

THE OBSTACLES OF PROMOTING CAMBODIAN CURRENCY

A CROSS COUNTRY COMPARATIVE STUDY:

BOLIVIA, ECUADOR, AND PERU

By

Dalin KHORN

THESIS

Submitted to

KDI School of Public Policy and Management

in partial fulfillment of the requirements

for the degree of

MASTER OF DEVELOPMENT POLICY

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ABSTRACT

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Hysteresis has caused Cambodia to be a highly dollarized country, yet implemented policies have failed to fully promote Cambodian currency. This research is seeking to identify the reasons behind these obstacles and propose policy recommendations for promoting Cambodian currency. To reach the research objective, time series analysis, existed literatures, and cross country comparison were employed in this paper. The main finding is that there are inconsistent government policies between promoting the Riel and attracting capital inflows. In addition, the market-development prudential policy implementation is limited and capital market is immature comparing to other countries. Hence, maintaining the macroeconomic condition is significant, and two important areas to promote national currency are capital financial market development, and accumulative and marketable prudential policies by giving more incentive to the Riel users. Moreover, minimizing the conflicting policies are also key contribution to promote the Riel.

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ABBREVIATIONS

- EBM Effective Broad Money supply
- COB Currency Outside Banks which is denominated in Khmer Riel
- TSD Time and Saving Deposits in Riel
- DD Demand Deposits in Riel
- FCC Foreign Currency in Circulation outside the banking system
- FCD Foreign Currency Deposit held with domestic banks
- M1 Money or Narrow Money (NM)
- ENM Effective Narrow Money supply
- RD Total Riel Deposits
- QM Quasi Money
- M2 Liquidity or Money Supply which is excluded FCC
(The highest broad money in Cambodia is M2).
- DI Dollarization Index
- NBC National Bank of Cambodia
- UNTAC United Nations Transitional Authority in Cambodia
- IMF International Monetary Fund
- NCD Negotiable Certificates of Deposit
- SECC Securities and Exchange Commission of Cambodia
- IT Inflation Targeting
- TE Trading Economics

I. INTRODUCTION

A. Background Information

Cambodian economy at one point has experienced dollarization. It is also regarded as the highest dollarization country in Asia (Duma 2011). Money supply (M2) in Cambodia is dominated by Foreign Currency Deposit (FCD), mainly the U.S. dollar. For example, at the end of 2014, the M2 which is comprised of Currency Outside Banks (COB), Demand Deposits (DD), Time and Savings Deposits (TSD), and FCD which make up widely different proportions: 13.14%, 1.68%, 2.56%, and 82.62% respectively (NBC, Economic and Monetary Statistics 2014). Historic shocks in the financial sector are a major cause of losing confidence in the Cambodian currency. History has demonstrated that the Cambodian currency (Khmer Riel) has not been used popularly as a medium of exchange since the advent of the Civil War in 1975. However, other monetary instruments like: gold, silver, and foreign currencies have been used (Prasso 2001). The fact that Cambodia is a dollarized economy has presented it with both advantages and disadvantages, but a comparative cost benefit analysis is more likely to show costs outweighing benefits in Cambodia (Kang 2005, Tal and Dabadie 2007).

B. Research Problems

The issue of dollarization has been an ongoing debate in Cambodia since Cambodian citizens began losing confidence in Riel currency. It is over three decades after the reissuance of the Khmer Riel in 1980; existing policies are still struggling to fully promote Cambodian currency against foreign currencies. However, successive Cambodian administrations have proven themselves capable of maintaining the exchange rate, price stability, and promoting economic growth (Menon 2008). Previous studies, however, have failed to address the question of why Cambodia has

failed to fully promote the Riel? In light of the foregoing, this research will identify the obstacles in promoting the Cambodian currency by analyzing existing policies and successful experiences of de-dollarization from other countries, following with recommended policies.

C. Research Purposes

Being a dollarized country is not caused by a policy decision (Menon 2008). However, existing policies have not effectively promoted the local currency. Therefore, it would be very interesting to understand the reasons behind this failure. Hence, the main purpose of this research is to address obstacles in promoting the local currency and to recommend solutions which may aid in its achievement.

D. Research Questions

1. What policy interventions, if any, have been implemented by the Cambodian Central Bank in the past, in response to dollarization?
2. Why have existing policies failed in fully promoting the Cambodian currency against foreign currency?
3. What can be done to stem the persistence of dollarization in the Cambodian economy?

E. Hypothesis

The Cambodian currency is not fully promoted because of hysteresis, network externalities and contextual policies.

F. Research Methodology

1) Quantitative Methodology

A quantitative analysis of the trend of dollarization, as well as Cambodian currency circulation, will be undertaken. Generally, in the case of a dollarized country, Foreign Currency Circulation (FCC) data is not available and observable (A. Calvo and A. Végh 1992, Edgar and James 2004). Therefore, in order to calculate this figure, FCD is used to measure the Dollarization Index. It should also be noted that the International Monetary Fund (IMF) also uses FCD to investigate currency substitution (Edgar and James 2004).

Using Edgar and James's model and the Cambodian structure of M2, the revised model can be described by using the following key terms:

$$\mathbf{EBM} \equiv \mathbf{TSD} + \mathbf{FCD} + \mathbf{COB} + \mathbf{DD} + \mathbf{FCC}$$

Given M2 is Broad Money without FCC since FCC is not observable.

$$\mathbf{M2} \equiv \mathbf{TSD} + \mathbf{FCD} + \mathbf{COB} + \mathbf{DD}$$

$$\mathbf{QM} \equiv \mathbf{TSD} + \mathbf{FCD}$$

$$\mathbf{NM} \text{ or } \mathbf{M1} \equiv \mathbf{COB} + \mathbf{DD}$$

$$\mathbf{ENM} \equiv \mathbf{NM} + \mathbf{FCC}$$

$$\mathbf{RD} \equiv \mathbf{DD} + \mathbf{TSD}$$

$$\mathbf{M2} \equiv \mathbf{QM} + \mathbf{NM}$$

$$\mathbf{DI}_{\text{IMF}} \equiv \mathbf{FCD}/\mathbf{M2}$$

2) Qualitative Methodology

The theory of Money Demand and Supply will be examined and used to evaluate the existing policies which have been used to promote the Cambodian currency. In addition to the foregoing theory, related articles, journals, newspapers, and cross country comparison among Cambodia, Bolivia, Ecuador and Peru. Finally, based on the aforementioned criteria, recommended policies will be proposed by the researcher.

II. LITERATURE REVIEW

Dollarization in Cambodia has been an issue of great interest which has been researched by several writers. The ultimate goal of these researchers' work is to promote the local currency, and they have demonstrated that the costs of dollarizing outweigh the benefits. Since obstacles of promoting Cambodian currency have been determined differently, so three significant areas will be covered and focused as following.

A. Causes of Dollarization

To reach a desirable solution, its causes have to be clarified particularly dollarization issue, for different country has experienced different hysteresis (Alvarez-Plata and García-Herrero 2008). "In economics, hysteresis is a situation which arises when any historical event affects the future economic path. Any disturbance in an economy will lead to a trickledown effect, and the problem will persist for long. This rolling down impact is known as the hysteresis effect." (Ewing 2013). It was stated that Cambodian underdeveloped economy was a consequence of the unique history—eliminating domestic banknote (Prasso 2001). Other researcher opposed the foregoing

statement, instead claiming that the increase in currency substitution¹ is a result of hyper-inflation (T. Valev 2007). For instance, Cambodia experienced hyper-inflation in 1992 (Tal and Dabadie 2007). It was found that Cambodia suddenly became dollarized in the early 1990s (Zamaróczy and Sa 2002). This was attributed to huge inflows of the U.S. dollar into the country during the post-conflict period. During that time, USD1.7 billion was injected by a UN agent which assisted Cambodia for its first election preparation—the United Nations Transitional Authority in Cambodia (UNTAC) — (Tal and Dabadie 2007). This represented two-thirds of the Cambodian GDP in 1993 (Khou and Ken 2015). Difference from other country, Cambodia became a dollarized country due to its own hysteresis (Menon 2008).

B. Persistence of Dollarization

Even though, economic indicators have proved development, dollarization is still persistent, and its presence is identified variously due to geography and methodology. Peruvian and Bolivian study about currency substitution found that focusing only reducing expectation (exchange rate depreciation), but not exchange rate risk is not a suggested policy to decrease dollarization (McNelis and Rojas-Suárez 1996). However, both researches—Cambodian, Laotian, and Vietnamese dollarization (Ra 2008), and currency substitution (Kem 2002), found that the share of USD holding has been significantly influenced by changes of depreciated expected rates in Riel.

According to a study at Bulgaria, it was found that people's preferences for using foreign banknotes have a strong impact because it is already widely used. (T. Valev 2007). Additionally, transaction costs are probably reduced by using foreign banknote—a research at Bolivia—and it will eventually contribute to increase the

¹ Currency substitution: using foreign money in transactions.

proportion of foreign currency (Reding and Morales 2004). An empirical research—Latin American countries and Poland—stated that “this persistence is connected to the fact that the participants in the dollar deposit market are fairly heterogeneous, and so is the way they form their optimal currency portfolios.” (Castillo and Winkelried 2005). In Cambodian case, the study determined that the determinants of using foreign banknote are “income level, the economic sector and access to finance” (Y.Siregar and Chan 2014). In relation to this, since not only USD is increasing, but the Riel too, so currency substitution has not been a reason of increasing dollarization (Duma 2011). In support of the foregoing point, higher proportion of USD is a consequence of “volume effects” rather than “substitution effects” (Menon 2008). He further mentioned that “degree of reforms and hysteresis” are well explained about Cambodian persistent dollarization.

C. Previous Recommended Policies

Many recommendations have been suggested in regard to Cambodian dollarization issue. “Cambodia needs to legalize only one strong currency as a means of exchange, and it is not important whether it is the Riel or not; otherwise, Cambodia will become the most impoverished country in the world.” (Prasso 2001). In contrast, a role to be a lender of last resort of central bank will be no longer effective if full dollarization occurs. In addition, it can possibly create financial crisis (A. Calvo and A. Végh 1992). However, two solutions of lawful de-dollarization were proposed: (1) legally ban people not to use USD, and (2) lawfully provide big different gap between costs and benefits of using the USD (Kang 2005). However, Cambodia will be a fully dollarized country if there is no macroeconomic stability to restore the Riel confidence by the authorities, and forceful policies are not recommended (Tal and Dabadie 2007). According to many international experiences, to deal with

dollarization issue, it is better for Cambodia to maintain its macroeconomic environment (Duma 2011). It was not recommended to enforce against de-dollarization, but recommended accelerating accommodative reforms instead (Menon 2008).

III. THE HISTORIC SHOCK ATTACKING THE RIEL

A. Abolishing National Currency (1975-1979)

Cambodia has the unique history in the world since at one point it abolished its local currency (Prasso 2001). The Pol Pot Regime which lasted from 1975 to 1979, was the darkest period in Cambodian history. During this period, most things were destroyed, including the central banking system. There was no financial market, as Riel banknotes and even the National Bank of Cambodia (Cambodian Central Bank) building were demolished (NBC, National Bank of Cambodia Brief History 2015). Immediately, Riel holders became poor and it was completely banned during that period. The Riel banknote was like a valueless piece of paper blowing across the street. The valuable thing became useless and no one was interested in it.

National Bank of Cambodia in 1975



Source: *Phnom Penh Post*

B. Fear in the Central Planning Economy after the Civil War (1979-89)

The Riel was re-established in 1980 after the country recovered from the Civil War. However, the Cambodian economy remained in a very poor condition. In spite of the foregoing, the unique experience under the Khmer Rouge Regime was still fresh, and Cambodian confidence in the Khmer Riel remained unrestored. Many Cambodians resorted to using other valuable commodities such as: gold, silver, or rice as a medium of exchange, instead. For example, rice was commonly used to buy other things, but rice itself was bought by gold (Prasso 2001). It was similar to a barter system which had been used in past history. Since it was a Centrally Planned Economy, the usage of foreign currencies was restricted, yet the U.S. Dollar, Thai Baht and gold were still widely demanded, as Cambodian citizens regarded them as safer means of storing the value of money (Tal and Dabadie 2007).

C. A Period of Economic and Political Instability

The Government Deficit, The First Arrival of Huge U.S. Dollar Inflows, Hyper-inflation, Political Instability, and the Asian Financial Crisis (1989-1993 and 1997)

The Cambodian central bank emitted money, amounting to 20% of government budgetary expenditure in 1989, which increased to 40% in 1990 (Irvin 1993). In actuality, money should have been printed according to money demand and supply; otherwise, inflation will appear. During the early 90s, the Cambodian government's revenue, particularly from taxation, was limited, and thus a budget deficit occurred. As a result of the foregoing, the budget was financed by the central bank. Consequently and accumulatively, the domestic money supply was expanded by 241%, 29%, and above 200% in 1990, 1991, and 1992 respectively (Tal and Dabadie 2007).

Even though the Khmer Rouge Regime had ended, the domestic political situation was not completely peaceful; until the signing of the Paris Agreement in October 1991. Following this development, Cambodia's political system became liberalized, and a two-tier banking system was introduced. In the same year, the UNTAC arrived to undertake preparations for the first national election. The arrival of this mission was very critical as it marked the first time in history that Cambodia saw inflows of large amount of the U.S. Dollar; it was also a very costly operation in UN history, with expenditure of approximately USD 1.7 billion (USD 1,700,000,000)—(Tal and Dabadie 2007). It should be noted in this regard that the Central Bank was not equipped to address this issue.

In 1992, Cambodia experienced hyperinflation (three-digit), with the Riel's value depreciated sharply and Riel holders' purchasing power degraded. This was a big incentive for people to use the USD. In response, the quantity of the U.S. Dollar in the market increased, as people were more likely to use dollar in hyper-inflation period in domestic transactions. As a result, the Riel depreciated from 800 to 2,600 to the U.S. dollar in 1990 and March 1992 respectively (Irvin 1993). It fell dramatically, by approximately 225% (author's calculation).

Hyper-inflation created yet another fear, loss of people confidence in the Khmer Riel. To cope with this issue, in mid-1992, an agreement with the IMF was signed to help Cambodia to stabilize itself during this crisis. There were no further monetary emissions from September 1992 to January 1993 and as a result, consumer prices increased by only 1.7%, and the exchange rate ranged from 2,200 and 2,400 Riel to the USD (Irvin 1993). Moreover, the inflation rate decreased to 20% in 1993 (1st Quarter).

The Riel has historically demonstrated that it is particularly responsive to political shocks. On March 19, 1993, within a period of only 24 hours, the Riel depreciated sharply by 80% from 2,600 to 4,800 to the dollar; this decline was attributed by the Khmer Rouge, attacking the ethnic Vietnamese living in the Tonle Sap River area (Irvin 1993). This conflict was a very sensitive issue and therefore it was a better option for both Cambodians and the Vietnamese ethnic groups to hold the USD to be prepared in case a war breaks out. At that time, foreign currencies were being legally traded; the Riel value depreciated since USD's demand increased.

Four years later, political upheaval appeared once again. It should be noted that the first democratic election in Cambodia was held under UNTAC supervision in 1993, and ended with the designation of two prime ministers during a same term as "first prime minister" and "second prime minister." (Nick, Bloom and Robinson 2010). In order to solve this issue, it was set in the constitution ahead that there could only be one prime minister in the next election to be held in 1998 (Brown and Zasloff 1998). However, in July 5-6, 1997, political violence resulting in the deposition of one prime minister's post by the other prime minister, led to further depreciation of the Riel by 6% because of political uncertainty (Prasso 1997). Several important items such as: gasoline and rice price increased rapidly over these two days (Toshiyasu, et al. 1997).

The Asian Financial Crisis in 1997 did not severely affect the Cambodian economy as the domestic financial sector was not open (Ohno n.d.) . The widespread use of the U.S. dollar at that time, was the main reason Cambodia did not face huge impacts of exchange rate risk and inflation (Okonjo-Iweala, et al. 1999). Inflation in Cambodia increased moderately from 9% to 15% between 1997 and 1998 respectively (DAN 1999). The Riel did, however, depreciate against the U.S. dollar

(DAN 1999), so the Riel holders were more likely to be affected rather than the U.S. dollar holders (Okonjo-Iweala, et al. 1999).

IV. CURRENT STATE AND EFFORTS FOR RIELIZATION²

A. An Overview of the Currency Composition

By using the quantitative methodology stated in the previous section, along with available money supply data from 1993 to 2014, the trends of total Riel deposits (RD) and FCD can be seen clearly. Since the early stage of dollarization, FCD proportions have dominated compared to RD and have been increasing positively. For instance, FCD increased from 84% to 95% in 1993 and 2014 respectively. For 22 years, FCD has grown by approximately 13%. Conversely, in the same year, RD decreased from 16% to 5%; it has declined around 69% (Table 1).

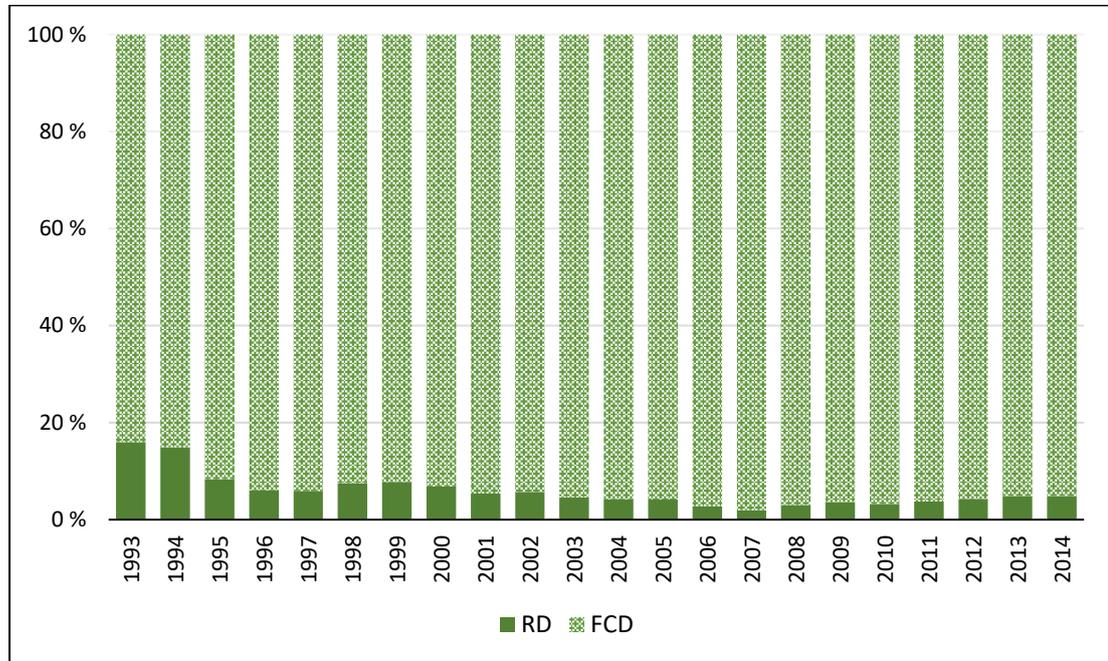
In terms of value, both FCD and RD have increased in number since there has been more economic activity. For example, FCD has increased from 121 to 35,161 billion Riel in 1993 and 2014 respectively, approximately 29,000%. For the same year, RD rose from 23 to 1,805 billion Riel, approximately 7,700% (Table 2). FCD has increased at a greater rate than RD, about 3.7 times higher, as the demand for the Riel is lower than foreign currency (Beresford, et al. 2004). Evidentially, adding RD with COB, still resulted in FCD being far larger. For instance, in 2014, FCD was 35,161 billion Riel and the combination of COB and RD was 7,399 billion Riel.

On the other hand, FCD/M2 in 1993 and 2014, increased from 36% to 83% respectively, around 131% growth (Table 3). It should be noted that this comparison does not cover FCC, since it is not known. In light of this fact, the exact amount of total foreign currency in the Cambodian economy is even higher. For example in 2014,

² Rielization refers to processes of promoting the use of Cambodian Riel.

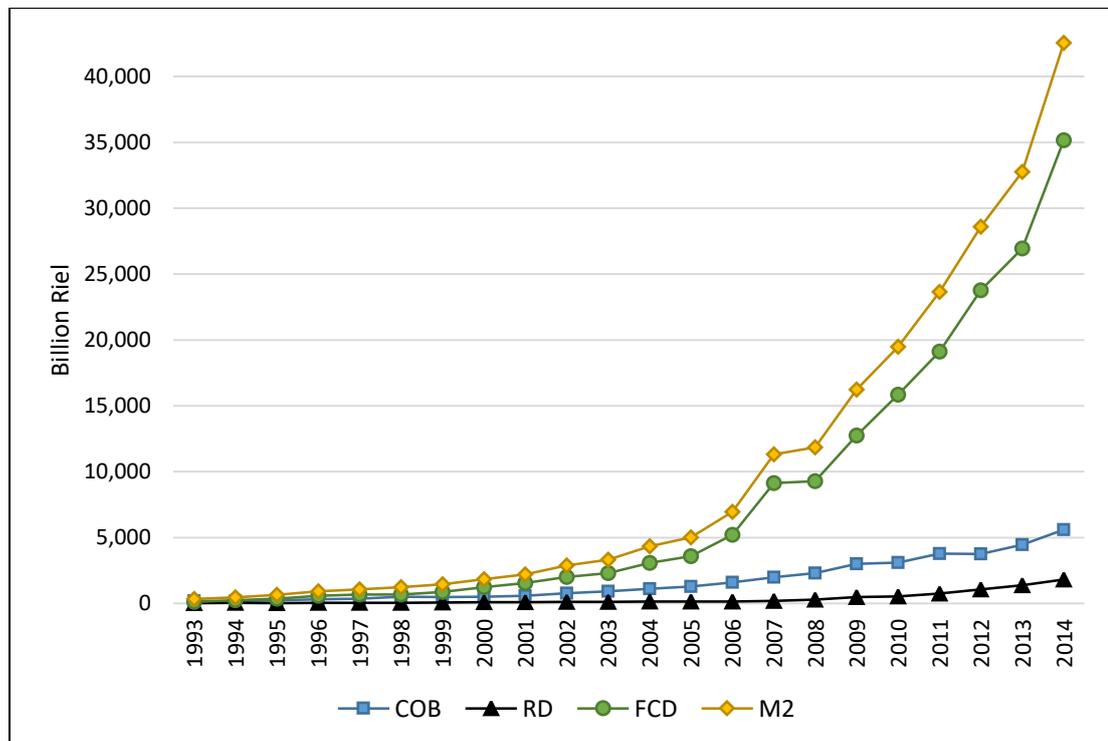
FCD/M2 was 83%, with FCC not being counted, meaning the amount of foreign currency in the Cambodian economy is even larger than 83%.

Table 1: Comparison of Cambodian and Foreign Currency Deposits



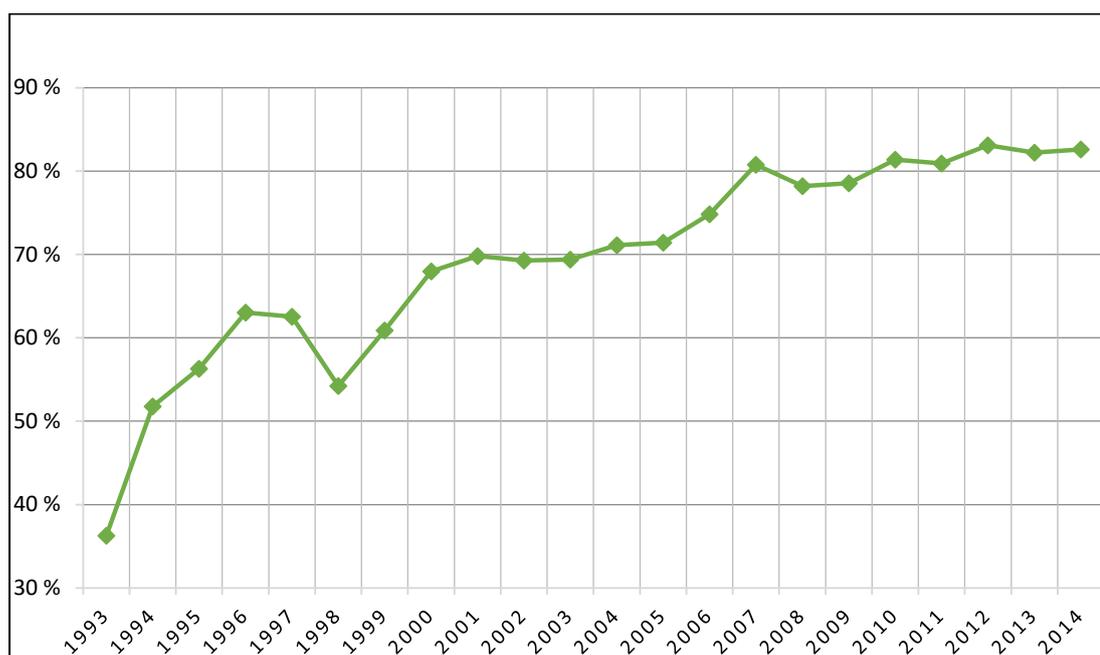
Source: National Bank of Cambodia

Table 2: The Trends of Foreign and Cambodian Currency



Source: National Bank of Cambodia

Table 3: Foreign Currency Deposits to Money Supply (FCD/M2)



Source: National Bank of Cambodia

B. Reasons for Persistent Dollarization in Cambodia

More and more people have been holding the U.S. dollar, and banks' transaction is mostly done by using U.S. dollar, 90% (Beresford, et al. 2004). This will result in further increase of the volume of U.S. dollar and its persistence. This research will show two main reasons for the persistence of dollarization.

1) Convenient Transactions for U.S. dollar Holders

It is very common in Cambodia to use the U.S. dollar to buy items. "Almost all significant transactions are priced - and paid for - in US dollars ... here the shops, tradespeople and even the motorbike taxi drivers accept the folding green." (Launey 2011). U.S. dollar holders find no any difficulty in having or holding this green note, and it is convenient for their economic transactions. For example: when they would like to buy something, particularly a car, they usually pay in the U.S. dollar because imported cars are priced in the U.S. dollar in the domestic market. However, if they pay in Riel, they will be faced with exchange rate loss, since Cambodia is

implementing a manageable floating exchange rate system. For instance, the exchange rate ranged from 3,950 to 4,100 in 2013 (NBC, Annual Report 2013).

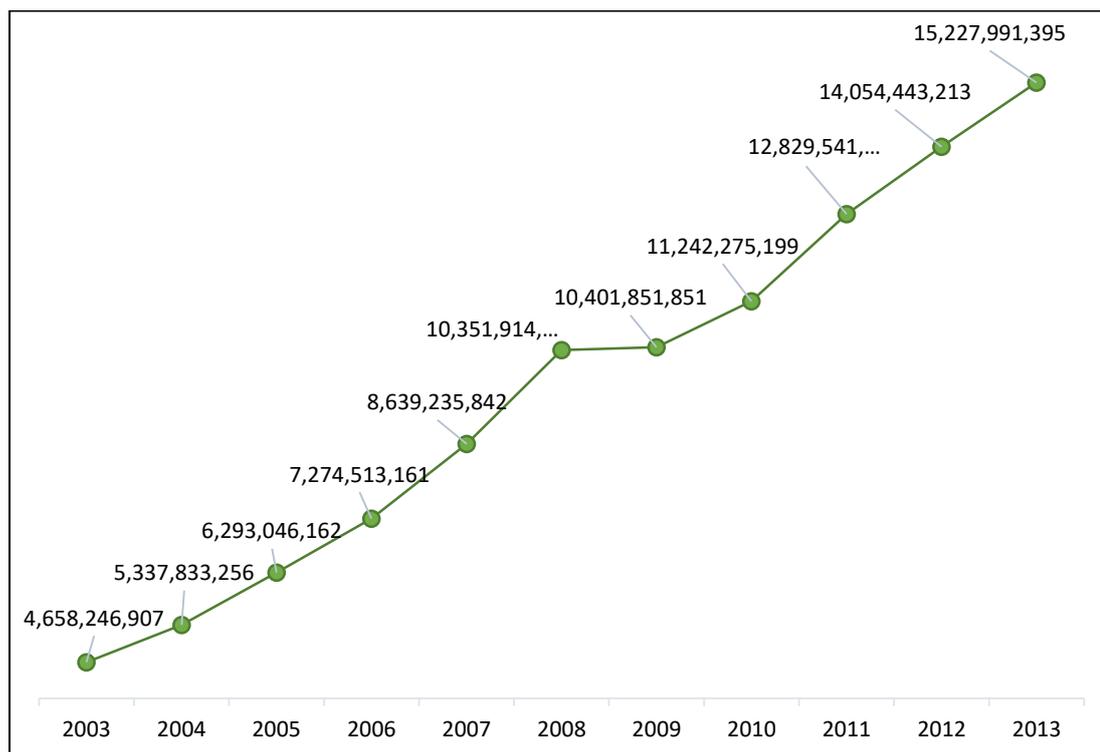
In addition to the foregoing, most private sector employees earn incomes (salaries) in U.S. dollar and they are more likely to hold the U.S. dollar rather than the Riel (Y.Siregar and Chan 2014), so it is convenient for them, since they do not deal with exchange rate risk. Yet, it is difficult for government officials, since they earn their income in Khmer Riel. Since the source of funds for commercial banks is mainly from depositors and according to Table 1 above, FCD is 95% and RD is 5% in 2014, it is preferable to give loans in U.S. dollar, as exchange rate risks can be avoided. On the other hand, with regard to the idea of network externality and preference, since people have the choice to “choose among several currencies for transactions they will prefer the currency that is already widely used in the economy.” (T. Valev 2007). As a result, most people also want to receive loans denominated in the U.S. dollar; this contributes to further increase in the volume of U.S. dollar transactions.

The green banknote has become a convenient medium of exchange, as U.S. dollar holders can avoid exchange rate risk and mostly earn their income in U.S. dollar, as it is widely accepted by economic agents. Increases in its volume can, therefore, be explained by the idea of network externalities.

2) Inflows of the U.S. dollar

Cambodia has improved its economic and political conditions; for example, GDP (current US\$) notably increased annually (Table 4) except during 2008 and 2009, the Global Economic Crisis. From 2003 to 2013, GDP (current US\$) increased by approximately three times. In addition, according to World Bank’s World Development Indicators, Cambodia maintained its GDP growth (annual %) from 2011 to 2014 around 7% continuously.

Table 4: GDP (current US\$)



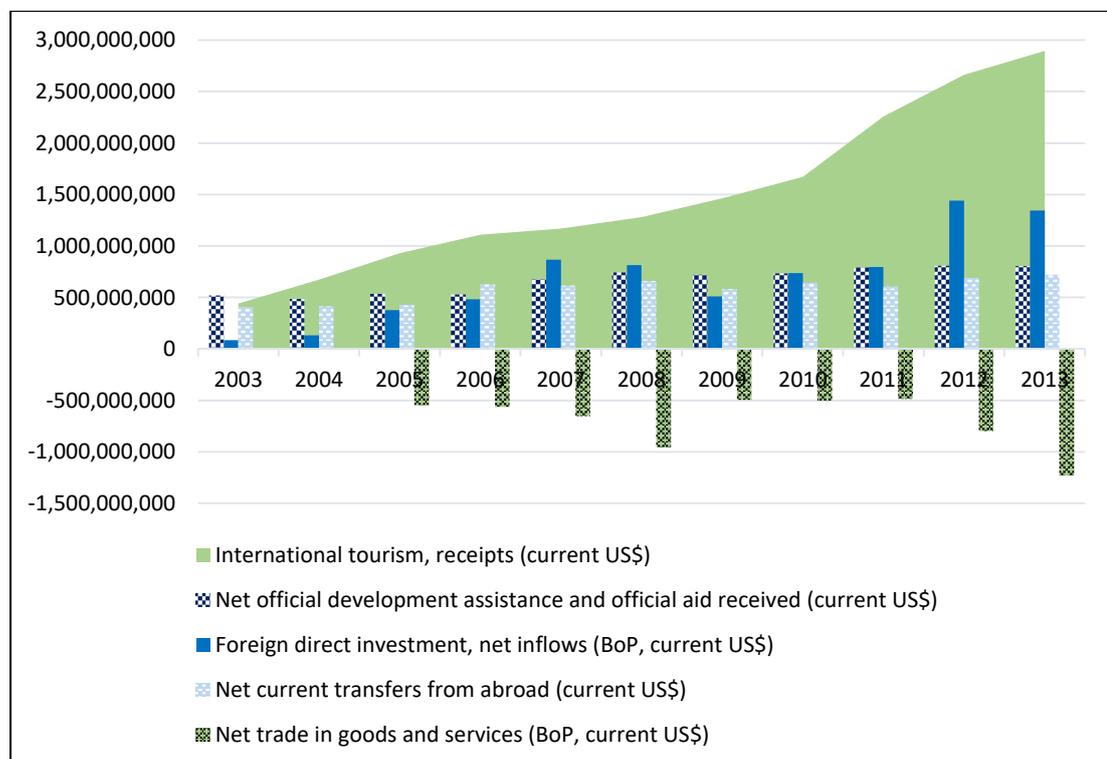
Source: *World Bank*

Besides GDP (current US\$) and GDP growth (annual %), there are other indicators which demonstrate increasing volumes of the U.S. dollar, namely international tourism (receipts), net Official Development Assistance (ODA) and official aid received, foreign direct investment (net inflows), net current transfers from abroad, and net trade in goods and services.

Even though the green banknote is not an official national currency, it functions as a local currency: a medium of exchange, a store of value, and a unit of account. Foreign investors are given incentives to invest in U.S. dollar and foreign tourists are allowed to make payments in U.S. dollar. Cambodian workers in foreign countries also transfer money to their home country in U.S. dollar as well. In addition, net trade in goods and services, and net official development assistance and official aid received, are also denominated in U.S. dollar as well.

According to Table 5, international tourism (receipts) has risen dramatically; for example, from 2003 to 2013, international tourism (receipts) increased approximately 5.56 times. The Cambodian tourism sector is one of the main components of GDP growth; its contribution to GDP was 29.9% in 2014 (WTTC 2015). Similarly, in the same year, net FDI inflows enlarged in proportion by approximately 16.02 times. In addition, net ODA and official aid received and net current transfers from abroad have increased 1.55 and 1.77 times respectively. Remittance is also considered as a variable that contributed to the dollarization since people are allowed to transfer in foreign currency (Watanabe 2006). Cambodia usually has a trade account deficit, since it imports more than it exports. According to Table 5, its net trade deficit has increased annually except during the Global Economic Crisis period. This shows that Cambodia has extended its trade transactions with other foreign countries, hence, the demand for US currency increased.

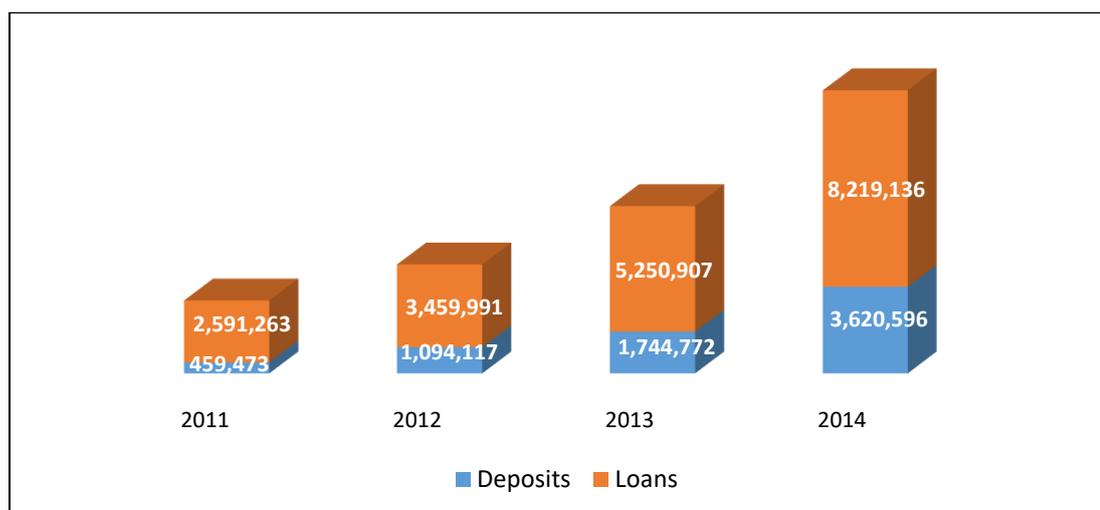
Table 5: Inflows of the U.S. Dollar



Source: World Bank

The increases in the indicators above prove that economic transactions and activities are expanding, yet these transactions are usually done in U.S. dollar instead of the Riel. Furthermore, according to the Supervision Report, deposits increased from 459,473 to 3,620,596 million Riel from 2011 to 2014 respectively, at the same time, loans increased from 2,591,263 to 8,219,136 million Riel (Table 6) (NBC 2014).

Table 6: Loans and Deposits (Million Riel)



Source: *National Bank of Cambodia*

Tables 4, 5 and 6 illustrated that all indicators show economic development and political stability. Particularly, there is financial deepening and heightened economic activity. Overall, Cambodia has good economic prospects, yet this is largely as a result of the USD, which is in greater demand than the Riel. Since the Cambodian financial sector is very complex and interrelated, if there is an external shock, which affects the U.S. dollar in particular, Cambodia is likely to be affected like during the Global Economic Crisis period. Also, there is a limitation in monetary policy, as the local currency is being circulated in small proportions, therefore, the central bank cannot intervene in the market by using M2 if there is a financial problem. In short, in

order to have sustainable economic development, mainly monetary power, promoting the local currency is a must.

C. Analysis Of Implementing Policies

The Cambodian Central Bank is moving to promote the domestic currency as well as partial de-dollarization in the contextual manner without force and without a targeted timeframe (KHMERTimes 2015). Evidentially, there have been no forceful policies to promote the Riel and Cambodia has been in high dollarization status for over two decades.

In terms of the demand side, compulsory payments using the Riel have been implemented for the payment of utilities, tax payments, and governmental employees' salaries (Tal and Dabadie 2007). These few obligatory payments have not changed people's behavior toward a preference for the use of the local currency since there are only approximately 190,000 civil servants in Cambodia and the majority of individuals are employed in the informal sector (Mom 2014, ILO 2012). According to a survey research, wage/salary is in the highest proportion of foreign currency income sources compare to agriculture and business ownership foreign currency income (Khou and Ken 2015). This is because Cambodian minimum wage regulation is denominated in U.S. dollar (MLVT 2015). Additionally, the National Bank of Cambodia (NBC) has promoted the Riel's transactions by paying civil servants via direct bank account deposits.

In terms of the supply side, the NBC can legally control government accounts and convert them into Riel (Tal and Dabadie 2007). In addition, the NBC is doing its best to promote economic stability, particularly price stability and a manageable floating exchange rate. According to an NBC report, the domestic inflation rate was 4% in 2013; Cambodia's inflation performance is comparable to other ASEAN members

(NBC 2013). Furthermore, the NBC can also maintain exchange rates under its target without huge fluctuation. According to Table 7 below, the exchange rate gap is manageable and ranged from 3,950 to 4,100 against the U.S. dollar in 2013 alone.

Table 7: The Trend of the Riel Exchange Rate against the U.S. Dollar



Source: *National Bank of Cambodia*

With regard to the appearance of local bank notes, the NBC has facilitated the replacement of old notes by injecting new notes into the economy. Hopefully, this rejuvenation of the local currency will instill some pride in the Riel. The NBC has also issued the highest denominated note (100,000 Riel) since people do not prefer to hold large sums of cash in Riel. It is approximately 25 U.S. dollar (1 USD = 4,000 Riel), however, the 100,000 Riel note is not popularly used in the market. Also, the smallest bank note, 50 Riel, is even more unpopular in terms of circulation because it is relatively valueless, for example, it cannot be used to purchase even simple candies. Since the economic situation in Cambodia has become more stable, the Securities and Exchange Commission of Cambodia (SECC) was established under the law of Issuance and Trading of Non-Government Securities in 2007 (SECC 2009). This is yet another way of increasing the use of local currency, since prices are quoted in Riel

both in primary and secondary markets (REUTERS 2011). However, the Cambodia Securities Exchange (CSX) is not yet mature, and until this point, there are only two companies which have been listed: Phnom Penh Water Supply Authority (PPWSA) on April 18, 2012 and Grand Twins International (Cambodia) Plc. on June 16, 2014 (CSX 2011). Additionally, the government is yet to issue any bonds.

The function of the NBC to be a lender of last resort is limited since Cambodia is in high dollarization, and the NBC can only print Riel not USD. Therefore, liquidity risk matters if there is external shock or unpredicted uncertainty. In order to solve this issue, the NBC developed a fully functioning inter-bank market in Cambodia in September 2013 (Hul and Williemyms 2013). Negotiable Certificates of Deposits (NCDs), a financial instrument, can be sold, bought or used as collateral in inter-bank market. Generally, commercial banks are required to deposit reserve requirement and if there are extra deposits, the NBC will give negligible interest rates. However, commercial banks can transfer these extra deposits to the NCD to loan to other banks who may be experiencing shortage, or in need of funding. It is similar to a Treasury Bill since it is very liquid and a low interest rate form of collateral.

Recently, in February 2015, the NBC planned to promote the Riel via leveraging financial market development in three main aspects: (1) foreign exchange market development, (2) inter-bank and money market and (3) securities market development (NBC, The 2nd NBC Macroeconomic Conference: Leveraging financial market development to promote Riel 2015). This, however, is just an idea and nothing has been implemented yet. But it is a good step, especially since de-dollarization requires accelerated policies.

Policies implemented to deal with dollarization in Cambodia have not been forceful. For instance, people were not forced to use the local currency by law and

there is little demand for Riel transactions in utility payments. Yet, government size is increasing in terms of hired officials and transactions and so is the Riel. On the other hand, the NBC legally has control over government accounts (all governmental ministries accounts) and it can maintain economic stability, mainly inflation and exchange rate. The central bank has created policies according to Cambodia's stage of development: price is denominated in Riel in the securities market, and there is a fully functioning inter-bank market. In addition, there are impending policies to promote the Riel; for instance, leveraging financial market development to promote the Riel.

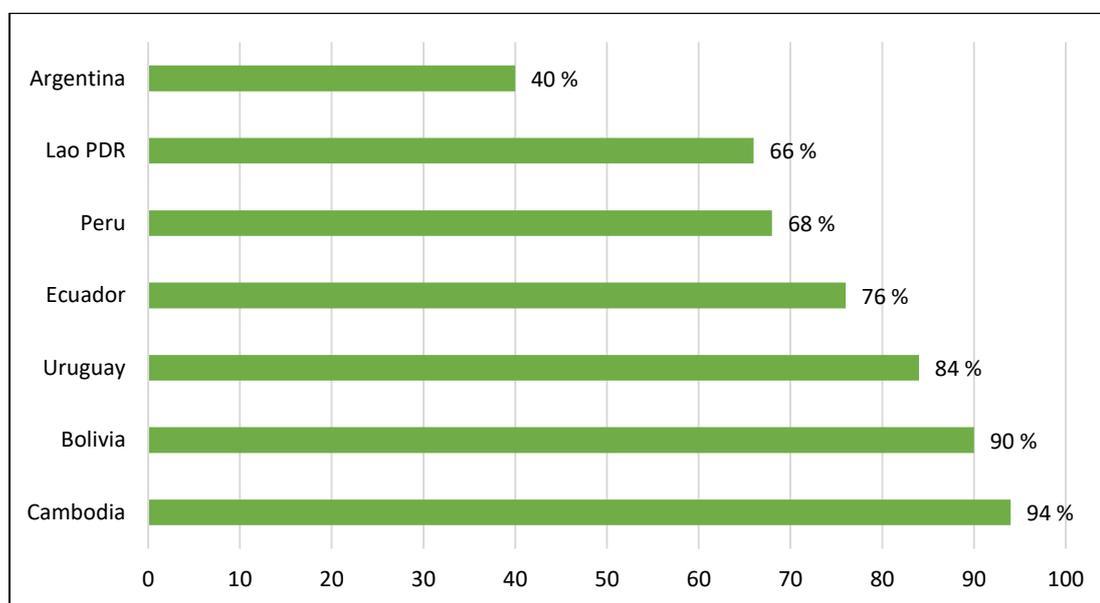
V. THE CROSS COUNTRY COMPARATIVE STUDY: BOLIVIA, ECUADOR, AND PERU

A. Why were these three Countries selected?

In order to come up with suggested policies for Cambodia, a cross country comparative study is necessary. Bolivia, Ecuador, and Peru are located in Latin America and Cambodia is in Southeast Asia, yet these countries have been chosen for the comparative study for the following reasons. Like Cambodia, these three countries have gone through similar situation of high dollarization, Cambodia 94%, Bolivia 90%, Ecuador 76%, and Peru 68% (Table 8). In addition, irrespective of the three countries—Bolivia, Ecuador and Peru, being geographically similar with similar language, culture and preferences, these countries have chosen different strategies in response to the issue of dollarization. For instance, Bolivia and Peru experienced both forceful and market development policy leading to failed and successful results respectively. However, Ecuador chose to become an officially dollarized country to tackle the dollarization issue although its rate was not huge. The differences in each of these countries policy preference may aid for drawing recommendations in the

context of Cambodia. Moreover, there are available data for these countries for convenient analysis.

Table 8: Foreign Currency Deposits to Total Deposits of High Dollarization Degree Countries, Average from 1995 to 2004



Source: *Levy Yeyati (2006), and Patricia Alvarez-Plata and Alicia García-Herrero (2007)*

B. Experiences of Dollarization: Before and After

1) Ecuador

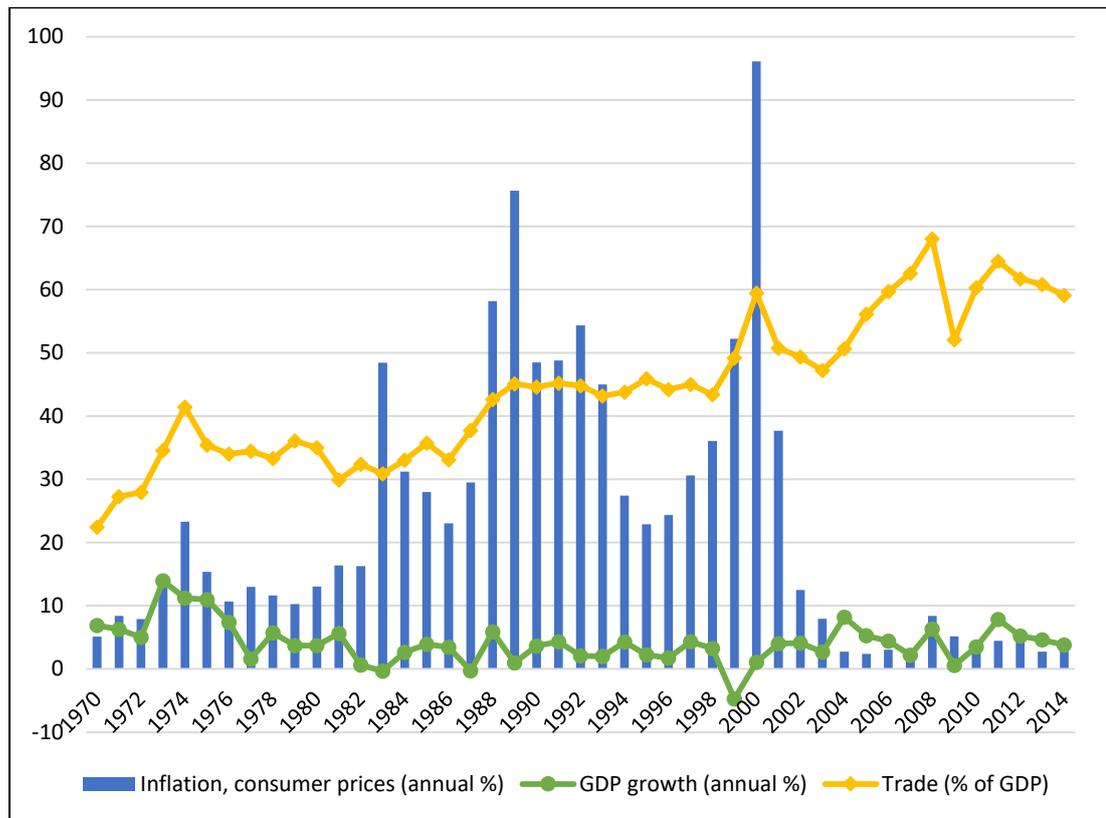
Sucre was the monetary unit in Ecuador since April, 1884 (RKA 2010-2014). Eventually, in early 2000, the Ecuadorian President, announced the USD as its legal tender. Many causes contributed to this decision, the most significant being political instability and economics. During the 1990s, Ecuador experienced large fiscal deficits, increasing external debts, and declining world oil prices which resulted in low economic growth, high inflation, and liquidity problem in an already fragile banking sector. This leads to the collapsing of the Ecuadorian economy in 1999 resulting in the depreciation of the Sucre, freezing of bank deposits, as well as defaulting on external debt. Political economy instability was therefore inevitable (Agnoli and Whisler 2006).

According to World Bank's World Development Indicators (Table 9), inflation in Ecuador was increasing notably and its highest point was 96.09% in 2000. Eventually, after official dollarization, inflation has decreased dramatically. It was 3.57% in 2014. With regard to GDP growth, there was a high negative growth rate in 1999, -4.74%. However the growth rate has been improving and was noted as being 3.80% in 2014. Moreover, trade as a percentage (%) of GDP before official dollarization did not increase much, but it increased its shares afterwards.

The aforementioned are reasons for this transformation. Since there was a worse period of instability, policy makers made a huge systematic change in the economy in order to achieve structural reform. In addition, Ecuador had already been partially dollarized. Since Ecuador is geographically near to the United States of America, its trade will be increased since dollarization will encourage investors to invest in Ecuador rather than other countries because of lower transaction costs.

If there is no internal economic crisis, no country will give up its monetary policy. To restore this, dollarization was undertaken and this has helped Ecuador to improve its situation in terms of: decreasing inflation rate, increasing economic growth and trade (% of GDP).

Table 9: Ecuador: Inflation consumer prices (annual %), GDP Growth (annual %), and Trade (% of GDP)



Source: World Bank, Ecuador

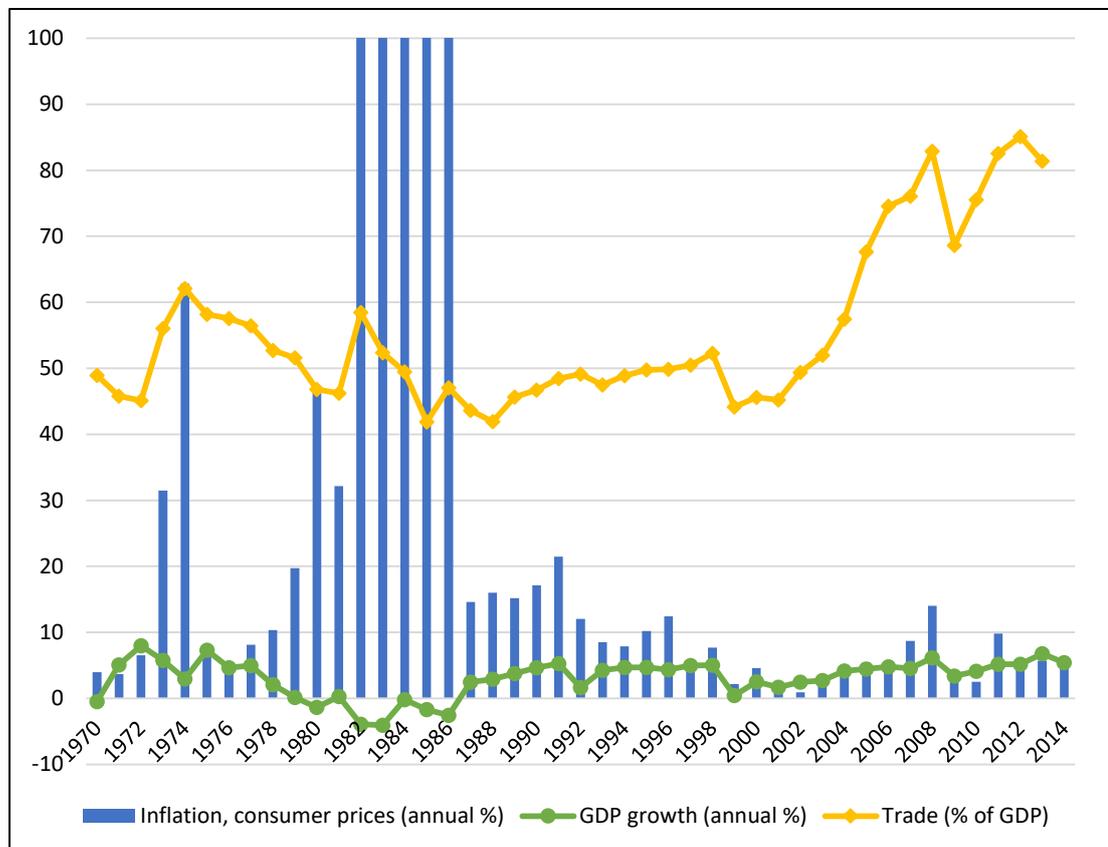
2) Bolivia

Similar to Ecuador, Bolivia has experienced economic shock in the form of hyper-inflation. Dollarization in Bolivia was caused by de facto reasons rather than policy decisions and occurred in the 1970s due to “exports and external foreign loans” (Staines 2014) which eventually led to a balance of payment crisis in 1981. The central bank of Bolivia decided to implement forceful de-dollarization in 1982, however, the result was worse and, during the 2000s, Bolivia changed its strategies to a market development policy and its local currency’s deposit has since increased notably.

According to Table 10, the inflation rate was high during the 1970s, registering at 31.49% and 62.84% in 1973 and 1974 respectively. However GDP

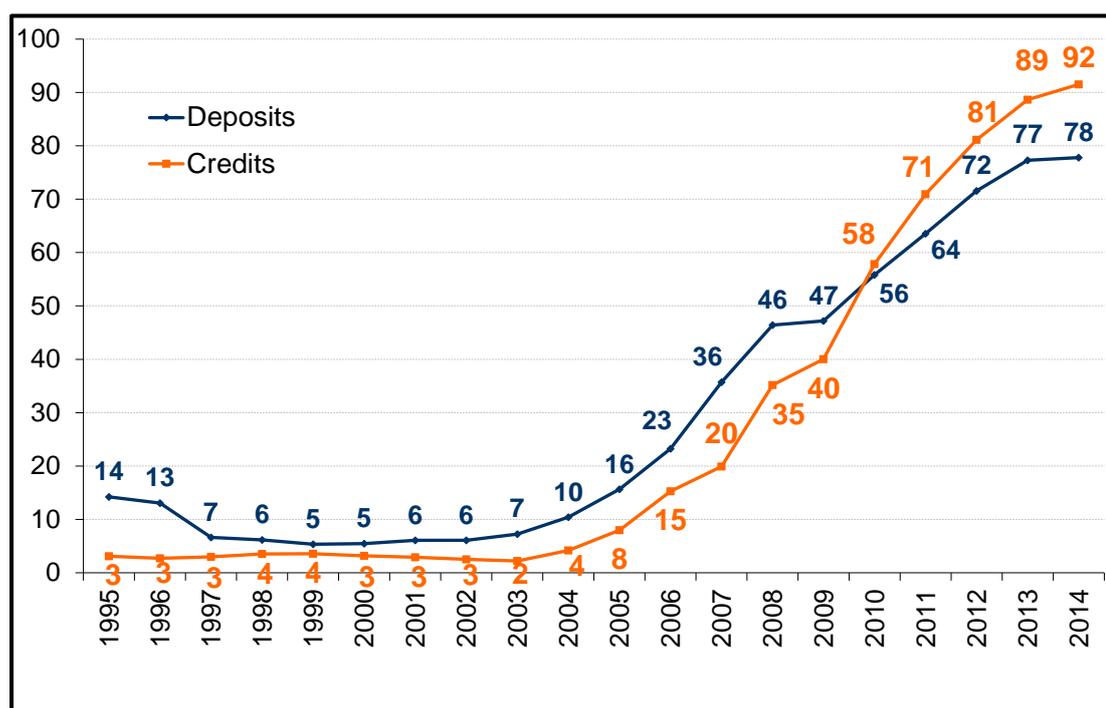
growth (annual %) was positive. After the forceful de-dollarization policy in 1982 the inflation rate was extremely high, 123.54% in 1982 and peaked at 11,749.64% in 1985. Before this forceful de-dollarization policy, the inflation rate was lower, being 32.13% in 1981. The country also experienced capital flight and eventually, the policy led to more dollarization in Bolivia. In addition, Bolivia had a hard time since its GDP growth (annual %) was negative for five consecutive years (1982-1986). Table 11 demonstrates the positive results of a 2006 market development policy or Bolivianization on the economy. Since its implementation, Bolivian Boliviano Deposits to Total Deposits have increased gradually from 23% to 78% in 2006 and 2014 respectively. In addition, Bolivian Boliviano Credits to Total Credits have also risen notably, registering at 15% in 2006 and 92% in 2014 respectively.

Table 10: Bolivia: Inflation consumer prices (annual %), GDP Growth (annual %), and Trade (% of GDP)



Source: World Bank, Bolivia

Table 11: Bolivia: De-Dollarization of Deposits and Credits, 1995-July 2014



Source: *Financial System Supervisory Authority (ASFI)*

Elaborated by: *Ministry of Economy and Public Finance*

Three important policy criteria were outlined which could serve as successful market-drivers in Bolivia: (1) macroeconomic conditions, (2) prudential policies, and (3) debt condition (Staines 2014). Since the 1990s, the inflation rate has decreased gradually, positive rate of GDP (annual %), and increasing of trade (% of GDP). It is called macroeconomic stability.

In addition, prudent policy incentives of using local currency have been made, including: “discriminatory legal reserve ratios and credit provisioning, foreign exchange net exposure limits, and foreign financial transaction tax.” (Staines 2014). In support of the foregoing policies, a new financial transaction tax was created—Act 3446 Supreme Decree 28815— (MEPF 2013). Under this regulation, taxes are only applied to foreign currency transactions exceeding 2,000 USD for a 3 year period (July 2006 to July 2009). This measure aimed to incentivize use of the national currency in financial transactions. This policy was eventually extended for another 3

years in order to deepen the process of promoting the use of local currency. In addition, the Central Bank of Bolivia's Board Resolution (143/ 2008), increased the foreign currency reserve requirement rate from 7.5% to 30%. This helped to reduce risks in the financial system and strengthen the capacity of Bolivian Central Bank as a lender of last resort. A Circular (604/2008) was also disseminated to differentiate between provisions for local and foreign currency respectively. The foreign currency provision rates were higher than domestic currency and aimed to strengthen the solvency position of financial intermediaries and decrease the level of exposure to credit risk (international financial crisis). Minimum credit levels of portfolios for national currency were also established (Supreme Decree 1842). Moreover, Resolution 031/2009, set the minimum and maximum buying and selling exchange rate for dollar transactions. There was also a tax on selling foreign currency (Law 291, Supreme Decree 1423, and Law 396) which served as a measure for meeting the government's objective of deepening the use of the national currency. In addition, Bolivian minimum wage Supreme Decree is denominated in its local currency (Derechoteca 2009) .

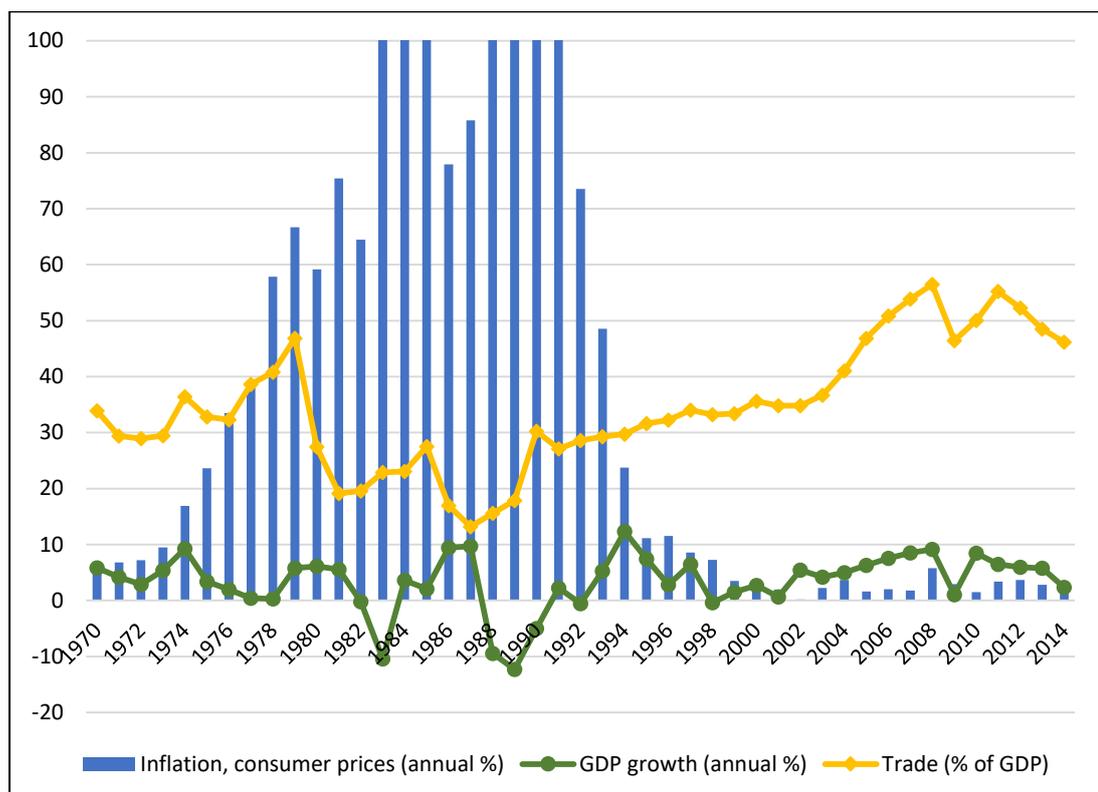
Government debt to GDP decreased gradually from 80.4% in 2005 to 32.4% in 2014 (TE) and the country's Credit Rating of Trading Economics (TE) gave Bolivia a score of 44/100 (Non-investment grade speculative; 5th ranked position with the lowest ranked being 10th. TE was rated by considering 5 major credit rating entities: Moody's, Standard & Poor's (S&P), Fitch, Economic Indicators, and Financial Markets; it gave each share equally 20% (TE) . These conditions favor Bolivian government to issue long term bonds particularly in domestic currency and it has contributed to decreasing in credit dollarization (García-Escribano and Sosa 2011).

3) Peru

Hyper-inflation and dollarization in Peru happened during the mid-1970s. The Peruvian government chose the route of forceful dollarization by forcing people to convert FCD to the local currency in 1985; this resulted in unprecedented “capital flight and financial disintermediation” (García-Escribano 2010) and huge inflation. This policy has arguably made the Peruvian economy worse; for example, during the 1980s, dollarization deposits were just above 60%, but rose to approximately 80% in 1990 (Staines 2014). Peru has changed its policy from a forceful one to a market-development policy during the 2000s and has proven to be more successful since credit and deposits in the U.S. dollar decreased gradually.

According to Table 12, the inflation rate was rising in the mid-70s and ranged from 23.62% to 75.43% during 1974 to 1981. This rate kept increasing and hit the three-digit mark in 1983 (111.15%), moving to 163.40% in 1985, the year of forceful de-dollarization. Immediately after the implementation of this policy, the inflation rate decreased to 77.92% in 1986; however, in subsequent years, inflation rate increased dramatically and peaked at 7,481.66% in 1990. The inflation rate was recently noted as being 3.23% in 2014. With regard to GDP (annual %), rates were negative both before and after the reforms undertaken in the years of 1982- 1983, and 1988- 1990.

Table 12: Peru: Inflation consumer prices (annual %), GDP Growth (annual %), and Trade (% of GDP)

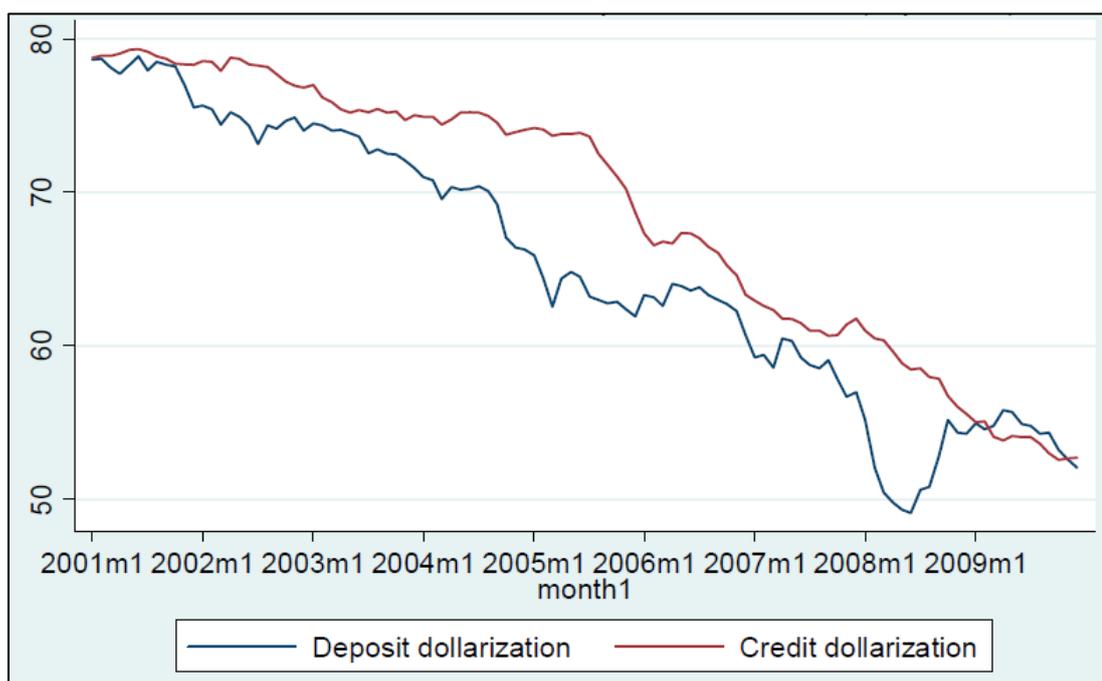


Source: World Bank, Peru

In the early 2000s, Inflation Targeting (IT) was introduced in Peru, resulting in a low inflation rate, and this is seen as a possible starting point for market development de-dollarization. This policy has contributed to the achievement of positive results. Table 13 below shows a huge decreased dollarization of credit and deposits from 2001 to 2009. Deposits and credit dollarization in 2001 was almost 80%, but they have fallen dramatically; it can also be noted from the chart that credit dollarization moved to 55% and dollarization deposits declined to around 52% in 2009. To achieve such successful results, many measures were undertaken. The first measure was suitable pre-conditions. During the 2000s, Peru's inflation rate remained low and there was positive GDP growth (annual %). Peru is also implementing IT, with a target rate of 2% and $\pm 1\%$. In addition, its trade levels were also increasing and the overall macroeconomic outlook was good. Secondly, the government

introduced long-term government bonds and private debt market mainly in local currency; by doing so the Peruvian government has decreased its government debt to GDP (TE Rating), a decision which is good for its credit rating, which in turn attracts investors to buy its securities. Trading Economic Rating gave Peru a score of 59/100 (4th rank). Finally, prudent policies have been adopted, including: “discriminatory legal reserve ratios, provisioning requirements, and foreign exchange net exposure limits.” (Staines 2014). For instance, there is a big different reserve requirement ratio between foreign currency and local currency, which was less than 5% for local currency, but more than 30% for foreign currency in the first month of 2010 (García-Escribano 2010). Yet another tool is discretionary credit provision; foreign currency is set at a higher rate than local currency. In addition to the aforementioned, the Central Bank of Peru requires commercial banks to hold liquidity of foreign currency higher than the local currency. For example, 8% of local currency and 20% for foreign currency “of all their liabilities maturing during the next 12 months.” (García-Escribano 2010). With regard to the foreign exchange policy, the Central Bank of Peru tries to maintain the stability of exchange rate and reduces its volatility by accumulating international reserves (Rossini, Quispe and Serrano 2013). Peruvian government is set its minimum wage regulation in its local currency (PEN) — (DOS 2015).

Table 13: Peru: Dollarization of Credit and Deposits, 2001-2009 (%)



Source: *Central Bank of Peru; and IMF staff calculations*

Note: 1/ *Foreign currency credit and deposits evaluated at constant exchange rate.*

C. Cambodia and Latin America Countries: Similarities, Differences, and Suggested Policies

Following closer examination of three countries—Ecuador, Bolivia, and Peru—a vital lesson for Cambodia with respect to the causes of dollarization is that it is mainly caused by hyper-inflation and an internally unstable economy. These findings imply that being a fully dollarized country is not desirable for Cambodia since it is geographically far from the United States of America (USA), and the current Cambodian macroeconomic climate recently is stable with positive progress. In addition, the experiences of both Bolivia and Peru hold important lessons for Cambodia, specifically that forceful de-dollarization will more likely result in deepening financial crisis (more dollarization) to the nation and ultimately the desirable policy is one focused on market-development.

In order to prescribe policies, similarities and differences among Ecuador, Bolivia, Peru and Cambodia are needed. There are three main aspects of comparisons: pre-conditions, prudential policies, and capital financial market.

	Cause: Highest Inflation Rate	Pre-condition (2013)		
		Inflation Rate (%)	GDP growth (annual %)	Trade (% of GDP)
Cambodia	180% (1992)*	2.94	7.36	139.61
Ecuador	96.09% (2000)	2.74	4.64	60.82
Bolivia	11,749.64% (1985)	5.72	6.78	81.39
Peru	7,481.66% (1990)	2.82	5.77	48.50

Source: *World Bank*

(*): *Nay Im Tal and Michel Dabadie (2007)*

Description:

- With regard to the causes of dollarization, Cambodia is not different from other countries in terms of hyper-inflation which was not huge in comparison to other countries like Bolivia and Peru. The unique historic difference is that Cambodia at one point abolished its local currency (1975) and eventually rejected a large amount of the U.S. dollar (2/3 of GDP in 1993).
- As a result of recent pre-conditions (inflation rate, GDP growth), Cambodia is comparable to other countries, and it is noted that Cambodia's trade (% of GDP) is the highest among other countries.
- In addition to trade, literature has shown that minimum wage regulation in Cambodia is denominated in U.S. dollar, unlike, minimum wage regulations in Bolivia and Peru, which are set in their local currency.
- The use of the U.S. dollar is served as an incentive to attract FDIs and tourists in Cambodia.
- In short, the current Cambodian macroeconomic situation is suitable for *market development policy* involving the promotion of the local currency (Rielization) rather than forceful de-dollarization as Bolivia and Peru have shown that decreasing in dollarization is feasible. ***There is significant inconsistent government policies in Cambodia between policy to promote the Riel and policy to attract capital inflow.***

	TE Rating	Capital Financial Market		
Peru	<ul style="list-style-type: none"> ▪ 59/100 ▪ 4th rank 	<ul style="list-style-type: none"> ▪ The government introduced long-term government bonds and private debt market mainly in local currency. 		
Bolivia	<ul style="list-style-type: none"> ▪ 44/100 ▪ 5th rank 	<ul style="list-style-type: none"> ▪ Issuing long term bonds particularly in domestic currency has contributed to decreasing in credit dollarization. 		
Ecuador	<ul style="list-style-type: none"> ▪ 29/100 ▪ 6th rank 	<ul style="list-style-type: none"> ▪ The government issues bond in U.S dollar since Ecuador has dollarized to be an official dollarization country. 		
Cambodia	<ul style="list-style-type: none"> ▪ 30/100 ▪ 6th rank 	<ul style="list-style-type: none"> ▪ The government has not issued any bonds to date. ▪ Thus far, there are only two listed companies and they have both issued stocks in local currency. 		
Description:				
<ul style="list-style-type: none"> ▪ Improving capital financial markets by issuing securities in local currency has promoted local currency transactions as well as the decrease in foreign currency, in both Bolivia and Peru. ▪ Ecuador's macroeconomic condition is not very different from that of Peru or Bolivia, yet it is in 6th rank because it cannot issue its local currency. ▪ <i>Cambodia is ranked 6th, and the country is therefore eligible to issue government bonds particularly in local currency in order to promote local currency and to increase domestic debt rather than foreign debt.</i> 				
	Prudential Policies			
	Reserve Requirement Ratios	Provision Requirements	Exchange Rate Policy	Other Policies
Peru	<ul style="list-style-type: none"> ▪ Foreign currency is around 30%. ▪ Domestic currency is around 5%. ▪ Big gap difference 	<ul style="list-style-type: none"> ▪ The foreign currencies provision rates were set higher rate than local currency. 	<ul style="list-style-type: none"> ▪ Maintain the stability of exchange rate and reduces its volatility by accumulating international reserves. 	<ul style="list-style-type: none"> ▪ Required commercial banks to hold liquidity of foreign currency higher than local currency.

Bolivia	<ul style="list-style-type: none"> ▪ Foreign currency has increased from 7.5% to 30%. ▪ Domestic currency is relatively low ▪ Big gap difference 	<ul style="list-style-type: none"> ▪ The foreign currency provision rates were higher than domestic currency. 	<ul style="list-style-type: none"> ▪ It was set the minimum and maximum of exchange rate in buying and selling dollar transactions. 	<ul style="list-style-type: none"> ▪ There is financial transaction tax; it was charged only operations in foreign currency above 2,000 USD. ▪ Tax on selling foreign currency ▪ Minimum credit level of portfolio on national currency
Cambodia	<ul style="list-style-type: none"> ▪ Foreign currency 12.5% ▪ Domestic currency 8% (NBC, Reserve Requirements) ▪ Small gap difference 	<ul style="list-style-type: none"> ▪ No differences between local and foreign currency (NBC 2009) 	<ul style="list-style-type: none"> ▪ Managed floating regime ▪ There is intervention from the central bank to reach its determined objective. 	<ul style="list-style-type: none"> ▪ Higher interest rate of local currency deposit, yet there is slightly higher interest rate of local currency loan (NBC, Annual Report 2013).

Description:

- Prudential policies in Bolivia and Peru have been similarly successful. These policies are discrimination of foreign currency by giving more noticeable incentive to local currency users.
- Cambodia’s policies have not given more noticeable incentives to local currency users.
- In short, Cambodian prudential policies are few and limited in terms of promoting the local currency in comparison to Bolivia and Peru. ***If the central bank as well as the government is willing to promote its own currency, accumulated and strong policies are necessary by giving more noticeable incentive to Riel users.*** These can be done by the Central Bank or cooperate with the Ministry of Economy and Finance.

The results of comparisons can be used to suggest policies to Cambodia in terms of prudential policies and capital financial market development. The Cambodian government should try its best to develop its capital financial market by

issuing long term bonds in local currency and encourage private sector to issue stocks/
bonds in local currency as well. With regarded to prudential policies, the Central
Bank and the Ministry of Economy and Finance should also collaborate on
formulating strong and marketable policies which will provide more noticeable
incentives to domestic currency users and increase income sources in local currency
(wage or salary).

VI. CONCLUSION

Hysteresis completely explains the reasons of becoming dollarization in
Bolivia, Peru, and Ecuador as well as Cambodia. In addition, the persistence and
higher volume of U.S. dollar in Cambodia are because of inconsistent government
policies between promoting the Riel and attracting capital inflow. The significant
conflicting policies of capital inflows are: minimum wage regulation (denominated in
U.S. dollar), and giving incentives to FDI's and tourists to freely use U.S. dollar rather
than trying to signal positive future economic outlook. Moreover, because U.S. dollar
is already widely used, so people are more likely to use USD in their transactions.
This because they have options to choose any currency, and there is no any barrier or
cost to use U.S. dollar. One more thing, it takes time to change people's behaviors and
mindset as well as to increase people's confidence in Riel; it cannot be done overnight.

Available literatures and a cross country studies have proven that implemented
prudential policies to promote the Riel are limited. There are very few policies, and
these policies have not given noticeable incentive to the local currency users like Peru
and Bolivia have done. Successful experiences from Bolivia and Peru are derived
from prudential policies and capital market development. There are various kind of
prudential policies, yet the common policies are: discrimination rate of reserve

requirement, and loan provision between foreign and local currency. In addition, Bolivia alone has introduced financial transaction tax, tax on selling foreign currency, and minimum credit portfolio on national currency. Peru has required higher rate of liquidity (foreign currency). In another aspect, all Bolivia, Peru and Cambodia have managed its exchange rate instability and inflation rate. Thus, the implementation of accumulative and marketable prudential policies which give more benefits to the domestic currency users is a key of gradually declining of dollarization. Another important thing is that the government should increase income sources in national currency rather than U.S. banknote. The development of the capital financial market by issuing securities in local currency is also a significant policy toward decreasing in dollarization as experiencing in Bolivia and Peru.

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