CHAPTER I
INTRODUCTION

A. Background of Research

The story of the European Monetary Union (EMU) and the Euro is one that is intertwined with the broader history of European integration and the continent's pursuit of economic and political unity. The foundations for the EMU were laid in the 1950s with the establishment of the European Coal and Steel Community, which paved the way for the creation of the European Economic Community in 1958. Over the subsequent decades, these early efforts at economic cooperation evolved into more ambitious plans for monetary integration, driven by the recognition that a shared currency could further enhance trade and economic ties across the continent. The creation of the Euro and the Eurozone has been a significant development in the economic landscape of Europe, bringing about a range of benefits for the member countries. One of the primary advantages is the enhanced economic strength and stability that the shared currency has fostered. The elimination of exchange rate risks and transaction costs associated with cross-border transactions has facilitated greater trade and investment among Eurozone members, leading to increased economic activity and growth. Additionally, the Eurozone has provided a platform for more coordinated monetary and fiscal policies, which has helped to mitigate the impact of economic shocks and promote economic convergence among the member states.

The 1970s saw the first concrete steps towards monetary union, with the creation of the European Monetary System which sought to stabilize exchange rates between participating countries. However, it was not until the Maastricht Treaty of 1992 that the plans for a single European currency were formally enshrined, laying out the criteria and roadmap for the transition to the Euro (Lee & Kim, 2020) (Portes & Rey, 1998). The Euro was officially launched in 1999, initially as an electronic currency for financial and commercial transactions, and then as physical banknotes and coins starting in 2002.

TABLE 1. 1.
European Union Country

NO	COUNTRY	Year Joined Eurozone
1	Austria	1999
2	Belgium	1999
3	Finlandia	1999
4	France	1999
5	Germany	1999
6	Ireland	1999
7	Italy	1999
8	Luxemburg	1999
9	Netherlands	1999
10	Portugal	1999
11	Spain	1999
12	Greece	2001
13	Slovenia	2007
14	Cyprus	2008
15	Malta	2008
16	Slovakia	2009
17	Estonia	2011
18	Latvia	2014
19	Lithuania	2015
20	Croatia	2023

(Source: European union & European Central Bank)

According to Table 1.1., there are 20 EU member countries that use the euro as their official currency. The integration of national financial markets within the Eurozone has also been a significant boon, as it has led to deeper and more liquid financial markets. This has made it easier for businesses and governments to access capital and has reduced the cost of borrowing, thereby stimulating investment and economic activity (Galati & Tsatsaronis, 2001). The convergence of interest rates across the Eurozone has been especially beneficial for the peripheral countries, which have historically faced higher borrowing costs. This has allowed these countries to engage in a consumption and real estate boom, leading to higher growth and increased government revenues.

In the years following its introduction, the Euro did achieve some of these objectives, contributing to a deepening of financial and economic integration across the Eurozone countries. However, the benefits of monetary union were not evenly distributed, and the 2008 global financial crisis exposed significant fault lines within the Eurozone (Lee & Kim, 2020). The European Monetary Union (EMU) has faced numerous challenges since its inception, with the sovereign debt crisis of the late 2000s being a particularly significant test of the currency's resilience. Despite the turmoil, the euro has managed to endure, defying the expectations of many who predicted its collapse. This phenomenon, known as the "euro paradox," has been the subject of much scholarly examination. Certain member states, such as Greece, Italy, Spain and Portugal, were hit particularly hard by the crisis, leading to sovereign debt crises and economic downturns that threatened the stability of the entire Eurozone (Hodson, 2010). The lack of centralized fiscal policy mechanisms and banking union made it difficult to coordinate an effective crisis response, leading to protracted economic uncertainty and social upheaval in the affected countries (Lane, 2012).

Despite the challenges posed by the European sovereign debt crisis, the euro has demonstrated remarkable resilience, defying the predictions of its critics (Lane, 2012) (Zhorayev, 2020). The challenges faced by the Eurozone in the aftermath of the financial crisis highlighted the structural weaknesses and design flaws in the original framework of the EMU (Caporaso & Kim, 2012). The euro's resilience can be attributed to several factors (Hodson, 2010). Firstly, the euro has provided a stable and unified monetary policy for the participating countries, reducing exchange rate volatility and transaction costs (Caporaso & Kim, 2012). This has facilitated cross-border trade and investment, boosting economic growth and integration within the Eurozone (Hodson, 2010). Furthermore, the euro has fostered a sense of European identity, strengthening political and economic ties among member states (Lane, 2012).

While the Eurozone's original design had inherent flaws, such as the lack of a banking union and other crisis management mechanisms (Lane, 2012), the currency union has proven adaptable and responsive to these challenges (Caporaso & Kim, 2012). The European Union has introduced a range of policy reforms and initiatives, such as the European Stability Mechanism and the Banking Union, to address the structural weaknesses of the Eurozone and enhance its resilience (Zhorayev, 2020) (Arestis & Sawyer, 2012).

Moreover, the Eurozone has demonstrated a remarkable degree of economic resilience, with some member states, such as Poland, weathering the crisis relatively well (Masik, 2016). This resilience can also be attributed to factors such as macroeconomic stability, fiscal discipline, and a well-developed system of innovation and learning (Masik, 2016).

Despite the ongoing challenges, the euro's resilience is a testament to the determination and adaptability of the European Union. The Euro remains a key component of the European economic and political landscape. The shared currency has facilitated greater cooperation and policy coordination among member states, even if the full benefits of monetary union have yet to be fully realized (Portes & Rey, 1998). As the Eurozone continues to evolve and strengthen its institutional frameworks, the euro paradox - the surprising durability of the single currency - is likely to persist (Lane, 2012) (Caporaso & Kim, 2012).

Looking ahead, the future of the Eurozone will depend on the ability of its members to address the underlying structural issues and to deepen economic and political integration in order to enhance the resilience and stability of the monetary union (Lane, 2012). The creation of the Euro was a bold and ambitious endeavor, and its continued evolution will be crucial in shaping the economic and political trajectory of the European continent. The increased diversification and integration of national financial markets, facilitated by the Eurozone, has strengthened the economic resilience of the member countries and positioned them for long-term prosperity.

With the formation of the European Union's single currency, the euro, has had a significant impact on the discussions surrounding the potential creation of a single currency for the Association of Southeast Asian Nations (ASEAN) (Bayoumi & Mauro, 2001). The history of the euro offers valuable insights for examining the viability of a similar single currency arrangement within the Association of Southeast Asian Nations (ASEAN) region. The journey toward the European Monetary Union was beset with obstacles, as the successful implementation of a shared currency required both strong political commitment and economic convergence among the participating countries (Peritz et al., 2022). Similarly, the path toward an ASEAN-wide currency union would likely face its own set of challenges, given the diverse economic and political landscape of the Southeast Asian region.

The introduction of the Euro was heralded as a landmark achievement, a symbol of European unity and a tool to enhance the continent's economic competitiveness on the global stage. The shared currency was expected to foster greater price transparency, reduce transaction costs, and eliminate exchange rate volatility - all of which would facilitate increased trade and investment within the Eurozone (Lee & Kim, 2020) (Portes & Rey, 1998).The global financial landscape is undergoing significant changes, marked by efforts to reduce dependence on the US dollar, known as dedollarization, and the rise of the BRICS countries—Brazil, Russia, India, China, and South Africa (Thanakijsombat, 2016). These countries are pushing for a multipolar financial system to enhance sovereignty and economic stability, challenging the dominance of traditional economic powers (Liu & Papa, 2022).

The prospect of a unified currency among the ASEAN-5 nations, which consists of Indonesia, Malaysia, the Philippines, Singapore, and Thailand has been a subject of extensive dialogue and analysis (Plummer & Wignaraja, 2007). The ASEAN-5 has experienced significant economic growth and integration over the past few decades, making the prospect of a shared currency an intriguing proposition (Stubbs, 1992). However, the path to a successful currency union is fraught with challenges, both economic and political. The political motivations behind ASEAN's economic cooperation have been a key factor in shaping the progress of regional integration (Severino, 2011). While ASEAN has made progress in reducing tariffs and removing non-tariff barriers to intra-ASEAN trade, the harmonization of regulations, standards, and policies across the region has proven to be a more complex and contentious process, requiring sustained commitment and coordination from all member states (Nikomborirak, 2015). The investment liberalization goals outlined in the ASEAN Economic Community Blueprint have been modest, indicating a reluctance among member states to fully open up their protected and lucrative service sectors (Nikomborirak, 2015).

While the current economic landscape, marked by trends such as dedollarization and the rise of alternative economic blocs like BRICS, could potentially further complicate the ASEAN-5's quest for a single currency (Haryani et al., 2022). The ASEAN international market is also heavily reliant on exports of medical equipment, home electronics, and consumer goods from China, making it difficult for ASEAN countries to compete on price and quality (Haryani et al., 2022). While the challenges that lies ahead is true, that also means a good thing, that it could also create opportunities for the ASEAN-5 to pursue a single currency. The heavy reliance of the ASEAN international market on exports of medical equipment, home electronics, and consumer goods from China may incentivize ASEAN countries to develop their own manufacturing capabilities and diversify their export portfolios, potentially strengthening their competitiveness on price and quality.

Furthermore, the push towards dedollarization, driven by the increasing dominance of the Chinese Yuan and the desire for greater financial autonomy, could provide a favorable environment for the ASEAN-5 to explore a regional currency arrangement (Maqbool et al., 2021) (Thanakijsombat, 2016). Seeing the movement of the world economic situation that is increasingly trying to reduce the use of the US dollar in transactions between countries. The pursuit of a regional currency arrangement within this economic bloc is seen as a natural progression towards deeper economic integration, particularly in the face of growing global economic uncertainties and the potential for the de-dollarization of international trade (Basnet et al., 2014) (Thanakijsombat, 2016). In this context, the formation of a single currency among the ASEAN-5 countries has emerged as a potential strategy to strengthen regional economic integration and resilience (*Redefining Strategic Routes to Financial Resilience in ASEAN+3*, 2021).

An analysis of the ASEAN-5's economic characteristics suggests that the region may not be fully prepared for a currency union, as evidenced by the lack of a dominant anchor currency and the differing levels of trade and investment between the ASEAN-5 and their major trading partners (Thanakijsombat, 2016). Moreover, the ASEAN-5 countries continue to face significant economic disparities, both in terms of development levels and economic structures (Severino, 2011). Indonesia, for example, remains heavily dependent on exports of raw materials, while Singapore has a more advanced, diversified economy (Haryani et al., 2022).

While it is true that the ASEAN-5 countries face significant economic disparities, with Indonesia remaining heavily dependent on exports of raw materials and Singapore having a more advanced, diversified economy, this diversity could also be viewed as a strength rather than a weakness (Severino, 2011) (Haryani et al., 2022). The differing economic structures and levels of development among the ASEAN-5 could potentially complement each other and contribute to the overall resilience and stability of a shared currency arrangement. Furthermore, the ASEAN-5's efforts to promote more equitable and inclusive growth, such as through the development of small and medium enterprises, could help to bridge these gaps and pave the way for a more cohesive and successful currency union.

Nonetheless, the potential benefits of a shared currency, including enhanced trade, investment, and financial integration, as well as greater economic stability and resilience, cannot be overlooked (Stubbs, 1992). This provide a strong rationale for the ASEAN-5 to continue exploring this possibility. In the context of the current global economic landscape, characterized by trends such as dedollarization and the rise of alternative economic blocs, the ASEAN-5's pursuit of a single currency could be seen as a strategic move to strengthen their regional economic integration and enhance their global competitiveness (Thanakijsombat, 2016). The ASEAN-5 countries share several key characteristics that could support the viability of a single currency area, such as their large share of the total ASEAN population, their dominant role in ASEAN trade, and their relatively homogeneous levels of economic development (Wiranatakusuma et al., 2013). Moreover, the growing economic and political profile of Indonesia, as well as the region's efforts to address non-traditional security issues through initiatives like the "blue economy," suggest that the ASEAN-5 may be able to overcome the challenges and make progress towards a single currency, though the path ahead remains uncertain (Gamage, 2016) (Ong & Vineles, 2016).

The potential for enhanced economic integration within the ASEAN region is substantial, as underscored by the positive impacts anticipated from the current surge in bilateral free-trade agreements (Plummer & Wignaraja, 2007). Central to this perspective is the hypothesis that the establishment of a currency union among participating nations could yield significant benefits. These benefits include diminished transaction costs, bolstered trade and investment inflows, and heightened macroeconomic stability through the mitigation of exchange rate variability (Palludeto & Abouchedid, 2016). However, the theory acknowledges the presence of considerable challenges and necessary compromises. Notably, member countries might need to relinquish autonomous control over their monetary and exchange rate policies. This concession is crucial in effectively managing asymmetric shocks, which poses a complex trade-off in striving for regional economic cohesiveness.

The adoption of a single currency within ASEAN presents a strategic avenue for enhancing the region's global competitiveness, attracting more foreign direct investment (FDI), and solidifying its position in international trade negotiations. Beck and Okhrimenko (2024) highlight that a unified currency would eliminate the costs associated with currency conversion and mitigate exchange rate risks in intra-regional commerce. This simplification would substantially lower transaction costs for businesses operating throughout the ASEAN nations.

Moreover, the introduction of a single currency would serve as a powerful symbol of ASEAN's dedication to deeper economic and political integration, reinforcing regional identity and solidarity. Such a tangible emblem of unity is expected to foster an enhanced sense of togetherness and collaborative spirit among the member states. Additionally, in scenarios of economic turmoil, a unified currency could streamline the coordination of economic and fiscal policies across the member countries. This coordinated approach would enable a more unified and effective response to economic shocks, thereby minimizing the adverse impacts on the region's overall economy. The single currency could thus act as a critical tool for stabilizing the regional economy during crises, promoting sustained economic growth and resilience.

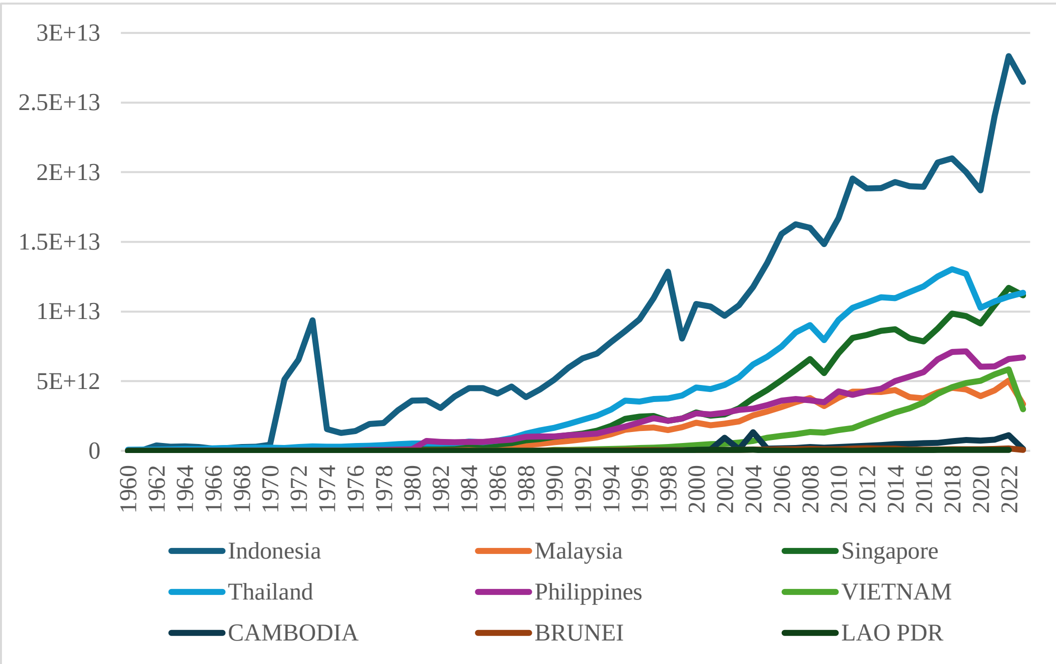
Ultimately, the decision to pursue a single currency for the ASEAN-5 will require a careful balancing of economic, political, and social factors. To better understand the single currency and optimum currency area we should take a brief look at the real-life successful implementation of the European Monetary Union (EMU) in the Eurozone and its single currency unit, Euro. The ASEAN-5 will need to carefully evaluate the costs, benefits, and preconditions for a regional currency arrangement, drawing upon the lessons learned from the European Monetary Union (EMU) experience (Bayoumi & Mauro, 2001).

This thesis will evaluate the feasibility of a single currency for ASEAN-5 using the hierarchy established by Robert Mundell that is the Optimum Currency Area (OCA) theories to ensure a successful monetary integration. Recognizing the strategic and economic motivations for ASEAN's ambition to introduce a single currency, it becomes crucial to delve into why the ASEAN-5 are deemed particularly appropriate for spearheading the implementation of the Optimal Currency Area (OCA). This analysis will reveal the key factors that make this group of nations a prime candidate to lead this initiative, including economic stability, deeper economic integration, labor mobility, fiscal and monetary policy coordination, and advanced financial infrastructure.

Based on the data from the World Bank, the Real sector of Gross Domestic Product (GDP) of all member nations within the Association of Southeast Asian Nations (ASEAN) from the year 1960 through 2023, shows that Indonesia, Malaysia, Thailand, Singapore, and the Philippines have emerged prominently as the top five economies. Their substantial GDP figures over the past decade underscore their significant economic impact within the region. This robust economic performance provides a compelling rationale for selecting these nations, collectively referred to as ASEAN-5, as foundational members in the exploration and establishment of an Optimum Currency Area (OCA). This strategic choice is predicated on their demonstrated economic strength and potential to enhance regional financial integration and stability.

The ASEAN-5 countries also have demonstrated moderate and stable inflation rates, with Indonesia, Malaysia, Thailand, and Singapore showcasing particularly controlled price levels essential for sound economic management and long-term investment planning. Although the Philippines reports a higher rate, it remains manageable compared to the volatility seen in countries like Myanmar and Lao PDR. Furthermore, the consistent economic growth in real GDP across these nations underscores their capability to expand economically while maintaining inflation stability. The economic size and influence of these countries in the ASEAN region make them pivotal to regional economic dynamics, enhancing their suitability as foundational members of an OCA. Their significant markets and strategic economic ties provide a strong basis for further integration efforts, which are aligned with the overarching goals of establishing a stable and cohesive economic zone. Thus, the ASEAN-5's track record of economic resilience, policy effectiveness, and strategic importance strongly advocates for their selection in spearheading the formation of an Optimum Currency Area, promising enhanced regional economic coordination and growth.

FIGURE 1. 1.
Trade performance of ASEAN countries from 1960-2023



The data depicted in the figure clearly illustrates a sustained positive trend in the trade activities of all ASEAN member countries from 1960 to 2023 in billion U.S. Dollar. This upward trajectory not only highlights the increasing volume of trade but also its significant impact on the economic growth of these nations, particularly in terms of Gross Domestic Product (GDP) contributions. Each year, the bolstering of trade metrics has been a key driver in the economic expansion of these countries, underscoring the importance of trade as a fundamental economic pillar.

The rationale for selecting the ASEAN-5 (Indonesia, Malaysia, Thailand, Singapore, and the Philippines) to form an Optimum Currency Area (OCA) is robustly supported by examining the inflation and real GDP performance over the past decade, including the 2023 inflation rates. It is crucial to recognize the importance of monitoring and understanding inflation, as it can serve as a fundamental basis for assessing the health and resilience of a nation's economy (O'Neill et al., 2017). High or volatile inflation can signal underlying economic imbalances, such as excessive government spending, supply chain disruptions, or overheating in certain sectors (Siregar et al., 2020). Conversely, low and stable inflation is often associated with economic growth, increased consumer confidence, and more effective monetary policy transmission (Coibion et al., 2020).

Based on the latest data from 2022, among the ASEAN bloc, the ASEAN-5 countries—Indonesia, Malaysia, Thailand, Singapore, and the Philippines are among the largest economic powerhouses in the ASEAN region, accounting for 80 percent of the region's GDP, trade, and investment activities. Excluding Vietnam, these nations have consistently been at the forefront in terms of GDP magnitude over the last six decades. Their substantial and growing economic outputs are reflective not only of their trade capacity but also of their broader economic health and developmental strategies. These nations have developed sophisticated trade networks, robust economic policies, and strategic regional and global partnerships that have enabled them to excel and sustain high levels of economic performance.

This consistent economic dominance further strengthens the argument for selecting the ASEAN-5 as the foundational members for the proposed Optimum Currency Area (OCA). Their longstanding economic stability, significant market size, and consistent trade growth make them ideal candidates. Establishing an OCA among these nations could potentially harmonize monetary policies, reduce transaction costs, and facilitate smoother and more efficient trade and economic interactions within the region.

This, in turn, would enhance economic integration, stability, and growth across the ASEAN-5, thereby contributing to a more unified and economically resilient Southeast Asia. This observation aligns closely with findings from a study by Wiranatakusuma et al. (2013), which noted that the economic development across the ASEAN-5 nations is both uniform and predominant, especially in terms of their trade volume. Specifically, the research highlights that these five countries account for approximately 92 percent of the total trade volume within the ASEAN region. This significant contribution underscores the dominant economic role that these nations play in the collective economic landscape of Southeast Asia.

Labor mobility, a crucial aspect of a country's economic landscape, plays a significant role in shaping its overall productivity, growth, and resilience. Understanding the level of labor mobility within a country is essential for policymakers and economists to assess the health and dynamics of the labor market, as well as to devise effective strategies for economic development (Bensaha et al., 2015) (Wajeetongratana, 2020).

Based on the description previously described about economic indicators in ASEAN countries, the following is a comparison table that highlights the similarities and differences in the important economic sector between all ASEAN countries. Through Table 1.2, a deeper understanding of the differences and similarities in the economical context for all ASEAN countries can be obtained and observed, as well as the factors that may affect the economic integration and the reasoning to choose ASEAN-5 countries for this research.

TABLE 1. 2
ASEAN Countries Economic Performance Data (As of 2023)

COUNTRY	Real GDP (Millions USD)	Inflation (annual %)	Trade (Billion USD)	LABOR MOBILITY
INDONESIA	$1,178,924.20	3.7	$258.86	HIGH
MALAYSIA	$401,113.36	2.5	$312.85	MEDIUM
SINGAPORE	$387,147.09	4.8	$476.25	HIGH
THAILAND	$458,437.32	1.2	$284.56	MEDIUM
PHILIPPINES	$430,342.49	6.0	$72.92	HIGH
VIET NAM	$377,364.15	3.3	$353.78	HIGH
CAMBODIA	$26,312.27	2.1	$23.47	LOW
BRUNEI DARUSSALAM	$13,183.36	0.4	$9.10	LOW
LAO PDR	$20,303.70	31.2	$8.40	LOW
MYANMAR	$63,784.63	8.8	$13.60	LOW

(Source: ASEANStats; World Bank; IMF, 2024)

Another supporting reason to pick the ASEAN-5 are listed below:

1. Economic Stability: The ASEAN-5 are distinguished by their economic resilience and stability, which are essential for the

foundation of a single currency system. These countries have consistently demonstrated robust economic fundamentals, including sustainable growth rates, manageable inflation, and strong balance of payments positions. Such stability is crucial as it ensures that the economies are less susceptible to unpredictable shocks that could destabilize a unified currency.

2. Deeper Economic Integration: These five countries exhibit a higher degree of economic integration among themselves, marked by significant cross-border trade and investment. This integration is beneficial as it often leads to synchronized economic cycles, which is a pivotal element of the OCA theory. The inherent economic alignment among these nations simplifies the process of adopting a single currency by reducing the potential for economic disparities that could challenge the union.
3. Labor Mobility: There is a notable degree of labor mobility within the ASEAN-5, facilitated by relatively liberal migration policies. This mobility is advantageous for a currency union because it allows for a more flexible workforce that can respond to regional economic changes and needs. The ability of labor to move freely across borders helps cushion local economic disturbances and distribute labor resources more efficiently, aligning with the requirements of an OCA.

4. Fiscal and Monetary Policy Coordination: The ASEAN-5 have a track record of cooperation in fiscal and monetary policies. Their central banks and financial authorities often collaborate on policy development, harmonization of regulations, and crisis management strategies. Such coordination is indispensable for a currency union, which relies on a cohesive approach to monetary and fiscal management across its member states to maintain stability and consistency in economic governance.

The primary rationale behind choosing the top five countries for the Optimal Currency Area (OCA) encompasses a blend of robust GDP figures, considerable intra-ASEAN trade volume, well-managed inflation, and effective labor mobility—all key factors that contribute to economic stability and robust growth within the ASEAN region. The ASEAN-5—characterized by more stable economic conditions compared to their regional counterparts—stands out as particularly suitable for the implementation of the OCA. This stability is manifested through well-controlled inflation, steady economic growth, and robust foreign exchange reserves, as noted by Frankel & Rose (1998).

Furthermore, the ASEAN-5 exhibit a higher degree of economic integration, marked by substantial intra-regional trade and significant cross-border investment, which positions them well to navigate the complexities of a shared currency system, as suggested by Mundell (1961). Additionally, these countries display enhanced labor mobility, a critical element in the OCA framework to address and balance regional economic disparities within the same currency zone, as emphasized by McKinnon (1963). Their coordinated fiscal and monetary policies are vital for sustaining macroeconomic stability within a unified currency area, a point highlighted by Bayoumi & Eichengreen (1994).

The developed financial infrastructure of the ASEAN-5, including a robust banking system, mature capital markets, and effective regulatory frameworks, further bolsters their readiness for the OCA. Moreover, their extensive experience in regional economic cooperation through initiatives like the ASEAN Free Trade Area (AFTA) and the ASEAN Economic Community (AEC) equips them with a robust framework to adapt to the requisite changes for OCA implementation. This perspective is supported by economic theories such as those of Mundell (1961), which underscore the significance of economic stability and high integration for the successful adoption of a single currency area. In light of these factors, the ASEAN-5 are arguably better prepared and possess a stronger foundation to undertake the implementation of the OCA compared to other ASEAN nations.

By analyzing these factors, it becomes clear why the ASEAN-5 are considered ideal leaders for the movement towards a single currency in the region. Their combined economic strengths and collaborative practices not only fulfill the theoretical prerequisites of the Optimal Currency Area but also set a practical example of how regional economic integration can lead to greater economic efficiency and stability. They stand out from their regional peers for several compelling reasons, making them the forefront runners in this significant monetary integration endeavor.

Although there are some similarities and strong points that states the suitable economic behavior and performance among ASEAN-5 countries, but it still needs to be proven whether all of the countries included in ASEAN-5 is all viable to create an optimum currency area or it's the case of maybe just some of the countries between the five. And also there is another thing like geopolitical condition that can be the focus of further research for analysis.

Following all of that reasoning, the rationale behind choosing the top five countries for the Optimal Currency Area (OCA) encompasses a blend of robust GDP figures, considerable intra-ASEAN trade volume, well-managed inflation, and effective labor mobility—all key factors that contribute to economic stability and robust growth within the ASEAN region. The ASEAN-5—characterized by more stable economic conditions compared to their regional counterparts—stand out as particularly suitable for the implementation of the OCA. This stability is manifested through well-controlled inflation, steady economic growth, and robust foreign exchange reserves, as noted by Frankel & Rose (1998).

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For this research, it is also important to choose a powerful currency as a benchmark and also a possible anchor to best determine the most stable currency the ASEAN-5 single 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 (Maggiori et al., 2019) (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) (Lusinyan et al., 2020). 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 (Maggiori et al., 2019) (Lusinyan et al., 2020).

Furthermore, 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).

Additionally, the 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 (Kumamoto, 2014). With such a foundation, it is essential and potential to establish an Optimum Currency Zone 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.

Selecting the US Dollar (USD), British Pound Sterling (GBP), Japanese Yen (JPY), and Chinese Yuan (CNY) have substantial influence on international economic activities, making them suitable reference points for assessing the exchange rate performances of the ASEAN-5 countries. This can further be categorized into three main points:

1. **Total Trade Distribution**

   The chosen currencies represent countries that are major trading partners with the ASEAN-5 nations, thereby directly impacting their trade dynamics and economic relations.

   a. **Chinese Yuan (CNY):** China is ASEAN's largest trading partner. According to the ASEAN Statistical Yearbook 2021, China accounted for approximately **18%** of ASEAN's total trade in 2020, with a trade volume of around **$516 billion USD**. This significant trade relationship underscores the importance of the CNY in regional economic activities (ASEAN Secretariat, 2021).

   b. **US Dollar (USD):** The United States is another key trading partner, representing about 10% of ASEAN's total trade in 2020, amounting to approximately $292 billion USD. The prominence of the USD in international transactions further justifies its selection as a benchmark currency (ASEAN Secretariat, 2021).

c. **Japanese Yen (JPY):** Japan accounted for around 8% of ASEAN's total trade in 2020, with trade valued at about $218 billion USD. The strong economic ties between Japan and ASEAN countries make the JPY a relevant currency for benchmarking purposes (ASEAN Secretariat, 2021).

d. **British Pound Sterling (GBP):** The United Kingdom, while accounting for a smaller share of ASEAN's trade, has historical and ongoing economic relations with the region. In 2020, trade between ASEAN and the UK amounted to approximately $35 billion USD (UN Comtrade Database, 2021). Including the GBP provides a broader perspective on currency strength, especially given the UK's influence in global finance.

2. **Market Share in Global Foreign Exchange Markets**

These currencies hold significant positions in the global foreign exchange markets, reflecting their widespread use and liquidity in international financial transactions.

a. **US Dollar (USD):** The USD is the most traded currency globally. The Bank for International Settlements (BIS) reported that the USD was involved in about 88% of all foreign exchange transactions in 2022, highlighting its dominance in the forex market (BIS, 2022).

b. **Japanese Yen (JPY):** The JPY is one of the top traded currencies, participating in approximately 17% of global forex transactions. Its liquidity and stability make it a critical currency in the international financial system (BIS, 2022).

c. **British Pound Sterling (GBP):** The GBP remains a significant currency in forex markets, involved in about 13% of global transactions. Its active trading status contributes to its relevance as a benchmark currency (BIS, 2022).

d. **Chinese Yuan (CNY):** The CNY's share in global forex trading has been rising, reaching about 4.3% in 2022, up from 1.1% in 2010. This growth reflects China's expanding role in the global economy and the increasing internationalization of the CNY (BIS, 2022).

3. **IMF Reserve Currency Status**

The status of these currencies as reserve currencies indicates their acceptance and trustworthiness in the global financial system, influencing international monetary stability.

a. **US Dollar (USD):** As the primary reserve currency, the USD accounted for approximately 59% of global foreign exchange reserves in the second quarter of 2023. Its predominant status underscores its influence on global financial markets (IMF, 2023).

b. **Japanese Yen (JPY):** The JPY constituted around 5.8% of global foreign exchange reserves in Q2 2023, highlighting its importance in international finance and as a store of value (IMF, 2023).

c. **British Pound Sterling (GBP):** The GBP made up approximately 4.8% of global reserves in Q2 2023. Its longstanding position as a trusted currency supports its selection as a benchmark (IMF, 2023).

d. **Chinese Yuan (CNY):** The CNY's share of global reserves has been increasing, reaching about 2.9% in Q2 2023. This trend indicates growing confidence in the CNY as a reserve currency, aligning with China's economic prominence (IMF, 2023).

Selecting the USD, GBP, JPY, and CNY as benchmarks for currency strength is justified based on their substantial roles in ASEAN's trade relations, their significant presence in global foreign exchange markets, and their recognition as major reserve currencies by the International Monetary Fund. These currencies exert considerable influence on global economic activities and financial markets, making them appropriate reference points for analyzing the exchange rate performances and macroeconomic interactions of the ASEAN-5 countries.

Several studies have explored the feasibility of establishing a single currency among ASEAN nations, revealing both potential and significant challenges. Achsani and Partisiwi (2010) analyzed ASEAN+3 countries and found that while Singapore and Malaysia have stable currencies suitable for initial integration, countries like Indonesia face economic disparities that hinder their participation. Wiranatakusuma et al. (2013) suggested pegging ASEAN-5 currencies to the Chinese Yuan due to its lower volatility, proposing the creation of an ASEAN Exchange Rate Unit (AERU) anchored to the Yuan, which could help meet the exchange rate stability criterion essential for an Optimum Currency Area (OCA). However, Kusuma and Putranto (2010) highlighted substantial obstacles stemming from differences in economic structures and policies, indicating that the region might not yet be ready for OCA formation and emphasizing the need to maintain exchange rate flexibility to absorb economic shocks.

Further, Riyanto (2020) found that ASEAN currencies respond more symmetrically to economic shocks when pegged to the Singapore Dollar rather than the US Dollar, suggesting that closer monetary integration could enhance currency stability. Ahmed and Mazlan (2021) examined the impact of interest rate changes on exchange rates, discovering complex dynamics that pose challenges for regional economic policy-making. Djirimua et al. (2022) concluded that ASEAN+3 is not yet prepared for a single currency due to increasing asymmetric shocks, lack of business cycle synchronization, and significant differences in economic structures, although certain country pairs, like Brunei Darussalam and Singapore, show higher feasibility for integration.

These studies collectively underscore persistent challenges such as economic disparities, exchange rate volatility, and insufficient policy synchronization within the ASEAN region. Despite recognizing the potential benefits of monetary integration, there remains a gap in identifying specific ASEAN-5 countries that are feasible candidates for forming a single currency based on a comprehensive analysis of both exchange rate performance and macroeconomic indicators. This gap highlights the need for further research that integrates these factors to more precisely determine the readiness and suitability of individual ASEAN-5 nations for monetary union, thereby contributing valuable insights to the discourse on regional economic integration.

Based on the description above, the researcher is interested in conducting research with the title "Study on Developing a Single Currency Area For ASEAN-5 Countries"

B. Limitations of the Research

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

1. The method used in this research is limited to signal extraction conducted from Early Warning System combined with Autoregressive Integrated Moving Average process.
2. The research data period used is from 2010-2023 in a monthly basis.
3. The indicator analysis that is used is only consists of currency strength against USD, GBP, JPY, and CNY. Whereas the Macroeconomic indicator consists of GDP, Inflation, Overnight Interest Rates, and Total Reserve Minus Gold.

C. Research Questions

Based on the statement described above, the focus of this research problem will be:

1. What is the currency considered as the best currency anchor for ASEAN-5 single currency formation?

2. What are criteria for developing an optimum currency area amongst ASEAN-5 countries?
3. What countries are qualified to create single currency formation in ASEAN-5 countries?

D. Research Objectives

Based on the formulation of the existing problem, the objectives of this study are as follows:

1. To analyze and determine which is the most feasible option for anchoring the ASEAN-5 single currency unit if it's to be made.
2. To analyze the defining criteria of an Optimal Currency Area (OCA) formation in ASEAN-5 region.
3. To analyze and determine the feasible countries among the ASEAN-5 that qualifies in order to form single currency.

E. Research Benefits

1. Theoretical Significance
    a. The research aims to shed light on the various factors that influence the establishment of an Optimum Currency Area (OCA) and Single Currency formation within the ASEAN-5 region.
    b. It is intended to serve as a valuable resource and reference for subsequent studies in this field.

2. Practical Significance

a. For Government and Policy Makers

Exploring the establishment of a single currency in the ASEAN-5 region offers transformative benefits for policy makers, that could enhance regional economic stability by taking the necessary action such as reducing exchange rate fluctuations, fostering a more predictable economic environment. The adoption of a unified currency facilitates synchronized monetary and fiscal policies across member states, enhancing policy coherence. Additionally, a single currency streamlines transactions and mitigates currency risk in intra-regional trade, potentially boosting trade volumes significantly. It also bolsters the region's strategic position in global economic forums, enhancing its negotiating power on international stages.

b. For Industries and Practitioners

The research into a single currency framework presents substantial advantages for industries and practitioners. By eliminating currency exchange necessities and hedging requirements within ASEAN-5 reduces operational costs and simplifies financial transactions, fostering a more business-friendly environment. Such a stable exchange rate regime aids in precise long-term financial planning and budgeting, enhancing market predictability. The move towards economic integration through a single currency would also sharpen the competitive edge of ASEAN businesses globally, by providing the necessary findings it could also help to improve the fostering a unified market that is both larger and more efficient. This integrated market is poised to attract greater foreign investment, perceived as having lower financial risks.

c. For Academicians

The potential shift to a single currency in the ASEAN-5 region offers rich research opportunities for the academic community. This transition enables in-depth studies in macroeconomic policy development, theories of currency unions, and the impacts of economic integration. As ASEAN-5 moves towards economic consolidation, it provides unique data for empirical research into these dynamics. These studies enhance academic discourse and enrich finance and economics education with real-world case studies. The findings are expected to significantly contribute to academic resources and future scholarly exploration.