NBER WORKING PAPER SERIES

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Working Paper 33145
http://www.nber.org/papers/w33145

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
November 2024

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NBER Working Paper No. 33145
November 2024
JEL No. F21, F33, F36, N20

ABSTRACT

Over the last 200 years, economies have accumulated significant experience in managing capital flows in the face of globalization. This study examines management of capital flows since the 1800s with an eye towards providing historical lessons for Southeast Asia today. We start with the global sterling/gold standard regime of the late 19th century globalization and then discuss the tumultuous inter-war period. We then examine policies in Southeast Asian countries since the 1950s. In the 1980s and 1990s, many economies faced increasing financial instability related to the resumption of global capital flows, most noticeably in Southeast Asia during the Asian Financial Crisis. The paper examines the historical importance of exchange rate policies for capital flow stability. Capital flow management in the 21st century faces various challenges such as enhanced state-intervention and digital currencies.

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1. Introduction

Over the last 200 years, economies have accumulated significant experience in managing exchange rates in the face of globalization. Regarding policies to manage capital flows, such as exchange rate policy, the world's smaller open economies have continually faced a trade-off between managing credibility and open economy objectives on the one hand and policy autonomy on the other hand. Exchange rate pegs promote trade, capital flows, and economic growth and they can also enhance fiscal and monetary credibility. However, fixed exchange rates tend to reduce policy autonomy and the shock absorber property of the exchange rate.

The last two centuries have seen ebbs and flows in globalization as well as continuous improvements in the art and science of open-economy economics. Recognizing the adage that there is no single optimal exchange rate policy for all countries is a good starting point. It is important to realise, there is a menu of options available in terms of policies to manage capital flows. As this paper will emphasize, these differences clearly relate to management of capital flows and trade and to country-specific variables and historical experiences, focusing on Southeast Asia.

This paper examines the history of how capital flows have been managed over time with a special focus on Southeast Asia, starting from the global sterling/gold standard regime of the late 19th century globalization to the present. During the interwar period (1920s-1930s) when the US dollar challenged the pound sterling, policy makers faced difficulties in managing exchange rate policies due to insufficient insight about their objectives and unwillingness to fully embrace changes in the global economy. Capital flows generally remained under control during the Bretton Woods era. However, as the study explores, there were differences in policy among countries based on their unique economic characteristics and needs. In the 1980s and 1990s, many countries faced increasing financial instability related to the resumption of global capital flows. Southeast Asia during the Asian Financial Crisis of the late 1990s was especially impacted.

The Asian Financial Crisis served as a reminder of the effects of sudden reversals in capital flows, leading policy makers to understand better the value of reserve accumulation and moderate capital controls. Setting and understanding "optimal" policy

frameworks and options become all the more important as economies become increasingly financially globalised.

The last part of the paper discusses several challenges are likely to arise in the coming decade. These include digital currencies and new/other forms of state-intervention. We provide some conclusions on these issues and implications for Southeast Asian countries based on a historical perspective.

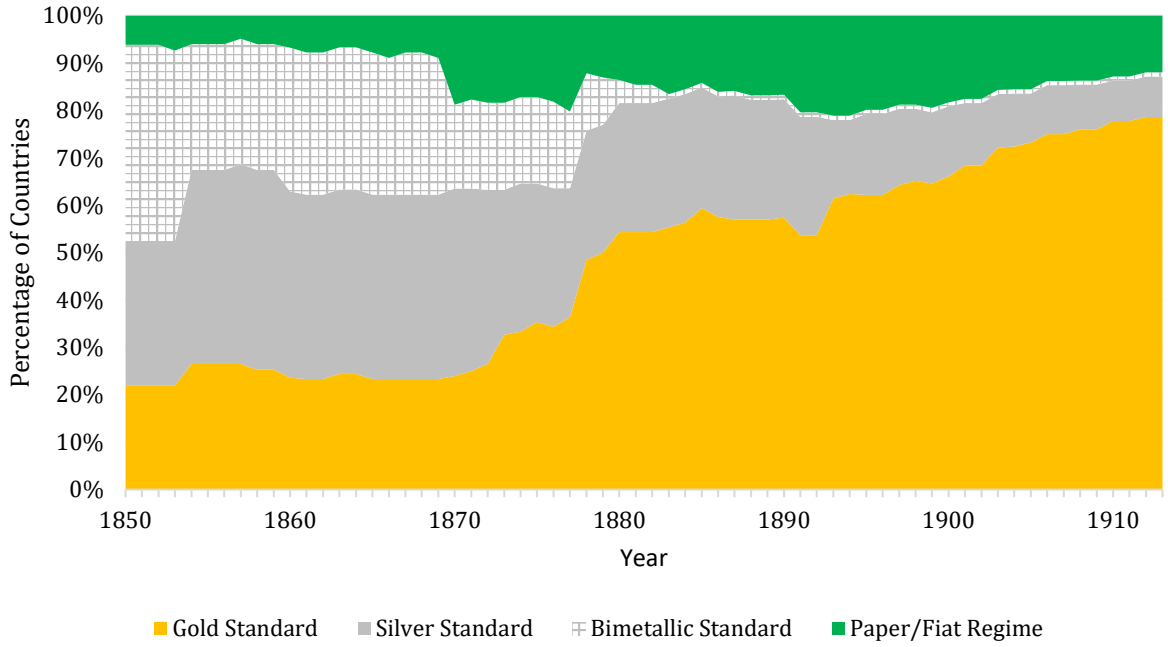
2. The Golden Age of Globalization: The Gold/Sterling Standard

In June 1867, British Treasury attaché Rivers Wilson, declared that "England found itself in a different position from that of most continental nations, indeed, it found itself *in a much more independent position*."[3] Rivers, a delegate to the International Monetary Conference of 1867 held in Paris, was responding to a proposal that a number of leading nations adopt a new, uniform global international currency and participate in an international monetary union. The conference, organized by the French government during the Paris Exhibition of 1867, and attended by delegates from the leading nations of Europe, aimed to promote a globally unified monetary system and to reduce transactions costs. What the metric system had done for weights and measures, Napoleon III and his advisor Felix de Esquirou de Parieu aimed to do for money. The resolution for a global monetary union failed. This was only in part due to British scepticism and obstinacy on the question. In addition to Great Britain, smaller countries, with less developed financial systems resisted making any moves that would distance them financially from Great Britain. The proposal for a global monetary union was stillborn.

And yet, in the decades following the 1860s, a new global monetary order spontaneously emerged. The system was a commodity money system based on gold, as the British system long had been, and it came to be known as the "classical gold standard". In the 1870s, leading countries, one after-the-other, in a near cascade, switched to gold-based commodity money systems, thereby abandoning fiat, silver or "bimetallic" systems which traditionally had used both gold and silver as money (Figure 1). By 1880, countries representing more than 60% of global GDP had adopted the gold standard system.

[3] The quotation comes directly from the proceedings of the International Monetary Conference (1867) p. 65.

Figure 1 Share of Countries on Each Monetary Regime, 1850-1913



Notes: Figure displays the share of countries using each type of monetary system. The sample consists of 82 economies in 1850 and 117 economies in 1913.

Although gold reserves ultimately backed most of these currencies, the British pound sterling was the international currency of the time. Great Britain's currency was the main international currency of the time in part because it was the dominant trade power, with a higher share of global exports than any other nation (Rey, 2001). The City of London, the world's leading financial centre, with some of the largest and most important banks, led the world in trade credit and bond finance. The Bank of England, with a solid record for currency stability, and the willingness and ability to act as a lender of last resort in the London money market, enhanced the attractiveness of the pound sterling as an international currency.

For those countries which had adopted the gold standard, exchange rates were fixed. Free movement of commodities, capital, labor, and gold reserves linked nations into something that effectively resembled a monetary union. Network externalities heightened the attractiveness to adopt a gold-based system. The more trade partners of a country that adopted the gold standard, the more attractive it became to adopt the gold standard locally. Furthermore, gold-based countries tended to trade more with each other since the system reduced exchange rate uncertainty and obviated hedging

strategies (López-Córdova and Meissner, 2003). As more countries adopted in the early 1870s, following Germany's lead, others could not resist.

Countries that credibly committed to the gold standard also benefitted from greater integration with global capital markets and a lower cost of capital when borrowing on international financial markets (Bordo and Rockoff, 1996 and Obstfeld and Taylor, 2003). Bordo and Rockoff (1996) argued that the gold standard lowered borrowing costs since by signalling to investors that countries would maintain fiscal balance and prioritize debt repayment. As most debt was dominated in sterling, or in other leading gold-based currencies, outsiders to the gold standard system paid a risk premium when issuing debt in international financial markets. Exchange rate depreciation (a common occurrence for non-gold or inconvertible currencies) led to higher repayments in local currency terms, in turn raising the spectre of unsustainable debt (Bordo, Meissner and Weidenmier, 2009).

Countries that were not on the gold standard often opted to back their currencies with silver or else operated fiat currency systems. Silver-standard countries between 1880 and the late 1890s experienced secular (nominal) depreciation and persistent intra-month volatility against gold standard countries. The two leading silver countries in the period were China and India. The former had a complex domestic monetary system that remained so throughout the pre-World War I period. China issued little debt in international markets prior to the early 1900s, exporting tea and silk and importing little but opium and silver specie in return. In India, trade, consisting mainly of commodities like wheat, was focused on Great Britain as it was a British colony. In addition, tributary payments (so called home charges) to the British treasury were payable in pounds sterling. British authorities eventually approved a gold-based system in India in the 1890s making China one of the last strongholds of silver in the world.

Other countries of the day like Austria-Hungary, Spain, Greece, Italy, Portugal (post-1890), Argentina, Brazil, and Chile, in addition to some Eastern European nations, maintained fiat currencies although they often shadowed the gold standard by pegging to gold standard countries. The inability to achieve full convertibility is most frequently attributable to the difficulty these countries faced in managing capital flows. Boom-bust periods involving heavy capital inflows, credit growth, accumulation of foreign liabilities payable in foreign currency and poorly regulated fiscal and financial systems frequently led to sudden stops, twin crises and sovereign default.

The process of smooth international adjustment and the stability in the core gold standard countries during the period stands as a remarkable achievement. Exchange rates remained tightly locked within narrow gold points in many countries such as the Great Britain, US, France, Germany, Belgium, Sweden/Norway, Netherlands, Switzerland, Australia and Canada. The process of balance of payments adjustment often associated with deviations of the exchange rate level from the official parity was not automatic. Gold movements in response to exchange market dis-equilibria were rare.

Leading nations of the time participated in what was effectively the world's first exchange rate target zone (Bordo and Macdonald, 2005). Exchange rate movements stayed largely within the narrow confines of the gold points due to credibility. As the exchange rate moved upwards towards to gold export point, markets often took a long position in a currency. These positions reflected market beliefs that nations would eventually act to re-store equilibrium in the balance of payments sacrificing monetary autonomy and sometimes domestic economic "balance" for the gold parity.

Bloomfield (1959) noted that changes in central bank balance sheets rarely conformed with conventional predictions of the period – namely that changes in domestic assets and foreign reserves would be negatively correlated. This observation led to the conclusion that countries systematically failed to "play by the rules of the (gold standard) game." The literature now agrees on the fact that, in the long run, the most advanced countries earned their credibility by raising short-term policy rates when and if necessary, especially when the exchange rate was close to hitting its upper bound (Morys, 2013). In the short-term markets perceived that leading nations would eventually take the necessary action to defend the exchange rate. Markets would then speculate on the currency in a stabilizing way. This was called the "target zone" paradigm and it is partially responsible for resolving the paradox originally observed by Bloomfield long ago.

However, even the classical gold standard has some resonance for the modern period. In the late 19th century, countries with smaller and less developed financial systems regularly focused on maintaining high gold reserve ratios. These countries learned that changes in policy rates were often ineffective and at odds with maintaining domestic balance. In case that gold reserves would start to leak from the country, these countries often resorted to restricting convertibility through what modern economists would call exchange controls. A leading player in this version of the gold standard was

France which used a multitude of policies to restrict access to reserves acting to maintain exchange rate parity.

Austria-Hungary was also a leader in "shadowing" the gold standard. While the country managed to keep its exchange rate stable against other gold countries, it did not offer de facto convertibility of the currency into gold. Austria-Hungary learned how to manage stability without full gold convertibility of the currency. Jobst (2009) and Flandreau and Jobst (2005) discuss how the central bank and monetary authorities effectively wielded the weapon of sterilized interventions in order to create stability. Austria-Hungary also pioneered development of local currency debt markets and a derivatives market for hedging exchange rate fluctuations. Few other countries in the period managed their currencies in such a way.

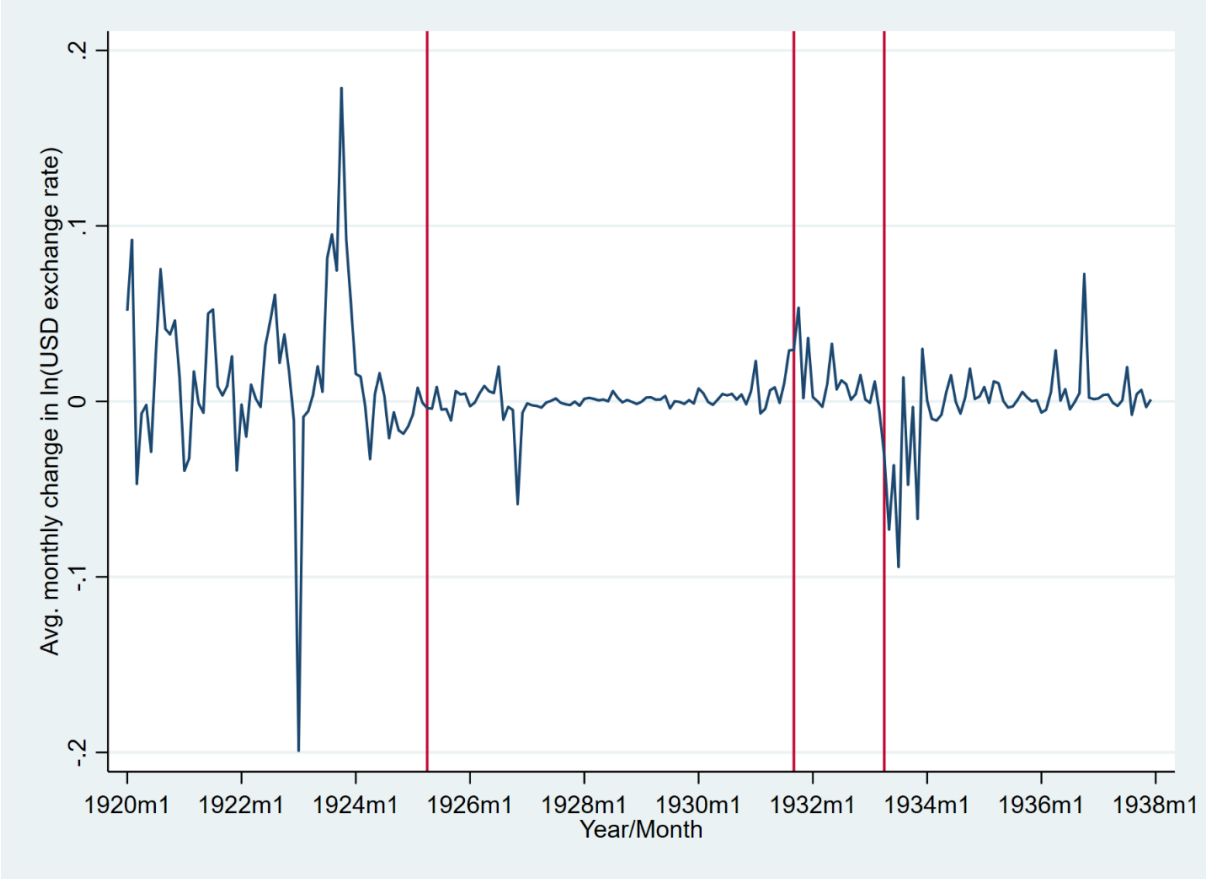
Morys (2013) concludes his study of the "periphery" by stating: "institutional flexibility…explains why the Classical Gold Standard remains to this day the longest-ever system of fixed exchange-rates." In other words, the gold standard was stable in part due to the willingness of countries, especially less-developed and middle-income countries, to bend the orthodox rules of the monetary regime and to manage the exchange rate with un-conventional policies including exchange market interventions.

In this period, exchange rate management in Southeast Asia focused on managing currency flows to ensure stable trading conditions, according to Spalding's account (1924) of trade and currency policy in Southeast Asia during the late nineteenth and early twentieth centuries.

3. The Unstable Inter-War Period: Dollar vs Sterling and the Great Depression

By 1927, nearly the entire world had re-established currency convertibility leading to the reincarnation of the international gold standard. In the interwar period, the gold standard was not synonymous with economic and financial stability. The Great Depression, the defining event of the "interwar period" was largely a monetary shock transmitted through the international monetary system. Moreover, exchange rate policy in the 1930s explains a large share of the variation in economic outcomes during the Depression. Figure 2 shows the average monthly change in the logarithm of the USD exchange rate for a sample of 35 leading economies.

Figure 2 Average Percentage Monthly Change in the USD Exchange Rate, 35 countries, 1920-1937



Notes: Figure shows the average of the monthly changes in the logarithm of the nominal exchange rate against the USD (Local currency units per USD) for 35 leading economies. The vertical lines represent the following events: 4/1925, UK re-instates gold standard; 9/1931, UK suspends gold convertibility; 4/1933, US suspends gold standard.

Several features of the period are worth emphasizing. First, the 1930s emphasized the political economy of the trade-offs between external and internal balance. Countries revealed themselves to be less inclined to sacrifice the economy for exchange rate stability than they had been prior to World War I. Second, international financial and trade linkages were of importance for exchange rate policy and economic recovery. Third, competition between international currencies intensified revealing how smaller nations may adapt to changes in the international monetary system under dominant currencies.

In 1928 and 1929, global interest rates rose as US monetary policy entered a tightening cycle. As commodity prices fell and aggregate demand softened, a number of countries faced severe economic challenges. Commodity exporters could not generate sufficient revenues to re-pay foreign debts. In Great Britain, unemployment remained elevated for structural and frictional reasons. A high "replacement ratio" associated with

the unemployment insurance scheme, as well as a transition away from traditional industries kept unemployment near 10 % coming into the 1930s. In Germany, and earlier in Austria, severe banking crises hit in the summer of 1931. Similarly, the United States suffered three waves of banking panics between 1930 and 1933, with a stock market meltdown and an economy-wide credit crunch.

Economic history research emphasizes that the gold standard acted as a constraint and worsened the severity of these crises. Monetary authorities of the time often initially refused to react to bank runs and losses in investor confidence with lower interest rates and liquidity support. Doing so would have been inconsistent with the gold standard commitment. The Fed in the early 1930s largely refused to engage in lender of last resort operations (Friedman and Schwartz, 1963). In Germany, a similar view prevailed leading to inaction by the Reichsbank, a twin crisis, debt default, and severe economic dis-location. Global deflation prevailed with a decline in price levels of over 30%. Unemployment rose to new levels. Financial systems collapsed. International capital flows ceased, and trade flows shrank by 50%.

As time went on, monetary orthodoxy ceded way to a view that these extreme shocks required active monetary responses and greater flexibility. In July 1931, Germany suspended the gold standard imposing a range of exchange controls. In September 1931, Great Britain, found the gold standard was no longer a political or economic winner – the government devalued sterling and for the rest of the 1930s operated a managed float. After considerable debate and discussion, a host of countries followed Britain off gold, opting to re-peg their exchange rates to sterling and creating a "sterling bloc". In 1933, FDR, in the mood for experimentation, decided a new approach to monetary affairs was worth trying, weakening the link between the dollar and gold. Clearly, even at the time, the path to economic recovery involved exit from the gold standard as a means to expansionary monetary policy and raising the price level.

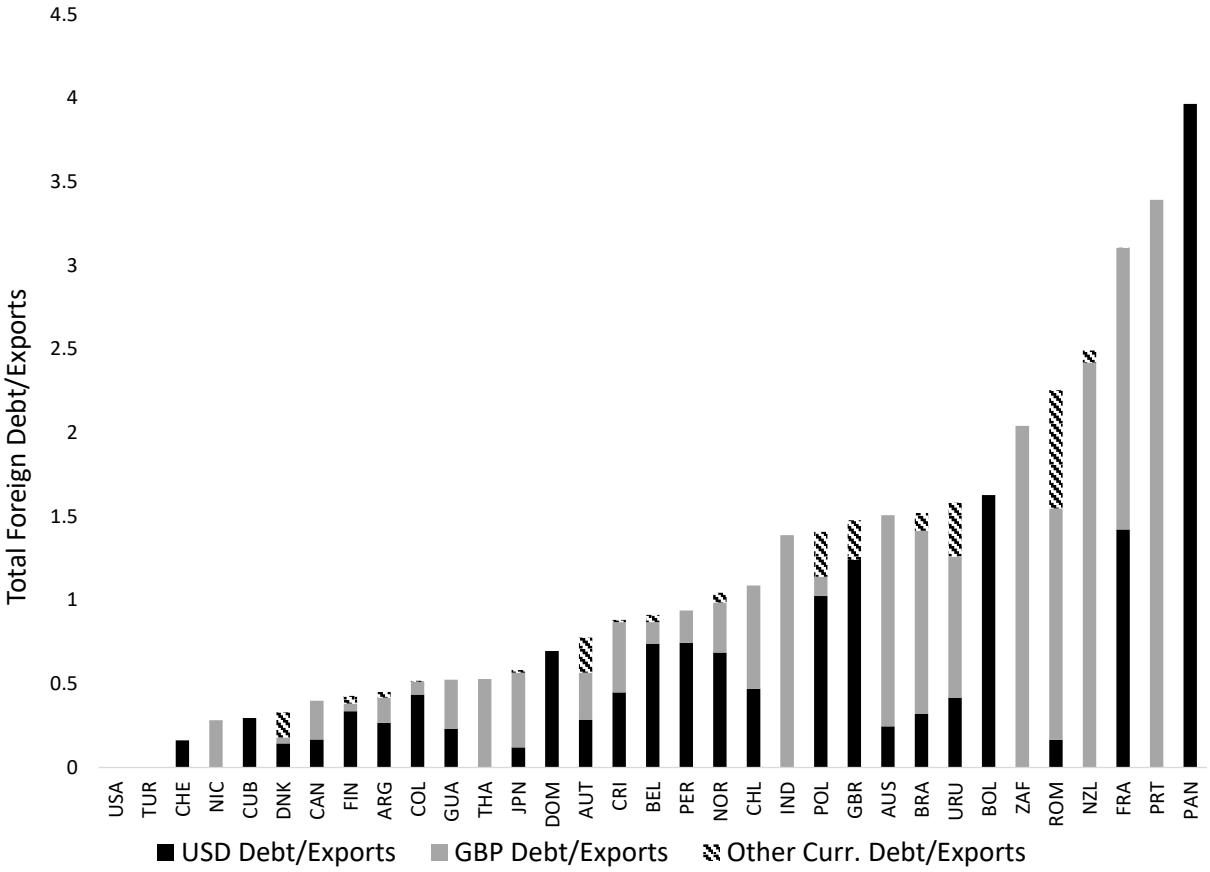
Although it was obvious at the time that greater flexibility was needed, policy makers gave due consideration to monetary credibility, trade patterns, and international financial connections. France, Belgium, Poland, and even Germany delayed their exits from the gold standard and were hesitant to break their monetary anchors because in the 1920s they had experienced disruptive bouts of hyperinflation or very high inflation. Regarding international trade, one view is that nations attempted to restore balance of

payments equilibrium with surprise devaluations. These "competitive" devaluations were often met with retaliatory devaluations, higher tariffs, or exchange controls (Eichengreen and Irwin, 2010). Nations also attempted to maintain exchange rate stability with key trade partners and with currencies in which their foreign debt was denominated even after devaluation against gold (Bordo and Meissner, 2023). By the mid-1930s, most countries had devalued against gold and reflated their economies.

The role of international currencies is also relevant for modern policy makers. In the 1920s, Eichengreen, Mehl, and Chiţu (2018) argue that the US dollar and pound sterling both acted as key international currencies. Debt and trade was denominated and transacted in both currencies. Figure 3 shows the share of foreign sovereign debt denominated in US dollars, pounds sterling and other less common currencies. London and New York served as financial centers and countries eventually de facto pegged to one or the other currency in the 1930s. US and British monetary policy directly influenced interest rates. As the trilemma would suggest, this led countries in the 1930s to prefer exchange rate pegs to the country with greater similarity in real and monetary shocks. The role of British and US monetary policy was also decisive in helping other countries – only when these nations devalued their currencies were most other countries, within their economic sphere, comfortable following suit.

In the 1920s, there was also a global rise in the use of foreign exchange reserves to back currencies. This raised the demand for liquidity from the suppliers of reserve currencies such as the pound and the US dollar. France, which arguably operated an undervalued exchange rate in the late 1920s, accumulated significant sterling reserves. France also acted to sterilize the associated accumulation of real balances leading to persistent balance of payments disequilibria. Facing a sort of Triffin dilemma, Birtish policy makers could not expand liquidity too much for fear of violating their statutory gold cover ratio. At the same time, the French insisted that "global" monetary policy was too loose at the time. British policy makers could also not tighten due to persistent double digit unemployment and sluggish growth. As is often the case in the nation issuing an international currency, Britain was stuck.

Figure 3 Average Ratio of Foreign Public Debt to Exports for 33 Countries, 1928



Notes: Figure shows the total public foreign debt for each country and the breakdown by the currency in which the foreign debt is payable. Data are from United Nations (1948).

By 1931, the economic environment had deteriorated so much that the status quo was un-tenable. The sudden devaluation of sterling in September 1931 struck a blow to French finances. The strong accumulation of Sterling reserves led to capital losses on reserves so high that the Bank of France went bankrupt (Accominotti, 2009). One wonders if coordinated global action in the face of a global shock may have improved global economic conditions. In addition, nations which use and accumulate the international currency have challenges in balancing demands for liquidity and growth against resilience to the rare events or large shocks that might make such an approach unsustainable.

4. The Bretton Woods Period: Coordination and Breakdown

The Bretton Woods monetary system was in operation from the 1950s until the early 1970s. The system had several objectives. The first was achieving a balance between international integration and policy independence. Second, there was a desire to avoid the destabilizing capital flows of the early 1930s. Third, nations wanted to avoid competitive devaluations and disorderly exchange rate management. By the 1940s, it was also understood that surplus countries were often unwilling to bear the burden of adjustment to international imbalances.

The deflationary pressures of adjustment to a deficit under fixed exchange rate systems were disdained by modern approaches to economic policy like Keynesian demand management. Leaders hoped that all of this would take place under the umbrella of an international organization to promote cooperation like the International Monetary Fund.

Some economists like Robert Triffin, argue that the key design flaw of the Bretton Woods system was the use of one global currency, the dollar, as the anchor for all other currencies (Triffin, 1960). Robert Triffin famously identified the problem which has come to be called the "Triffin Dilemma". Under Bretton Woods, the supply of US dollars dictated the overall level of the global money supply. If the US did not expand the supply of dollars in pace with global economic growth, deflation and unemployment would beset the global economy. On the other hand, if the US over-expanded the supply of dollars, then the commitment to convert dollars to gold would be compromised since the amount

of gold was almost fixed. No practical solution was available given the policy objectives enunciated in the 1940s. Getting the supply of US dollars "just right" was unlikely.

Ultimately, the Bretton Woods system was unworkable. Member countries outside of the US with persistent deficits failed to undertake the required level of austerity that re-balancing would mandate. Exchange rates for deficit countries collapsed but with costly delay. Surplus nations had little intention of easing the burden of adjustment and often complained of the imported inflation that the pegged rates of the system wrought. Finally, the key country, the custodian of the system, the United States, failed to rein in its deficits. Accelerating inflation in the US after 1965 was the final straw. Eventually world markets (and policy makers) demanded a devaluation of the US dollar.

The Bretton Woods period reveals several timeless features of the international system. First, the burden of adjustment is typically born by the deficit country. Second, capital controls and financial regulations or repression can limit the frequency and severity of financial crises that encompass the entire financial system of a nation. Finally, to the extent that global liquidity is a public good, then the optimal supply of such liquidity may not be provided by the issuer of a global currency.

5. Bretton Woods periods in Southeast Asia and the Gold/Sterling Standard

The evolution of exchange rate regimes discussed in the previous section also had a consequences for Southeast Asia's capital. Members of the Sterling Area, which included Malaysia and Singapore, pegged their currencies within the prescribed margin of 1% around the pound and tended to hold significant sterling reserves at the Bank of England. Both countries refused to follow the devaluation of the pound in November 1967 in attempting to leave the Area, resulting in increasing nominal exchange rates for both countries but holding domestic inflation at bay (Rana, 1981). Both would leave the Sterling Area in June 1972 when they chose to maintain gold parity instead of following the floating of the pound. The Area itself would eventually end in the early 1980s, though British policy decisions and several episodes of financial turmoil in the 1960s and 1970s had already reduced membership. Schenk (2010) provides an extended treatment of the

pound's international role and the decline of the Sterling Area through the post-war period.

Until 1967, Malaysia operated a currency board system with the then-Malaysian dollar fixed to the UK pound sterling. Bank Negara Malaysia (BNM) was established in June 1967 and began issuing a new currency, the new Malaysia dollar, which was also fixed to the pound at the same rate as previously, but now secured through open market transactions in a newly established foreign exchange market rather than a currency board system. BNM (2023) provides a detailed history of changes in foreign exchange policy and foreign exchange movements through the 1970s. Most significant were the succession of appreciations against gold using the US dollar as an international currency (Rana, 1981), as the UK devalued the pound through the 1970s and Malaysia refused to follow suit, instead maintaining the Malaysian dollar's value against gold. From June 1973, a freely floating regime was briefly adopted in response to the collapse of the Bretton Woods system, before a managed float against a basket of currencies was adopted in September 1975 (Bank Negara Malaysia, 2024). The currency was also renamed the Malaysian ringgit the same year.

Other Southeast Asian countries, including Thailand, Indonesia, and the Philippines, pegged their currencies primarily to the US dollar under the Bretton Woods system. Alongside the system of the adjustable peg currencies being the prevailing global norm, stabilisation appears to have been a driving policy goal motivating the adoption of fixed currency arrangements in the mid-twentieth century (Yenko, 1982).

For instance, Thailand, pegged to the pound sterling and gold before World War II. The *Currency Law 1928* pegged the baht to a value of 0.66567 grams of fine gold or 11 baht to one pound. The peg to the pound was briefly abandoned in September 1931 when sterling's value departed from gold. When World War II reached Southeast Asia, convertibility to the pound was suspended again in January 1942 in favour of a peg to the value of gold. Immediately after the war, the baht was fixed to the value of the pound at 40 baht to one pound, the US dollar at 9.925 baht to one US dollar, and to gold. These rates were adjusted in September 1949 when sterling was devalued (Shenoy, 1950).

Outside of these official rates, a multiple exchange rate system operated de facto until the multiple exchange rate system was ended, and rates were unified in 1955 in

Thailand (Krisanamis, n.d.). In 1963, a small devaluation occurred, and policy shifted to allow small movements within a 1 % band around the official par value rate fixed to the US dollar. The band was expanded to 2.25 % around the official rate in 1973. In November 1978, the peg to the US dollar was officially shifted to a basket peg system with daily fixing through commercial banks, which was changed in July 1981 to a fix maintained through market operations conducted by the Exchange Equalisation Fund (EEF). The basket peg lasted until a managed float system was adopted at the start of the Asian Financial Crisis (AFC) in July 1997 (Disyatat et al., 2005).

In Indonesia, following independence, the new Indonesian government instituted a foreign exchange system requiring exporters to sell their foreign currency proceeds to the central bank in exchange for 'export bonus' certificates. Importers were variously able to purchase certificates either directly from exporters or through a market located in Jakarta or by approval from the government, depending on the policy framework in place at the time. Importers could then use the certificates to claim foreign currency from a fund maintained by the government (Kanesa-Thasan, 1966). For most of the period from 1950 to the mid-1960s, under the Sukarno government, the government applied a system of quantitative import and capital controls through the certificate system, in effect controlling who could access foreign currency and at what rate depending on the nature of the imports and government priorities at the time. In this way, the rupiah was officially pegged to the US dollar (Corden and Mackie, 1962; Thasan-Kanesa, 1966). Despite this official rate, this was a de facto multiple exchange rate system, in which there were also prevailing and more freely moving unofficial rates available (White, 1972).

Three times during that era, in 1950, 1957-58, 1964-65, the market for certificates was de facto allowed to operate with little government control, in effect floating the rupiah for a brief period in response to economic pressure, and each time resulting in a depreciation of the currency (Glassburner, 1970). Each time, after a period of liberalisation, an import surge or capital flight episode would result in the reapplication of controls by the government (White, 1972).

After the establishment of Suharto's New Order regime, the system of certificates was allowed to be traded relatively freely, in what was a de facto managed float, from February 1966 onward. The multiple exchange rates were slowly unified during the late 1960s by bringing the official rate in line with parallel rates – no small feat given one

assessment that the official rate was only 6% of the black-market rate in 1965 (White, 1972). At the same time, a stabilisation program brought inflation down from its high of around 600 % per annum in 1965 and reconstructed the banking system. Devaluations in April and December 1970 finally achieved the unification of rates (Rana, 1981) and, by 1971, the exchange rate had largely stabilised at around 415 rupiahs to one US dollar (FRED, 2024). The official policy of Bank Indonesia (BI), in place since late 1968, was to stabilise and maintain that rate using purchases and sales as required in the foreign exchange market. Exporters were still required under this system to surrender their foreign currency earnings to BI, receiving certificates in return that can be transacted in domestically located foreign exchange markets (Glassburner, 1970), or they were free to buy back those earnings from BI at a slightly different rate, effectively imposing an export tax of about 0.5% (White, 1972).

The Philippines' experience illustrates some of the challenging BOP dynamics that could arise under a pegged regime. A deteriorating trade balance or domestic inflation would put pressure on the exchange rate as importers ran out of foreign currency. Facing increasing pressure, authorities could either devalue the currency, which would in effect achieve equilibrium by legalising the reduction in foreign purchasing power of the domestic currency or hope the imposition of capital or import controls would be sufficient to ration foreign currency until conditions improved. ASEAN foreign exchange regimes in the 1960s often relied upon complicated controls in the form of exchange rationing, multiple exchange rates, tariffs, and subsidies were often used as the mechanisms to match a pegged currency with the balance of payments requirements of the economy (International Monetary Fund, 1967).

After 1945, the Philippines had implemented a system of elaborate exchange and import controls to defend the value of the peso against the US dollar (Rana, 1981). Following BOP problems, many trade restrictions were removed and the peso was allowed to float more freely between January 1962 and November 1965, during which time the peso depreciated by around 8% against the US dollar. After that time, the Philippines once more returned to a hard peg, until further BOP problems in 1967 resulted in the reimposition of exchange controls and the negotiation of an early IMF package of stabilisation credits in 1968. When this failed, the peso was allowed to enter a managed float once more in February 1970 and exchange controls were reduced (Rana,

1981). This managed float regime persisted throughout the 1970s, with authorities officially retaining the capacity to intervene "whenever necessary in order to maintain orderly conditions in the exchange market and other policy objectives in the medium run" (International Monetary Fund, 1980) – foreshadowing the strategic ambiguity of future policy frameworks in the region.

Elsewhere in the region, the official Lao PDR economy was heavily supported by aid flows from the late 1950s through the end of Vietnam War. The individuals living in the area controlled by the Royal Lao Government (RLG) around Vientiane were among the highest per capita recipients of aid in the world at the time (St John, 2006). This aid included multilateral budgetary support for Lao currency, the kip, through the Foreign Exchange Operations Fund (FEOF). The FEOF was a joint venture between five contributors (the US, UK, Australia, France, and Japan) commencing in 1964 (USAID, 1973). The FEOF was designed to provide currency stability for the RLG, both by providing a source of foreign currency to pay for imports and to absorb excess kip in exchange for foreign currency to help control inflation. Lao PDR had two legal exchange rates during this period: the first rate was used for pricing imported aid goods and financing government transactions, the second was a free market rate at which the FEOF sold foreign currency in exchange for kip, and which prevailed in the private economy (Joel, 1966). This situation prevailed until the FEOF was abolished in 1975 when a socialist government took power and international aid was abruptly ended (Brown and Zasloff, 1976).

Similar to other planned economies, Vietnam had that functioned like hard pegs enforced through state planning for imports and enforced surrender of export earnings. Vietnam participated in the market bloc amongst socialist countries at soft prices set in terms of the Soviet rouble, as the USSR was Vietnam's primary trading partner for many years. Foreign exchange rates were set by multi-party agreements among communist countries by comparing the internal and the external purchasing power of currencies (Pham, 2012). Nguyen and Nguyen (2009) argue that the Vietnamese dong was administratively fixed at a rate far below that prevailing in the black market for most of the time prior to the start of Vietnam's liberalisation process in March 1989. The competitive effects on exports of this kind of administrative fixing under state planning are less obvious than under a market-determined system, as the government determines

the level of export production and captures all foreign currency proceeds regardless of prevailing foreign exchange rates.

Myanmar similarly implemented strong controls on foreign exchange following the 1962 military coup, which instigated the Burmese road to socialism (Turnell, 2011). After a string of nationalisations, including of all firms operating in the import-export trade in April 1963, the government undertook a "demonetisation" in May 1963, declaring all high-tender denominations of the kyat illegal (Cook, 1970). The government controlled and allocated all foreign currency earnings from that point onward, obviating the need for an official exchange rate (Hori and Wong, 2013).

6. Post-Bretton Woods and capital flows in Southeast Asia

After the end of the Bretton Woods arrangements and the advent of generalised floating amongst advanced economies in the second quarter of 1973, Southeast Asian economies faced a new set of choices in how to cope with new global financial arrangements. Global policy norms changed very quickly, in a matter of a few years, opening the possibility of using freely floating currency arrangements or some form of intermediate regime. Accelerating export and strong economic growth in several countries in Southeast Asia corresponded with eventual financial liberalization and growing capital flows in the region. Portfolio flows notably accelerated in the early 1990s.

The early 1970s was a period of brief turmoil as countries adjusted to the effects of newly floated global currencies. After two devaluations in April and December 1970, Indonesia devalued the rupiah again in August 1971 by 8.9 per cent in terms of gold, resulting in a 30 per cent depreciation against the US dollar and the temporary reintroduction of the system of multiple exchange rates that had been removed a year earlier. By December 1971, Indonesia had managed to stabilise a peg against the US dollar, but one which officially remained in place only until March 1973 when an official basket peg was introduced (Rana, 1981). Thailand and the Philippines managed to maintain their peg against the US dollar through the same period, but with the sudden depreciation of the dollar following the end of gold convertibility, both the baht and peso experienced a de facto depreciation against other major currencies also. This eventually

resulted in the Philippines allowing a formal depreciation to a new guided rate in April 1972.

After the formal end of the Bretton Woods arrangements in March 1973, four of five original ASEAN member countries eventually officially moved to a basket peg arrangement (the Philippines being the exception) (Rana, 1981). Malaysia and Singapore ended free interchangeability at par between their currencies in May 1973. The opportunity for interest arbitrage with high local interest rates had seen a sudden influx of speculative funds into Singapore, creating excess domestic liquidity – perhaps the first modern hot money surge into the region (Bhattacharya, 1977; Rana 1981). In response, Singapore floated the dollar in June 1973 (Monetary Authority of Singapore, 2011) and Malaysia followed suit, with both currencies nominally depreciating against the US dollar over the next two years by about 5.6 per cent (Rana, 1981). This period of relatively free floating ended in September 1975, when both currencies were pegged to an undisclosed basket of currencies (Monetary Authority of Singapore, 2011). Throughout the 1970s, the guided rate for the Philippine peso was depreciated several times, going from 3.9 pesos to the dollar at the end of January 1970 to approximately 7.4 pesos to the dollar as of the end of December 1978 (Bangko Sentral Pilipinas, n.d).

November 1978 saw the region's next significant changes when Indonesia devalued the rupiah against the US dollar by about 50% (Kincaid, 1984; Woo, 1988) and officially ended the hard peg to the dollar in favour of a managed float with an intervention band guided by real exchange rate movements against currencies of major trading partners (Goeltom, 1996). In the same month, Thailand also officially implemented a basket peg arrangement (Rana, 1998). Korea followed a similar pattern several years later. After maintaining a peg to the US dollar through the 1970s, relatively higher domestic inflation in the late 1970s caused the Korean won to become progressively more overvalued in real terms, affecting exports. Following a package of stabilisation reforms enacted in 1979, Korea allowed a 20 % devaluation of the won in January 1980 and an official change to a basket peg against five currencies (Frankel and Wei, 1994).

There has been a significant quantity of research trying to figure out what were the de facto foreign exchange regimes or what weights were placed on various currencies in the various baskets. Frankel and Wei (1994) assess the actual weights of basket pegs

by using regression analysis to estimate the relative weighting of the US dollar. They find that most Southeast Asian countries examined heavily weighted their basket pegs to the US dollar.

Several studies examined the contrast between de jure and de facto currency arrangements during the 1980s and 1990s (Reinhart and Rogoff, 2002). The most common finding being that a de facto peg to the US dollar survived in most countries throughout the period leading up to the AFC. Kim and Lee (2008) find that the currencies of Thailand, Malaysia, Singapore, the Philippines, and Indonesia were all de facto pegged to the US dollar, despite official basket pegs, albeit to varying degrees. Alongside Japan's growing presence in international trade in 1980s, Japanese capital did become more important in the region, particularly after the appreciation of the yen following the Plaza Accords in 1984-85. After the Accords, Rajan (2012) argues that the appreciating yen pushed Japanese businesses to invest in other Asian economies, helping to finance and stimulate the export-led GDP take off experienced in the region through the period.

Elsewhere in the region, Cambodia began rebuilding after the disastrous reign of the Khmer Rouge ended in most parts of the country in January 1979. The Khmer Rouge had banned all forms of currency, and so in March 1980 (after an intervening period in which barter was prevalent and foreign currencies and precious materials like gold, functioned as a currency in the newly liberated cities) a new currency called the riel was introduced. Under the socialist government established by Vietnam from 1979 to 1993, there was only a single state-owned bank operating in Cambodia and the reintroduced riel was initially valued at four riels per US dollar (Slocomb, 2010; Viseth, 2002). Following democratic elections in 1993, the new government undertook a significant program of economic reform to establish formalised private markets in the country. The currency regime moved to a managed float against the US dollar at the same time, which evolved to a system whereby the National Bank of Cambodia (NBC) sets the official exchange rate every morning based on surveys of the rates quoted by three major foreign exchange dealers in the market the day before (Viseth, 2002). Facilitating market infrastructure was built around this policy set up, with private banks and foreign exchange dealers allowed to enter the market in 1993. The stock of FDI increased rapidly from a very low base of USD 38 million in 1990 to USD 1.6 billion in 2000 (Menon, 2008). After the riel depreciated rapidly through the 1980s and 1990s from a starting nominal

position of 4 riels to one US dollar, it eventually settled around the 4 000 riels to one dollar mark by June 1998 (Slocomb, 2010). The NBC has maintained a relatively fixed exchange rate to the US dollar ever since, which has acted as 'the effective nominal anchor for three decades in the absence of a formal monetary framework' (Duma, 2011). The primary tool for both foreign exchange and monetary policy in Cambodia through the 1990s (and which largely remains in place) was through the NBC conducting one-way foreign exchange auctions to protect market stability and the official exchange rate, selling the government's foreign exchange receipts derived from non-project foreign aid. These auctions also help the NBC address the issue of 'dollarisation' by absorbing US dollar liquidity and injecting riel into the economy (Kubo et al., 2019). Cambodia's currency and foreign exchange policy is unavoidably shaped by the dominance of dollarisation of the economy – de Zamaroczy and Sa (2002) estimated that US dollar banknotes in circulation at the time amounted to USD 2.9 billion, or approximately 20 times the value of riels circulating outside banks and seven times the official M2 money supply measure (Kubo et al, 2019). Dollarisation is still rampant in the Cambodian economy, and one of the leading issues in the management of foreign exchange and monetary policy for the NBC (Kubo et al., 2019).

Myanmar moved to an official peg of the kyat to the IMF's Special Drawing Right (SDR) of 8.50 kyat per SDR in 1977 (Kubo, 2013). Public-sector exporters, mostly SOEs, were required to surrender all export earnings, which was rationed by the Ministry of Finance and Revenue for use in public demand for imports. Under the official rate, import demand was much larger than available foreign currency (Hori and Wong, 2013). While private sector firms were officially only allowed to retain and use their own foreign currency earnings, and only that since 1990, an illicit but tolerated multiple exchange rate system operated in practice. Exporters were required to deposit their earnings in a Foreign Currency Deposit (FCD) account in state banks, but importers and exporters could trade domestic currency and swap FCD account holdings, in effect creating a parallel exchange system (Kubo, 2013). This was further reformed in 1997, under an 'Export First' policy, which introduced a system for foreign exchange allocation operated via a major state-owned bank, Foreign Trade Bank (FTB). The FTB would pool official foreign currency earnings and, through negotiations between importers and exporters, allocate that currency for import payments (Nijathaworn et al., 2015). Across this period, in the unofficial, parallel system, the kyat experienced steady depreciation against the US

dollar from around 30 kyat per dollar in 1987 to around 1,300 kyat per dollar in 2006 (Kubo, 2013).

Foreign exchange management in Vietnam underwent several developments after the fall of the Bretton Woods system. The foreign exchange rate gradually changed from a system of multiple rates to a single fixed rate, and then to a system allowing trading in a narrow adjustable band around an official rate. The official rate was set daily and was meant to reflect underlying market forces. Prior to 1989, there had been a complicated system of multiple fixed foreign exchange rates, with an official rate for foreign trade transactions, a different rate for non-commercial transactions, another for remittances, and an internal settlement rate for compensating export enterprises for their losses under the fixed system. In March 1989, the various foreign exchange rates were unified into one single official rate under which commercial banks could transact foreign exchange within a 0.5 % band around the official rate set by the State Bank of Vietnam, though the band was eventually narrowed to 0.1% (International Monetary Fund, 1996). Infrastructural reforms were then introduced to improve efficiency, with two foreign exchange trading floors opening in Hanoi and Ho Chi Minh City in 1991 and then replaced by a more comprehensive interbank market in October 1994 (Nguyen and Nguyen, 2009).

Reforms that started to open markets in Vietnam were reflected in the reforms adopted by other market economies during this period that gave policymakers more flexibility in managing the effects of foreign exchange markets on currencies and capital flows. Beneath the surface of de jure reforms, however, many de facto structural features of the region's foreign exchange markets remained surprisingly unchanged. The US dollar retained its position as the dominant reference currency for the region's basket pegs, despite the rising importance of the yen in regional trade and capital flows. Authorities were still committed to defending relatively stable and largely fixed foreign exchange rates, with depreciations often signalling and occurring within periods of economic instability. Currency competition in this era was viewed through the prism of trade market, including negotiated appreciations of the yen. Some countries in the region experienced accelerating GDP and export growth, and there was a corresponding increase in financial flows in the region, but when countries ran into difficulties it was usually still because of BOP issues derived from a lack of foreign trading income.

7. Crises in 1990s - Asian Financial Crisis and Sterling Crisis

On Wednesday, 16 September 1992, the UK suspended its membership in the exchange rate mechanism. Officials had been attempting to defend the pound sterling from speculative attack in the preceding days and weeks. Facing accelerating sales of the pound and continuing losses of hard-won foreign reserves, the chancellor concluded he could no longer defend the pegged exchange rate. Thus ended the two-year attempt to keep sterling closely pegged to the German mark and other leading European currencies. Speculative attacks and sudden large exchange rate depreciations also occurred around the same time in Italy and in the Nordic countries of Sweden, Norway, and Finland in 1992. France was forced to widen its band of fluctuations by the summer of 1993. This was clearly an international currency crisis.

This series of crises has been described as largely unexpected and an example of the potential for crises to occur in countries that were not obvious candidates for a crisis. More plainly, the question for any country with a pegged rate would now be: Does the government have the willingness to defend a peg when globally footloose capital chooses to mount a speculative attack?

In the first half of the 1990s, capital inflows into the Southeast Asian economies dramatically increased, averaging about 2.4% of the region's GDP and peaking at almost 4% of GDP by 1996 (Rajan 2011). There were global structural and technological factors behind this surge, including rapid improvements in information technologies, financial regulatory changes in developed countries leading to a proliferation of instruments and a dramatic rise in global financial flows, the internationalisation of investment funds looking for risk diversification and attracted by the high growth prospects and performance of Southeast Asian economies. After the reforms of the previous decades, many Southeast Asian economies were able to offer stable exchange rates and macroeconomic policies combined with a trend toward capital account deregulation, which acted as pull factors for foreign capital flows into the region (Takagi and Esaka, 2001). Foreign direct investment (FDI) grew steadily through the 1990s, while portfolio and other net flows were more volatile, though still increasing significantly. There was a notable jump in 'other' private flows in 1995 and 1996, representing short-term lending

by foreign banks, foreign currency deposits, and trade credits, likely driven in part by the 'carry trade' phenomenon (Rajan, 2011).

In Southeast Asia, fixed exchange rates and foreign currency debt led to heightened financial fragility. Fixed exchange rates led borrowers to believe they were insured. Local banks, firms, and households believed that the exchange rate pegs with the US dollar were guaranteed. As a result, these nations accumulated significant short-term debt denominated in US dollars. The cost of capital was lower when borrowing in dollars than borrowing in local currency. However, a shock to market confidence in the exchange rate could lead foreign currency debt to rapidly increase in local currency terms. This "fragility" was barely recognised by markets prior to 1997.

The crisis was triggered by an attempted devaluation of Thailand's currency and spread rapidly to other countries. The role that was played by fixed foreign exchange policies contributing to overvalued currencies that crashed and led to the rapid reversal of the 'hot money' flows that had been coming into the region has been intensely debated ever since. Authorities reacted to the crisis in different ways, some seemingly abandoning their fixed arrangements and allowing a period of largely free-floating foreign exchange, before either officially or de facto attempting to reimpose largely fixed arrangements to the US dollar (Fane, 2005).

Malaysia's experience illustrates the difficulty faced by policymakers generated by the increased significance of financial flows in the region. Faced with significant capital outflows in 1998, Bank Negara Malaysia (BNM) found itself in the position where further lowering policy interest rates to support economic activity and contain suddenly tightened monetary conditions itself threatened to generate additional capital outflows and deepen short term pressures (Cheong, 2005). Unable to use the interest rate to effectively contain the crisis and reaching for policy fixes reminiscent of the dynamic that sometimes prevailed in the 1970s, the BNM introduced selective exchange controls on 1 September 1998 and fixed the ringgit at the prevailing market rate the next day to gain additional policy space and stem the tide of outflows (Ariyoshi et al., 2000; Umezaki, 2006).

The policy stances adopted in the aftermath of the AFC still prevail in some form in many economies in the region. Indonesia and the Philippines officially adopted flexible

exchange rate regimes coupled with inflation-targeting frameworks. Thailand also adopted an inflation targeting framework but chose to officially designate its foreign exchange policies as a managed float arrangement. So-called intermediate arrangements, lying between the corner solutions of a hard peg or a freely floating currency, became both the de jure and de facto norm. Singapore officially adopted a basket peg with the trade-weighted exchange rate used as an intermediate target. Malaysia was one of the few countries to officially return to a hard peg against the US dollar, which lasted until 2005 when a basket peg was officially adopted. With few exceptions, Asian economies were classified by the IMF as holding soft or hard pegs or managed exchange rate regimes in the aftermath of the AFC (Rajan, 2012).

Empirical studies of currency movements from this era have returned some mixed results, with some finding little evidence of any particularly strong peg for any country in the region (Klyuev and Dao, 2016). The most referenced studies from this period are, however, those that posit a "fear of floating" (Calvo and Reinhart, 2002) or a "fear of appreciation" (Levy-Yeyati and Sturzenegger, 2007) in the region, arguing that many countries relatively quickly returned to a pegged arrangement against the US dollar despite de jure announcements that they were adopting either managed floats or freely floating arrangements. Those studies use various estimation techniques to point to evidence of co-movement between currencies and the US dollar over and above what would be expected from freely floating arrangements (Rajan, 2010).

After the 1990s, economists predicted that there would be a "hollowing out" in exchange rate regimes (Eichengreen,1999). The best solutions to avoiding financial instability were flexible exchange rates or hard fixes like currency boards or monetary unions. Pegged exchange rates fuelled foreign currency borrowing in many prior crises. Abandoning the policy of pegged exchange rates would limit the moral hazard inherent in foreign currency borrowing under soft pegs. A country might also be forced to develop a more resilient domestic financial system and issue more debt in local currency. On the other hand, floating exchange rates bring volatility, limiting international trade and economic growth. A peg that was hard or nearly irrevocable could also eliminate the risk of devaluation avoiding the rise in the cost of debt from devaluation. Hollowing out did not emerge. Instead, another path was followed.

Reserve accumulation was allegedly another indirect lesson from the financial crises of the 1990s. The accumulation of large foreign exchange reserves by many countries in Southeast Asia truly began after the AFC, which many have pointed to as additional evidence of foreign exchange intervention for the purposes of limiting currency appreciation and the accumulation of safety buffers in the event of further capital surges and flights. Rajan (2011) has argued that these reserves indicate concerns about possible reductions in capital values and export competitiveness from the risk of a sharp appreciation, rather than depreciation fears. Indeed, reserve accumulation accelerated in emerging markets, as well as Japan and Germany and in commodity exporters. Obstfeld, Shambaugh, and Taylor (2010) emphasize the importance of financial considerations as well as traditional forces related to the trade balance and its variability. The key concern according to Obstfeld, Shambaugh, and Taylor (2010) for policy makers was a "double drain." Domestic financial instability, which is common in financially developing, emerging markets often "leaked out" into a run on the currency. The chance of a simultaneous dis-location of the domestic financial sector and the currency would only be heightened in the face of foreign currency borrowing. A war chest of hard currency would essentially provide self-insurance. Such insurance was necessary since the AFC revealed that IMF assistance was to be taken with caution, or because of the failure of the IMF to backstop Argentina in 2001 and 2002.

Finally, there is the idea that capital controls can limit financial crises. Obviously inspired by experience in the 1950s and 1960s when banking crises went dormant, this approach was anathema to the spirit of the Washington Consensus dominant in the 1990s. The IMF generally opposed such regulations. Recall that the IMF refused to deal with Prime Minister Mahathir after imposing such controls. Only recently, in the aftermath of the Global Financial Crisis of 2008, did the IMF soften its stance, recognizing that capital controls could enhance financial stability if applied properly.

8. Managing Contemporary Capital Flows in 21st century in Southeast Asia

In the last decade, foreign exchange flows involving the region have continued to increase substantially. According to the latest BIS Triennial Central Bank Survey (2022), onshore foreign exchange trading volume more than tripled in China between 2013 and 2022, more than doubled in Singapore, and Indonesia, and increased by about half in India and Malaysia. This growth came off a somewhat low base and, in GDP terms, foreign exchange trading volumes are still lower than in advanced economies. Markets in Indonesia and the Philippines are dominated by spot transactions, while foreign exchange swap and forward transactions are the largest shares of the markets in Malaysia and Thailand.

Many currencies throughout the region are also becoming more internationalised. Offshore trading in the Indonesian rupiah, Philippine peso and Thai baht increased substantially over the three years from 2019 to 2022. The Malaysian ringgit is one currency that experienced a decline over the period, partly due to encouragement for greater onshore trading by Malaysian authorities (BIS, 2022a).

Foreign exchange policy regimes have been largely stable over the last decade. The BIS's 2019 Annual Economic Report characterised foreign exchange regimes in the region as having moved "ahead of the theory" with a combination of managed floats, foreign exchange intervention, and some use of capital flow management measures (CFMs) to smooth foreign exchange and capital flow volatility. Only five of eleven central banks have some reference to exchange rates in their mandate, but for eight of eleven the foreign exchange regime is important for fulfilling their mandate. Outside of periods of turmoil, central banks tend to intervene in foreign exchange markets only sometimes, most less than once a month, most often to support market functioning and financial stability. Only Singapore uses foreign exchange intervention to target an exchange rate level, in line with their monetary policy framework (BIS, 2022a).

Capital account liberalisation in Southeast Asia has also stabilised. An updated version of the Chinn-Ito Index (2006) of capital account liberalisation that captures de jure measures used by the BIS (2022a) suggests that capital account liberalisation in emerging economies around the world has declined somewhat since the GFC and after the introduction of renewed CFMs. Having said that, the difference in capital account

restrictions between emerging and advanced economies in Asia has narrowed over the same period. Particularly in relation to direct investment regulations, the BIS (2022a) found that emerging economies were substantially closer to the kind of regulatory environment prevailing in advanced economies in the region. For other kinds of investment vehicles, such as capital and money market instruments, derivatives, credit operations and personal capital transactions, emerging economies still do apply a greater range of restrictions and management policies. These restrictions are usually either qualitative measures, where investors are required to meet some qualifications before investing, or quantitative measures, where controls or quotas on the volume of transactions are in place (BIS, 2022a).

Policy and structural changes appear to have helped to make the region's foreign exchange market more resilient in recent years. The BIS concludes that regional foreign exchange markets fared better during the COVID-19 pandemic than during the turmoil of the taper tantrum in 2013. While there can be vulnerabilities generated from the growing presence of non-bank financial intermediaries (NBFIs), their greater participation is likely to have contributed to the diversity and resilience of foreign exchange markets. The growing use of foreign exchange derivatives to hedge exposure has also likely helped generate additional resilience in regional markets and helped to mitigate the risk of large selloffs of local currency by foreign investors (BIS, 2022a).

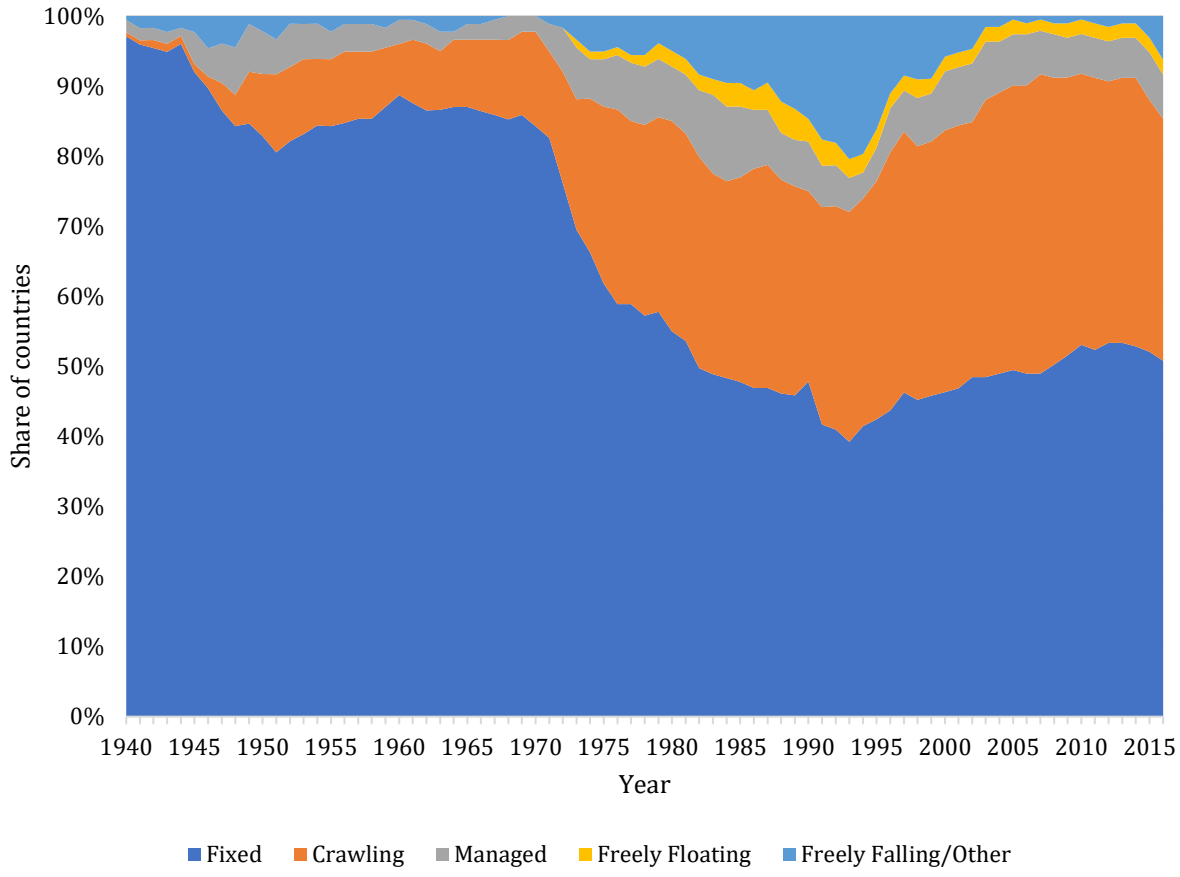
These changes to regional foreign exchange flows and management policies have been occurring amidst a changing global economic landscape and global intellectual approach to suitable foreign exchange management policies. China become a more important player in regional and global trade and capital flows. New vehicles for capital flows have entered the field or are under development, including new crypto products and central bank digital currencies (CBDCs).

Another challenge for exchange rate policy relates to the growth of global value chains (GVCs). GVCs structure trade in new ways such that the import-content of exports is higher than it once was. Recent empirical evidence points to the fact that GVCs also dampen the response of trade flows to exchange rate changes (International Monetary Fund, 2019a). The analytical implications seem to suggest that GVCs create real rigidities or perhaps natural hedges for trading economies. If this is the case, then exchange rate

pegs that typically absorbed shocks in the past under more traditional types of trade arrangements may be less important.

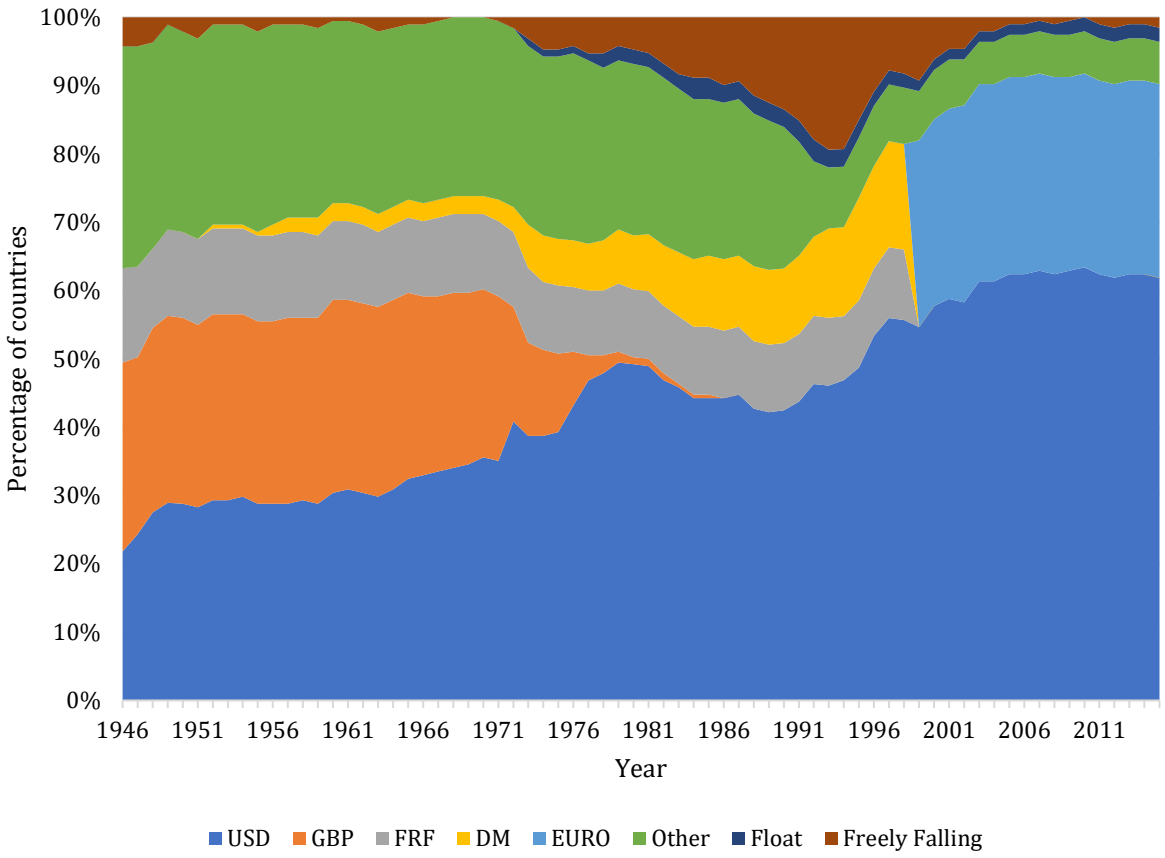
Still, looking at the evidence from recent years, suggests that exchange rate pegs with intermediate levels of flexibility, especially to the US dollar, are still common and popular (Figure 5 and Figure 6). The prediction that there would be a "hollowing out" seems inconsistent with revealed policy choices of countries today. The largest countries in the East Asia region (excluding Japan which floats) currently follow managed floats or even tighter fixed systems against the dollar.

Figure 5 Exchange Rate Regimes, 1940-2016



Notes: Figure shows the share of countries adhering to different exchange rate regimes using the "fine" classification of Ilzetzki, Reinhart and Rogoff (2021). The "fixed" category encompasses countries with no legal tender, de facto hard pegs and pre-announced narrow bands of less than or equal to +/-2%. The "crawling peg" category includes both de facto and de jure crawling pegs, and de facto narrow bands. "Managed" includes countries with wider bands of up to +/-5% and countries who have actively intervened to affect the level or volatility of their exchange rate. "Freely floating" includes countries outside these narrow bands, but who didn't experience currency crashes or high rates of inflation. "Freely falling/other" include "freely falling" currencies and countries with parallel exchange rates but with no data on the parallel rate.

Figure 6 Share of Countries using Various International Currencies as an Anchor, 1946-2016



Notes: Figure shows the share of countries using various international currencies as the anchor or reference currency. Data from Ilzetzki, Reinhart and Rogoff (2021).

Other factors on the financial side are relevant for exchange rate policies. First, Rey (2015) argues that countries are beholden to the global financial cyclical regardless of the exchange rate regime. If so, exchange rate regime choice may no longer be driven by the concern that a flexible rate affords protection from nominal or financial shocks.

Moreover, the currency denomination of debt has grown less important. In the aftermath of the 1990s, policy makers suggested limiting exchange rate flexibility to reduce sudden rises and shocks to the domestic currency value of debt. But in recent decades, nations in East Asia have gone some distance towards improving the share of debt denominated in local currency. Chernov, Creal and Hördal (2020) report that Asia-Pacific countries have grown local currency debt markets from 10% of GDP to nearly 50% of GDP. This is much faster than in Latin America where the growth of the absolute size

of local currency debt has been insignificant or possibly even negative when measured as a share of local GDP.

In addition, exchange market intervention is now widely viewed as an effective means to managing financial volatility. As discussed above, and is well-known, most Asian countries have, since the late 1990s adopted managed floats or arrangements with limited flexibility. At the same time, they have also experienced financial stability. Most countries in this region make use of extensive exchange market interventions. The implicit, and sometimes explicit, goal of such interventions has been to stabilize the exchange rate, and to reduce the chances of credit-driven asset price booms. Results in Jogwanich (2019) show that in seven East Asian nations that were studied, "changes in foreign assets and domestic credit move in opposite directions". The results echo findings that over 70 percent of net capital inflows in Asian emerging markets are absorbed by foreign exchange market interventions (International Monetary Fund, 2019b).

A final observation relates to the historical dominance of the US dollar. In the last two decades, the role of the dollar has diminished since reliance on dollar-denominated debt has declined and invoicing in other currencies besides dollars has become commonplace. In the past, international currency status has depended on several variables including demand for a currency as a medium of exchange, its ability to store value and its role as a unit of account. Multiple currencies can be in use at any one time, but "multiple equilibria" are possible due to strategic complementarities.

In recent years, various electronic currencies (crypto-currencies or stable coins) have emerged, potentially offering the benefits of being useful for cross-border transactions. Central bank digital currency (CBDC) systems have also been contemplated and are at various stages of implementation and testing. The novelty of the private electronic currencies is that they are active on a digital platform, potentially de-centralized, and/or not governed by sovereign monetary authorities. One issue for CBDCs is the lack of anonymity. Inter-operability of disparate national systems will also have to be overcome. Advocates argue that digital currencies have the potential to lower the transaction costs in international trade and finance. There is no evidence that CBDCs will alter the standard trade-offs and constraints in international finance. However, monetary policy could become more powerful if central banks can make one-time increases to the money supply (so called "helicopter drops") to the population efficiently. In addition, if

the first-mover advantage leads to lock-in for one currency over another the dominant currency may tilt towards the leader.

The rise of crypto currencies and assets is another example of currency competition. History has witnessed many episodes of outright currency competition. As with any currency, de-centralized electronic currencies must insure they are viable media of exchange and stores of value. Most crypto and digital currencies to date have not satisfied these constraints although they are increasingly acceptable and in demand.

In the medium run, crypto currencies and digital approaches may provide backstops or potential outside options to incumbent currencies. The challenges of scaling payments systems in blockchain-based systems and of privacy in the case of CBDCs are not entirely solved. For these reasons, electronic currencies do not seem to pose fundamentally novel challenges in terms of exchange rate policy in the near term.

9. Conclusions

Over the long run, the international monetary system has seen significant changes, but certain deep similarities persist. Countries for the last 150 years have opted frequently for fixed exchange rates. Financial instability and balance of payments adjustment have always posed challenges. In recent decades, countries have shown that exchange market intervention is a common tactic. Capital controls and exchange market intervention are viable and effective ways to manage financial and real volatility.

Although forms of pegged exchange rates remain popular in some countries, the trade-offs have become more complicated than traditional optimal currency arrangement theories would suggest. Indeed, currency and debt invoicing patterns and the rise of the global financial cycle have altered these trade-offs and no new paradigm has emerged to replace the theory of optimal currency areas. At the same time, countries must continue to assess their situations vis-à-vis their level of financial development, their ability to manage monetary stability and their level of integration with the global economy all factors which vary among Southeast Asian countries.

In closing, history could provide some guidance for exchange rate policy in Southeast Asia today, but policy makers must also continue to be aware of changes to the environment and to keep pace to achieve the dual objectives of financial stability and strong growth.

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