CHAPTER I

INTRODUCTION

A. Background of Research

The concept of Optimal Currency Area (OCA) has garnered significant attention, regional economic integration has become a primary agenda for many economic blocs worldwide. Economic integration refers to the collaborative efforts of countries within a region to reduce or eliminate barriers to trade and investment, with the goal of creating a more transparent and efficient market. This concept is proposed as a strategic solution to address regional economic challenges and enhance financial cooperation among member countries. This is particularly relevant now as the global financial landscape undergoes significant changes, marked by efforts to reduce reliance on the US dollar, known as dedollarization, and the rise of the BRICS nations Brazil, Russia, India, China, and South Africa (Thanakijsombat, 2016). The US Dollar System, which has been the most influential entity in the global financial arena, faces increasing challenges from peripheral monetary regions and new powers aiming to expand their currency holdings (Liu & Papa, 2022). Consequently, dollarization occurs, which refers to the practice of countries adopting the US dollar as their main or official currency. The BRICS countries and other emerging powers advocate for dedollarization to decrease their dependence on the US dollar and mitigate associated risks. These nations are implementing various approaches to enhance the standing of their currencies in the real economy, finance, and investment attractiveness with the goal of expanding the global financial system and reducing the supremacy of the US dollar.

The formation of an Optimal Currency Area (OCA) is increasingly relevant, especially with the trends toward dedollarization and the establishment of BRICS+. OCA enhances exchange rate stability, reducing the impact of market volatility and speculation by decreasing reliance on the US dollar. It also facilitates deeper economic integration, making cross-border trade and investment more efficient. In the face of global economic uncertainty, an OCA provides better adaptability for member countries in responding to policy changes and economic challenges worldwide. The theory of Optimal Currency Areas (OCA) was first adopted and adapted in the Eurozone, where member countries of the European Union adopted the Euro as their common currency as a unifying currency. Thorough evaluations of the costs, benefits, and prerequisites for establishing a regional currency system are essential (Bayoumi & Mauro, 2001).

The concept of optimum currency area first emerged with the euro after World War II to strengthen political and economic cooperation among European countries and to prevent further hostilities. One of the main motivations behind the creation of the euro was the desire to deepen European integration, as outlined in the Maastricht Treaty of 1992 (Spolaore, 2013), which established the Economic and Monetary Union (EMU) and laid the groundwork for the European Union (EU). In the 1970s, the establishment of the European Monetary System marked the first progress towards a monetary union. This system aimed to stabilize the exchange rates among the involved countries. The agreement outlines the criteria and schedule for the transition to the Euro. The debut of the euro is celebrated as a significant achievement, representing the unification of Europe and serving to strengthen the continent's economic competitiveness globally. The introduction of the single currency was expected to promote increased price clarity, reduce transaction costs, and minimize exchange rate fluctuations. These factors would in turn encourage an increase in trade and investment within the Eurozone. Additionally, the agreement sets forth convergence requirements price stability, solid public finances, exchange rate stability, and convergent interest rates that member states must meet to adopt the euro (Wiley & Ltd, 1998).

The integration of national financial markets into the Eurozone has also been a significant advantage, as it has resulted in deeper and more liquid financial markets. This has facilitated access to financing for businesses and governments and has spurred investment and stimulated economic activity. The convergence of interest rates across the Eurozone has particularly benefited the peripheral nations, which have traditionally experienced high borrowing costs. As a result, these nations have been able to participate in a surge in consumption and real estate, resulting in high economic growth and increased government revenue. The euro did fulfill some of these objectives, leading to a higher level of financial and economic integration among the countries in the Eurozone (Lee & Kim, 2020). However, the benefits of the monetary union were not evenly allocated, and the 2008 global financial crisis revealed substantial weaknesses within the Eurozone. The crisis in the euro area has highlighted the need for an adequate adjustment mechanism to address asymmetric shocks, as well as the links between banking and sovereign crises (Gibson et al., 2014). Additionally, the costs of adjusting to these adverse shocks have been significant, underscoring the importance of structural reforms and effective governance in the eurozone (Streit, 2011).

The European Monetary Union (EMU) has encountered several obstacles since its establishment, with the sovereign debt crisis of the late 2000s serving as a particularly substantial examination of the currency's durability. Despite the upheaval, the euro has successfully persevered, contradicting the forecasts of many who anticipated its demise. The "euro paradox," a phenomenon that has attracted significant academic scrutiny, refers to a situation that has been extensively studied. Specific countries, including Greece, Italy, Spain, and Portugal, saw severe impacts from the crisis. This resulted in sovereign debt crises and economic downturns that posed a danger to the viability of the whole Eurozone (Hodson, 2010). The absence of centralized fiscal policy procedures and banking union posed challenges in coordinating a prompt crisis response, resulting in prolonged economic uncertainty and social unrest in the nations impacted (Lane, 2012). The euro's durability may be ascribed to many causes, the euro has established a consistent and consolidated monetary policy for the nations involved, hence decreasing fluctuations in exchange rates and minimizing transaction costs (Caporaso & Kim, 2012).

The facilitation of cross-border trade and investment has resulted in an increase in economic development and integration inside the Eurozone. The euro currency has promoted a feeling of European identity, enhancing the political and economic connections between countries that are part of the European Union. The Eurozone has shown a notable level of economic resilience, with several member nations, like Poland, enduring the crisis very well (Masik, 2016). Resilience may also be ascribed to variables such as the stability of the macroeconomy, the practice of fiscal restraint, and a sophisticated system of innovation and learning (Masik, 2016). The euro's capacity to withstand recurring difficulties serves as evidence of the European Union's resolve and flexibility. The Euro continues to play a crucial role in the economic and political environment of Europe. The adoption of a common currency has promoted more collaboration and synchronization of policies among member states, but the whole advantages of monetary union have not been completely achieved yet (Portes & Rey, 1998). The future of the Eurozone hinges on the capacity of its members to tackle the fundamental structural problems and to further strengthen economic and political integration, with the aim of bolstering the durability and steadiness of the monetary union (Lane, 2012). The establishment of the Euro was a daring and ambitious undertaking, and its ongoing development will be pivotal in determining the economic and political path of the European continent. The enhanced diversity and integration of domestic financial markets, fostered by the Eurozone, has bolstered the economic resilience of the member nations and positioned them for sustained prosperity in the long run.

The history of the Euro and Economic Crisis provides a useful starting point for analyzing the feasibility of such an arrangement in the ASEAN region. The path to the European Monetary Union was fraught with challenges, as political commitment and economic convergence were critical preconditions for the successful adoption of a common currency (Peritz et al., 2022). The economic potential for closer integration within ASEAN is strong, and the current wave of bilateral free-trade agreements in the region may generate positive gains (Plummer & Wignaraja, 2007). Allah swt speaks in Qs. Al- Baqarah [2:275]

الْبَيْعُ اِنَّمَا قَالُوْٓا بِاَنَّهُمْ لِكَ ذٰ ۗالْمَسِّ مِنَ الشَّيْطٰنُ يَتَخَبَّطُهُ الَّذِيْ يَقُوْمُ كَمَا اِلَّا يَقُوْمُوْنَ لَا الرِّبٰوا يَأْكُلُوْنَ اَلَّذِيْنَ

ۗاللّٰهِ اِلَى وَاَمْرُهٗٓ سَلَفَۗ مَا فَلَهٗ فَانْتَهٰى رَّبِّهٖ مِّنْ مَوْعِظَةٌ جَاۤءَهٗ فَمَنْ ۗ الرِّبٰوا وَحَرَّمَ الْبَيْعَ اللّٰهُ وَاَحَلَّ ۘ الرِّبٰوا مِثْلُ

خٰلِدُوْنَ فِيْهَا هُمْ ۚالنَّارِ اَصْحٰبُ فَاُولٰۤىِٕكَ عَادَ وَمَنْ

“Those who consume interest cannot stand [on the Day of Resurrection] except as one stands who is being beaten by Satan into insanity. That is because they say, "Trade is [just] like interest." But Allah has permitted trade and has forbidden interest. So, whoever has received an admonition from his Lord and desists may have what is past, and his affair rests with Allah. But whoever returns to [dealing in interest or usury] - those are the companions of the Fire; they will abide eternally therein.”

This verse emphasizes the importance of a fair economic system free of interest practices, which often lead to economic instability. The key premise of this theory is that by forming a currency union, participating countries can potentially reap benefits such as reduced transaction costs, increased trade and investment flows, and greater macroeconomic stability through the elimination of exchange rate fluctuations (Palludeto & Abouchedid , 2016).

The Association of Southeast Asian Nations is a regional intergovernmental organization established in 1967 with the primary goal of promoting economic, political, and social cooperation among its member states. The formation of ASEAN was driven by a desire for regional stability and development, as the founding members, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, sought to secure peace and prosperity in the aftermath of the Cold War era (Tan, 2008). The diverse economic structures and varying levels of development among ASEAN countries can be viewed as a strength rather than a weakness when it comes to the potential for a shared currency system. Despite the striking economic disparities within the region, this diversity can contribute to the mutual enhancement and strengthening of a shared currency, ultimately promoting overall resilience and stability. The ASEAN region has experienced remarkable economic growth in recent decades, with the countries acquiring a reputation as "engines of the global economy" (Mundula & Salustri, 2012). This growth can be attributed to a range of factors, including the liberalization of trade and services, the influx of investments, and the idea of a common market and productive basis to be realized within 2015. It is important not to overlook the potential benefits of a common currency, such as increased trade, investment, and financial integration, as well as improvements in economic stability and resilience (Stubbs, 1992). This is a strong reason for ASEAN to continue exploring this potential during the global economy, marked by trends such as dedollarization and the emergence of alternative economic blocs, ASEAN's efforts to establish a single currency can be seen as a strategic move to strengthen their regional economic integration and enhance their global competitiveness (Thanakijsombat, 2016). ASEAN countries have many important attributes that can facilitate the potential formation of an integrated currency zone, including a significant proportion of the total ASEAN population, their prominent position in ASEAN trade, and a generally uniform level of economic advancement (Wiranatakusuma et al., 2013). In line with the Optimal Currency Area (OCA) theory proposed by Robert Mundell, the strategic and economic reasons for ASEAN's push towards a single currency necessitate an examination of why the ASEAN-5 countries Indonesia, Malaysia, Thailand, the Philippines, and Singapore are more suited for this implementation compared to other ASEAN nations. The forthcoming Table 1.1 will provide a comparative analysis of gross domestic product (GDP), inflation rates, and trade volumes between ASEAN-5 and other ASEAN countries. This data underpins the assertion that ASEAN-5 exhibits solid economic performance and stable market conditions, which are critical factors for the successful adoption of a single currency. These indicators not only reflect the economic stability required by Mundell's OCA criteria but also emphasize the deep economic integration and synchronization needed to support a unified monetary system. A significant influence on the economic progress of these countries, especially in terms of their contribution to Gross Domestic Product (GDP). The top countries are selected based on a combination of high GDP, controlled inflation, interest rates, and total reserves minus gold. All these factors contribute to strong economic stability and prosperity in the ASEAN region. Stability is reflected in the maintenance of steady inflation, stable economic growth, and robust foreign currency reserves (Frankel & Rose, 1996). An important aspect in the context of OCA is achieving balance in economic disparities across different regions within the same currency zone (McKinnon,1963).

TABLE 1. 1.

ASEAN Macroeconomics Performance

COUNTRY	Real GDP (Billions USD)	Inflation (annual %)	Interest Rate (annual %)	Total Reserve minus Gold (Billions USD)
Malaysia	$1.57	2.5	7.32	$110.87
Indonesia	$12.30	3.7	7.28	$141.14
Singapore	$532.26	4.8	4.00	$344.59
Philippines	$21.05	5.9	6.25	$93.19
Thailand	$10.87	1.2	3.03	$208.28
Laos	$143.22	31.2	7.50	$1.767
Timor Leste	$1.85	2.8	35.48	$781.99
Cambodia	$62.65	2.1	0.87	$19.99
Vietnam	$5.83	3.3	7.28	$86.50
Brunei	$18.96	0.4	21.12	$4.18
Myanmar	$77.80	27.1	7.00	$7.23

Source: worldbank (2023)

Table 1.1 The data shows the macroeconomic data of all member countries of the Association of Southeast Asian Nations (ASEAN) since 2023. The ASEAN-5 countries are crucial for understanding regional monetary policy and economic integration efforts. The ASEAN-5 economies also have exhibited similar growth patterns and macroeconomic characteristics, despite some variations in timing, resource dependence, and industrial structure (Dalu, 2014). Due to their strong economic foundations, including stable growth rates, well-managed inflation, and healthy balance of payments positions, these countries are less vulnerable to unexpected shocks that could potentially disrupt the unified currency. Their extensive economic integration, marked by substantial cross-border trade and investment, enables the implementation of a single currency by reducing the likelihood of economic disparities. This perspective is supported by economic research, including Mundell's OCA theory (1961), which emphasizes the importance of characteristics such as economic stability and strong integration in effectively forming a single currency area. For these reasons, the ASEAN-5 has a stronger framework and is better prepared to implement an Optimal Currency Area (OCA) compared to other ASEAN members.

The ASEAN-5 faces numerous challenges in realizing this vision, including differing levels of economic development, unaligned monetary policies, and global market volatility, making the adoption of a single fiat currency a complex task. As a result, the use of a commodity currency as an anchor has emerged as a potential solution. A commodity currency is a type of currency whose value is directly tied to a specific commodity. This currency aims to stabilize its value by linking it to commodities with intrinsic and stable values, unlike fiat currencies, whose value depends on public trust and government policies. This helps reduce currency volatility, which is highly beneficial for countries with less stable economies or those vulnerable to inflation. Since commodity prices tend to rise with inflation, a currency linked to commodities can provide protection against the erosion of purchasing power (Lusinyan et al., 2020). The value of commodities is generally easier to monitor and less subjective compared to fiat currencies, which can be influenced by various economic and political factors. This provides a higher level of predictability and transparency in currency valuation. Adopting a commodity-based currency as an anchor in the financial system can offer significant stability and confidence, which is crucial for establishing an optimal currency area, such as the one you are researching in the context of ASEAN-5.

This integration is an effort to identify commodities suitable to serve as anchors for a single currency, a key element in creating a stable and efficient monetary system in the region. The selection of such commodities is critical, as it will not only determine the currency's stability but also impact the effectiveness of monetary policy and the overall economic performance of ASEAN-5 (Ahmed & Mazlan, 2021). The 19th century was the key period of bimetallism, especially in Europe and the United States. The issue of bimetallism, the use of both gold and silver as legal tender, as nations grappled with the challenges of maintaining a stable monetary system (Martin, 1968). While supporters of bimetallism argued that it provided greater flexibility and stability, opponents contended that it was inherently flawed and would lead to economic instability. The transition after the Napoleonic Wars, when the UK formally adopted the gold standard in 1816, making gold the sole standard for currency valuation. Gold is known as a stable asset and a protector of value in a variety of economic conditions, making it an attractive choice as an anchor currency (Gorain & Lakshmanan, 2019). By introducing a commodity currency as an anchor, countries in a regional block like ASEAN-5 can facilitate cross-border trade and investment by reducing currency exchange risks. The internationally measurable and observable value of commodities offers greater transparency in assessing currency value. This reduces currency manipulation and speculation, bringing more trust and stability to the financial system.

The selection of commodity as candidates for forming a single currency anchor in the ASEAN-5 Optimum Currency Area (OCA) stems from their significant global economic roles and resilience during times of economic uncertainty. Commodities like gold, silver, and oil are indeed pivotal in the global economic landscape, serving not only as benchmarks of economic health but also as stabilizing forces during periods of economic uncertainty. Their intrinsic values and limited susceptibility to inflation make them ideal candidates for anchoring a regional currency system like the ASEAN-5 Optimum Currency Area (OCA). This foundational stability could help mitigate exchange rate volatility and enhance economic integration among ASEAN-5 nations, potentially leading to a more robust regional economy.

Transitioning from the pitfalls of fiat currency, the narrative of economic stability and sustainability finds solace in the concept of commodities-backed currency systems. Such systems, historically rooted in the gold standard, tether the currency's value to tangible assets like gold, silver, or other commodities with intrinsic value. This fundamental shift from fiat's abstract trust to tangible assets' concrete value proposes a panacea to many of the ailments plaguing the current global financial system. The research conducted by McFarlane in 2012 also shows that exchange rates are more volatile than the real price of commodity goods, which strengthens the argument for adopting a unit of value based on one or more real physical commodities. The prominent weakness of the fiat money is largely affected by the dismemberment of the market forces including the rules governing the world's major currencies (Hermele, 2014)

The allure of commodities, particularly gold, as a basis for currency, is not a new concept. Throughout history, gold has exemplified a stable store of value, unaffected by the whims of government policies or the volatility of market sentiments. Its value is universal, transcending borders and cultures, and its scarcity ensures its worth is maintained over time. By anchoring currency to such commodities, a nation can imbue its monetary system with the inherent stability and reliability these assets represent. This is because commodities derived from mineral extraction are usually regarded as non-replaceable, to the extent that there is widespread concern that some sources will become exhausted (McFarlane, 2012). This stability is crucial in avoiding the pitfalls of inflation and currency devaluation that so often beset fiat currencies.

The energy commodity market is by far the largest in terms of contracts traded and turnover. While there are many types of energy commodities available to trade, it's the black gold which is traded the most. Brent Crude Oil is mostly traded on the ICE (Intercontinental Exchange), whereas WTI is mostly traded on CME (Chicago Mercantile Exchange). The Brent Crude Oil production is more scalable than the competing WTI. In early 2024, Brent crude prices climbed to $90 per barrel, underlining the commodity's economic importance amidst geopolitical tensions. Brent oil and WTI oil are the two most widely traded types of crude oil in the world, whose prices are widely monitored and have high liquidity. The spread between WTI and Brent crude oil prices has widened and returned to the mean, with Brent being claimed as the global oil index (Akbulaev, 2023). West Texas Intermediate (WTI) crude oil is a major index for oil purchases worldwide and is traditionally more applicable in the USA, while Brent is a European index (Berk, 2016). Choice of oil is influenced by the prices of Brent and West Texas crude oil have a significant impact on the prices on international Trade.

The data obtained from The Observatory of Economic Complexity (OEC) shows that: In 2022, Crude Petroleum were the world's 1st most traded product, with a total trade of $1.45T. Between 2021 and 2022 the exports of Crude Petroleum grew by 46.1%, from $993B to $1.45T. Trade in Crude Petroleum represent 6.13%

of total world trade. Indonesia crude petroleum export in Asia region is 0.31 percent or $2.02 Billion as of 2022. As of 2022, Malaysia export 1.54% or $1.2 Billion as a total of trade in Asia region Thailand exports the total of 0.077 percent of Crude petroleum in Asia region equating into $507 Million as of 2022 Philippines export of Crude petroleum in Asia making up to 0.058% or $385 Million of the continent's trade volume. Singapore export of Crude Petroleum in 2022 making up to 0.015 percent of the trade volume that equates to $96.6 Million. Brent crude oil is a major index for oil purchases worldwide and is used to set prices for over 70% of global crude oil (Imsirovic, 2023).

Commodities such as gold and silver have long been regarded as stable stores of value. They provide a strong and less volatile foundation than fiat currencies, which are often influenced by monetary policy and domestic economic factors. Gold prices extended a three-year surge, reaching all-time highs amid safe-haven flows. Gold holds a special status among financial assets, often rising in price during periods of elevated geopolitical and policy uncertainty, including conflicts. These price increases followed notable fluctuations in oil prices and, more generally, a plateauing of many commodity prices in the first quarter of the year Gold has seen increasing demand in 2024, with prices averaging $2,100 per troy ounce, driven by central bank purchases in emerging markets and developing economies. Silver, which holds importance as both a financial and industrial asset, particularly due to its application in vehicle electrification and renewable energy, is also projected to see a 7% price increase in 2024, further supporting its strength as a commodity anchor (World Bank, 2024). In 2022, Gold is the world's 7th most traded product, with a total trade of $478B. Between 2021 and 2022 the exports of Gold grew by 9.38%, from $437B to $478B. Trade in Gold represent 2.02% of total world trade. Indonesia is one of the exporters of gold in Asia, making up the total of 1.31 percent or $1.55 Billion as of 2022.As of 2022, Malaysia export 0.35% or $410 million as a total of trade in Asia region. Thailand exports the total of 5.73 percent of gold in Asia region equating into $6.79 Billion as of 2022. Philippines being one of the largest exporters of gold in Asia, making up to 7.51% or $8.9 Billion of the continent’s trade volume. Singapore is the second-largest exporter of Gold in 2022, making up to 11.1 percent of the trade volume that equates to $13.1 billion. In 2022, Silver the world's 156th most traded product, with a total trade of $30.4B. Between 2021 and 2022 the exports of Silver decreased by -19.9%, from $37.9B to $30.4B. Trade in Silver represent 0.13% of total world trade. Indonesia Silver export in Asia region is 0.087 percent or $108 Million as of 2022. As of 2022, Malaysia export 1.54% or $1.2 Billion as a total of trade in Asia region. Thailand exports the total of 0.24 percent of Silver in Asia region equating into $29.3 Million as of 2022. Philippines export of Silver in Asia making up to 0.32% or $39.2 Million of the continent’s trade volume. Singapore export of Silver in 2022, making up to 0.64 percent of the trade volume that equates to $79.7 Million. The choice of gold and silver as commodity currencies is influenced by their historical significance as stores of value and currencies, as well as their profitability being influenced by factors such as investor sentiment. These commodities are crucial for stabilizing a single currency system due to their ability to withstand external shocks, making them reliable options for a currency anchor. These commodities are employed in numerous industrial applications and draw substantial investment (Akbulaev, 2023).

For this research, it is important to choose a powerful currency as a benchmark to determine the most stable currency the commodity currency will be pegging to. The United States dollar (USD), the British pound sterling (GBP), the Chinese yuan (CNY), and the Japanese yen (JPY) are widely recognized as influential currencies that can provide valuable insights into a country's currency viability (Lusinyan et al., 2020). The dominance of the US dollar as a reserve currency, the historical prominence of the British pound, the growing significance of the Chinese yuan, and the stability of the Japanese yen offer a comprehensive framework for evaluating a country's currency strength (Maggiori et al., 2019). These currencies are widely used for trade invoicing, cross-border investment, and as exchange rate anchors, making them essential benchmarks in the assessment of currency viability. The dynamic behavior of the real exchange rates of these currencies, as observed in the pegged regimes of the Chinese yuan and the Malaysian ringgit, provides valuable insights into the stability and convergence of a country's currency (Yong-jian et al., 2009). The similarity in the speed of convergence of the real exchange rates of these pegged currencies against floating currencies suggests that the anchor currency, such as the US dollar, plays a crucial role in shaping the overall currency dynamics (Yong-jian et al., 2009).

Recent experiences with currency substitution, particularly in the wake of the 2007 financial crisis, have highlighted the importance of evaluating the determinants of currency choice in the evolving international monetary system (Kumamoto, 2014). As the US dollar and the euro have faced depreciations, it is essential to investigate whether the factors driving currency substitution have shifted, further emphasizing the need for a comprehensive analysis of the key currencies with such a foundation, it is essential and potential to establish an Optimum Currency Area with a strong single currency, ASEAN-5 countries can enhance their collective ability to withstand external shocks, such as financial crises or global economic recessions, and promote greater economic resilience and recovery (Kumamoto, 2014).

The research aims to address this complexity by using a multi-faceted approach that integrates macroeconomic data and commodity market indicators. By analyzing gross domestic product (GDP), inflation rates, overnight interest rates, and international reserves of the ASEAN-5 economy, along with the prices and trading volumes of gold, silver, West Texas oil, and Brent crude oil, the study seeks to identify correlations and patterns that can inform the choice of a decent currency anchor. This effort is vital to fostering regional economic integration and stability among the member states, namely Indonesia, Malaysia, Singapore, Thailand, and the Philippines. The choice of a single currency anchor has significant implications for monetary policy effectiveness, exchange-rate stability, and overall economic performance in the region. The need to identify the commodity as a single currency anchor in the creation of the ASEAN-5 Optical Currency Area lies in the potential to enhance regional economic stability, promote deeper economic integration, and reduce currency-related risks within member countries. By adopting a common currency threat, ASEAN-5 countries can adjust their monetary policy more effectively, reduce exchange rate volatility, and enhance macroeconomic stability. That can attract foreign investment, promote regional trade, and facilitate economic development throughout the region (Direktorat Jenderal Minyak dan Gas Bumi, 2020). By establishing an Optimum Currency Zone with a strong single currency threat, ASEAN-5 countries can enhance their collective ability to withstand external shocks, such as a financial crisis or a global economic recession and promote greater economic resilience and recovery.

Based on the background above, this study takes the title "A Proposed Formation for A Single Currency Area in Asean-5 Countries Based On Commodity Currencies". This research differs significantly from previous studies through an approach that considers the use of commodity currencies in the creation of a single currency and performs tests against four commodities such as gold, silver, west texas oil and brent crude oil and ASEAN-5 currency that are attached to the four major of the U.S. dollar, pound sterling, Chinese yuan and Japanese yen. The study employs a combined approach that integrates the Early Warning System (EWS) method with a signal extraction technique to achieve a comprehensive understanding of threshold levels for each economic variable. This methodology is designed to enhance the resilience of commodity-based currencies by detecting early signs of potential economic problems. Such proactive monitoring facilitates timely interventions and the implementation of appropriate preventive measures to mitigate risks. In addition to the EWS, the study utilizes the Autoregressive Integrated Moving Average (ARIMA) model to forecast the future stability of the selected ASEAN-5 Optimum Currency Area (OCA). ARIMA is a powerful statistical tool for time-series forecasting that analyzes historical data to predict future trends. By applying ARIMA, the study projects the future resilience of the chosen country leading Phase 1 of the OCA for the years 2024–2025. This forecasting is crucial for assessing how the leading country is expected to perform in the coming years, ensuring that it is well-positioned to spearhead the OCA initiative effectively.

B. Limitations of the Research

Acknowledging these limitations is crucial for a comprehensive understanding of the results and for guiding future research.

1. The Research Concentrates on a Commodity Currencies and conducted in ASEAN-5 (Indonesia, Malaysia, Singapore, Thailand, Philippines).
2. The analysis method combining the Early Warning System (EWS) using a signal-based approach with the ARIMA model. The research data period is 2010-2023.

3. The research indicator uses commodity currency (Gold, Silver, Brent Crude Oil, and West Texas Oil) and macroeconomics indicator (GDP, Inflation, Overnight Interest Rate, and Total Reserve minus Gold).

C. Research Questions

The focus of this research problem is:

1. What is the currency considered as the best commodity currency anchor (gold, silver, west Texas oil or brent crude oil) for ASEAN-5 single currency formation?
2. What are the criteria for developing an optimum currency area amongst ASEAN-5 countries?
3. What countries are qualified to single currency formation in ASEAN-5 countries?

D. Research Objectives

The aims of this research based on the problem formulation**:**

1. Determine which commodity currency (gold, silver, west Texas oil or brent crude oil) offers the most stability and suitability as the anchor for a single currency in ASEAN-5.
2. Identify the criteria needed to establish an Optimum Currency Area (OCA) among the ASEAN-5 countries.

3. Assess the readiness and qualifications of individual ASEAN-5 countries to participate in the formation of a single currency based on the established OCA criteria.

E. Research Benefits

The result of this research is expected to provide benefits for several parties:

1. Theoretical Significance

   This study makes a theoretical contribution to monetary economics and regional integration by exploring the feasibility of using a commodity as a single currency anchor for the ASEAN-5 Optimum Currency Area.

2. Practical Significance

   a. Industries

      For Industries operating within ASEAN-5 can benefit from a single currency based on commodity currencies like gold, silver, Brent crude oil, and WTI. This would reduce transaction costs, enhance competitiveness, and provide price stability. This is especially beneficial for industries relying on global trade. A stable, unified currency would also improve the investment climate, attracting more foreign and domestic investment into industries sensitive to currency risks, promoting growth in sectors like manufacturing, energy, and technology.

b. Practitioners

For financial practitioners, including traders, analysts, and business professionals, are embracing the idea of a single ASEAN-5 currency anchored by commodities. This would provide improved financial planning and hedging tools, enabling easier forecasting of market movements and risk mitigation. The simplification of transactions across ASEAN-5 nations would remove trade barriers, improve efficiency, and eliminate exchange rate volatility. This would also facilitate long-term investment decisions, empowering financial practitioners to engage in more reliable planning and strategic forecasting.

c. Policy Maker

For policy makers in ASEAN-5 countries are considering the establishment of a single ASEAN-5 currency anchored by key commodities to enhance economic stability. This would mitigate the volatility of individual national currencies and reduce vulnerability to external shocks. A unified currency would accelerate regional economic integration, allowing policy makers to coordinate monetary and fiscal policies more effectively. This would create a stronger, more cohesive regional economy capable of competing globally. A more efficient monetary policy environment would also benefit policy makers, reducing risks of isolated currency crises and making it easier to manage economic growth across the region.

d. Universitas Muhammadiyah Yogyakarta

The results of this research are expected to add reading references and information so that in the future it can be used as a means of adding broader insights and reference.