

Research on Singapore's Monetary Policy, Monetary Authority, and Import-Export Economic Development

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Abstract: Singapore, as an important player in the global economy, has a high market value for both its economic conditions and monetary policies in academia and business. Given this importance, this study focuses on the monetary policy of Singapore and the institutions that determine it, as well as the effect of these elements on the import-export industry of the country. For this reason, the study embeds the historical development of Singapore's monetary policies and their effects on foreign trade, which shows that monetary policy is highly related to the country's external trading activities. Another perspective is the role of trade, both imports and exports, in the economy of Singapore. The assessment reflects Singapore's impressive economic performance and its key role in the global market. The findings suggest that through effective exchange rate management, Singapore has been able to support the growth of its trade sector while maintaining domestic macroeconomic stability and preserving its competitive edge globally.

Keywords: Monetary policy, Monetary Authority of Singapore (MAS), Trade balance.

1. Introduction

Singapore has long been an important key player in the international economy and stands today as one of the most significant regions in world trade and financial transactions, able to boast an important position in global finance, supply chains, and value chains [1]. In today's increasingly uncertain global environment, the implications of Chinese economic policies go beyond its borders into the Asia-Pacific region and beyond. As a city-state that relies on financial and other services, Singapore also attaches great importance to monetary policy to regulate its economy, and the Monetary Authority of Singapore (MAS) is an important institution for policy adjustment. The MAS flexibly also adjusts policies in response to domestic and international conditions. In recent years, MAS has introduced new measures to address fluctuations in global currency and product markets, drawing widespread attention from academia and industry. Given Singapore's significant financial position and unique monetary policy, this study explores the role of its monetary policy in promoting export-import growth, economic development, and maintaining global competitiveness. While previous studies have highlighted the distinctiveness of Singapore's monetary policy framework [2], as the global economy evolves and financial technology advances, further study on the adaptability of Singapore's monetary policy and its implications for future economic growth is still of both academic and practical importance.

Therefore, this study employs a combination of qualitative and quantitative research methods, integrating policy analysis with data examination, to analyze and review several key research questions: This study will explore the evolution of Singapore's monetary policies across various stages of its economic development. It will also analyze the role and significance of the Monetary Authority of Singapore (MAS) in adjusting these policies. Furthermore, the study will examine the impact of these unique policies on Singapore's export-import economy, a key pillar of the nation's economic structure. This study provides a comprehensive and rigorous perspective on exchange rate-centered monetary policies and offers practical insights for Singapore, as well as for global investors, consumers, entrepreneurs, and policymakers, in terms of monetary policy regulation and promoting financial market and economic development.

2. The Characteristics of and History of Singapore's Monetary Policy

2.1. Characteristics and Reasons for Singapore's Monetary Policy

Monetary policy refers to the set of guidelines, policies, and measures employed by a central bank to control and regulate the supply of money and credit in order to achieve specific economic objectives [3]. Typically, monetary policy influences domestic economic stability and import-export economic development through tools, such as money issuance and interest rate adjustments. As one of the world's unique small open economies, Singapore's monetary policy exhibits distinctive features. Most central banks around the world, such as the U.S. Federal Reserve or the European Central Bank, rely on adjusting benchmark interest rates to influence borrowing costs and investment decisions, with interest rates serving as the core tool of monetary policy. However, Singapore's monetary policy has consistently been centered on the exchange rate. The Monetary Authority of Singapore (MAS) uses the exchange rate as the intermediary for economic regulation, relying on the management of the Singapore dollar's Nominal Effective Exchange Rate (NEER) to achieve its economic goals. By maintaining price stability, MAS aims to foster sustainable economic growth [4], operating under what is termed a "managed float exchange rate system".

Currently, the primary exchange rate regimes include fixed exchange rate systems, floating exchange rate systems, crawling peg systems, managed float systems, and currency unions [5]. Every system is regulated to a degree. For example, fixed exchange rates are regulated and do not change with time; floating exchange rates are determined by the market without any regulatory intervention. Crawling pegs and managed floating exchange rates represent intermediate systems, allowing regulators to intervene in the market-driven exchange rate process. A monetary union, like the Eurozone, involves an agreement among countries in a specific area to share a common currency and maintain similar inflation rates. Among these options, Singapore has adopted a "managed floating exchange rate system." Specifically, MAS does not fix the Singapore dollar's exchange rate but allows it to fluctuate within a predetermined range, enabling market forces to play a dominant role. However, MAS has also established mechanisms to prevent excessive exchange rate fluctuations. When the exchange rate moves outside the allowed range, MAS intervenes in the foreign exchange market to stabilize the rate, thus balancing economic stability with policy flexibility. For example, when the Singapore dollar experiences significant volatility or speculative activities, MAS intervenes through spot and forward foreign exchange transactions. The primary intervention mechanism involves trading between the Singapore dollar and the U.S. dollar. Furthermore, the frequency of MAS interventions is irregular, with minimal interference to let market forces maintain the Singapore dollar within the policy range.

There are two main reasons why Singapore uses an exchange rate-based monetary policy rather than an interest rate-based one. First, adjusting interest rates would lead to significant capital flows. If Singapore were to raise interest rates, large amounts of short-term capital inflows would cause the

Singapore dollar to appreciate rapidly; conversely, lowering interest rates would lead to capital outflows and currency depreciation. For a small economy like Singapore, large exchange rate fluctuations pose considerable economic risks. Secondly, given Singapore's heavy reliance on import-export trade, which is closely tied to the size of its economy, regulating the economy through exchange rate adjustments is more effective and helps to stabilize the confidence of investors, businesses, and residents [6]. Therefore, due to the vulnerability and volatility of small open economies, Singapore has opted for a policy of gradual, small-scale appreciation to maintain economic stability.

2.2. The Role of the Monetary Authority of Singapore (MAS)

Established in 1971 under the Ministry of Finance, the Monetary Authority of Singapore (MAS) performs most central banking functions, except currency issuance. Its main duties include formulating and implementing financial policies, managing the Treasury and foreign reserves, supervising financial institutions, intervening in financial markets, providing deposit and lender of last resort services, and regulating the insurance industry. MAS also represents the government in international financial affairs, acting as the government's and banks' bank, playing a key role in financial regulation.

From above, MAS has combined the roles of central bank and financial regulator, overseeing monetary policy, financial institutions, and markets while protecting investors and consumers. Most critically, MAS manages the exchange rate to maintain the Singapore dollar's stability and the nation's international competitiveness. In recent years, MAS has also played an important role in modern financial development and financial innovation, such as the development of the digital economy, fintech development and green finance development [7].

2.3. The History of Singapore's Monetary Policy

The development of Singapore's foreign exchange management began in the 1960s. Inspired by the rapid growth of the Eurodollar market, Singapore formally approved the application from the Bank of America's Singapore branch in October 1968 to establish the Asian Currency Unit in Singapore. In 1978, the Singapore government further liberalized foreign exchange controls, allowing free inflow and outflow of foreign exchange and removing restrictions on foreign banks, foreign enterprises, foreign investors, and expatriates with regard to remittances, the amount and currency types, and the repatriation of investment returns. In 1984, the Singapore government approved the establishment of the International Monetary Exchange, marking the formal creation of a modern monetary and financial system.

From the perspective of exchange rate regulation, the development of Singapore's monetary policy under the modern monetary and financial system can be divided into three stages. The first stage, from 1988 to 1997, saw the nominal effective exchange rate of the Singapore dollar appreciate. During this period, in response to external demand and Gross Domestic Product (GDP) growth, the NEER cumulatively appreciated by 30%, or about 3% annually, while inflation remained stable at around 2.4%. The Singapore dollar also experienced steady appreciation against the US dollar during this time. The second stage, from July 1997 to 2008, was marked by the Asian financial crisis, during which competitive devaluations of regional currencies severely impacted Singapore's economy, leading to a temporary rise and fall in the NEER. As the economy recovered, controlling inflation once again became the primary focus of exchange rate policy, and the NEER resumed a gradual appreciation [8]. The third stage, from 2008 to the present, followed the global financial crisis. During this period, Singapore's monetary and financial policies remained relatively stable. In October 2008, under pressure from an economic slowdown, MAS allowed the exchange rate to maintain zero growth

within its fluctuating range. In 2009, MAS continued to loosen exchange rate controls, allowing for stable fluctuations in the exchange rate. In recent years, Singapore's authorities have maintained a stable monetary policy stance.

3. Exchange Rate Fluctuations and Import-Export Economic Analysis in Singapore

3.1. Overview of Changes in Singapore's Overall Economic Situation

The monetary and financial system is not an isolated entity but is closely linked to the broader economy, influenced by fluctuations in economic conditions, population, and trade, creating a series of interrelated effects [9]. Based on this, the study further explores the changes in Singapore's overall economic situation and analyzes its relationship with the formulation and implementation of monetary policies, as well as Singapore's position and competitiveness in the global economy.

Figure 1 shows Singapore's GDP and its share of global GDP. It is evident that Singapore's GDP has steadily increased, and its share of global GDP has also shown a clear upward trend. Although Singapore is a small economy, its share in the global economy has gradually risen, reaching nearly 0.005 by 2023, reflecting Singapore's growing importance in the global economy.

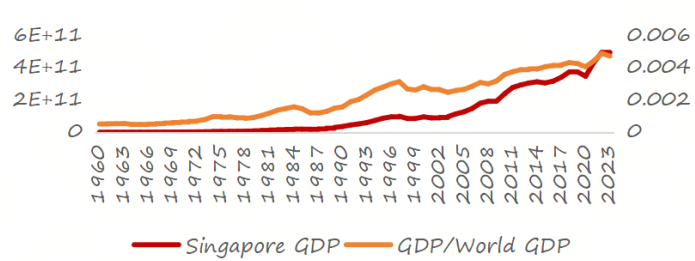


Figure 1: Singapore's GDP and its share of global GDP

Figure 2 illustrates the comparison between Singapore's per capita GDP and global per capita GDP, with Singapore's per capita GDP growing significantly faster than the global average. By 2023, Singapore's per capita GDP approached \$90,000, indicating a high level of economic development, making it one of the most advanced economies and financial centers in the world.

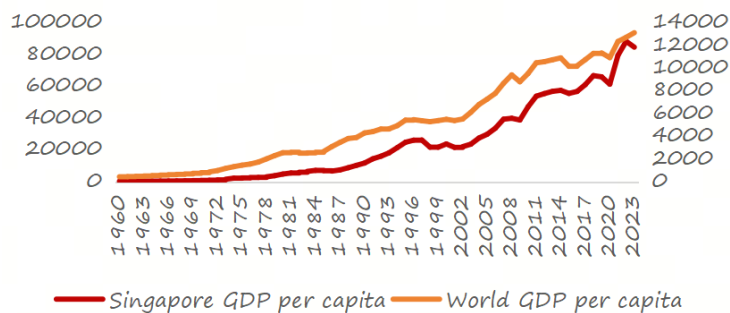


Figure 2: Singapore and Global Per Capita GDP

3.2. Singapore's Import and Export Economic Development and Its Importance

As a city-state, foreign trade is a crucial pillar of Singapore's national economy, and to some extent, it can be considered the most vital source of resources for the country's production and livelihood. Singapore's major trade partners span the globe, including Malaysia, Thailand, China, the United States, the European Union, and various other countries and economic organizations.

In Singapore's economic structure, based on the composition of GDP by sector, the country has virtually no primary industry, with the majority of its economic contributions coming from the tertiary sector, which continues to increase its share. According to the Singapore Department of Statistics, from 2018 to 2023, the secondary sector accounted for 22% to 26% of GDP, while the tertiary sector contributed 68% to 73%. The population's daily life is highly dependent on imports and exports, and both domestic and international investments rely heavily on the smooth functioning of trade [10].

Figure 3 illustrates the changes in Singapore's net imports of goods and services and its growth rate. Since around 2000, Singapore's net imports have increased significantly, with the growth trend accelerating in recent years, reaching a high level by 2023. In terms of growth rate, it has remained relatively stable overall without significant fluctuations. Over the past fifty years, Singapore's import and export trade has grown steadily, consistently playing a crucial role in the country's economy.

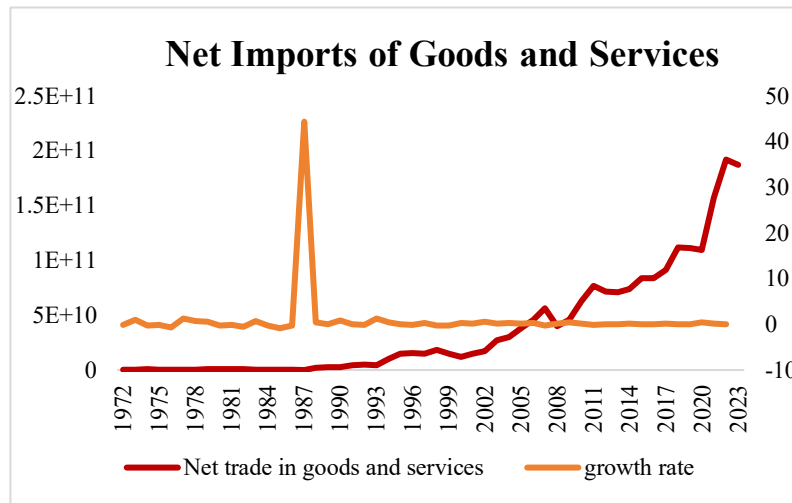


Figure 3: Net Imports of Goods and Services

3.3. The Relationship Between Singapore's Monetary Policy and Import-Export Economy

As mentioned above, Singapore's monetary policy centers around the exchange rate to regulate and promote economic growth. Figure 4 illustrates the fluctuations in Singapore's exchange rates, with both the official exchange rate and the real effective exchange rate experiencing varying degrees of fluctuation. By 2022, the official exchange rate remained relatively strong, indicating that Singapore's international competitiveness has remained stable to a certain extent, with its competitiveness in global trade relatively enhanced. The divergence between the official exchange rate and the real effective exchange rate also shows that Singapore's competitiveness in international trade and the economy has not been significantly weakened by exchange rate fluctuations.

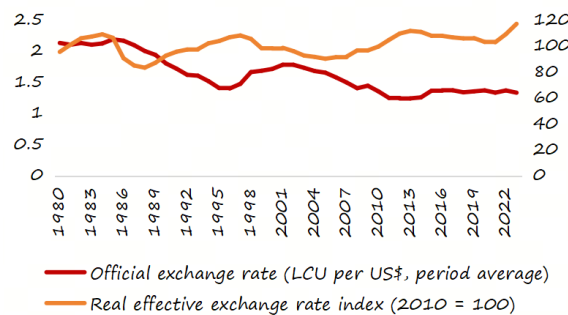


Figure 4: Exchange Rate Fluctuations in Singapore

The international foreign exchange market and national exchange rates are closely linked to trade, with exchange rates having a direct and immediate impact on a country's import and export economies [11]. From the analysis above, it is clear that Singapore's monetary policy centers around managing exchange rate fluctuations to stabilize its import-export economy, thereby maintaining its competitiveness in the global market. The exchange rate fluctuations in Figure 4 show that Singapore's real effective exchange rate has consistently remained at a high level. Through MAS's exchange rate policy adjustments, Singapore successfully mitigated adverse fluctuations in the foreign exchange market, maintaining the price competitiveness of its export products in global markets and preventing sharp exchange rate fluctuations from negatively affecting the import-export economy.

In a related vein, the net imports of goods and services changed as indicated in Figure 3, and this is also closely linked to exchange rate policy. Because the economy of Singapore is highly open and leans much toward international trade, the robust rise in net imports befits its monetary policy, given that stable exchange rates help ensure that import prices are stable.

4. Conclusion

This study assesses Singapore's monetary policy throughout its various stages of economic development. It examines the role of the Monetary Authority of Singapore (MAS) in policy adjustments and their impact on the import-export sector. The findings suggest that Singapore's monetary policy has always prioritized exchange rate stability, balancing domestic economic growth with external market risks. Additionally, MAS plays a key role in formulating and enforcing these policies, managing the foreign exchange market, and responding to both domestic and global economic shocks. The policy aims to maintain a stable exchange rate, which helps stabilize import prices, boost export competitiveness, and sustain a balanced trade environment. Moreover, these policies are designed to ensure long-term economic adaptability, enabling Singapore to withstand global financial fluctuations while supporting the consistent growth of its export-driven economy.

Taking this into account, the MAS is advised to step up its surveillance of global economic developments and align its actions with the monetary policies of major trading partners and key financial hubs. It should also improve reserve management to effectively deploy strategic market interventions to mitigate the adverse effects of global capital flows on domestic economic stability and coherence. Given the rise of digital currencies and fintech, the MAS should adapt by incorporating the growing influence of digital financial markets into its exchange rate management strategies. Additionally, it is important for the MAS to maintain its "managed float" regime while expanding its toolkit to address emergencies. This could involve adjusting the exchange rate band and strengthening collaboration with international financial institutions, enabling economic adjustments to domestic conditions while preserving long-term stability.

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