HOW IS THE RATE OF INFLATION AND MONEY SUPPLY IN THAILAND?

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ABSTRACT

Understanding the money supply process is crucial in that policymakers and related economic agents will know whether or not the central bank can conduct sound monetary policy. Most previous studies employ linear cointegration tests, which assume that the adjustment towards the long-run equilibrium is symmetric. However, when this long-run relationship is not linear, the results can be misleading. The type of research used is library research or literature study where researchers rely on various literatures to obtain research data and use a qualitative approach because the data produced is in the form of words or descriptions. Between money supply and inflation is generally positive, especially over the long term. An increase in the money supply tends to lead to higher inflation if it outpaces economic growth.

INTRODUCTION

Many economists have frequently argued that the money supply is endogenously determined (Howells and Hussein, 1998; Badarudin et al., 2011, 2013; Thenuwara and Morgan, 2017, among others). The theory of money endogeneity focuses on bank loans as a determinant of changes in the money supply. Some previous studies emphasize the effects of monetary regimes on the money supply process. These studies mainly suggest that there is no long-run relationship between the monetary base and money supply in advanced economies. Only the evidence from a developing economy of Sri Lanka lends support to the Post-Keynesian theory of money endogeneity (Thenuwara and Morgan, 2017). When the money supply is endogenously determined, the central bank will not be able to control the money supply via a change in the monetary base. In the monetarists' viewpoint, the broad money supply is exogenously determined by the central bank. Few previous studies find that the money multiplier is stable. The stability of the money multiplier implies that the money supply is determined exogenously (Baghestani and Mott, 1997; Bhatti and Khawaja, 2018; Ongan and Gocer, 2019). If there exists a stable long-run relationship between money supply and the monetary base, the money multiplier is stable and predictable. Therefore, the central bank will be able to control the money supply. Whether the money supply is endogenously or exogenously determined is a controversial issue.

Understanding the money supply process is crucial in that policymakers and related economic agents will know whether or not the central bank can conduct sound monetary policy. Most previous studies employ linear cointegration tests, which assume that the adjustment towards the long-run equilibrium is symmetric. However, when this long-run relationship is not linear, the results can be misleading. Since there is no consensus about the stability of the money multiplier, the present paper contributes to the literature in that it gives evidence of a stable money multiplier in an emerging market economy. The period of study is during the post-1997 Asian financial crisis. Nonlinear cointegration tests suggest that the long-run relationship between broad money supply and monetary base is stable.

A critical understanding of money policy in an open-economy context is essential for price stability and sustained economic growth. That is, the effectiveness of monetary policy in improving economic performance mainly relies on how well policy makers understand the monetary transmission mechanism. Thus, policy-oriented research for identifying some major channels of how monetary policy is transmitted in the economy is increasingly important in recent decades. However, particularly in Thailand, the knowledge and understanding of the monetary policy transmission mechanism is somewhat limited.

After the 1997 financial crisis, Thailand has dramatically changed the exchange rate regime and implemented economic reforms suggested by the

International Monetary Fund (IMF). Given an institutional reform of monetary policy, a managed-float exchange rate system and a rule-based monetary policy, namely monetary targeting and inflation targeting, have been introduced. In doing this, monetary transmission mechanism has been also changed. The understanding of monetary transmission mechanism in Thailand needs to be reinvestigated. However, there has been the limited number of studies that have been conducted on the monetary policy transmission mechanism in developing countries like Thailand. The contribution of this study is to provide the quantitative importance of a rule-based monetary policy on a bunch of macroeconomic variables. The study makes effort to address the issues of monetary policy transmission mechanism in Thailand. To achieve this purpose, a structural vector autoregressive model, henceforth SVAR, is built for Thailand monetary policy analysis. The identification of the SVAR model is developed based on theoretical basis and previous studies. An analysis of the impulse responses and forecast error-correction decompositions is then made to draw the empirical findings.

The identifying restrictions used in the SVAR seem to appropriately identify a monetary policy shock even though the exchange rate puzzle is found. Some empirical findings are meaningful in economic sense. First, the interest rate remains a dominant channel for monetary policy to output, consistent with the view of Disyatat and Vongsinsirikul (2003) and Kubo (2008). Second, monetary aggregate plays a more domineering role for monetary policy to output and inflation while an exchange rate channel has a decreasing significance. These results are in line with Hesse (2007) and Prasertnukul, Kim, and Kakinaka (2010). In addition, Thailand economy is sensitive to the foreign sector in both the world price of oil and the U.S. monetary policy. The results also reveal the linkage and influence of U.S. monetary policy on Thailand monetary policy.

Using monthly data during 1997M7 and 2017M12, cointegration tests are performed to estimate the long-run relationship between broad money supply and money base in Thailand. The estimation methods are linear and nonlinear cointegration tests. The results from the residual-based test for cointegration, which takes into account an unknown structural break, show that there is no cointegration between broad money supply and the monetary base. Therefore, a linear long-run relationship does not exist. When the threshold and momentum threshold cointegration tests are applied to the data, the results suggest that the long-run relationship between the two variables is nonlinear with asymmetric adjustment towards the long-run equilibrium. The results also reveal that the broad money multiplier is stable throughout the period of the floating exchange rate regime. The stability of the money multiplier found in this paper supports the monetarists' approach. Regarding the policy implications, in this case, the Bank of Thailand should maintain the current monetary regime so that it can have the power to control the money supply.

LITERATURE REVIEW

The money supply is the total amount of monetary assets available in an economy at a specific time. It includes various forms of money used by the public and held by the banking system. The money supply is typically categorized into different aggregates, each representing different levels of liquidity:

M0 (Monetary Base)

Definition: The most liquid form of money, consisting of physical currency in circulation (coins and banknotes) and reserves held by commercial banks at the central bank. Significance: Represents the foundation of a country's money supply and is controlled directly by the central bank.

M1

Definition: Includes all of M0 plus demand deposits, which are checking accounts that can be easily accessed for transactions. Components: Physical currency in circulation + demand deposits + other liquid deposits. Liquidity: Highly liquid, used for daily transactions.

M2

Definition: A broader measure of the money supply that includes M1 plus near-money, such as savings accounts, time deposits (like certificates of deposit), and money market securities. Components: M1 + savings deposits + small time deposits + retail money market mutual funds. Liquidity: Less liquid than M1 but still relatively accessible.

M3

Definition: Even broader than M2, M3 includes large time deposits, institutional money market funds, and other larger liquid assets. Components: M2 + large time deposits + institutional money market funds +

other larger liquid assets. Liquidity: Less liquid than M2, typically includes assets held by larger financial institutions.

M4 (in some countries)

Definition: Includes M3 plus other liquid assets, sometimes including less liquid financial instruments. Components: Varies by country, but generally the broadest measure of money supply. Liquidity: Least liquid, encompassing a wide range of assets.

Why the Money Supply Matters

Economic Influence: The money supply affects interest rates, inflation, and overall economic activity. An increase in the money supply can lower interest rates, leading to higher investment and consumption, potentially stimulating economic growth. However, if the money supply grows too quickly relative to the economy's output, it can lead to inflation. Monetary Policy Tool: Central banks, such as the Bank of Thailand, control the money supply through monetary policy tools like open market operations, reserve requirements, and interest rate adjustments to achieve economic goals like price stability and full employment.

Control of Money Supply

Central Bank's Role: The central bank controls the money supply through its policy decisions. For example, by buying or selling government bonds (open market operations), adjusting reserve requirements for commercial banks, and setting interest rates, it influences how much money is in circulation. The money supply is a crucial indicator for understanding economic health, and its management is key to maintaining economic stability.

The Inflation

Inflation is the rate at which the general level of prices for goods and services in an economy rises over time, leading to a decrease in the purchasing power of money. In other words, as inflation increases, each unit of currency buys fewer goods and services. Here's a more detailed look at inflation:

1) Types of Inflation

   Demand-Pull Inflation: Cause: Occurs when the demand for goods and services exceeds their supply.
   Example: If consumers have more disposable income or if the economy is growing rapidly, they may spend more, driving up prices as suppliers struggle to keep up with demand. Cost-Push Inflation: Cause: Arises when the cost of production increases, leading businesses to pass these higher costs onto consumers in the form of higher prices. Example: A rise in the price of raw materials, such as oil, or an increase in wages could lead to cost-push inflation. Built-In Inflation: Cause: Linked to adaptive expectations, where businesses and workers expect future inflation and thus increase prices and wages in anticipation, creating a self-fulfilling cycle. Example: If workers demand higher wages because they expect prices to rise, and businesses raise prices to cover the increased wage costs, this can perpetuate inflation. Imported Inflation: Cause: Occurs when the prices of imported goods rise, often due to changes in exchange rates or increases in global commodity prices. Example: If the value of a country's currency falls, imported goods become more expensive, contributing to inflation.

2) Measurement of Inflation

   Consumer Price Index (CPI): Definition: The CPI measures the average change in prices paid by consumers for a basket of goods and services over time. Components: Includes categories like food, housing, clothing, transportation, medical care, and entertainment. Usage: Widely used as an indicator of inflation and cost-of-living changes. Producer Price Index (PPI): Definition: Measures the average change in selling prices received by domestic producers for their output. Focus: Reflects price changes at the wholesale level before they reach consumers. Core Inflation: Definition: Inflation that excludes volatile items such as food and energy prices to give a clearer picture of underlying inflation trends. Importance: Used by central banks to guide monetary policy since it reflects longer-term inflation trends.

3) Causes of Inflation

   Excessive Money Supply: When the central bank increases the money supply faster than the economy's growth rate, it can lead to inflation as too much money chases too few goods. Demand Increases: If consumer demand grows faster than supply, prices will rise. Supply Shocks: Events that reduce supply, such as natural disasters or geopolitical conflicts, can lead to higher prices. Wage-Price

Spiral: When wages increase, leading to higher costs for businesses, which in turn raise prices, leading to further wage demands.

4) Impact of Inflation
Purchasing Power: Inflation reduces the purchasing power of money, meaning consumers can buy less with the same amount of money. Interest Rates: Central banks may raise interest rates to combat high inflation, making borrowing more expensive and slowing down economic activity. Uncertainty: High or unpredictable inflation can lead to uncertainty, discouraging investment and saving. Income Redistribution: Inflation can erode the real value of savings and fixed incomes, hurting savers and those on fixed pensions, while potentially benefiting borrowers who can repay loans with money that is worth less.

5) Controlling Inflation
Monetary Policy: Central banks, like the Bank of Thailand, use tools such as interest rate adjustments, open market operations, and reserve requirements to control inflation. Fiscal Policy: Governments can influence inflation through taxation and spending policies, such as reducing public spending or increasing taxes to cool down an overheated economy. Supply-Side Policies: These aim to increase productivity and efficiency in the economy, helping to keep costs and prices down.

6) Inflation Targets
Inflation Targeting: Many central banks set an explicit inflation target, such as 2%, as a guideline for monetary policy to maintain price stability. In summary, inflation is a critical economic indicator that affects every aspect of an economy, from purchasing power and savings to interest rates and economic growth. Controlling inflation is a primary objective of economic policy to ensure economic stability and sustainable growth.

METHOD

Qualitative research is research that holistically intends to understand the phenomenon of what the research subject experiences, be it his behaviour, perceptions, motivations or actions, and in a description in the form of words and language, in a special natural context and by utilising various natural methods (Moleong, 2007). Literature study is a theoretical study, references and other scientific literature related to culture, values and norms that develop in the social situation under study (Sugiyono, 2012).

The type of research used is library research or literature study where researchers rely on various literatures to obtain research data and use a qualitative approach because the data produced is in the form of words or descriptions. Library research or literature research is research where the place of study is literature or literature (Purwanto, 2008). In this research, research is conducted by utilising studies which are similar or related. After collecting various literature related to the study under study, the researcher makes observations then the object of research is explored through various library information both from books, natural journals, digital data, documents and so on in order to analyse monetary, fiscal and green trade indicators in Indonesia

RESULTS AND DISCUSSION

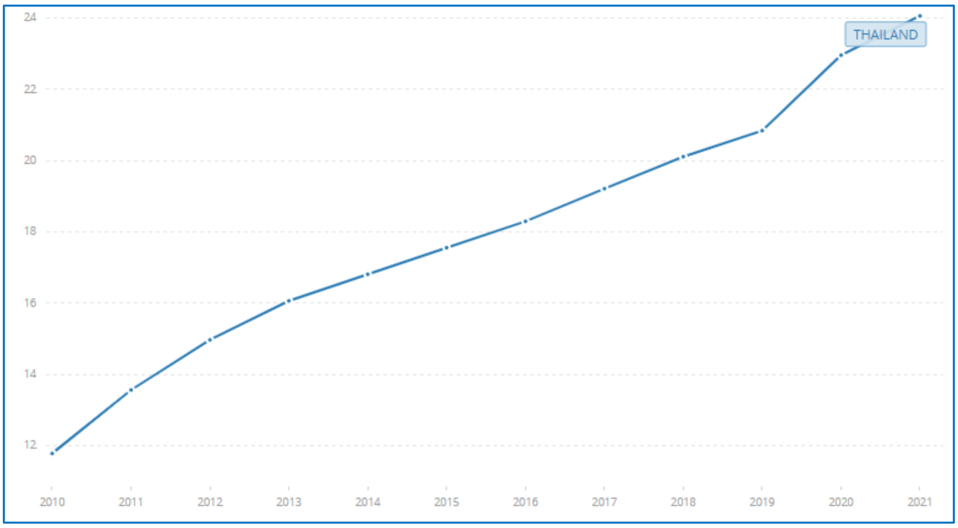
Ordinary people generally (perhaps some of us) are familiar with the new currency trend but did not realize what was actually happening. Throughout the month of fasting until the feast of the government, through Bank Indonesia, increase the amount of money circulating in the community. This is caused by the high demand for cash and the high level of consumption throughout the day even when Ramadhan.

The all of money circulating in the community is called money supply. Money Supply is the amount of money circulating in the economy and available for trading. Based on Keynes's theory of money supply (Karpetis, 2006) stated that increase in the money supply has a positive effect on output and economic growth. Due to the increasing the money supply is expected that the consumption rate will be increased so as to encourage increased economic growth. If there is excess supply of money, Bank Indonesia will take the policy lowering interest rates. These conditions may encourage investors to invest in Indonesia which in turn creates an increase in output and boost economic growth. The money supply also has a close relationship with interest rates in a country.

According to Apir Justine (2015) about the quantity theory of money by Irving Fisher, he said that when the money supply increase, the price of goods and services will also increase. So that, increased circulation of money in the community is one of the causes of inflation and this is driving the rising prices of goods and services in a country. If a country is in a state of inflation, the government should reduce the level of money supply.

Money supply is a very sensitive variable, the size of which determines the pace of any economic activities. Apart from being a powerful instrument of monetary policy, its expansion or contraction dictates the growth in investment and output of any economy. It is therefore the usual slogan of the Monetarist school of thought that money matters. They argued that changes in the amount of money in the circulation are the sources of other economic changes. In other words, the changes in the size of money supply have a number of implications on the macroeconomics variables especially inflation.

Money is an object that essentially serves as medium of exchange, store of value, unit of account, standard for deferred payment. Bank Indonesia as the central bank of Indonesia that trying to implement the function of monetary authorities whose job was to issued and circulated the money. If we remember again a flashback during Eid yesterday most of us must realize is receiving new money still seamlessly with its distinctive odor.



Source: World Bank 2021

Figure 1. The Money Supply of Thailand, 2010-2021

The relationship between money supply and inflation is a fundamental concept in economics, and it applies to Thailand as well. Here’s a summary of how these factors interact in the Thai economy:

Money Supply in Thailand

Definition: The money supply refers to the total amount of money—cash, coins, and balances in bank accounts—available in an economy at a particular time.Measurement: Thailand's money supply is typically measured by various aggregates like M1, M2, and M3. M1 includes currency in circulation and demand deposits. M2 adds time deposits and savings deposits to M1. M3 includes large time deposits, institutional money market funds, and other larger liquid assets. Monetary Policy: The Bank of Thailand (BoT) manages the money supply through its monetary policy tools, including open market operations, reserve requirements, and interest rates.

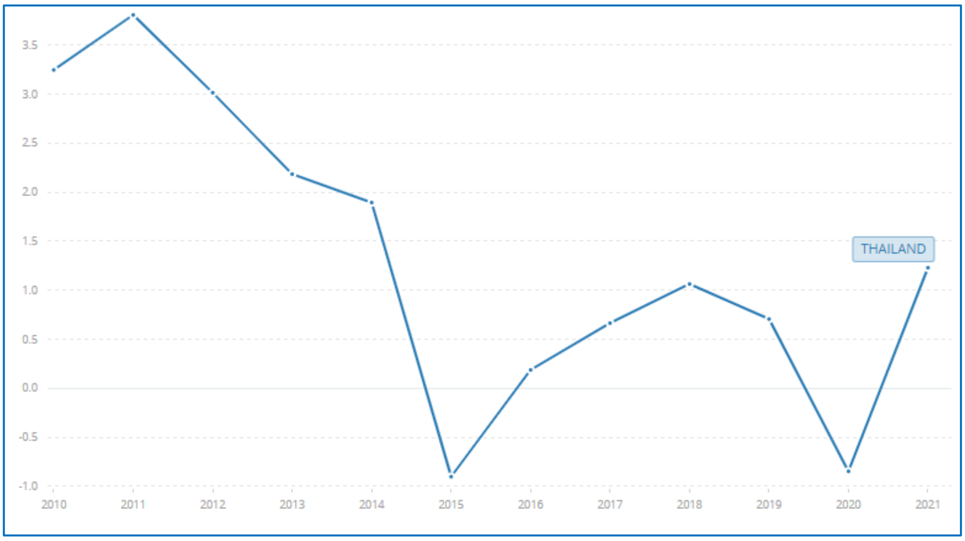
Inflation in Thailand

Definition: Inflation refers to the rate at which the general level of prices for goods and services rises, eroding purchasing power. Measurement: In Thailand, inflation is measured by the Consumer Price Index (CPI), which tracks changes in the price level of a basket of consumer goods and services.

Types of Inflation: (a) Demand-pull inflation: Occurs when demand for goods and services exceeds supply. Cost-push inflation: Occurs when production costs increase, leading to higher prices for goods and services. (b) Imported inflation: Results from increases in the cost of imports, particularly important in Thailand due to its open economy.

Relationship Between Money Supply and Inflation

a) Quantity Theory of Money: This economic theory suggest that if the money supply grows faster than real output in an economy, inflation will result. The equation **MV = PQ** (where M is money supply, V is the velocity of money, P is the price level, and Q is the real output) highlights this relationship.
b) Monetary Expansion: If the BoT increases the money supply without a corresponding increase in economic output, inflationary pressures might build up as more money chases the same amount of goods and services.
c) Historical Context in Thailand: Over the years, Thailand has experienced periods of varying inflation rates, influenced by changes in money supply, economic growth, and external factors like global commodity prices and exchange rate fluctuations.



Source: World Bank 2021
Figure 2. The Inflation of Thailand, 2010-2021

Recent Trends and Monetary Policy in Thailand

Low Inflation Environment: In recent years, Thailand has maintained relatively low inflation, partly due to cautious monetary policy, slow economic growth, and subdued demand. COVID-19 Impact: The pandemic led to an economic contraction, which affected both the money supply and inflation rates. The BoT implemented various measures to stabilize the economy, including interest rate cuts and liquidity support. Current Policy Focus: The BoT aims to balance economic recovery with price stability, adjusting the money supply as needed to support growth without triggering excessive inflation.

Challenges and Outlook

External Factors: Thailand is susceptible to external shocks, such as changes in global commodity prices, which can influence inflation regardless of domestic money supply. Structural Issues: Long-term structural issues, such as an aging population and reliance on exports, also impact the money supply and inflation dynamics. Inflation Targeting: The BoT continues to focus on inflation targeting as a key monetary policy framework, aiming to keep inflation within a specified range to ensure economic stability. The money supply and inflation in Thailand are closely intertwined, with the Bank of Thailand playing a crucial role in managing this relationship to support economic stability and growth.

Short-Term: In the short term, the relationship between money supply and inflation can be influenced by various factors, such as consumer confidence, expectations, and temporary shocks (like supply chain disruptions). For instance, an increase in money supply might not immediately lead to inflation if demand remains low. Long-Term: Over the long term, however, most economists agree that sustained increases in the money supply that outpace economic growth will eventually lead to inflation.

Empirical Studies: Research often shows a strong correlation between long-term money supply growth and inflation. However, this relationship can be weak or delayed in the short term due to various economic factors, including monetary policy, global economic conditions, and the state of the economy.

Developed vs. Developing Economies: The relationship can also vary between developed and developing economies. In some developing countries, where institutions may be less effective, an increase in money supply can lead to rapid inflation. In more developed economies with strong institutions, the relationship may be more controlled.

CONCLUSION

Between money supply and inflation is generally positive, especially over the long term. An increase in the money supply tends to lead to higher inflation if it outpaces economic growth. However, the relationship can be influenced by other factors, such as the velocity of money, economic output, and the effectiveness of monetary policy. Therefore, while money supply is a crucial determinant of inflation, it is not the only factor, and the correlation may vary in different economic contexts and timeframes.

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