Dollarization and macroeconomic performance in Cambodia since the first 1993 general election: a historical perspective

Chanthol Hay*

Department of Sociology and Community Development, National University of Battambang, Battambang city, Cambodia. ORCID ID: 0000-0002-4876-2421

Abstract

This paper provides historical backgrounds of dollarization, the introduction of the Khmer riel and macroeconomic performance in the context of high dollarization after the Khmer Rouge regime which ended in year 1979. The high level of dollarization was caused by both economic and political factors. The history of large exchange rate depreciation and high inflation, trust in new local currency (which was abolished during the Khmer Rouge), political unrests, spending in U.S. dollars by international organizations for running elections, are among those factors. Macroeconomic environment was favourable as low inflation, stable exchange rate against U.S. dollar and high rate of GDP growth were achieved recently. Policy to gradually de-dollarize the economy is in place. However, dollarization cannot cushion Cambodian economy against recent global economic shocks such as global financial crisis in 2008 and Covid-19. A more active dedollarization policy shall be considered.

Keywords: Dollarization; Exchange rate; Inflation; Foreign currency deposit; Dedollarization

JEL Classifications: F31; G20

---

* I would like to thank my supervisors, professor Fukuda Shin-Ichi and professor Ueda Kenichi for helpful comments during research seminars. This paper is extracted from my doctoral dissertation titled "Essays on the macroeconomic effects of dollarization on Cambodian economy".

Introduction

Cambodia has undergone many political regime changes and economic difficulties such as extreme poverty and hunger. The economy became highly dollarized as the local currency was used together with the U.S. dollar for an exchange of goods and services, for a store of value and for a unit of account, even while the macroeconomic environment was stable. Dollarization is defined differently according to how foreign currency is used in an economy. The followings are some definitions of dollarization. Dollarization is broadly defined as the use of multiple currencies as media of exchange in a given country. Dollarization is also frequently used to indicate that foreign currency serves as a unit of account or as a store of value, and not necessarily as a medium of exchange (Calvo and Vegh, 1992). Financial dollarization is a situation when the banking systems built nontrivial assets and liabilities positions denominated in dollars. This mainly occurred in many emerging market economies routinely in the early 1990s. Asset dollarization refers to the use of foreign currency in any of the three functions of money: a unit of account, a medium of exchange and a store of value. Liability dollarization refers to a situation in which either the domestic banking system or the government hold relatively large foreign currency debt obligations. Real dollarization is the extent to which prices and wages are determined in foreign currency (Ize and Yeyati, 2003). Full dollarization occurs when a country abandons its own currency and adopts another country's currency as means of payment and unit of account. Very few countries in the world has completely dollarized like Panama. Currency substitution refers to the use of foreign money only as means of exchange. Thus, an economy can be highly dollarized, but not subject to currency substitution.

Initially, the large depreciation of the Khmer riel can be one of the factors behind dollarization. The degree of dollarization, which is commonly measured as the ratio of foreign currency deposits (FCDs) to broad money (M2), showed an upward trend. According to the Monetary Survey of the National Bank of Cambodia (NBC), there was an increase from 0.36 in December 1993 to 0.83 in August 2014. During the period of economic liberalization in the early 1990s, the Khmer riel depreciated sharply against the U.S. dollar, in particular, in the period before and after the first general election held in 1993 as shown by the red line which corresponds to the left axis of Figure 1. In 1990, a U.S. dollar was traded for 426.25 riels. The Khmer riel depreciated sharply to 718.33 against the U.S. dollar in 1991. The Asian financial crisis in 1997 also caused the Khmer riel to depreciate further, from 2946.25 riels per U.S. dollar to 3744.42 riels per U.S. dollar during the crisis period.

After the Khmer Rouge regime, the National Bank of Cambodia introduced the new Khmer riel (KHR) into circulation on 20 March 1980. People started using local currency again after it was completely abolished in the Khmer Rouge regime under which the economic system was in vast contrast with the previous regime. In the Khmer Rouge's economic system, general means of production as well as outputs belonged to the state. The price mechanism did not function in the economic system. People received foods through rationing system. During the short period between the end of the Khmer Rouge and before the introduction of the new currency, markets revived on the basis of private exchange. The main medium of exchange was rice, measured in empty condensed milk cans. More expensive items were paid for in gold, which the people had either safeguarded with them during the Khmer Rouge regime, or buried the gold before the evacuation from Phnom Penh in April 1975.

In addition to a large currency depreciation and high inflation in the early 1990s, one of the remarkable events that contributed to dollarization in Cambodia was the first general election in 1993 during which a large quantity of U.S. dollar was spent in the country. The United Nations Transitional Authority in Cambodia (UNTAC) essentially governed Cambodia from March 1992 to September 1993 to build peace, reconstruct and rehabilitate the country. About 16,000 blue-helmeted peacekeepers blanketed the country, and over 3,300 civilian administrators took control of Phnom Penh. UNTAC was provided with 2.8 billion U.S. dollars to run a government oversee the repatriation of 350,000 refugees and supervised a cease-fire among factions who despised and distrusted each other. UNTAC also conducted the first Cambodian election after the Paris peace agreement in 1991.

Dollarization is still on the increase despite stable exchange rate, high GDP growth rate, low inflation and the decreasing role of the United States (US) as a trade partner. Recent Cambodian economic growth, which was on average 7.7% annually, was mainly supported by four engines of growth: agriculture sector, garment sector, tourism sector and construction sector. Recent trade, development assistance and foreign direct investment (FDI) are associated with dollarization. Although Cambodian economy ran a trade deficit, the volume of trade was large. In 2013, the sum of export and import as a fraction of GDP was 105% and the

amount of trade deficit stood at 19.4% of GDP. Export has been primarily based on garment sector. The total value of garment export accounted for 75% of the total export value (FOB) in 2013, declining from 96% in 2005. Both U.S. and EU markets were the main export markets. The share of export to US market declined from 65% of the total export value in 2002 to 27% in 2014 while the share of export to EU market increased from 25% to 34%. The National Bank of Cambodia and some other government ministries recently implemented a gradual dedollarization policy. However, dollarization degree remained high.

Previous studies about dollarization in Cambodia lack the comprehensive description of macroeconomic performance in Cambodia. Most of those studies used only partial analysis to look at the particular effect of dollarization. This paper aims to fill this gap by providing a detailed description of Cambodian macroeconomic performance from the introduction of the new Cambodian currency to the current period of high degree of dollarization.

The next section provides literature review about dollarization in Cambodia. Section 2 examines the evolution of dollarization and exchange rate movement after the Khmer Rouge regime. After providing a brief historical overview of exchange rate and dollarization, section 4 investigates how the National Bank of Cambodia introduced a new Khmer riel into the economy after the moneyless regime of the Khmer Rouge. This section explains the political causes of dollarization in the economy. Section 5 explores recent macroeconomic performance. Section 6 provides an overview of de-dollarization policies in Cambodia and a brief discussion. Section 6 summarizes the findings.

Literature Review

Dollarization can have positive effects on economic growth through at least three channels: interest rate channel, currency risk channel and trade channel. Dollarized economy tends to have lower interest rates and higher investment. Thus economic growth will be higher. In addition, by eliminating currency risk through dollarization, higher investment and faster growth can be achieved (Dornbusch, 2001). In addition, national currency can be a barrier to trade. Thus, trade can be improved by reducing this barrier through dollarization (Rose and Van Wincoop, 2001). Another benefit of dollarization is the increase in economic horizon because stable and low inflation and stable currency can be achieved under dollarization. However, cross-country empirical studies about the economic benefits of dollarization on macroeconomic variables showed mixed results. Some studies show negative impacts of dollarization. Countries that use a convertible currency as legal tender are called strictly dollarized countries. GDP per capita growth has not been statistically different in dollarized and in non-dollarized countries. Dollarized countries have had a slightly lower rate of growth than countries with a domestic currency; this difference, however, is not statistically significant. Volatility has been significantly higher in dollarized than in nondollarized economies (Edwards and Magendzo, 2003). Using panel data, deposit dollarization has a negative but small impact on the real interest rate (Bacha et al, 2008).

In Cambodia, several studies about dollarization focused on financial dollarization by using foreign currency deposit as a main indicator, in particular, to measure elasticity of currency substitution, to investigate the effect of currency depreciation on the degree of dollarization which is defined as the ratio of foreign currency deposit over broad liquidity, to explain the causes of dollarization. Large domestic currency depreciation during the transition periods in late 1980s and early 1990s was the main economic factor behind dollarization in the country. Ra (2008) found that, for the time period 1992- 2007, there were positive effects (expected) of the expected rate of depreciation in market exchange rates on the holdings of U.S. dollars. The effect is strongest for Cambodia, and this may reflect the fact that Cambodia's dollarization is stronger than those of Laos and Vietnam.

In Cambodia, there were two opposing views about the effects of dollarization. On the one hand, dollarization seems to be good for Cambodia. Duma (2010) and Menon (2008) argued that, in a stable macroeconomic environment, dollarization in Cambodia was caused by "good news" rather than "bad news" factors. Those pieces of good news include a strong inward flow of dollars related to garments sector exports, tourism receipts, foreign direct investment, and aid. On the other hand, dollarization provided negative effects to Cambodian economy. Lay et al. (2012) find that dollarization in Cambodia induce domestic currency depreciation and intensifies exchange rate volatility. Kang (2005) conclude that the costs of dollarization in Cambodia, which include loss of seigniorage, some monetary, fiscal and foreign trade policies and worsening the distortion of income distribution, outweigh the benefits, which include stabilization of price levels and reduction in the risk of national default during a foreign currency crisis. Dollarization can stabilize

prices in Cambodia at the expense of competitiveness. Samreth et al. (2019) find that a positive US interest rate shock dampens trade balance of Cambodia with the EU through appreciation of the US dollar and the shock also leads to significant decrease in Cambodia's international reserve level. Those previous studies about dollarization in Cambodia lack the comprehensive description of macroeconomic performance in Cambodia. Most of those studies used only partial analysis to look at a particular effect of dollarization. This paper aims to fill this gap by providing a detailed description of Cambodian macroeconomic performance since the country introduced the new Cambodian riel after the Khmer Rouge regime. The detailed description may provide policy makers or scholars to judge whether dedollarization shall be implemented more actively or not.

Dollarization and Exchange Rate Movement after the Khmer Rouge Regime from 1979 to the present

Dollarization in Cambodia has increased, along with the rapid growth of financial sector over the past years, to become the highest dollarized economy in the Asian region. The degree of dollarization which is commonly measured as the ratio of foreign currency deposits (FCDs) to broad money (M2) showed an upward trend, increasing from 0.36 in December 1993 to 0.83 in August 2014, according to Monetary Survey of National Bank of Cambodia (NBC). The blue line which corresponds to the right axis of Figure 1 shows the degree of dollarization from 1994 to 2016. The degree of dollarization shows an upward trend over the period except in the periods of Asian financial crisis which occurred in 1997 and in the periods of global financial crisis which occurred in 2008. In these two periods of crisis, the degree of dollarization plunged dramatically. Although the degree of dollarization showed positive correlation with local currency depreciation against the U.S. dollar prior to 1997, as shown below in Figure 1, there seem to be no correlation after 2001 when the exchange rate became stable. The degree of dollarization has continued to increase while the exchange rate has become stable against the U.S. dollar, in particular, since 2001. During the period of economic liberalization in the 1990s, the Khmer riel depreciated sharply against the U.S. dollar, in particular, in the period before and after the first general election held in 1993 as shown by the red line which corresponds to the left axis of Figure 1. In 1990, a U.S. dollar was traded for 426.25 riels. The riel depreciated sharply to 718.33 against the U.S. dollar in 1991. While the 1997 Asian financial crisis caused large depreciation, the 2008 global financial crisis did not. The Asian financial crisis in 1997 also caused the Khmer riel to depreciate further. The Khmer riel depreciated from 2,946.25 riels per U.S. dollar to 3,744.42 riels per U.S. dollar in the crisis period.

In addition to deposit dollarization, the outstanding loans denominated in the U.S. dollar captured a large proportion of total outstanding loans. The percentage of loan outstanding in local currency, Khmer riel (KHR), was less than 10% of total outstanding loan. This evidence suggests that financial institutions in Cambodia overwhelmingly borrowed funds from abroad to finance loans in domestic market. The financial institutions avoided exchange rate risk because they were able to provide loans in the same currency they had borrowed, which is generally in U.S. dollars.

Figure 1 : Exchange rate and dollarization

Source: The National Bank of Cambodia

In addition to this high degree of dollarization, dollarization has been widespread across Cambodia to provinces and deep in Cambodian economic agents. A comprehensive joint survey on dollarization in Cambodia conducted by Japan International Cooperation Agency (JICA) and the National Bank of Cambodia (NBC) in 2014 found that dollarization in Cambodia was deep at all level of economic agents, namely at firm level, household level and financial institution level. Part of firms' revenue and expenditure is denominated in U.S. dollar. Workers in major industries such as tourism and garment received salary in the U.S. dollar. Financial institutions also provided loans and received deposits in U.S. dollars. The survey found a large share of revenue denominated in U.S. dollar and also a large share of expenditure denominated in U.S. dollar at firm level. However, enterprises on average had more foreign currencies in their expenditures than revenues, in every region. At household level, the survey found that salary income had the highest ratio of foreign to local currency. At financial institution level, the survey found that commercial banks relied heavily on foreign currency in their operations than microfinance deposit taking institutions (MDIs). Regarding price quotation, most entrepreneurs tend to set prices of their goods and services either in U.S. dollars or in Khmer riel only, or in a combination of the two currencies.

Cambodian Currency after 1979

The previous section demonstrated the evolution of dollarization and exchange rate movement in Cambodia. This section will explore main economic and political events after the Khmer Rouge regime, in particular the introduction of a new Cambodian currency which was completely abolished in the Khmer Rouge regime. Readers who are interested in Cambodian history can skip to Annex A for a brief overview of Cambodian economy in the past.

The economic system under the Khmer Rouge, which was formally called Democratic Kampuchea, was in vast contrast with the previous regime. Chapter 2 of the constitution of Democratic Kampuchea states that "all important general means of production are the collective property of the people's state and the common property of the people's collectives. Property for everyone use remains in private hand". The Khmer Rouge eliminated currency, wages, and all systems of the market economy. People were given food through rationing system. There was an intention to introduce a new Khmer riel but it failed to do so. This was because the administration was young and lacked experience in maintaining the currency stability. Money was also regarded as a threat to pure society (Slocumb, 2010). The main commodity during the Khmer Rouge period was rice, which was used for exchange goods with other countries. Rice production was targeted at 5.5 million tons in 1977 for the entire country (Tyner, 2017, p. 106). Rice was exported to a myriad of destinations, including China, Yugoslavi, Madagascar, and Hong Kong. Between January and September 1978, quantity of rice exported to China was 29,758 tons, valued at nearly six million U.S. dollars. In return, the country imported tons of other commodities, including machine parts and medicine (Tyner, 2017, p. 106). The Khmer Rouge obtained credit or balance from China for future purchases; and no material transfer of printed money would take place at this level. International trade could continue without the reintroduction of currency within Democratic Kampuchea (Tyner, 2017, p. 106). Virtually, the entire educated class perished or fled the country in the 1970s. It is believed that about three million Cambodian people perished in the Khmer Rouge regime which lasted for three years, eight months and 20 days. By the time the Khmer Rouge regime was overthrown, only 25 medical doctors had survived (Annear et al. 2015).

The Khmer Rouge was overthrown by the Vietnamese army in January 7, 1979 and subsequently a new government called the People's Republic of Kampuchea (PRK), consisting of Khmer defectors, was formed and supported by Saigon. The Socialist Republic of Vietnam fielded an army of 120,000 against Pol Pot's 30,000 to 40,000 troops. The Chinese swiftly evacuated diplomatic personnel, technicians, military advisors, and dependents. One day before the fall of Phnom Penh, on January 6, Norodom Sihanouk escaped to Peking aboard the last flight out of Phnom Penh (Etcheson, 1984). Heng Samrin a former Khmer Rouge division commander who had sought refuge in Vietnam when his faction was overpowered by Pol Pot, was installed as president. Heng Samrin was soon replaced by Foreign Minister Hun Sen, who has been prime minister for more than 30 years.

During the initial year of the People Republic of Kampuchea (PRK) in 1979, there was heavy economic downturn and a famine crisis occurred. Before the introduction of the new currency, markets in the city revived based on a barter system. Smugglers, traders on bicycles bought goods at border points in Thailand and Vietnam with gold and gems, as there was a huge shortage of foods after the liberation. The wet season crop was either burnt by the retreating Khmer Rouge troops or left to rot in the fields as the people packed their few remaining possessions and set off in search of their former lives, their family members who were

separated during the Khmer Rouge regime and their hometowns where they lived before they were evacuated by the Khmer Rouge. It was calculated that about 5 to 10 % of the population, mounting to 325,000 to 625,000 people, may have died of starvation in 1979. It was also recorded that 137,894 and 43,608 Cambodian refugees in 1979 and 1980, respectively, were admitted to the camps of the office of the United Nations High Commissioner for Refugees (UNHCR) on the border with Thailand (Slocomb, 2003, p. 94). During the first two years of PRK, the government and people of other countries, mostly communist countries, including USSR, Laos, Hungary, Bulgaria, Poland, and Czechoslovakia, provided basic assistance to millions of Cambodian people in need.

Before the introduction of the new currency, which was not used during the Khmer Rouge regime, markets revived based on a barter system. The main medium of exchange was rice, measured in empty condensed milk cans. More expensive items were paid for in gold which the people had kept on them throughout the Khmer Rouge regime, or which they had buried before they were evacuated from Phnom Penh in April 1975. The Vietnamese dong and Thai Baht were also used as currency. Gold was used to pay for imported goods from Thailand through Koh Kong, Battambang and Siem Reap, and also from Vietnam. Most of the people who were living in rural areas relied on natural resources for foods, and materials for building construction. Going through the market was not needed as the country sides were rich in natural resources.

The new Khmer riel (KHR) was introduced into the economy on March 20, 1980 by the National Bank of Cambodia. Before the circulation of the new currency, rice mainly played the role of commodity money in the economy. One Khmer riel was set to be equal to one kilogram of rice because rice had already established its purchasing power. Because 1 ton of rice was traded at 250 U.S. dollars in international market, the nominal exchange rate was one riel per 0.25 U.S. dollars given the law of one price held. The Khmer riel was introduced in the market through salary supplements and payment for farmers' paddy (Slocomb, 2010). In its first year, between 400 and 450 million riels went into circulation; 250 million riels for salary supplements and 100 million riels to the farmers as payment for their paddy and as loans (Slocomb 2003). Before salary in cash was introduced, government officials received salary in kind. Phnom Penh officials were initially paid with basic ration of rice. According to Chandler (2008), the minister received 700 grams of rice per day with a 200-gram supplement for other family members and occasional distributions of fish, vegetables, and foods. When money salaries denominated in the new Khmer riel were implemented, the food distribution ended and all employees were instead entitled to buy specified quantities of subsidized commodities from the state market. The government paid attention to the provision of seven goods: rice, salt, cooking oil, sugar, soap, cloth, and fish. The free market was an essential supplier of many of those goods. An official with a monthly salary of 170 riels was allowed to buy 18 kg of rice for himself at the price of one riel per kg, nine kilograms for each of family members, three kilograms of meat, plus two shirts and two pairs of trousers per year. Housing was provided for free. The introduction of the new Khmer riel had been successful in major towns. Vietnamese expatriates received their salaries in Vietnamese dong which they had to convert at the rate of three dongs for one riel. The Vietnamese dong, which was widely used around Phnom Penh, was displaced by the new Khmer riel. However, in some remote areas such as Sisophon, North-Western region which is about 45 kilometres from the Thai border, rice was still used to pay for goods or services in the 1980s. Along with the Khmer riel, the use of the dollar by foreigners in Cambodia started around 1988 under the tacit approval of the Cambodian government (Kang, 2005). During the early 1980s, Cambodians used gold as means of saving value. But the means was changed from gold to dollars in the 1990s (Kang, 2005).

The PRK in October 1985 introduced the first five-year plan (1986-90) for socio-economic restoration and development. The plan emphasized the agriculture sector development by strengthening four sectors: food, rubber, aquaculture production and timber. The first five-year plan was also aimed at expanding trade network with socialist countries. In an effort to transform the economy from a centrally planned economy to an open market-oriented one, Cambodia reformed land property rights, amended investment code, and privatized state owned enterprises. In 1988, Cambodia took measures to liberalize the economy by strengthening the role of the private sector. With regards to private property, in the February 1989 constitutional amendment of the 1981 constitution, limited land ownership was granted. The amendments in early 1989 provided citizens with the right to manage and use land as well as the right to bequeath and inherit land granted by the state for the purpose of living on or exploiting it. There was an argument that the land reform program primarily aimed to increase domestic political support as opposed to boosting agricultural output. The reform program helped rally popular support for the PRK as it prepared to face the challenge of an emboldened resistance following Vietnamese troop withdrawals. In reality, the PRK land reforms simply legalized the existing situation since the land in most cases had been distributed several years earlier (John, 2006, p. 94).

In mid-1989, Cambodia issued liberal foreign investment code to attract foreign investment to the country. A national committee for reviewing foreign direct investment decisions was also established. Currently, the Council for the Development of Cambodia over-sighted investment activities in Cambodia. In late 1989, privatization of state-owned enterprises (SOEs) started. Privatization in full scale took place in 1991. By the end of 2000, 160 state-owned enterprises (SOEs) had been privatized, of which 139 were leased to the private sector, 12 transformed into joint ventures, eight sold outright and eight liquidated (United Nations, 2003, *An Investment Guide to Cambodia*).

Article 9 of the law on investment in Cambodia, which was promulgated in August 1994, states that "the Royal Government shall not undertake nationalization policy which shall adversely affect private properties of investors in the country." The law on Amendment to the Law on Investment, which was promulgated in 2003, also provided guarantee against nationalization. Eligible investors can lease concession land up to 99 years for agricultural purposes with renewable contract and land ownership is permitted to joint ventures with over 50% equity in Cambodian ownership. Under the Cambodian foreign ownership property law which was passed in 2010, foreigners can buy and own properties on the first floor or higher, but are not allowed to own properties on the ground floor of a building because any foreigner is not allowed to own land as it is stated in Cambodia land law, which was promulgated in 1992 and amended in 2001.

With the Vietnamese troops withdrawal in 1989, after facing declining Soviet support, the country was renamed the State of Cambodia. A transitional government was established until the Paris Agreement in October 1991 that temporarily formalized the government structure. Prince Sihanouk returned to Phnom Penh in November 1991, after 13 years of self-imposed exile, to become head of state. The United Nations Transitional Authority in Cambodia (UNTAC) oversaw the peace process, reconstruction, and rehabilitation. UNTAC monitored the election process to ensure that the election is free and fair. UNTAC essentially governed Cambodia from March 1992 to September 1993. About 16,000 blue-helmeted peacekeepers blanketed the country, and over 3,300 civilian administrators took control of Phnom Penh. UNTAC was provided with 2.8 billion U.S. dollars to run a government, oversee the repatriation of 350,000 refugees, supervise a cease-fire among factions that hated and distrusted one another, and conduct the first Cambodian election after the Paris peace agreement in 1991. It was criticized that UNTAC was not able to pacify the nation because numerous violations of the cease-fire occurred, mostly by the Khmer Rouge (Dayley and Neher, 2010, p. 254). The Khmer Rouge refused to disarm or demobilized its area. Weeks before the polls, Khieu Samphan unsurprisingly announced the Khmer Rouge would boycott the election and, effectively, the entire peace process. The reasons for the boycott derived from accusations that the Vietnamese troops and citizens had remained in Cambodia and would take over the country once election had been completed, and the UNTAC was biased in favour of the Hun Sen administration in Phnom Penh (Dayley and Neher, 2010, p. 255).

The first general election was finally held in July 1993, instituting a new coalition government headed by Prince Norodom Ranariddh, with Hun Sen as co-premier. The country was renamed the Kingdom of Cambodia in 1993 when the country restored royal institutions under a constitutional monarchy. Since the 1993 election, Cambodia has been in transition to a full market economy, following decades of war and isolation from international markets by a socialist regime. Economic and political systems of Cambodia in the early 1990s changed from a planned economic system to a market-oriented one and from a communist government to a multi-party system, respectively. With the cumulative cost of the UNTAC intervention, the subsequent level of dollarization was very high. Large inflows of foreign assistance and private transfers were also in U.S. dollars (Menon, 2008).

In 1997, an attempted coup disrupted the dual government, leading to a strengthening of Hun Sen's control. Prince Ranariddh was out of the country when Hun Sen's coup took place. He charged prince Ranariddh with a variety of traitorous acts, including unauthorized negotiations with the Khmer Rouge hard liners. The July 1998 election left Hun Sen in command of the recovering state (Colletta, and Cullen, 2000). The post-coup elections were marred by corruption, intimidation, and candidate assassinations (Dayley and Neher, 2010, p. 258). The negative effect of the Asian financial crisis and the July 1997 coup negatively impacted the economic reform, international supports, direct foreign investment and the local currency value. Direct foreign investment commitments to Cambodia fell by 35% in 1997 and actual flows declined by 45%. The Khmer riel lost value, but it fell less precipitously than other Asian currencies due to the extensive dollarization of the Cambodian economy (John, 2006, p. 132).

In the July-1998 elections, Hun Sen's Cambodian People's Party (CPP) won the majority of seats in the National Assembly. But it still lacked the two-third majority necessary to form a government. Following an extended period of negotiation, Hun Sen and Prince Ranariddh who led the National United Front for an Independent, Neutral, Peaceful and Cooperative Cambodia (FUNCINPEC) agreed to form a coalition government in late November 1998 with the former as prime minister and the latter a president of the National Assembly. Political stability following the election 1998 allowed the Cambodian government to address a number of long-delayed but important issues such as the Khmer Rouge tribunal, military demobilization and commune elections. The Khmer Rouge tribunal proposal in August 2001 was a hybrid because it contained a mixture of Cambodian and international prosecutors and judges. The tribunal bill signed by King Sihanouk in August 2001 did not include the death penalty.

In part, to free up funds for the social sector, the Cambodian government, at the prompting of the international donor community, planned to demobilize by 2004 some 31,500 soldiers out of a total defence force of more than 133,000 personnel (John, 2006, p. 175). The National Assembly passed the commune election law in January 2001 to improve democracy at the grassroots level. The first commune election was held in February 2002 in post-colonial Cambodia. The CPP won the commune election because the CPP benefited from a prolonged monopoly over the local government, a better organized political network and more abundant human and financial resources than FUNCINPEC. The National election in July 2003 produced significant new gains for the CPP. In 2004, King Sihanouk abdicated in favour of his son Norodom Sihamoni who lived most of his life abroad in Prague, Pyongyang, and Paris, who was a relatively unknown figure to most Cambodians. Subsequently, the CPP also won the 2008 National Assembly elections which were the fourth multi-party elections since the signing of the peace agreement in 1991. King Sihanouk passed away in Beijing on 15 October 2012. The CPP won the general election 2013 and 2018 while opposition parties were weakened. Up to the general election 2018, Prime Minister Hun Sen led Cambodia for 35 years since 1985.

In the second half of the 1990s (in particular in 1996, 1997, 1998), a large depreciation of the Khmer riel against U.S. dollar and high inflation were observed in the Cambodian economy. The average annual inflation was 7.1% in 1996, 8.1% in 1997, and 14.7% in 1998 while the annual average exchange rate per U.S. dollar was 2,720 riels in 1996, 3400 riels in 1997, and 3,780 riels in 1998 (Ministry of Economy and Finance data). The large depreciation and high inflation during the period were drivers for holding foreign currency. Ra (2008) found that the expected rate of depreciation in market exchange rates had positive effects on the holdings of U.S. dollars for Cambodia (also for Lao and Vietnam). However, the exchange rate became stable and moved slightly around 4,000 riels per U.S. dollar after the year 2000 and inflation was also kept low, except in 2008 when annual average inflation jumped to 19.7%. The high rate of inflation in 2008 was caused by high oil prices and the surge in food prices in the international market. The National Bank of Cambodia immediately tightened monetary policy by increasing the reserve requirement from 8% to 16% to reduce credit growth to private sector. Because the property prices also increased sharply during this period of high inflation, The National Bank of Cambodia imposed a cap of 15% on credit to the real estate sector to curb credit growth to real estate sector. Simultaneously, the government also took measures to counter inflation by tightening fiscal expenditure, improving tax collection, banning rice export, and imposing a price ceiling on rice (National Bank of Cambodia, Annual Report 2008). Unlike during the Asian financial crisis when the Khmer riel depreciated sharply against U.S. dollar, the exchange rate against the U.S. dollar remained stable at around 4100 riels per U.S. dollar during the global financial crisis which was occurred in 2008.

Dollarization in Cambodia did not decline despite economic and political stability. The increasing dollarization after 2000 was driven by international capital inflow and increasing foreign trade and more confidence in the economy. Export of goods as a share of GDP increased from 11% in 1993 to 50.8% in 2006 (Ministry of Economy and Finance). Cambodia became a member of the World Trade Organization (WTO) in 2004 to be more integrated with the world economy. Net inflow of foreign direct investment to the country showed an upward trend, increasing from 54 million U.S. dollar in 1993 to 2,784.3 million U.S. dollars in 2017 (the World Bank data). In regard to confidence in the economy, a large amount of foreign currency held by resident and non-resident Cambodians in offshore banks (in Singapore, Hong Kong, China etc.) were recovered. Although some of these flows have gone into real investment which contributed to sustained economic growth, a large amount of the capital inflow was used for speculative purpose in particular in the real estate sector (Menon, 2008).

Recent macroeconomic performance

Real Sector

The previous section showed how the new Cambodian currency was introduced into the economy after the currency was abolished in the Khmer Rouge regime between 1975 and 1979. Immediately after the Khmer Rouge regime, a barter system and commodity money were used for exchange of goods and services and subsequently the new Khmer riel (KHR) was put into circulation on 20 March 1980 by the National Bank of Cambodia. However, because of political and economic factors such as internal conflicts and currency depreciation, foreign currency share in total liquidity have continued to increase in the economy. The Khmer riel and the U.S. dollar had been used together and each currency had performed all three functions of money: a unit of account, a store of value and a medium of exchange. This section describes recent macroeconomic performance focusing on real sector, external sector, fiscal sector, and monetary and financial sector and dollarization in those sectors will also highlighted.

The Cambodian economy has achieved remarkable growth since the first general election administered by United Nations Transitional Authority for Cambodia (UNTAC) in July 1993. The average annual GDP growth rate was 7.6% over two decades from 1994 to 2017. In 2016, the World Bank raised Cambodia's status from a low-income economy to a lower-middle income country based on the Banks estimate that Cambodia gross national income (GNI) per capita for 2015 was 1,070 U.S. dollars above the required threshold of 1,026 U.S. dollars. When we look at the contribution to the GDP growth by economic sectors, we find that the contribution of agriculture sector has continued to decline while the contribution of service and industry sectors had increased due to a slower growth in agriculture sector and a stronger growth in both industry and service sectors as shown in Figure 2.

Figure 2: Contribution to economic growth by main economic sector
Source: Ministry of Economy and Finance

The two main drivers of industrial growth in Cambodia over a quarter of this century are garment sector and construction sector. The development of the two sectors was supported by foreign direct investment in which U.S. dollar was used without converting to domestic currency first. Garment workers receive their salary in U.S. dollar and construction materials and housings were all transacted in U.S. dollars. It is not exaggerated to mention that dollarization contribute to growth in those sectors. The strong growth in industry sector with an average annual growth of 12.3% over the 1994-2017 periods was mainly driven by rapid expansion of garment sector (Textile, Wearing Apparel & Footwear). The garment sector which is the main part of the industry sector grew with an annual average of 25% over the same period and the sector accounted for 18% of GDP in real terms in 2017. Construction sector also contributed remarkably to industry growth. The average annual growth of the construction sector was 11.9 % over the 1994-2017 periods and the sector accounted for 9 % of GDP in real terms in 2017. Export-driven garment sector has absorbed mostly female workers from low-productive rural areas to produce clothes, shoes to export mainly to European and US markets. The number of garment factories has grown from 20 in 1995 to 742 in May 2014. And the total employment in the industry (textile, non-textile and footwear) increased from 18,700 in 1995 to 681,182 workers in May 2014. As a result of multiple negotiations, the basic minimum wage in the garment sector increased from 40 U.S. dollars in 1997 to 140 U.S. dollars in 2016.

U.S. dollar has also been widely used in tourism sector. A visitor can spend U.S. dollar to buy tickets to visit ancient temples in Cambodia and also pay hotel room fee in U.S. dollars. The service sector showed an annual average growth of 8% over the 1994-2017 periods, making its share in real GDP the largest one, which was equal to 39.5 % in 2017. Tourism sector had played an important role in service sector. In 2018, Cambodia absorbed around 6.2 million international tourists from around the world, up from 5.6 million tourists in 2017. Tourism receipts in 2018 grew to 4,375 million U.S. dollars from 3,638 million U.S. dollars in 2017. The Angkor Wat temple complex had been the main attraction site in Cambodia. International tourists mainly visit the temple, capital city of Phnom Penh and Sihanouk Ville of sea. According to the economic update of the World Bank in Phnom Penh issued in 2017, the revenue from Angkor Wat entrance fees was 60.3 million U.S. dollars during the first seven months of 2017, an increase of 68% compared to the same period in the previous year.

External sector

The Cambodian economy experienced twin deficits-current account and budget deficits and was very open to the World. The sum of export and import of goods as a fraction of GDP increased from 31% of GDP in 1993 to 120.4% of GDP in 2017. The total trade value was higher than GDP, 109.7% of GDP, for the first time in 2004. Figure 3 showed the fraction of export, import and trade balance in GDP. The amount of trade deficit stood at 19.3% of GDP in 2017, up from 8.2% of GDP in 1993.

Figure 3: Share of trade in GDP

Source: Ministry of Economy and Finance.

Cambodian had run persistent trade deficit at least since 1993 as it has a narrow export base and has imported various kinds of goods from consumption goods such as household appliances to capital goods such as machineries. Export had been mainly based on garment sector. According to data from General Department of Customs and Excise of Cambodia, the total value of garment export accounted for 75% of the total export value (FOB) of 8090 million USD in 2014, declining from 96% of the total export value (FOB) in 2005.

Cambodia imported mainly from China and member countries of the Association of Southeast Asian Nations (ASEAN) while exported mainly to the US and EU markets. Figure 4 showed the share of imports from partner countries in total import (CIF). Imports from China had remarkably increased from 5% of the total imports in 1997 to 41% in 2019 while import share from ASEAN member countries remained stable over the period.

Figure 4: Share of Imports from Partner Countries in total imports (CIF)
Source: The Direction of Trade Statistics (DOTS) of IMF.

The U.S. market was the main export destination for Cambodian products in the late 1990s and early 2000s. This provided Cambodia with U.S. dollars. However, the role of the United States as a trading partner has decreased over time. Recently, Cambodian economy had diversified the export markets as well as export products. The export market had become more diversified from the U.S. markets to European markets and some markets in Asia such as Japan. As a result, as shown in Figure 5, the share of export to US market declined from 56% of the total export value in 2001 to 26% in 2019 while the share of export to EU (28 members including the UK as of August 2020) market increased from 22% of the total export in 2001 to 29% in 2019. In addition, the share of export to Japan and other Asian markets also increased. Moreover, Cambodia has also started to diversify its export products by including rice as a major export commodity besides other agricultural products such as rubber and fish. According to data from Cambodia Rice Federation, the total volume of milled rice export was 0.62 million metric tons in 2019.

Figure 5: Share of Exports to Partner Countries in total Exports (FOB)
Source: The Direction of Trade Statistics (DOTS) of IMF.

Foreign direct investment stood at around 10% of GDP since 2010 (See Annex A for details about the Balance of Payment of Cambodia).

Fiscal sector

In addition to international trade and foreign direct investment, the structure of fiscal sector also contributed to dollarization in the economy because a large proportion of the government debts were denominated in U.S. dollar. For some years prior to the first general election in 1993, the budget was in deficit, which was hugely financed by central bank. Central bank financing was eliminated in 1994 due to substantial concessional lending and improved tax revenue. As the country emerged from international isolation, public revenues were less than 5% of GDP, comprised overwhelmingly of duties and taxes on traded goods. Public spending was more than double the state's revenue, and both the current and overall budget balances were in deficit. The budget deficit was substantially financed by foreign funds as the government bonds were not issued yet. Central bank financing was also used prior to the general election in 1993, which caused high

rates of inflation. Figure 6 shows the evolution of the government budget revenue and expenditure as percentage of GDP.

Although the overall budget had been in deficit since 1993, domestic bank financing was minimal and the deficit was overwhelmingly financed by foreign financing through borrowing and project aid, especially after 1993, as shown in Figure 7. Borrowing through issuing government bond has not been implemented yet. For most of the years, domestic financing was negative, indicating that the government deposited money in banks. Net domestic bank financing was very small and most of the time was negative. This suggested that the domestic inflation resulted from budget deficit was very small because the deficit was slightly financed by printing more money.

Figure 6: Government budget revenue and expenditure as percentage of GDP
 Source: Ministry of Economy and Finance.

The total outstanding public debt is relatively low compared to other countries and dominated by external debt. Public debt denominated in U.S. dollar is the largest among other currencies. According to Cambodia Public Debt Statistical Bulletin No. 9 issued by Ministry of Economy and Finance of Cambodia, as of end of 2019, the outstanding public debt was 7,599 million U.S. dollars or 28% of GDP, in which 0.04% is public domestic debt and 99.96% is public external debt. When we look at the share of borrowing by currency, of the total borrowing as of year-end 2019, borrowing in U.S. dollar was 38.7%, SDR 27.4%, CNY 13.53%, JPY 11.08%, EUR 4.72%, KRW 3.66%, THB 0.82%, MYR 0.07%. In Cambodia, government security such as government bond had not been issued yet for the government to borrow funds from private sector.

Figure 7: Financing the budget deficit
Source: Ministry of Economy and Finance.

Monetary and financial sector

Cambodian economy was a highly dollarized economy as reflected by the dominant share of foreign currency deposit in total liquidity. Some perspective on the behaviour of monetary aggregates in Cambodia is provided by Figure 8, which plots annual end of year in December the composition of aggregate money using data from monetary survey of the National Bank of Cambodia. The total liquidity, which is called aggregate money, includes money plus quasi-money. Money consists of currency outside banks and demand deposit. Quasi-money consists of time and saving deposit and foreign currency deposit. The Cambodian economy's total liquidity was characterized by a dominant share of foreign currency deposit and relatively small shares of demand and time deposits making Cambodia a highly dollarized economy. The fluctuation in total liquidity is dominated by the fluctuation of foreign currency deposit. Total liquidity increased from 333.46 billion Khmer riels in 1993 to 88443.2 billion Khmer riels in 2018. The largest share of total liquidity was foreign currency deposit, which increased from 36.32% of total liquidity in 1993 to 84.8% in 2018. Currency outside bank was the second largest component of total liquidity. The quantity of foreign currency deposit started to surpass the quantity of currency outside banks in 1994, just one year after the first general election. The other two components of total liquidity, demand deposit plus time and saving deposit, showed minimal share in total liquidity. Demand deposit share in total liquidity was 4.2% in 1993 and 1% in 2018. Similarly, time and saving deposit share in total liquidity was 2.5% in 1993 and 3.6 % in 2018.

Each component of money supply increased but at different speed. The average annual growth rate of total liquidity over the 1994-2018 periods was 25.17%, currency 18.55%, demand deposit 20.30%, time and saving deposit 30.14% and foreign currency deposit 28.3%.

Monetary Policy in the context of a highly dollarized economy, the National Bank of Cambodia (NBC) cannot act as the lender of last resort. In addition to foreign exchange intervention, NBC used the following monetary policy instruments to achieve price stability in order to facilitate economic development.

Figure 8: Components of money supply
Source: The National Bank of Cambodia.

Exchange Rate Policies: Cambodia had adopted a managed floating exchange rate regime since 1992 based on the U.S. dollar. The NBC intervened frequently in the foreign exchange market to stabilize the value of the Khmer riel against the U.S. dollar through foreign exchange auctions, and to defend against speculative attack. Foreign exchange market intervention aimed to keep the exchange rate of the Khmer riel against the U.S. dollar volatile within $\pm 1\%$ of the official exchange rate. The NBC's Official Exchange Rate Determination Committee met every morning to set the official daily exchange rate which was to be announced every working day to the public. According to NBC's annual report in 2013, NBC purchased 316.45 million USD with 1268 billion Khmer riels. NBC sold 73 million U.S. dollars to the Ministry of Economy and Finance and bought 27.15 million U.S. dollars from the Ministry of Economy and Finance in response to the increasing demand of local currency and the increasing capital flows. Consequently, the net purchase of U.S. dollar had been positive, especially since 2006.

Reserve Requirement: is a monetary policy tool which control the speed of credit growth to maintain price stability; it is also a macro-prudential tool for protecting depositors. The National bank of Cambodia (NBC) sets the reserve requirement rate, requiring all regulated banking and financial institutions to keep a proportion of their customers' deposits and external borrowings at the NBC to guarantee a safe level of liquidity and also to protect the banking system against potential liquidity shocks. Because the Cambodian economy was highly dollarized, the NBC set the reserve requirement for both Khmer riel and U.S dollars (USD) deposits. To promote the use of the Khmer riel, the reserve requirement rate for the Khmer riel had been set lower than the reserve requirement rate for foreign currency. Currently, the reserve requirement rate for the Khmer riel was set at 8% and 12.5% for foreign currency. During the period of high credit growth and surging inflation, on June 2008 the NBC increased the reserve requirement rate for foreign currency from 8% to 16% to restrict the liquidity in the economy. This rate was reduced to 12% in January 2009 when inflation moderated, and the economy was hit by global financial crisis. Since September 2012, the NBC had increased this rate to 12.5%. Meanwhile, reserve requirement rate for the Khmer riel has been maintained at 8% since 1997.

Negotiable Certificate of Deposits (NCDs): acts similar to a debt security issued by the NBC. It was a liquidity management tool for banks and microfinance institutions and development of interbank market while the security market in Cambodia was at its rudimentary stage due to the lack of tradable instruments, the absence of market makers and the lack of a benchmark rate against which securities could be priced. NCDs are denominated in both Khmer riel and U.S. dollar. Based on the market situation, the interest rates charged on U.S. dollar-denominated and Khmer riel-denominated NCDs with short-term maturity were reduced to develop the inter-bank market and to lower the lending interest rates charged by banks and MFIs. The interest rate of NCDs is set by the NBC. The NCDs market is envisaged as the first step in the development of a full-fledged money market, in this connection the central bank also wishes to use this channel to effectively exercise its monetary policy.

Liquidity-Providing Collateralized Operation (LPCO): the NBC conducted the LPCO in riel, whilst requiring NCDs to be collateralized to provide banking and financial institutions with cheap liquidity and to increase lending in local currency. In 2017, the LPCO operation, conducted monthly, provided liquidity totalling 165 billion Khmer riels with an average interest rate of 3%. To help banks and MFIs get longer term liquidity in Khmer riel, the NBC change the maturity from 91 days to 364 days in mid-1997. Though participation at the LPCO auction was still limited, four microfinance institutions participated in the bidding process.

Cambodian financial sector had grown rapidly over the past years. In addition to the large component of foreign currency deposit in aggregate money supply, almost all loans provided by financial institutions were denominated in U.S. dollar. In 2017, of the total credit (loans) of 16.127 billion U.S. dollars, 94% was denominated in U.S. dollars, 5% in Khmer riel and the remaining 1% in Thai Baht (Credit Bureau of Cambodia's [CBC] annual report 2017). In 2017, Cambodian financial system consisted of 39 commercial banks (12 foreign branch banks, 12 locally incorporated banks, and 15 subsidiary banks), 15 specialized banks (one state-owned bank), seven microfinance deposit taking institutions (MDIs), 69 microfinance institutions (MFIs), 313 rural credit institutions, 11 leasing companies, 15 third-party processors, one credit bureau Cambodia, six representative offices, and 2,476 money changers (Source: the National Bank of Cambodia, Annual Report, 2017). Because of the lack of domestic saving, banks in Cambodia overwhelmingly borrowed from abroad to finance bank loans. As of September 2014, domestic banks borrowed in total 1008 million U.S. dollar, of which 93% from abroad and the remaining 7% from within the country. The remarkable development of financial sector is reflected by the upward trend of the loan-to-GDP ratio, which increased from 27% of GDP in December 2009 to 105% of GDP in December 2018. Loans provided by commercial banks were about 3.7 times larger than loans provided by microfinance institutions in 2017. The loan made by commercial banks stood at 83% of GDP while by microfinance institutions (including NGOs) at 22% of GDP in December 2018. Figure 9 showed the upward trend of loan-to-GDP ratio of commercial banks, of microfinance institutions.

Figure 9: Credit-to-GDP ratio of MFIs and Banks
Source: The National Bank of Cambodia.

Nonperforming loan (NPL) as a percentage of total loans varied among and within financial institutions. During the period from 2010 to 2017, the ratio of nonperforming loan to loan for both commercial banks and microfinance institutions was less than 3%. As of December 2017, NPL/loan ratio for commercial banks was 1.26% and 2.2% for microfinance institutions.

With the large increase in credit, the interest rates continued to fall gradually. The U.S. dollar and the Khmer riel were used for saving in bank account and also for provided loans in both currencies that would be used for purchasing goods and services as well as for salary payment. Financial institutions accepted deposits and provided loans in U.S. dollar and Khmer riel. However, there had been a huge difference in interest rates on loans from MFIs and from banks. Micro loans normally targeted poor borrowers and were short-term loans. Figure 10 shows the 12-month interest rates on loan and deposit of commercial banks in Cambodia. Interest rate on loan and deposit denominated in U.S. dollar had been lower than interest rates on loan and deposit denominated in Khmer riel, respectively. However, as shown in Figure 10, interest rate on loan denominated in Khmer riel has been the most volatile. On December 2006, the 12-month interest rates on

Khmer riel and U.S. dollar loans were 23% and 16.6%, respectively. On June 2018, the 12-month interest rates on Khmer riel and U.S. dollar loans decreased moderately to 11.38% and 11.31%, respectively.

Figure 10: The annual interest rates from commercial banks

Source: The National Bank of Cambodia.

Unlike interest rates on loan, interest rates on deposit had decreased at a slower pace. The interest rates on Khmer riel and U.S. dollar deposits had decreased slightly and the gap between the two interest rates had also been narrowed. On December 2006, the 12-month interest rates on Khmer riel and U.S. dollar deposits were 6.4% and 4.8%, respectively. On June 2018, the 12-month interest rates on Khmer riel and USD deposit decreased slightly to 5.99% and 4.43%, respectively.

The spike in interest rates in late 2008 as shown in Figure 10 was in part a result of the increase in reserve requirement for foreign currency from 8% to 16% in June 2008. The reserve requirement of 16% for foreign currency was maintained at 16% from June 2008 to January 2009. The reserve requirement rate was reduced to 12% in January 2009 and then increased again to 12.5% in September 2012.

The interest rate on loan from microfinance institutions (MFIs) was about twice or three times higher than interest rate on loan from banks. Interest rates on Khmer riel and U.S. dollar loans and the spread between loan rates and deposits rates have decreased recently. Figure 11 shows the annual interest rate on loan and deposit for MFIs. The interest rates on both loan and deposits denominated in Khmer riel were higher than in U.S. dollar. In 2019, the interest rate on deposits denominated in KHR and USD was 7.9% and 7.7%, respectively. In the same year, the interest rates on loans denominated in KHR and USD was 17.9% and 16%, respectively. The interest rates for MFIs showed a sharp decrease from 2016 to 2018 due to increased competition and improvement in operating costs and interest rate ceiling imposed by the National Bank of Cambodia on March 2017 for microfinance institutions and rural credit operators to implement from April 2017. The interest rate ceiling was set at 18% per annum for any maturity of loans.

Figure 11: The annual interest rates from MFIs
Source: The National Bank of Cambodia.

De-dollarization policy and discussion

Financial institutions in Cambodia was highly dollarized as the share of loan and deposit denominated in U.S. dollar reached more than 90% of total loan. The transaction of goods and services were also mostly done in U.S. dollar. Most financial institutions overwhelmingly borrowed funds from abroad to finance loans in domestic market. In 2017, of the total credit (loans) of 16.127 billion U.S. dollars, 94% was in U.S. dollar, 5% in Khmer riel and the remaining 1% in Thai Baht (Credit Bureau of Cambodia, Annual Report 2017).

The NBC appealed to financial institutions to increase loans in Khmer riel as part of a policy to de-dollarize the economy. On December 1st, 2016, the NBC issued a Prakas related to the provision of credit in national currency requiring that the proportion of Khmer riel loans in the total loan portfolio reached 10% by December 31st, 2019 for all banks and financial institutions. This policy was often called 10% Khmer riel policy. The restriction on loan in Khmer riel is binding for many MFIs and banks. According to a recent survey conducted by Cambodia Microfinance Association (CMA), the restrictions will have impact on financial institutions as the followings: (1) difficult to increase KHR loan because the customer mind set (demand side) is deep with U.S. dollar, (2) most of borrowers have income in U.S. dollar and most of them want to borrow U.S. dollar, (3) funding cost of Khmer riel is higher than U.S. dollar, (4) the interest rate on loan in Khmer riel is higher than U.S. dollar, (5) market transactions are conducted in U.S. dollar mostly. A 10% Khmer riel Committee with members from Microfinance Association of Cambodia, the Association of Banks in Cambodia (ABC) and representatives from banks and microfinance institutions was established to find solutions to promote the use of Khmer riel.

In addition to the policy of 10% Khmer riel, the Ministry of Commerce also issued a Prakas 047- MoC/SM2013 dated July 19th, 2017 which required display of price tag in Khmer riel. In addition, the NBC also celebrate annually Riel's day on March 20 to celebrate the anniversary of the introduction of Khmer Riel in the Economy. The Riel's day encourages citizens to use and protect the national currency. This policy has been effective in encouraging modern markets such as super markets and convenience stores to use price tags in both U.S. dollar and Khmer riel. However, education institutions such as private schools, hotel and guest houses normally used price tags denominated in U.S. dollar.

A more active dedollarization policy shall be considered. While the degree of dollarization in Cambodian economy increased, macroeconomic environment was also favourable as low inflation, stable exchange rate against U.S. dollar and high rate of GDP growth were achieved recently. In addition, the ratio of the value of exports and imports to GDP as well as net capital inflow were also high. It may be true that these achievements were in part the results of dollarization. So far, the policy to gradually de-dollarize the economy may be the right option. However, when we look at the recent direction of trade, the role of the U.S., who prints the U.S. dollar, as a major trading partner has decreased. In addition, dollarization did not cushion Cambodian economy from the global financial crisis and the recent COVID-19 as the GDP growth in those periods was hard hit like many other countries. Moreover, as shown in Table 1, the average annual GDP growth rate of Cambodia for the 2000-2019 periods was not much higher than other countries of similar

income per capita measured in the year 2000. In recent years, Bangladesh which is not a dollarized economy could even a achieved a higher average growth rate than Cambodia for 2015-2019 periods. When we look at the East Asian Miracle in the past, dollarization in those countries did not played any role in economic growth. According the a document by the World Bank (1993), entitled "The East Asia Miracle", the remarkable record of high and sustained economic growth in East Asia, which was higher than all other regions of the world from 1960 to 1990, resulted mainly from remarkable achievement in primary and secondary education and high rate of private investment. Thus, it may be a good time for Cambodia to consider a more active dedollarization policy.

Table 1: GDP growth of countries with similar income per capita in year 2000

Countries of similar income in 2000	GNI per capita in year 2000*	Average GDP growth (annual %) by different period		
		2000-2019	2010-2019	2015-2019
Niger	973.53	5.06	6.17	5.64
Uganda	1,231.16	6.28	5.43	5.35
Togo	1,253.30	3.65	5.70	5.19
Burkina Faso	1,296.35	5.65	6.02	5.70
Tanzania	1,396.41	6.33	6.31	6.21
Cambodia	1,444.55	7.74	7.03	7.08
Liberia	1,533.22	2.30	3.15	-0.04
Madagascar	1,583.26	3.15	3.13	4.09
Mali	1,614.63	4.86	4.39	5.37
Guinea-Bissau	1,667.74	3.41	4.19	5.34
Bangladesh	2,002.47	6.16	6.76	7.39
Lower middle income	---	5.53	5.39	5.17

* GNI per capita, PPP (constant 2017 international \$)

Source: World Development Indicators database, World Bank, accessed 27 May 2021

Conclusions

This paper investigates the historical backgrounds of dollarization, the introduction of the Khmer riel and macroeconomic performance after the Khmer Rouge regime which ended in year 1979. The high level of and increasing dollarization were caused by both economic and political factors. The history of large exchange rate depreciation and high inflation, trust in new local currency which was abolished during the Khmer Rouge, political unrests, spending in the U.S. dollar by international organizations for running elections are among those factors. Macroeconomic environment was favourable as low inflation, stable exchange rate against the U.S. dollar and high rate of GDP growth were achieved recently. Cambodian economy became highly dollarized as local currency has been used widely together with U.S. dollar. In addition dollarization continued to increase despite stable exchange rate, high GDP growth rate, low inflation and the decreasing role of the United States as a trade partner. However, it seems difficult to see whether dollarization increased or decreased welfare of the country because dollarization caused the country to loose seignorage and monetary policy. Further study needs to be done to see welfare effect of dollarization so that clear evidence can be provided to de-dollarize or to continue dollarization. However, recently the NBC had undertaken some policies for gradually de-dollarize the economy but the degree of dollarization remains high. A more active dedollarization policy shall be undertaken in the near future.

Annex A: The balance of payments (BoP, % of GDP) of Cambodian economy from 2010 to 2017

	2010	2011	2012	2013	2014	2015	2016	2017
Balance of Trade	-	-	-	-	-	-	-	-
Exports fob	23.1%	24.0%	25.1%	23.9%	23.1%	21.8%	19.2%	19.3%
Domestic exports	33.5%	38.9%	40.4%	46.2%	48.9%	51.6%	51.3%	50.6%
GSP exports (including garment)	30.8%	35.6%	37.1%	42.4%	44.9%	47.3%	47.0%	46.4%
Other export	29.6%	34.3%	35.7%	40.8%	43.2%	45.6%	45.3%	44.7%
Re-Exports	1.1%	1.3%	1.4%	1.6%	1.7%	1.8%	1.7%	1.7%
Imports fob	2.8%	3.2%	3.4%	3.8%	4.1%	4.3%	4.3%	4.2%
Retained imports	56.6%	62.8%	65.5%	70.1%	72.0%	73.5%	70.5%	69.9%
Garment sector	54.2%	60.1%	62.7%	67.0%	68.9%	70.3%	67.4%	66.8%
Petroleum	12.8%	14.2%	14.8%	15.9%	16.3%	16.6%	16.0%	15.8%
Other retained import	4.9%	5.4%	5.7%	6.0%	6.2%	6.3%	6.1%	6.0%
Imports for re-exports	36.4%	40.5%	42.2%	45.1%	46.4%	47.3%	45.4%	45.0%
Net Service	2.5%	2.7%	2.9%	3.0%	3.1%	3.2%	3.1%	3.0%
Receipts	8.7%	10.4%	11.4%	11.2%	10.3%	9.5%	8.0%	8.5%
Transportation service	17.4%	21.1%	22.7%	22.9%	22.8%	21.9%	20.1%	20.8%
Travel services	1.8%	2.2%	2.4%	2.4%	2.4%	2.3%	2.1%	2.2%
Other services	13.1%	16.1%	17.5%	17.5%	17.7%	17.4%	16.0%	16.4%
Payments	2.5%	2.8%	2.8%	3.0%	2.7%	2.2%	2.0%	2.2%
Transportation services	8.8%	10.7%	11.3%	11.8%	12.5%	12.4%	12.1%	12.3%
Travel services	4.5%	5.5%	5.8%	6.0%	6.4%	6.4%	6.2%	6.3%
Other services	0.5%	2.0%	2.2%	2.3%	2.4%	-2.7%	-3.0%	-3.2%
Net Income	3.7%	3.2%	3.3%	3.4%	3.7%	8.7%	8.9%	9.2%
Receipts	-3.4%	-4.1%	-4.8%	-5.3%	-5.4%	-5.3%	-5.0%	-4.9%
Compensation of employees	1.4%	1.4%	1.7%	1.7%	2.0%	2.0%	1.9%	2.0%
Interest	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%
Other	0.2%	0.2%	0.2%	0.2%	0.5%	0.6%	0.5%	0.7%
Payments	1.1%	1.1%	1.3%	1.4%	1.3%	1.2%	1.2%	1.3%
Compensation of employees (incl.ST-TA salaries)	-4.9%	-5.5%	-6.5%	-7.0%	-7.4%	-7.3%	-6.9%	-6.9%
Interest payable (incl arrears)	-1.2%	-1.3%	-1.3%	-1.2%	-1.3%	-1.1%	-0.9%	-1.0%
Income on equity	-0.4%	-0.4%	-0.4%	-0.5%	-0.5%	-0.4%	-0.5%	-0.4%
Transfers	-3.2%	-3.7%	-4.8%	-5.3%	-5.6%	-5.8%	-5.5%	-5.5%
Current Account Balance	9.4%	9.8%	9.9%	9.6%	9.7%	9.1%	7.8%	7.7%
GDP at current price (billion USD)	-8.4%	-7.9%	-8.7%	-8.4%	-8.5%	-8.7%	-8.4%	-8.0%
	11.6	13.0	14.1	15.2	16.7	18.1	20.0	22.2

Source: Ministry of Economy and Finance

References

- Annear, P., Grundy, J., Ir, P., Jacobs, B., Men, C., Nachtnebel, M., ... & Ros, C. E. (2015). The Kingdom of Cambodia health system review (Health Systems in Transition, Vol. 5 No. 2). Manila: World Health Organization (Asia Pacific Observatory on Health Systems and Policies).
- Bacha, E. L., Holland, M., & Gonçalves, F. M. (2009). Systemic Risk, Dollarization, and Interest Rates in Emerging Markets: A Panel-Based Approach. *The World Bank Economic Review*, 23(1), 101-117, <https://doi.org/10.1093/wber/lhn012>
- Calvo, G. A., & Vegh, C. (1992). Currency substitution in developing countries: an introduction, IMF Working Paper No. 92/40, Available at SSRN: <https://ssrn.com/abstract=884762>
- Colletta, N. J., & Cullen, M. L. (2000). Violent conflict and the transformation of social capital: Lessons from Cambodia, Rwanda, Guatemala, and Somalia (Vol. 795). World Bank Publications.
- Credit Bureau of Cambodia. (2017). Annual Report 2017
- Dayley Robert and Neher Clark D. (2010). Southeast Asia in the new International Era, Westview Press
- Dornbusch, R. (2001). Fewer monies, better monies. *American Economic Review*, 91(2), 238- 242.DOI: 10.1257/aer.91.2.238
- Duma, N. (2010). Dollarization in Cambodia: Causes and Policy Implications. International Monetary Fund. DOI:10.5089/9781455218936.001
- Edwards, S., & Magendzo, I. I. (2003). Strict dollarization and economic performance: An empirical investigation (No. w9820). National Bureau of Economic Research. DOI 10.3386/w9820
- Etcheson Craig. (1984). The Rise and Demise of Democratic Kampuchea, Westview Press.
- Ize, A., & Yeyati, E. L. (2003). Financial dollarization. *Journal of International Economics*, 59(2), 323-347.[https://doi.org/10.1016/S0022-1996\(02\)00017-X](https://doi.org/10.1016/S0022-1996(02)00017-X)
- John Ronald Bruce St. (2006). Revolution, Reform and regionalism in Southeast Asia, Cambodia, Laos and Vietnam, Routledge
- Kang, K. (2005). Is dollarization good for Cambodia?. *Global Economic Review*, 34(2), 201-211. <https://doi.org/10.1080/12265080500117517>
- Lay, S. H., Kakinaka, M., & Kotani, K. (2012). Exchange rate movements in a dollarized economy: The case of Cambodia. *ASEAN Economic Bulletin*, 65-78. www.jstor.org/stable/41446026. Accessed 30 May 2021.
- Menon, J. (2008). Cambodia's Persistent Dollarization: Causes and Policy Options. *ASEAN Economic Bulletin*, 25(2), 228-237. Retrieved May 30, 2021, from <http://www.jstor.org/stable/41220050>
- National Bank of Cambodia. (2008). Annual Report 2008
- Ra, H. R. (2008). Modeling the dollarization: A case study for Cambodia, Laos, and Vietnam. *Global Economic Review*, 37(2), 157-169.<https://doi.org/10.1080/12265080802021177>
- Rose, A. K., & Van Wincoop, E. (2001). National money as a barrier to international trade: The real case for currency union. *American economic review*, 91(2), 386-390. DOI: 10.1257/aer.91.2.386
- Samreth, S., Sánchez-Martín, M. E., & Ly, S. (2019). Dollarization Dilemma: Price Stability at the Cost of External Competitiveness in Cambodia. The World Bank. <https://doi.org/10.1596/1813-9450-8893>
- Slocumb, M. (2003). The People's Republic of Kampuchea, 1979-1989, The Revolution after Pol Pot; Silkworm Books.
- Slocumb, M. (2010). An Economic History of Cambodia in the Twentieth Century, Singapore: NUS Press.
- Tyner, J. A. (2017). From rice fields to killing fields: Nature, life, and labor under the Khmer Rouge. Syracuse University Press.
- United Nations and International Chamber of Commerce. (2003). An Investment Guide to Cambodia.