conditions and domestic dynamics at the same time.

This phenomenon suggests that inflationary pressure is not only shaped by domestic factors but is also closely linked to monetary variables discussed in economic literature. The Quantity Theory of Money and Monetarism by Milton Friedman essentially explain that growth in money supply and movements in the exchange rate can trigger inflationary pressure. The quantity theory argues that when the money supply increases while output remains roughly unchanged, prices tend to rise. The monetarist view emphasizes that inflation mainly occurs as a result of excessive monetary expansion (Anilah et al., 2023).

Inflation in a country is not only influenced by domestic factors, but also by external conditions. This is especially true for emerging market economies like Indonesia, where inflation is often heavily affected by the monetary policy of the United States. The Federal Funds Rate (FFR) serves as the primary global interest rate benchmark, which directly influences international capital flows and serves as a key indicator of global economic conditions. The US monetary policy has even become a reference point for central banks around the world (Dyota Pramudita, 2022).

The Federal Reserve (The Fed), as the US central bank, plays a crucial role in managing the country's monetary policy, with the primary goal of maintaining a safe, flexible, and stable monetary and financial system (Arteta et al., 2022). The policy direction set by The Fed ultimately has widespread impacts on global economic developments, including how inflation moves in other countries that are affected by its spillover effects (Lastauskas & Nguyen, 2024).

**Figure 1. 2 FFR Chart**



Source: Board of Governors of the Federal Reserve System (US) via FRED

From Figure 1.2, it is evident that significant changes became strongly felt in recent years when the Federal Reserve aggressively raised the FFR during 2022–2023, by a total of 525 basis points. This increase ran from February 2022, when the rate was still at 0.08%, all the way up to 5.33% in August 2023. The FFR then remained at that same level of 5.33% for a full year, from August 2023 to August 2024. After that period of stability, the FFR began to decline. This rate hike was even recorded as the fastest since the early 1980s.

The sharp rise in the FFR prompted many global investors to pull their funds out of emerging markets and redirect them into US-based assets. This was because investors viewed US assets as safer and more rewarding when the FFR was high. This capital movement caused the US Dollar to strengthen, while the currencies of developing countries, including the Indonesian Rupiah which came under pressure. Indonesia, with its open economic structure and considerable dependence on international trade and investment flows, became one of the countries that felt the impact of this shift in global sentiment most quickly (Sany et al., 2025).

Exchange rate stability plays an important role in keeping inflation in check, since a relatively stable exchange rate can help reduce domestic price pressures (Kayamo, 2021). When the exchange rate weakens, the cost of obtaining goods and services from abroad also increases, which can push inflation higher. Conversely, when the exchange rate strengthens, import prices tend to fall, helping to ease inflationary pressure. A weaker currency makes imported goods more expensive because it costs more domestic currency to purchase them, including products that rely heavily on imported raw materials (Akhyar, Khoiriawati, & Hidayah, 2024). This leads to higher production costs and ultimately drives up domestic prices.

Beyond that, a depreciation of the Rupiah can also stimulate exports because domestic goods become relatively cheaper for foreign buyers. While this may seem beneficial at first, the surge in external demand can squeeze the availability of goods in the domestic market and push prices up gradually, which in turn contributes to inflation once again (Djuharni & Maulana, 2019).

**Figure 1. 3 Exchange Rate Chart: IDR against USD**



Source: Central Bank of Indonesia

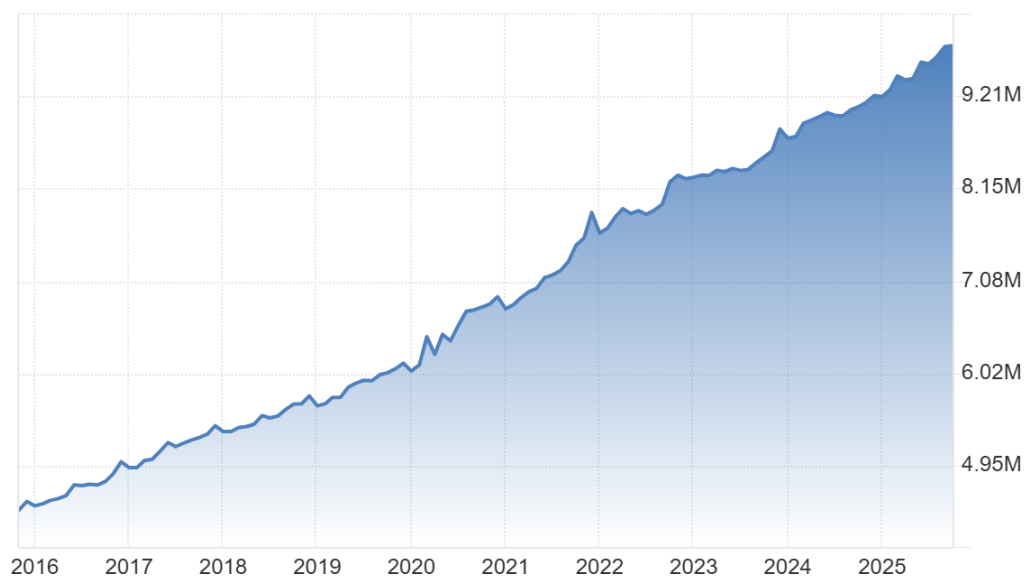
Figure 1.3 shows that the movement of the Rupiah against the US Dollar has been quite volatile over nearly the past decade, with several notable spikes during periods of global uncertainty, such as in 2018, when the Rupiah depreciated to as low as Rp15,217 per USD in October 2018, then fell sharply again in the early days of the Covid-19 pandemic in March 2020 to around Rp16,564 per USD, and came under pressure again with the onset of the US monetary tightening wave in 2022.

This pattern illustrates that the Rupiah is highly sensitive to changes in external conditions, particularly capital flows and global investor sentiment that

follow the Federal Funds Rate. The Rupiah's tendency to weaken during periods of global stress and then recover when volatility eases shows that Indonesia's economy remains vulnerable to external shocks, making exchange rate fluctuations a direct reflection of how the market responds to international monetary policy (Parulian & Mahendra, 2021).

Another macroeconomic indicator that affects inflation is the money supply. Money supply is divided into two main categories: M1 and M2. M1 includes currency held by the public and demand deposits (in Rupiah). M2 includes everything in M1, plus quasi-money (such as savings, time deposits in Rupiah and foreign currencies, and foreign currency demand deposits), as well as securities. M2 is considered an important indicator because it reflects the level of liquidity in the economy, which in turn affects aggregate demand and the inflation rate. (Akhyar, Khoiriawati, Hidayah, et al., 2024). An increase in money supply tends to boost aggregate demand, which can drive prices upward.

**Figure 1. 4 Indonesia's M2 Chart**



Source: Central Bank of Indonesia

The data presented in Figure 1.4 shows the development of M2 in Indonesia. It is clear that the money supply (M2) in Indonesia has continued to grow year after year from 2016 to 2025. The most noticeable increase occurred during the 2020 to 2022 period, when the Covid-19 pandemic was at its height. During that time, the government and Bank Indonesia pushed more money into circulation through various policies to support weakened economic activity. After the pandemic began to subside, M2 continued to grow, though not as steeply as before, signaling that liquidity in the economy remained relatively loose. In general, this condition indicates ongoing economic activity, but it also warrants attention, as money supply growth that is too rapid can trigger inflationary pressure (Susmiati et al., 2021).

Several previous studies have shown varying results regarding the influence of the Fed Rate, exchange rate, and money supply on inflation, meaning there is still no truly consistent conclusion. The study U.S. Monetary Policy and Emerging

Market Economies (Lastauskas & Nguyen, 2024) concluded that an increase in the Fed Rate can weaken developing countries' currencies and trigger inflationary pressure through external channels. This finding aligns with research titled *The Influence of the Federal Reserve System's Interest Rate and Exchange Rate on Inflation in Indonesia* (Wahid & Chaidir, 2025), which found that a rise in the Fed Rate drives the Rupiah to depreciate and increases inflation, particularly in the long run. However, contrasting results were found in *The Asymmetric Exchange Rate Pass-Through to Inflation in the Selected ASEAN Countries* (Widarjono et al., 2023) which found that the exchange rate's effect on inflation is not always large and tends to weaken when core inflation is stable. At the same time, other studies such as *The Influence of Interest Rates, Money Supply, Exchange Rate, and Government Expenditure on Inflation* (Akhyar, Khoiriawati, Hidayah, et al., 2024) and *The Influence of Money Supply, Interest Rates, and Household Consumption on Inflation in Indonesia* (Fitrianti & Rachmawati, 2024) found that money supply sometimes has a negative or even insignificant effect on inflation, which does not fully align with the quantity theory of money.

The differences in results across these studies are also reflected in the findings related to the exchange rate. *The Asymmetric Exchange Rate Pass-Through* study affirmed that depreciation does not always strongly drive inflation, while research on *The Effect of Inflation and Money Supply on the Rupiah Exchange Rate* (Alawiyah et al., 2019) showed that changes in domestic monetary variables tend to have a stronger influence on Rupiah movements. These differences are supported by findings from *Monetary Policy and the Causality Between Inflation and Money Supply* (Sasongko & Huruta, 2018) which stated that inflation in Indonesia is indeed

influenced by the money supply, but not the other way around. In contrast, *The Impact of Monetary Policy on Inflation in Indonesia* (Aji, 2025) found the opposite that money supply actually has a negative effect on inflation. These disagreements between studies suggest that monetary transmission in Indonesia is highly context-dependent, making it difficult to draw a single conclusion that applies to all time periods.

These varying results point to a significant research gap: there is still no consistent conclusion about how the exchange rate and money supply affect inflation. The conflicting outcomes ranging from positive to negative to no significant effect, indicate that the transmission mechanism changes over time and is not yet fully understood.

Furthermore, very few studies have simultaneously tested the Fed Rate, exchange rate, and money supply within a single research model to explain inflation in Indonesia, even though these three variables interact with each other through the global monetary transmission mechanism. When the Fed Rate rises, the Rupiah can weaken, capital flows out, and these conditions can affect the dynamics of money supply and domestic inflationary pressure. The limited number of studies that combine all three of these important variables creates a research gap that needs to be filled in order to provide a more complete picture of the sources of inflationary pressure in Indonesia.

Based on all the explanations above, it is clear that inflation in Indonesia is shaped by many factors, both from within the country and from global monetary dynamics. Changes in the Federal Funds Rate, movements in the exchange rate, and

the level of money supply are among the key factors that contribute to inflationary pressure. However, the inconsistent findings from previous research, combined with the limited number of studies that examine all three variables simultaneously, suggest that the understanding of inflation sources in Indonesia still needs to be deepened. Therefore, this study is conducted under the title *"The Impact of Fed Funds Rate, Exchange Rate, and Money Supply on Inflation in Indonesia"*.

## **1.2 Research Questions**

Based on the background above, the research questions of this study are as follows:

1. Does the Fed Funds Rate affect inflation in Indonesia?
2. Does the Exchange Rate affect inflation in Indonesia?
3. Does Money Supply (M2) affect inflation in Indonesia?

## **1.3 Research Objectives**

Based on the background above, the main problem of this study is inflation in Indonesia caused by various factors. From this core problem, the objectives of this research are as follows:

1. To analyze the effect of the Fed Funds Rate on inflation in Indonesia.
2. To analyze the effect of the Exchange Rate on inflation in Indonesia.
3. To analyze the effect of Money Supply (M2) on inflation in Indonesia.

## **1.4 Scope of The Study**

This research is a descriptive quantitative study using secondary data obtained from Bank Indonesia (BI), the Central Statistics Agency (BPS), and the Federal Reserve Economic Data (FRED), covering the period from 2015 to 2024.

The focus of this study is to analyze the effect of the Federal Funds Rate (FFR), the Rupiah exchange rate, and money supply on inflation in Indonesia.

### **1.5 Benefits of The Study**

In conducting this research, the author hopes the results will provide value to various parties. The benefits expected from this study are as follows:

#### **1. Theoritical Benefits**

##### **a. For the Author**

This research is expected to add to the author's knowledge, broaden their understanding, and provide new experience related to the analysis of macroeconomic variables that affect inflation in Indonesia.

##### **b. For the University**

This research is expected to contribute scientific references that can be used as informational material and guidance for other students who wish to study related topics such as inflation, global monetary policy, exchange rates, or money supply.

#### **2. Practical Benefits**

##### **a. For the Government and Monetary Authorities**

This research is expected to provide additional useful information for the government and Bank Indonesia in supporting decision-making and the formulation of monetary policy.

##### **b. This research is also expected to be useful for all parties involved and concerned with the issues studied, and can serve as a reference related to FFR, exchange rates, and money supply in the context of inflation.**