Dollarization in Afghanistan; Issues and Concerns

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Abstract

Dollarization has been consistently high in Afghanistan despite relatively low inflation and developments towards central bank independence in last few years. This paper begins with providing definition of different strands of dollarization then goes on to present stylized facts and trends of dollarization in Afghanistan. The main content of this paper focuses on pros and cons of dollarization in Afghanistan especially emphasizing on loss of seignoirage, currency mismatch and loss of central bank's role as a lender of last resort. In this paper we have also tried to shed some light on the dollarization phenomenon in Afghanistan and to address the posed questions regarding the short-term and long-term effects of dollarization on the economic stability of the country. At the end, we will conclude our findings in the form of some policy recommendations for the monetary authorities Afghanistan for the purpose of dealing the issue of dollarization in the country.

It should be noted that we have conducted our study mostly based on literature review and study of similar cases around the world.

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Introduction

Over the last few decades dollarization has emerged as a serious policy issue for the Afghan monetary authorities. Despite significant development in the banking sector and relatively low and stable inflation, Afghanistan is characterized as a highly dollarized economy. The amount of foreign currency in circulation is far greater than the amount of domestic currency in circulation. Overwhelmingly large proportion of the Afghan constituency saves and borrows in large parts in US dollar and almost all of the large transactions are carried out in US dollar, in other words we can say that US Dollar perform important functions of money alongside domestic currency albeit US Dollar does not hold the status of legal tender. At the border areas Pakistani Rupees and Iranian Toman are also used parallel to Afghani and US Dollar. Hence, extensive use of foreign currencies in particular US dollar in economic activities continues to be a major source of concern for monetary authorities for a number of reasons such as vulnerability of the banking system to exchange rate fluctuations, volatile exchange market, loss of seignoirage, and also because of its contribution in the loss of confidence in domestic currency on the part of economic agents.

Share of foreign currency deposits to total deposits in the banking system is substantially high in Afghanistan. Foreign currency deposits accounted for 83% (equivalent to 27,733 million Afghanis) of total available deposits in the banking system in 2006. Over 2006 to 2015 period, the share of foreign currency deposits has experienced some fluctuations falling to 66% of total deposit of the banking system by April 2015. Despite a considerable decline in the level of dollarized deposits, Afghanistan is considered as a highly dollarized economy by international measures.

Along with high level of foreign currency deposits, it is a common practice for some businesses and households to use the foreign exchanges and in particular the US dollar as medium of exchange in preference to the Afghani (domestic currency). The use of foreign currencies as medium of exchange is mostly seen in service sector located in urban areas including real estate, education, medical services and for purchasing high value imported goods such as computers and automobiles. All in all, it can be stated that the use of US dollar has been widespread as medium of exchange in the country; however, lack of integrated and reliable data has made the estimation of the level of transaction dollarization a very difficult task to accomplish.

The growing use of dollar as medium of exchange along with high levels of financial dollarization in the country has raised some concerns among the policy makers and monetary authorities. To curb the growing dollarization of the economy and to discourage businesses and people from using foreign exchange in their transactions, Da Afghanistan Bank (central bank of Afghanistan) drafted a set of regulations which was approved by the parliament. Under this set of regulations the business community is directed to quote the prices of goods and services in domestic currency.

The concerns of policy makers regarding the growing dollarization of domestic economy are well grounded on realities and have both theoretical and empirical background. Stability of the financial sector is a serious concern for the policy makers. A highly dollarized financial system is associated with two major types of risks: liquidity risk and solvency risk. High level of dollarization is also associated with loss of seigniorage revenue for the government. In addition, dollarization makes implementation of monetary policy and controlling inflation harder for the central banks trying to control inflation through monetary targeting. Moreover, transaction dollarization increases the demand for foreign currency exerting downward pressures on value of domestic currency.

The widespread use of dollar and the recent substantial depreciation of domestic currency have raised some serious concerns among the monetary authorities and policy makers. In this paper we have tried to shed some light on the dollarization phenomenon in Afghanistan and to address the posed questions regarding the short-term and long-term effects of dollarization on the economic stability of the country. At the end, we will conclude our findings in the form of some recommendations for the monetary authorities for the purpose of dealing the issue of dollarization in the country.

Definition and Types of Dollarization

Dollarization is defined as officially or unofficially adoption of a foreign currency as replacement for domestic currency to conduct transactions and to keep wealth by residents of the home country. Ortiz (1983) describes the phenomenon of dollarization as the degree to which real and financial transactions are performed in dollars relative to those performed in domestic currency. The literature has distinguished three types of dollarization; official dollarization, official semi-dollarization and unofficial dollarization (Meyer 2000). **Official dollarization (de jure dollarization)** refers to a situation of official replacement of the domestic currency with a foreign currency. In this type of dollarization, the foreign currency would play the role of legal tender and would be legally used as medium of exchange, store of value and unit of account in the country. Peru, El Salvador and Ecuador are examples of countries which have adopted official dollarization. **Official semi-dollarization** refers to a situation where both domestic currency and foreign currency would have the attributes of legal tender and both would play their roles as medium of exchange, store of value and unit of account. Lesotho and Swaziland are two African countries that have adopted the South African currency as their legal tender while keeping their own currency as well. The countries who adopt official or semi-official dollarization are mostly small and share some common characteristics of high inflation, foreign exchange volatility and macroeconomic instability. There is consensus in literature as well as empirical evidence on the success of dollarization to control hyper inflation and to provide macroeconomic stability in countries which adopted either of the two types of official or unofficial dollarization. The success of dollarization in controlling hyperinflation can be attributed to limitations imposed on fiscal management of the government by the adoption of dollarization.

The third form of dollarization is known as **unofficial dollarization (de facto dollarization)**. This type of dollarization refers to widespread use of foreign currency as medium of exchange, unit of account and store of value while the local currency remains the legal tender in the country. Unofficial dollarization or partial dollarization is a common practice in many countries around the globe. Most of these countries such as Afghanistan have suffered from a period of hyper inflation and economic instability which has had profound destructive effects on the people's confidence on domestic currency.

Based on the three functions of money, unofficial dollarization is further divided into three subcategories of: i) transaction dollarization (also known as currency substitution) which is referred to the widespread use of foreign currency for transaction purposes, ii) financial dollarization is also known as asset substitution which denotes the use of foreign currency as a store of value, and iii) real dollarization is referred to indexation of prices and wages to the foreign currency.

Considering the above definitions of dollarization, it can be inferred that Afghanistan is among the countries with unofficial dollarization. Despite the fact that domestic currency (Afghani) is the legal tender, few foreign exchanges particularly the US dollar prevalently are used as medium of exchange and store of value by business community and households. A high level of foreign exchange deposits in the banking system of the country is a proof to this reality.

Trends and Measures of Unofficial Dollarization in Afghanistan

Measures of unofficial dollarization:

The total stock of foreign currency being hold by residents of a country determines the degree of dollarization in that country. The total stock of foreign currency is comprised of foreign currency deposits (FCD) in the domestic banking system and foreign currency in circulation (FCC). To measure the degree of dollarization various ratios including the ratio of foreign currency deposits to local currency deposits (FCD/LCD), the ratio of foreign currency deposits to total domestic deposits and the ratio of foreign currency deposits to money supply (FCD/M2) are commonly used.

Besides the foreign currency deposits, businesses and households maintain a big portion of their wealth in foreign denominated currencies, mainly in the US dollar. In contrast to foreign currency deposits which are easy to measure, it is very difficult to measure the amount of foreign currency being held by people in the form of cash. Despite the difficulties in measurement, there are some indirect methods to estimate the FCC in the country. To estimate the stock of foreign currency in circulation (FCC) in Afghanistan, we have used a method proposed by Erasmus, Leichter and Menkulasi in their joint work on Dollarization in Liberia. To get to an estimation of the foreign currency in circulation, they used the money supply process and assumed an identical money multiplier for both domestic and foreign currencies. Since the assumption of identical money multiplier for both domestic and foreign currencies plays a central role in estimation of the stock of foreign currency in circulation in this method, therefore, the robustness of the outcome is highly dependent on plausibility of this assumption.

Estimation of Foreign Currency in Circulation in Afghanistan

Since Afghanistan is a cash-based economy, there is a substantial foreign currency in circulation and in order to get a reliable estimation of dollarization in Afghanistan we must take this measure into account. In this paper we have used the same method used by Erasmus et al. in estimation of foreign currency in circulation for Liberia. The assumption of same money multiplier for both domestic and foreign currencies, which is the backbone of this method, is a plausible assumption in case of Afghanistan. We provide two reasons for this claim: first, a less developed banking system and second, same required reserve ratio for both domestic and foreign currency deposits.

Using the available data on total value of deposits available in our banking system and with a money multiplier of 1.25, we estimated the total value of foreign currency in circulation from December 2002 up to April 2015 to be equivalent to 476 billion Afghanis. This method generates a high estimate for foreign currency in circulation. It would therefore be reasonable to assume that this figure could rather be regarded as an upper bound of the stock of foreign currency in circulation in the country (Appendix).

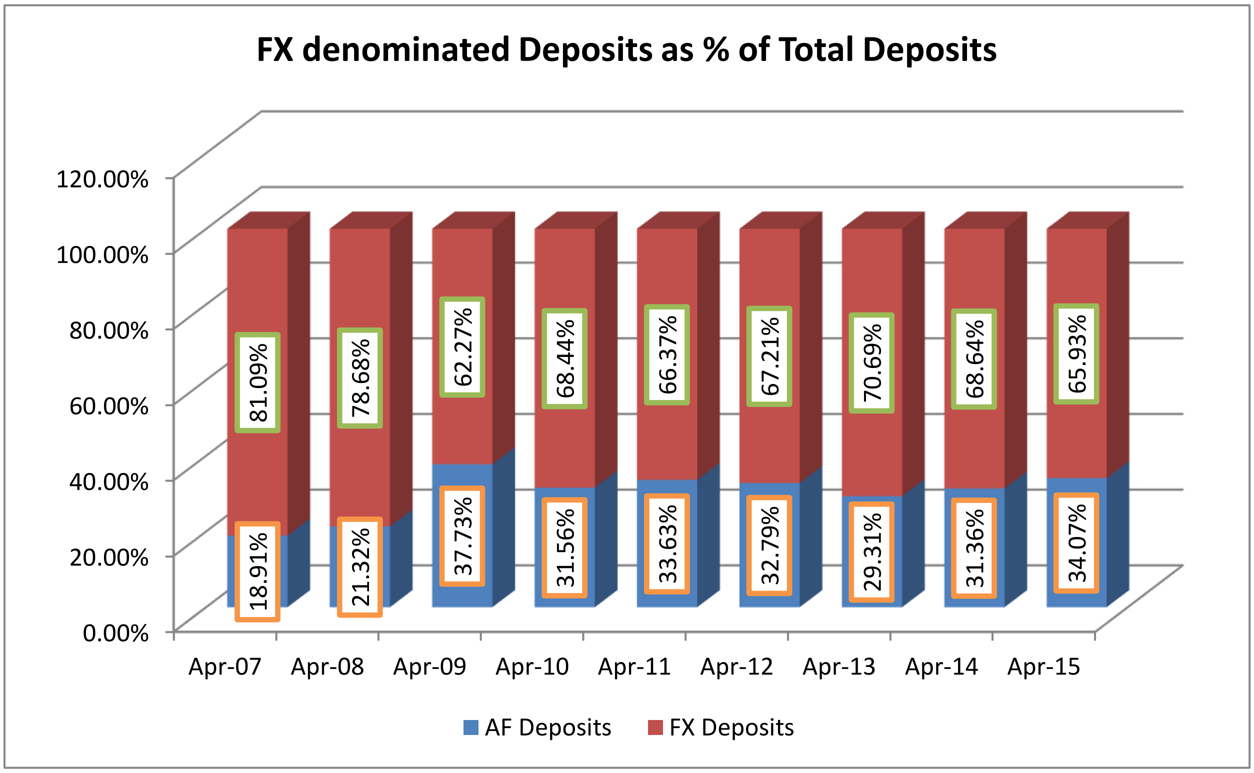
Dollarization in Afghanistan

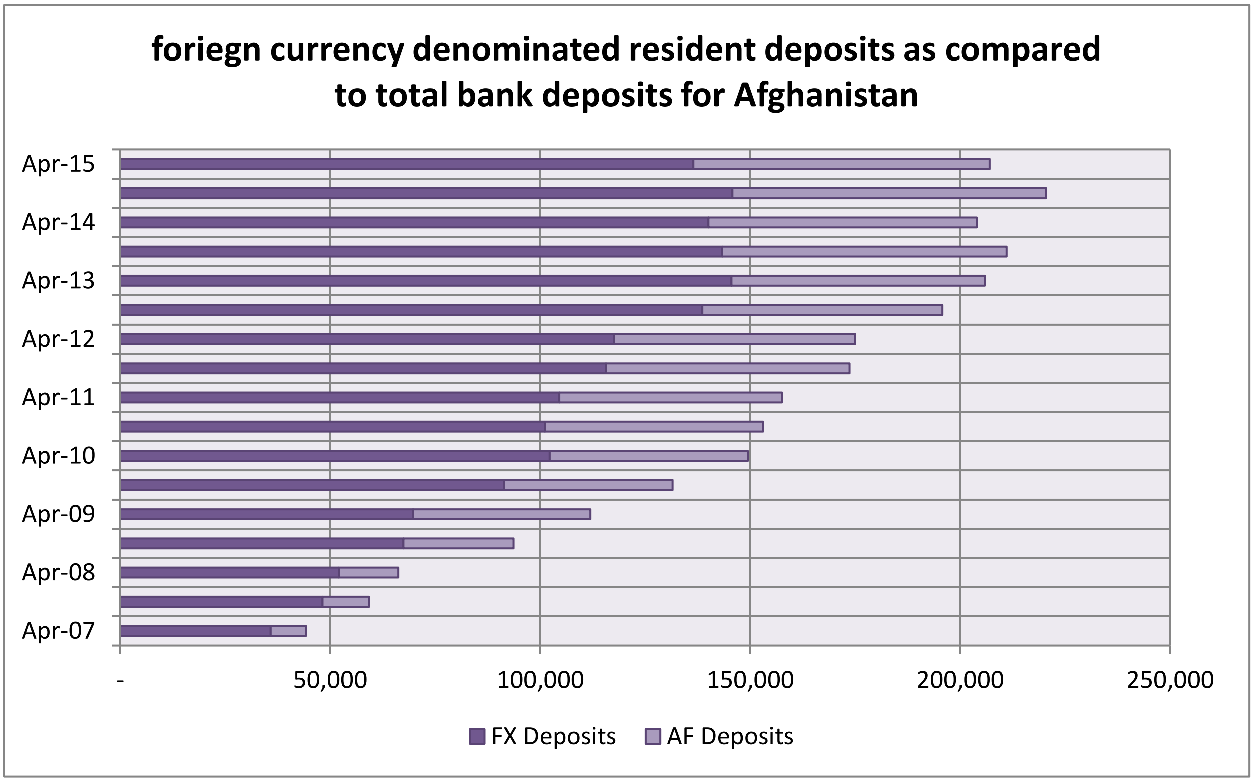
Afghanistan is a small open economy which is heavily reliant on imports. Although the country has experienced developments over the last decade but it has not yet found sustainable sources of growth. The GDP of the country is around $20 billion and the country is confronting with severe fiscal and trade deficit. Among all the economic challenges Afghanistan is facing dollarization poses most dominant hurdle in way of achieving macroeconomic stability.

The phenomenon of dollarization took tremendous momentum in Afghanistan during civil war. In the late 90s political parties were printing their own Afghani banknotes to finance their expenses; excessive supply of Afghani currency in the market surged the inflation to astronomical levels.   Consequently various foreign currencies including Pakistani Rupees and Iranian Toman were extensively used as a medium of exchange alongside Afghani. The lack of confidence on demand side coupled with large inflows of aids to different political parties provided imputes for speedy dollarization. It is worth mentioning that the lack of financial and banking system in the country during civil war also played its part in expediting dollarization in Afghanistan. However, the end of civil war saw a further increase in dollarization in Afghanistan, tremendous amount of inflows of international donations for reconstruction process coupled with repatriation of Afghan resident's deposits abroad catapulted foreign currency deposits to an unprecedented level. Despite the introduction of New Afghani currency in 2002, Afghan monetary authorities couldn't reverse dollarization hysteresis in the country, albeit the introduction of New Afghani currency was effective in restoring some degree of confidence in domestic currency.

The dollarization in Afghanistan reached to its all time high level of 81.09% in April 2006, measured in terms of percentage of foreign currency denominated residents deposits as compared to total bank deposits for Afghanistan. Following a series of fluctuations dollarization was recorded lowest in 2009, 62.27 %. Unstable inflation, devaluation, bank failures and most important of all economic uncertainty augmented dollarization in the years following 2009, as of April 2015 the dollarization ratio in

Afghanistan stood at 65. 93%. Consequently, U.S. dollar has become a de facto currency along with the national currency, Afghani. As a result, Afghanistan has been confronting with free circulation of multiple currencies within its territory, to the extent that the dollar has become the dominant currency and weakening the role of Afghani currencies as legal tender. The foreign currency deposits are dominant, while the usage of Afghani currency is very limited; Government authorities often use Afghani for execution of budget, including the payment of taxes and salaries of civil servants.

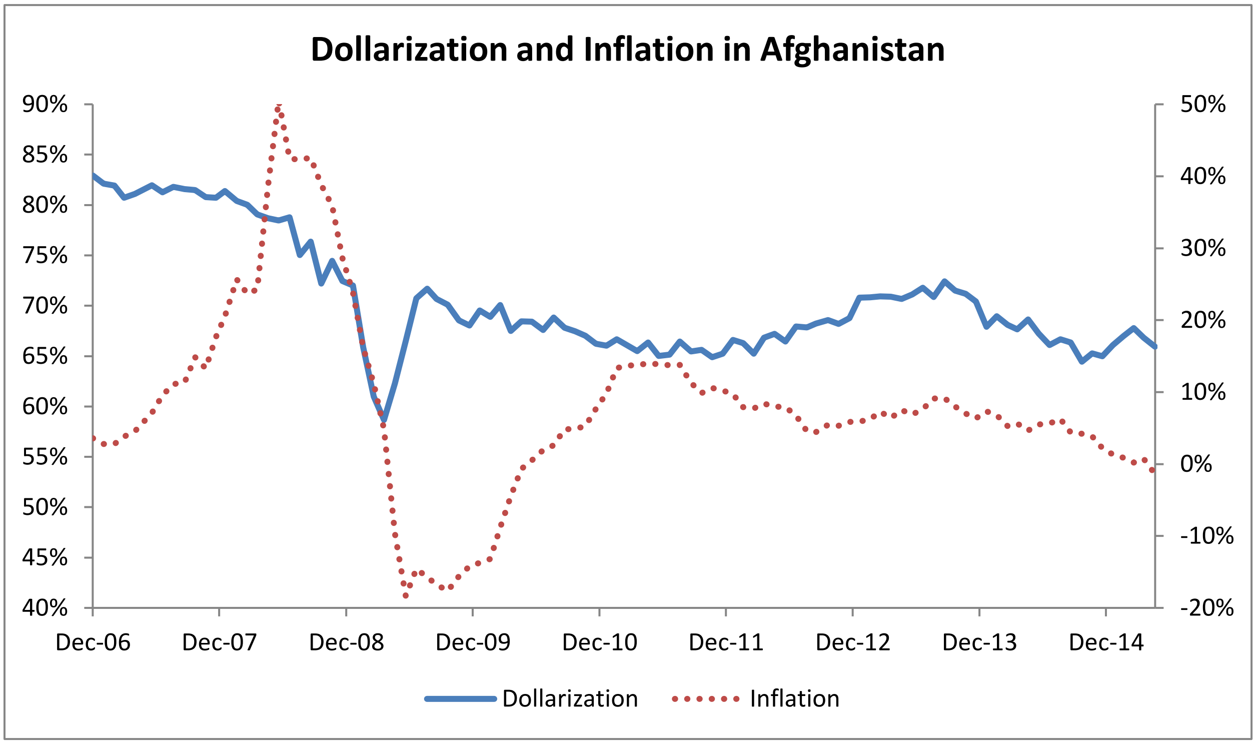




Baliño, et. al. (1999) defines highly dollarized countries as those whose foreign currency denominated deposits ratio exceed 30% of total deposits. According to this definition, Afghanistan having foreign currency deposit ratio of 65.93% can be characterized as a "highly" dollarized economy.

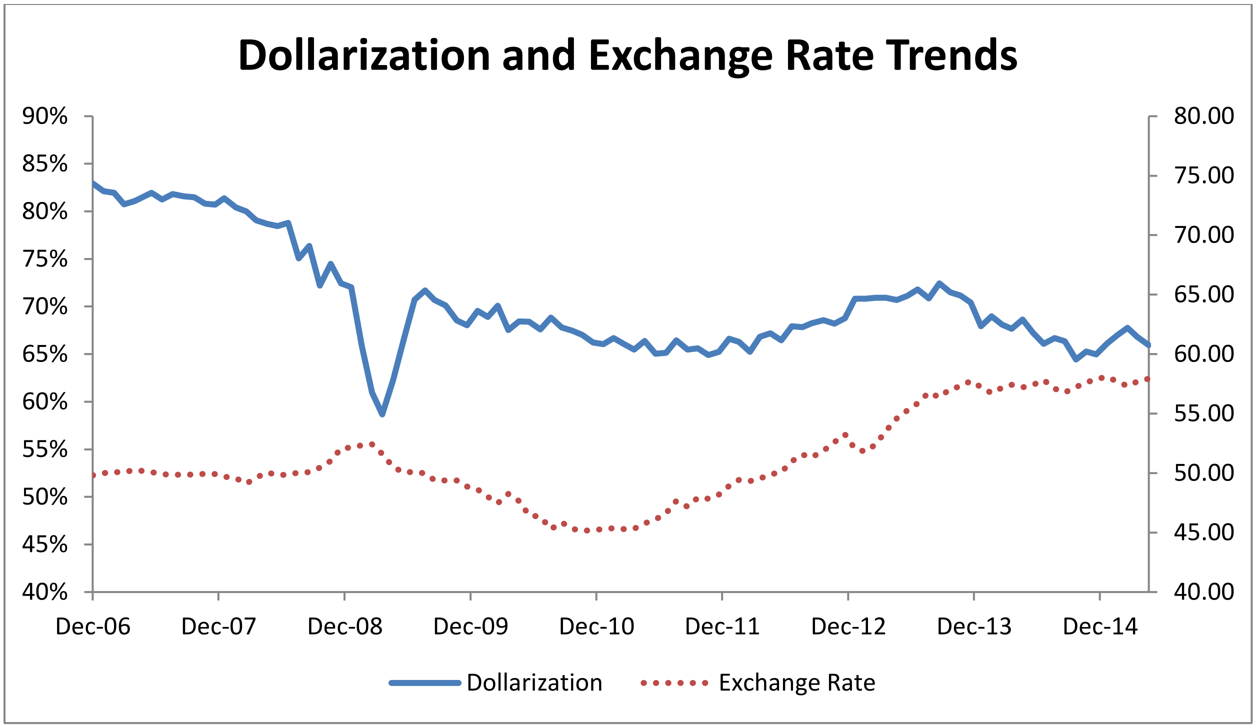
The main drivers of dollarization in Afghanistan has been economic and political instability, inflation differential between Afghani and foreign currency (US dollar), and relatively low transaction costs for acquiring foreign currency; dollarization has become widespread as the residents restrain from holding domestic currency due to its high holding cost. However, inflation has been relatively low in the last few years but it couldn’t reduce dollarization level in the country.

A thorough analysis of the relation between inflation and dollarization in Afghanistan depicts a weak relationship between the two variables as shown in the figure below. As shown in the figure below, in April 2006 inflation stood at 3.59% and dollarization hit record high, peaked at 82.93%. However, in following year inflation gained momentum while dollarization kept decreasing, in the early 2009 both inflation and dollarization plunged to record low levels albeit inflation took a much deeper dip than dollarization. From 2009 onward both inflation and dollarization have had relatively similar trend. The available data suggests that the correlation between dollarization and inflation in the country is 0.361, which is very weak.



Some economist such as Ize and Levy (1998 and 2003) argue that risk averse borrowers and lenders prefers to denominate contracts in foreign currency when its purchasing power is relatively stable than domestic currency, hence exchange rate volatility becomes the bigger driver of dollarization. However, our findings paint a different picture, exchange rate volatility does not seem to be one of the major contributors to dollarization in Afghanistan. As per our calculations, the correlation between dollarization and exchange rate, as expected, is negative but very insignificant (-0.09). [1]

[1] We have used Afghani exchange rate against USD as proxy for Afghani Exchange rate.



Pros and Cons of Unofficial Dollarization

In this part of the paper we discuss the disadvantages of increased dollarization and the challenges associated with this phenomenon in the context of Afghanistan by generalizing our finding from literature review. The potential economic costs associated with dollarization are as follow.

Costs Associated with Dollarization

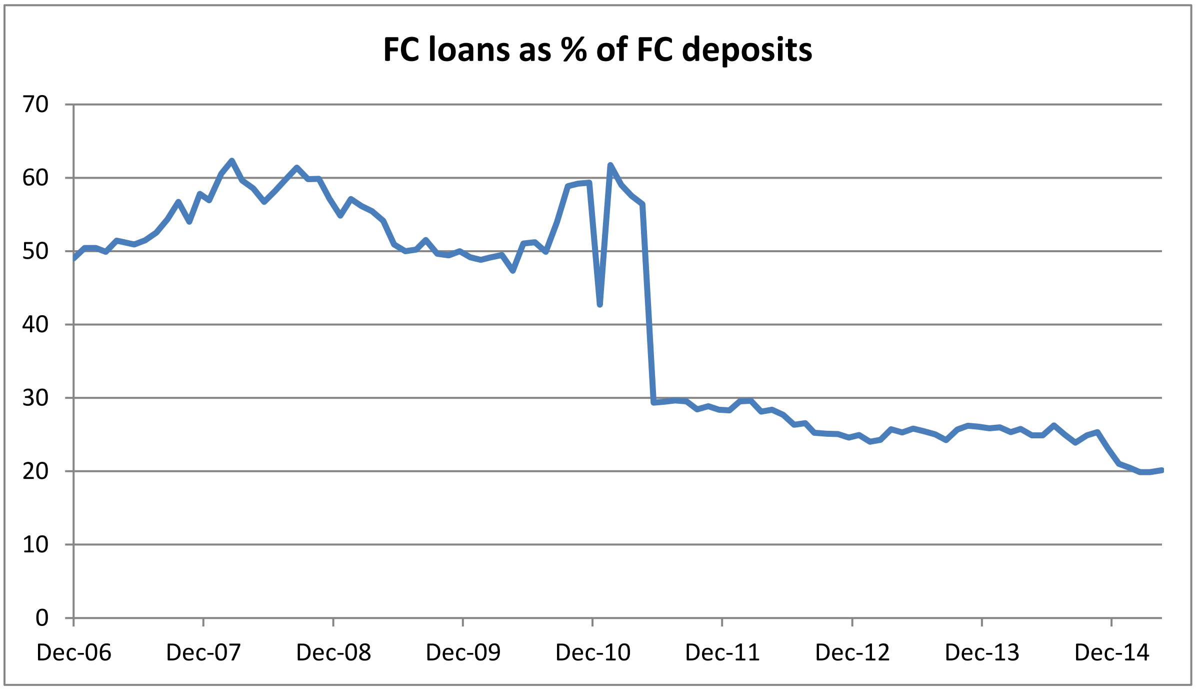
Currency mismatch: Highly dollarized economies are prone to solvency and liquidity risks stemming from exchange rate fluctuations which increase the vulnerability of financial system. When a highly dollarized economy faces some level of instability that raise concerns about the risks associated with the banking sector forces the demand for assets denominated in local currency to fall, causing the local currency to depreciate.

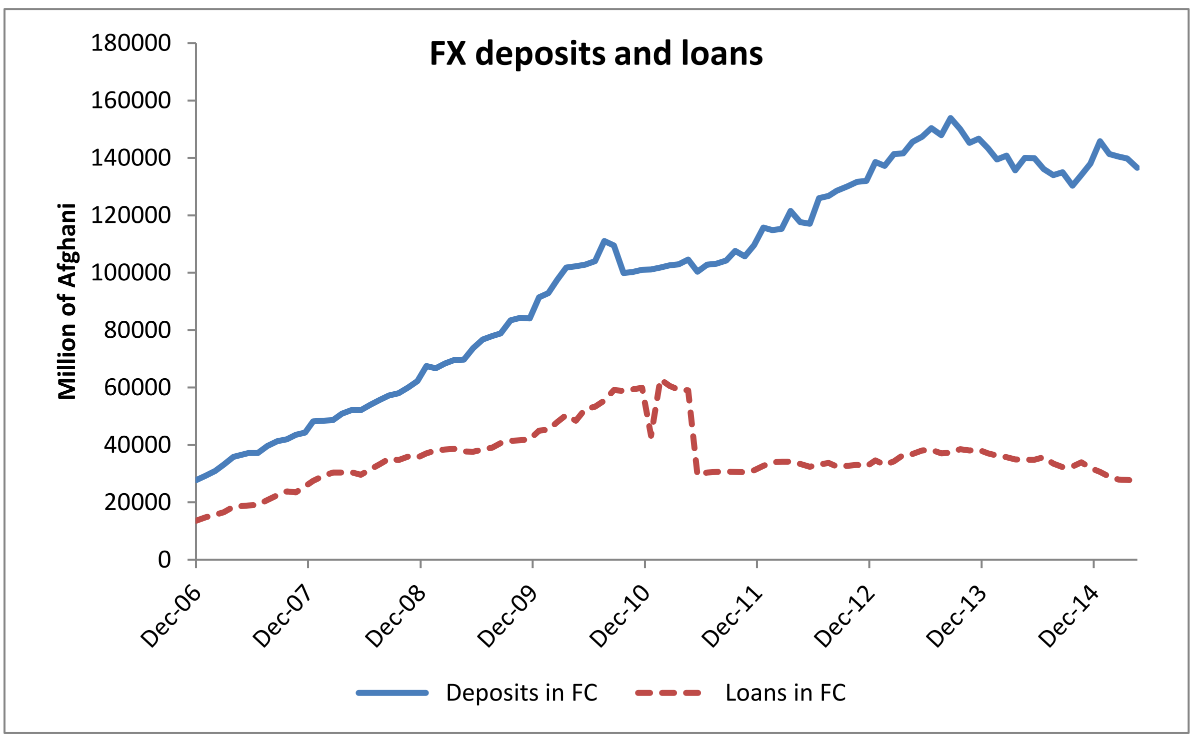
- ***Liquidity risk:*** In a dollarized economy a large portion of the deposits with the banking system would be in foreign exchanges. The more foreign denominated loans issued by banks to domestic households and businesses the more vulnerable the banking sector would be to liquidity risk, which stems from exchange rate fluctuations. A substantial level of depreciation of local currency would impose pressure on the financial position of the households and businesses whose incomes are in local currency while their debts are in denominated in foreign currency. This increases the chances of default on their foreign currency denominated debts which in turn weakens the financial position of the banking sector.

- ***Solvency risk:*** similar to liquidity risk, currency mismatch is the main factor causing solvency risk in a dollarized financial system. In case of substantial local currency depreciation, balance sheet of the banks would be affected in two ways: first, by negatively affecting the value of local currency denominated assets that banks hold on their balance sheet and second, by weakening the financial position of the borrowers whose income are in domestic currency increasing the probability of default on their foreign exchange denominated debts.

Financial statements of local banks depict a highly liquid banking system in Afghanistan. Foreign currencies denominated loans constitute 20 percent of the total foreign currency deposits hold by the banking system in the country. Such high levels of liquidity create a reliable buffer against any unpredictable shock that may lead to bunk run on foreign currency deposits. Moreover, considering the foreign exchange reserves of the central bank and comparing it with the total value of foreign exchange denominated liabilities of the banking system, in case of any possible bank run central bank can act as the lender of last resort to domestic banking system and eliminate liquidity risk. Despite the low liquidity risk that banking system is exposed to at the moment, knowing that Afghanistan is prone to many types of shocks which can change the current favorable stable condition to unfavorable, prudent policies are vital to control the liquidity risks involved with foreign currency denominated deposits.

Unlike liquidity risk, solvency risk is a more serious risk for the domestic banking system. The borrowers whose revenue is in domestic currency but having foreign currency denominated loans are vulnerable to any unfavorable exchange rate fluctuation. Given that only 20% of the total foreign currency deposits is loaned out, the solvency risk is not a major source of concerns for domestic banking system. But still the given unfavorable fluctuations in exchange rate coupled with other attributes of banking system in the country such as lack of reliable measures to check the credit history of the costumers and lack of standard criteria to value the collaterals provided by the costumers, increase the potential solvency risk to domestic banking system which requires a close supervision by the central bank of country.





Loss of seigniorage revenue: seigniorage refers to the difference between the nominal value and the printing cost of a currency. Under unofficial dollarization (partial dollarization) government's revenue from printing units of domestic currency falls due to usage of foreign exchange as medium of exchange by the domestic residents. Depending on the level of growth in demand for money the loss of seigniorage revenue in dollarized economies may be substantial. In short, loss of seigniorage is considered one of the most important costs of dollarization.

We estimated the stock of foreign currency in circulation in Afghanistan using the method proposed by the Erasmus, Leichter and Menkulasi. Assuming an identical money multiplier of 1.25 for both the domestic and foreign currencies, we got an estimated number of 476 billion Afghanis (it should be noted that this figure is mere an estimation of the upper bound for foreign currency in circulation) for foreign currency in circulation from 2002 to 2015. Given the estimated stock of FCC, our estimation of seigniorage loss is equivalent to 460 billion Afghanis (for the detailed procedure of estimating seigniorage loss, refer to Appendix).

Loss of role of Lender of Last Resort: As a lender of last resort, central banks try to assist illiquid banks to overcome bank runs on deposits. With a partial dollarization since domestic central bank is not the legal authority to print foreign currency, it would definitely lose part of its capacity to act as a lender of last resort to the domestic banking system in times of financial crisis. Foreign currency denominated deposits constitutes 65.93 percent of the total deposits available in the domestic banking system which is equivalent to 136.521 billion Afghanis (or $2.275 billion). The ability of DAB (central bank of Afghanistan) to help illiquid domestic banks (with bank run on foreign denominated deposits) would be confined by its stock of foreign exchange reserves of $6.7 billion which limits DAB's ability to perform its role as the Lender of last resort.

Ineffectiveness of monetary policy: Almost all available literature on dollarization have consensus on the negative effects of dollarization on conduction of effective monetary policy. According to the literature, dollarization negatively affects the effectiveness of monetary policy through its effects on monetary transmission mechanism.

Afghanistan is following a monetary targeting regime; in such regime having precise figures of currency in circulation and other monetary aggregates is very crucial for conducting a sound monetary policy. However, having a dollarized economy makes it very difficult for monetary authorities to calculate FCiC as well as to control foreign currency component of broad money. Thus the role of monetary authorities in determining money supply would decrease which in turn would adversely affect the effectiveness of monetary policy.

Another key issue regarding challenges to conduct monetary policy in a partial dollarized economy is the extent to that currency substitution amplifies the pass-through effect from exchange rate to domestic prices. The higher the pass through the harder it becomes for the monetary authority to control inflation through monetary targeting. Based on this, one can argue that exchange rate in a highly dollarized economy where non-tradable goods and services are priced in foreign currency will be passed to domestic prices through a broader set of goods; hence, exchange rate volatility will be more painful in a dollarized economy.

Downward pressure on Domestic Currency: widespread transaction dollarization (currency substitution) will likely increase demand for foreign exchange in the economy which will in turn exert pressure on exchange rate, weakening the domestic currency. Furthermore, the literature and empirical evidence demonstrate that high level of currency substitution aggravates the exchange rate volatility. In other words, the higher the currency substitution the more would be the exchange rate volatility (Akcay et al. 1997). As it is known, exchange rate volatility would adversely affect the domestic economy by increasing volatility in inflation rate, increasing exchange rate risk and destabilizing inflation expectations.

Benefits Associated with Dollarization

International experience shows that partial dollarization is primarily driven by the quest of individuals to protect the real value of their income, and the biggest threat to the real value of individuals' income is high inflation. In a highly dollarized economy such as Afghanistan the openness of foreign currency deposits helps controlling capital flight. In countries where resident are restricted from opening foreign currency accounts, residents tend to keep their foreign currencies "under the mattress" or send it abroad. Based on this argument one can say that de facto dollarization is helpful in deepening financial market through encouraging business and households to keep their foreign currency denominated income and wealth in local bank, enhancing the level of activities and operations of the domestic banking sector.

In a highly dollarized economy central bank loses its ability to serve as lender of last resort to a great extent. Consequently, government seek to introduce crucial reforms in attempt to encourage competition, strengthen supervision and regulation and to pave the way for the entry of international banks. In Afghanistan Da Afghanistan Bank, central bank, and IMF strictly monitors the regulation and supervision of private banking sector, and because of macroeconomic volatility Da Afghanistan bank has imposed even stricter regulation on capital requirement. Scholars believe that the presence of international banks will provide residence with an extra confidence, currently, 6 out of 16 banks are foreign owned.

Another major advantage of high dollarization is that it provides Afghan resident an opportunity to protect the value of their wealth against inflation and currency depreciation. Although inflation has been relative stable in the past few years but Afghani, local currency has experienced drastic depreciation. More so allowing foreign currency deposits eliminate the exchange rate risk which implicitly encourages foreign direct investment and provides an opportunity for further economic growth.

Recommendation

This paper made it evident that dollarization in Afghanistan has been consistently high and that monetary authorities of the country have been unable to reduce the level of dollarization. As stated above the cost of dollarization is significantly high and it outweighs its benefit by a great margin. Hence, we propose that a set of policy framework which covers economic, regulatory and administrative aspects of de-dollarization shall be formulated in order to achieve a sustained de-dollarization in Afghanistan.

International experience demonstrates that dollarization is hard to reverse and an effective de-dollarization is a lengthy process which takes decades to produce desirable outcome. Literature on de-dollarization also shows that countries haven't had good experience with forced de-dollarization, in most of the cases forced de-dollarization has backfired and stimulated capital flight and reduced financial sector intermediation ultimately leading to slower economic growth (IMF). After a deep study of different countries case studies that have successfully reduced dollarization we came to the conclusion that effective de-dollarization policy entails a combination of prudential regulations and development of local currency market. By prudent regulation we mean conducting a monetary policy specifically focusing on bi-currency environment and the strengthening of prudential norms to cope with associated risk, meanwhile, development of currency market is more proactive that aims at limiting the incentives that favour dollarization in the first place and foster development of local currency instruments.

Prudential regulation includes standard prudential best practices as well as regulation implemented in dollarized economies aiming to address bank level currency imbalances (such as an active management of reserve requirement differential, measure to create incentive to internalize the risk of dollarization for instance higher reserve requirement for foreign currency deposits, strict quantitative limits and proportional tax measures). These prudential approaches tend to diminish the incentive for dollar intermediation while at the same time incentives local currency intermediation. Successful implementation of prudential regulations is one of the key aspects of macroeconomic stabilization policies in highly dollarized economies. According to Escribano and Saso (2010) macroeconomic stabilization policies result in low inflation, anchored inflation expectations and gradual appreciation of domestic currencies. Highly dollarized Latin American Countries such as Bolivia, Paraguay, Peru and Uruguay saw significant decline in dollarization in 2000s, the decline in dollarization during this period was accompanied by contained inflation and a domestic currency appreciation trend. It is worth mentioning that the latter was the bigger driver of de-dollarization.

Development of local currency market becomes necessary in order to minimize the costs in terms of financial disintermediation in foreign currencies. It is necessary that prudential regulations should couple with expanding menu of domestic currency instruments in order to achieve sustained de-dollarization. In such scenario development and deepening of local currency market does the job of menu expansion of domestic currency instrument as well as it enhances the attractiveness of local currency against the USD. International experiences shows that credit de-dollarization have been facilitated by the development capital market in local currency, especially issuance of long term public bonds have been very instrumental. Countries such as Bolivia, Peru and U ruguay introduced local currency denominated public bonds with maturities exceeding 10 years which lead to considerable extension of the domestic yield curve expediting bank funding and pricing of long-term loan in domestic currency. An empirical analysis conducted by Escribano (2010) on determinants of de-dollarization in Latin America revealed that issuance of long term public bonds had been incredibly successful in diminishing credit dollarization level albeit issuance of long term public bond had very little or no effect on deposit dollarization.

IMF report on de-dollarization published in 2012 suggests that countries that successfully de-dollarized had better macroeconomic stability, higher economic growth, a better external and fiscal balance and persistently lower debt than countries which remain unsuccessful in their attempts to de-dollarize their economies. The report further argues that inflation in successful countries was contained below 14 percent on average and exchange rate remained stable. However, unsuccessful countries have had persistently high inflation as well as exchange rate depreciation. Based on this report one can argue that macroeconomic stability is perhaps the most significant driver of de-dollarization. Without persistent macroeconomic stability de-dollarization efforts often backfires and produce undesirable outcomes that can have negative implications on the economy as a whole.

Conclusion

Dollarization is not a new phenomenon in Afghanistan. The prevalent usage of foreign currencies as medium of exchange and store of value by domestic residents can be traced to the start of civil war in the country. Lack of confidence in domestic currency is the main deriver of dollarization in Afghanistan which can be attributed to some major factors including prolonged political and security turbulences, lack of a strategic macroeconomic management, a history of high inflation in the past plus high levels of exchange rate volatility.

Despite a considerable decline in the level of dollarization, foreign denominated deposits constitute around 66% of the total deposits in domestic banking sector making Afghanistan one of the highly dollarized economies of the world. Based on a rough estimation, the upper bound for stock of foreign currency in circulation is around 474 billion Afghanis which is approximately three times the current stock of domestic currency in circulation in the country.

After studying different aspects of dollarization and evaluating its costs and benefits to a relatively small and open economy like Afghanistan, we have come to the conclusion that dollarization has cost our economy dear. As it is explained in this paper, the costs associated with dollarization such as currency mismatch, seigniorage loss and less effective monetary policy are significantly high and they outweigh its benefit by a great margin. Therefore, we propose that a set of policy framework which covers economic, regulatory and administrative aspects of de-dollarization shall be formulated in order to achieve a sustained de-dollarization in Afghanistan.

International experience indicates that there is no short-term and easy path to a sustained de-dollarization. In general those countries that have pursuit market-driven approach to de-dollarization have been more successful at achieving sustained de-dollarization in comparison with the countries that resorted to administrative force to achieve de-dollarization. We should realize that de-dollarization is a lengthy process with macro-economic stability being a necessary condition for it. Unless we do not solve the existing profound structural weaknesses in our economy, we will not be able to get any favourable outcome in this regard. Hence, we are of the opinion that macro-economic and legal reforms are necessary in order to achieve sustained de-dollarization in the country.

Appendix

(Estimation of stock of currency circulation in Afghanistan)

- Getting Money Multiplier (mm) for domestic currency using Money Supply formula

  Money Supply= CiC + Total deposits

  Reserve Money = CiC + deposits of commercial banks with DAB

  MM= Ms/R

  $MM^L = (CiC + TD)^L / (CiC + R)^L$

  $MM^L = (175{,}800 + 70{,}528)^L / (175{,}800 + 21{,}634)^L = 1.25$

- Assuming same MM for both domestic and foreign currencies

  $MM^F = (CiC + TD)^F / (CiC + R)^F = 1.25$

  $CiC^F = [(mm^F + R^F) - TD^F]/(1 - m^F)]$

  ⇨ Foreign currency in circulation = 476 billion Afghanis

- Cost of printing note: for each 30 billion approximately 1 billion afghanis
- Seigniorage loss (upper bound): approximately 460 billion Afghanis

Bibliography:

Balino, Tomás, Adam Bennett, and Eduardo Borensztein (1999), "Monetary Policy in Dollarized Economies", International Monetary Fund.

Ize, A. and E. Levy-Yeyati (2003) "Financial Dollarization", Journal of International Economics, forthcomming

Ize, A. and E. Levy-Yeyati (1998) "Dollarization and Financial Intermediation: Causes and Policy Implications". IMF Working Paper 98/22.

Escribano, M. and S. Sosa (2010) "What is Driving Financial De-dollarization in Latin America?". IMF Working Paper.

Mecagni, M. et al (2012) "Dollarization in Sub-Saharan Africa Experience and Lessons". IMF African Department.

Azeema Adam, *Dollarization in a Small Open Economy- The Case of Maldives*, World Review of Business Research, Vol. 3. No. 3. July 2013 Issue

Panteleo Kessy, *Dollarization in Tanzania: Empirical Evidence and Cross-Country Experience*, Working Paper 11/0251, April 2011, International Growth Centre

Mercedes Garcia-Escribano, *Peru: Drivers of De-dollarization*, International Monetary Fund, July 2010

Mercedes Garcia-Escribano and Sebastian Sosa, *What is Driving Financial De-dollarization in Latin America?*, IMF Working Paper WP/11/10, January 2011

Angel Garcia Banchs, *Partial Dollarization: A Currency-Matching Rule And Its Implication for Monetary Policy and Welfare,* University of Warwick

Guillermo Felices et al., *Monetary Policy in a Dual Currency Environment*, August 2010

Anne-Marie Guide, Alain Ize, et al., *Financial Stability in Dollarized Economies*, July 2004

Jiro Honda and Liliana Schumacher, *Adopting Full Dollarization in Postconflict Economies: Would the Gains Compensate for the Losses in Liberia?* , IMF Working Paper, WP/06/82, March 2006

Patricia Alvarez-Plata and Alicia Garcia-Herrero, *To dollarize or de-dollarize: Consequences for Monetary Policy*, ADB, September 2007

Nombulelo Duma, *Dollarization in Cambodia: Causes and Policy Implications*, IMF Working Paper, WP/11/49, March 2011

Myriam Quispe-Agnoli et al., *Costs and Benefits of Dollarization*, July 2002

Hale E. Sheppard, *Dollarization of Ecuador*,

Benjamin J. Cohen, *Dollarization: Pros and Cons*, Department of Political Science, University of California at Santa Barbara, May 2000