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Prospects of Foreign Exchange Reserve - A Study on Bangladesh

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Abstract: In recent days rapid accumulation of foreign exchange reserve leads to the rising interest in Bangladesh on the optimal utilization of its backlog. Though our foreign reserve holding is markedly higher which shows the sum of money is equivalent to seven months of import payments and sufficient to handle the country's import bills for more than seven months in case of any emergency, but different approaches for foreign reserve adequacy level suggest the immediate steps to its best use unless it will contribute to a big liability in Bangladesh. There are heaps of investment opportunities in this emerging country, but cost-benefit analysis should be restrained in mind while placing the large store. The prospects of foreign exchange reserve focus in in infrastructural development, Export Development Fund, financial sector reform, limiting exchange rate flexibility, develop a manpower exports fund, liberalize the rules concerning outward FDI, buying gold from the IMF, mobilizing additional FX funds to open FX -dollar denominated- external account. Research on the different aspects of reserve accumulation is vast but little has been done in Bangladesh. Against this background, the purpose of the study is to cater a simple analysis of Bangladesh's foreign exchange reserve, especially centering on the reserve position and prospects of it.

Keywords: *Remittance, foreign exchange, current account.*

JEL Classification: *F24, F32, F34.*

1. Introduction

Bangladesh Foreign Exchange Reserve averaged USD 4437.58 million from 1990 until 2015, reaching an all time high of USD 23050 million in March of fiscal year 2015 and a record low of USD 176.47 million in May of 1990. The figure makes Bangladesh's foreign currency reserve second only to India's and far ahead of Pakistan in South Asia. The substitute is equivalent to seven months of import payments and sufficient to handle the country's import bills for more than seven months in case of any emergency. Elevated foreign exchange reserve implies adequate supply in the marketplace. The country's foreign currency reserve increased by about 19.46% or USD 3755.1 million during the financial year 2014-2015 compared to the fiscal year 2013-14 due to rebooted remittance growth and slowed-down import expenditure.

The states which are necessitated with a huge mass of international dealings, observe a high danger of random shock to their external balances for the grounds of temporary or continuous unexpected falls of their foreign exchange profit. Foreign reserve, which is usually taken in the form of short-term, highly liquid and interest bearing securities may used to constitute payment for ordinary government purchases from the ease of the

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universe or to repay loan denominated in foreign currency. The opportunity cost to maintain and manage foreign exchange reserve, insurance premium; simply there are potentially huge payoffs in the course of upgrading macroeconomic outcomes and fiscal stability. Economic policy makers in rising market economies have naturally viewed foreign exchange reserve as money in the bank- the higher, the more adept. From 1973, a transform to flexible exchange rate regimes and a capability to borrow in home currency made easy on developed nations to accumulate reserves. In the meantime, developing nations, like Bangladesh, continued to struggle with maintaining sufficient reserve volumes. Just in recent times has a remarkable scale or foreign currency reserve accumulation in rising markets elevated questions regarding its inevitability. The majority of the experimental researches on international reserve holdings constantly end that there are variables proven to be important while determining reserve holdings. The two mainly vital variables are measure of economic openness and the unpredictability of foreign exchange rates. Nevertheless, it is also a misuse of resources foreign country so increasing the level of holdings in its foreign exchange reserve. On the contrary, if its foreign exchange reserve is also humble, that nation will have complexity intervening in foreign exchange markets and matching the balance of payments, so cutting down on its capability to dispense with the influence of international capital and financial jeopardy. Thus, research on the optimal international reserve is critical for continued growth.

Bangladesh has recently acquired foreign exchange reserves at a good rate in the South Asian region and as an emerging economy. Therefore it is important to look into whether the reserve status of Bangladesh is higher than warranted by fundamentals and the factors actually determining the international reserve demand of Bangladesh. Thus, the paper attempts to analyze the reserve accumulation in Bangladesh context.

2. Literature Review

Summers (2006) think excessive reserves to be uneconomical because of heavy infrastructure and societal demands in emerging markets. Certainly, Bangladesh has huge investment needs for infrastructure and other economic sectors. He also contend that holding dollar denominated reserves is costly as keeping reserves in US treasury gives only a small return and far under the costs of borrowing of the regime. Instead, a higher yield can be achieved by getting actual investment in the economy such as roads, bridges. Then, why should the money be kept as reserves and why should the government pay higher interests for outstanding liabilities. On the other hand, proponents of stockpiling reserves stress more on macroeconomic imbalances such as currency or financial crisis in today's macro environment than the opportunity costs of holding reserves. In the issue of balance of payment crisis, international capital market may keep out their doors and IMF bailout is also not assured. Hence, to forestall or whether such crisis Aizenman and Marion state it is necessary to make a high reserve stock (2003).

But in reality, the 'fear of floating' (Calvo and Reinhart 2002) may keep central bankers stockpiling reserves of foreign currencies. Foreign exchange reserves can also keep the domestic banking sector and the credit sector in particular, from outflows of domestic or external resources (Obstfeld, Shambaugh and Taylor 2007). Foreign exchange reserve is expected to give important benefits, enabling states to intervene in foreign exchange markets and to regulate the value of their currency. But reserve accumulations also entail certain costs (Goldberg, et al. 2013).

Dash and Narayanan (2010) empirically investigates the post-1991 trade dynamics in India in the light of their influence on foreign exchange reserve by estimating import and export functions for the period of January 1994 to October 2008. The findings of their study revealed that there is a long-run statistically significant association among exports, world exports, and real effective exchange rates in the export function, and among imports, domestic demand and real effective exchange rates in the import mapping.

Ouyang and Rajan (2011) carried a study on Reserve accumulation and monetary sterilization in Singapore and Taiwan. The outcomes of their study showed that high-effective capital mobility has not weakened the power of the central bank in either economic system to sterilize their respective foreign exchange intervention but may cause the process increasingly difficult over time. Yongzhong and Freeman (2013) noted that an international reserve plays a substantial part in minimizing the risks of outside debt and home currency crises, and mitigating the unfavorable impacts of an unexpected fall of capital inflow or capital flight when a financial occurs.

Fukudan and Kon (2007) look into the macroeconomic impacts of foreign exchange reserve accumulation in developing nations. The findings of their study revealed that an increase in the foreign exchange reserve influence of permanent decrease in consumption, depreciation of real exchange rates, and temporal improve in the current bill. Established on the argumentation of these two groups it can be concluded that reserve accumulation to a certain point is a prudent macroeconomic decision while slowing down the rate of reserve accumulation is also advisable as it may contribute to increasing costs beyond a sure point. For effective reserve management, the monetary authority needs to recognize what factors generate demand for reserves in the economy and analyze the level of reserves to recognize whether it is really higher than the safe point. There are five central elements that explain reserve holdings such as economy size, current account vulnerability, capital account vulnerability, exchange rate volatility and opportunity cost (IMF World Economic Outlook 2003). One of the prime motives for which countries hold reserves is to smooth unpredictable fluctuations in consumption and import payments which can be named the ‘precautionary motive’ of holding reserves (IMF 2003). Countries want to avert the risks of devaluation of domestic currencies and keep up their sovereign risk ratings in the face of macroeconomic imbalances. At the onslaught of severe currency devaluation, the central bank can easily buy its currency with its foreign exchange reserve to maintain the value of the domestic currency at target level. If the monetary approach to the remainder of payments holds for a rural area, then it implies that excess demand for money is associated with an inflow of international reserves. This study intends to recover out whether this theory holds for Bangladesh following Badinger (2004).

Mohammad Mahboob Ali and Anisul Islam (2010) said possible eruption of political and labor unrest, possible fall in exports, remittances, and foreign investments, possible rise in energy and food prices in global markets, emerging intense competition from other nations (such as China and India), possible rise in protectionism in rich country markets, and continued stronger (appreciated) currency values which may adversely affect exports and remittances are the key threats to Bangladesh. They recommended that the policy makers be more proactive by taking appropriate corrective policy actions ahead of time rather than reactive (waiting to take action until the adverse effects begins to occur) in dealing with the weaknesses and emerging threats. Islam (2009) proves to dissect these issues by holding away some traditional benchmark analysis for reserve adequacy over the period 1997-98 to 2008-09 but fails to apply any econometric model to find the significant factors playing role in reserve demand function of Bangladesh or its adequacy level. The IMF proposed a new metric to assess reserves adequacy in 2011.The metric was based on the careful analysis of sources of outflow during crisis. Those liquidity needs are calculated taking in consideration the relation between various components of the balance of payments and the probability of tail events using ratios. The higher the ratio of reserves to the developed metric, the lower is the risk of a crisis and the drop in consumption during a crisis. Besides that, the Fund does reserves ratios are generally adequate among emerging markets. Reserves that are above the adequacy ratio can be used in other government funds invested in more risky assets such as sovereign wealth funds or as insurance to time of crisis, such as stabilization funds.

Moreover IFM (2011) states that any economy needs to have a foreign exchange reserve equivalent to at least three months' import bill, where, our reserve is enough to meet the import bills for about seven months. The survey finds that Bangladesh's reserve holding is markedly higher than what is required and concludes that Bangladesh's reserve buildup is due to an 'investment drought' in the economy which is due to underdeveloped financial system and infrastructure problem.

3. Research Objectives

The main objective of the study is to identify the best possible use of accumulated foreign exchange reserve of Bangladesh. Moreover, it also aims to:

- To identify the state of the FX Market of Bangladesh along with reserve accumulation
- To chance on the social system of excess reserve of Bangladesh
- To provide some suggestions regarding the utilization of Foreign Exchange Reserve of Bangladesh.

4. Research Methodology

In carrying out the above objective, the researcher examined the status of Foreign exchange reserve of Bangladesh on the standard requirement of IMF such as FX reserve to GDP ratio, FX reserve to current account balance ratio, FX reserve to export ratio and regression analysis using the model of FER=$f(GDP, SIG, NFA)$. The major sources of data include the publications of the International Monetary Fund (IMF), the World Bank (WB), the Bangladesh Bank (BB), and other publicly available sources. The other articles and publications of various authors and organizations were obtained from academic journals, newspapers, working papers, research studies, and Internet sources. The exact sources will be mentioned in the citations inside the paper as well as in the list of references. The time periods of the study cover up FY 2005-2006 TO FY 2014-2015.

The study is primarily based on secondary data. It doesn't attempt to deal with primary sources such as questionnaire for survey purposes to assess the impact of the crisis at the grass roots level. These grass roots level analysis were deliberately kept beyond the scope of this paper due to time and budget constraints and hopefully be carried out by other researchers in the field.

5. Foreign Exchange Market of Bangladesh

Foreign Exchange Market allows currencies to be exchanged to facilitate international trade and financial transactions. The reserve basket of Bangladesh, like most other countries, consists of different foreign currencies, gold, reserve position in the IMF and special drawing rights (SDR), which are under control of the central bank and readily available for any balance of payments financing. Bangladesh, like other emerging Asian countries, is also stockpiling international reserves and achieved the second position in South Asia in this decade. Evolution of the market in Bangladesh is closely linked to the exchange rate regime of the country. Bangladesh Bank, as agent of the government, was the sole purveyor of foreign currency among the users. It tried to equilibrate the demand for and supply of foreign exchange at an officially determined exchange rate. Immediately after liberation, the Bangladesh currency taka was pegged with pound sterling but was brought at par with the Indian rupee.

The Bangladesh Taka, which is the domestic currency of Bangladesh and the country's foreign exchange, had been strictly regulated until the early 1990s. Bangladesh Bank used to publish a daily foreign exchange rate sheet that had two sets of rates; one being the rates for commercial banks to transact with their customers and the other being rated for the commercial banks to transact with Bangladesh Bank.

In addition to authorized dealers, there are registered money changers to buy foreign currencies from tourists and sell them to outgoing Bangladeshi travelers as per entitlement. Their excess holdings beyond the permitted balance are required to be retained with authorized dealers. Some service institutions like hotels and shops have also obtained limited money changing licenses to accept foreign currencies the foreign tourists, but those are to be sold to authorized dealers. Transactions by customers take place mainly to satisfy customer demand for individual needs and to facilitate export, import, and remittances. The participants in the foreign exchange market comprise: Corporate, Commercial banks and Central banks.

The phenomenal growth of inter-bank transactions was due mainly to relaxation of exchange control regulations and expansion of the activities of the Bangladesh Foreign Exchange Dealers Association (BAFEDA) formed on 12 August 1993.The-interbank foreign exchange market of Bangladesh is still at its rudimentary stage. The market is an oligopolistic one and is dominated by a few relatively large banks, which have remained only as dealers instead of developing themselves into buyers or sellers. The most widely used practice is spot transaction; this covers 95% of the total transactions.

6. Foreign Exchange Reserve in Bangladesh and Invested Sectors

In Bangladesh, Foreign Exchange Reserve is the foreign assets held or controlled by the country central bank. The reserve is made of gold and other specific currency. They can also be special drawing rights and marketable securities denominated in foreign currencies like treasury bills, government bonds, corporate bonds and equities and foreign currency loans. Mainly our reserve constitutes: A fraction of World Investment (Bangladesh in EURO market), Nostro accounts in foreign countries and Gold purchase (Bank of England).

6.1 Foreign exchange reserve, including gold and platinum

Foreign exchange reserve has risen to a record USD 23050 million in March of fiscal year 2014-15 for the first time in Bangladesh on the back of an increase in remittances and exports and low investment. The figure makes Bangladesh's foreign currency reserve second only to India's and far ahead of Pakistan in South Asia. The reserve is equivalent to seven months of import payments and sufficient to cover the country's import bills for more than seven months in case of any emergency. The country's foreign currency reserve increased by about 20% during fiscal year 2014-2015 by rousting remittance growth and slowed-down import expenditure as compared to the previous financial year 2013-2014.

Figure 1 presents the striking point of long continues the growth of the Bangladesh foreign exchange reserve crossed a record USD 11340 million in March, 2011. However, due to soaring import bills for fuel oil to run the costly rental power plants, the reserve declined to USD 9000 million in January 2012 and hovered around USD 10000 million for the last few months of 2011-2012 fiscal years. The declining reserve also affected the value of taka against the dollar with the local currency hitting more than BDT 85 against a dollar in January-February 2013. As soon as the reserve started climbing upwards the taka started getting stronger, with the value standing at BDT 81 per USD. From the beginning of the year 2013, the foreign exchange reserve witnessed upward trend and it stood at USD 13000 million as of January 8. Bangladesh Bank continued to purchase dollars round the financial year to keep the value of the greenback strong against taka to the benefit of exporters, said a senior executive of the bank. According to Bangladesh Bank figures, total foreign currency reserve stood at USD 15300 million as of June 30, 2013; a USD 5000 million increase upon the USD 10300 million the same day of last year.

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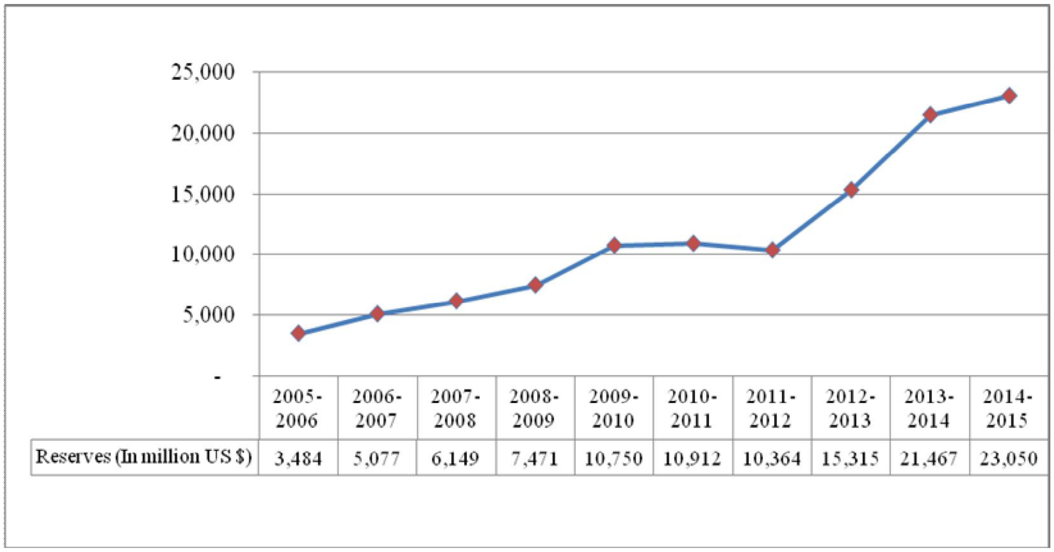
Figure 1: Bangladesh's reserve of foreign exchange (Million US$)



Source: Bangladesh Bank

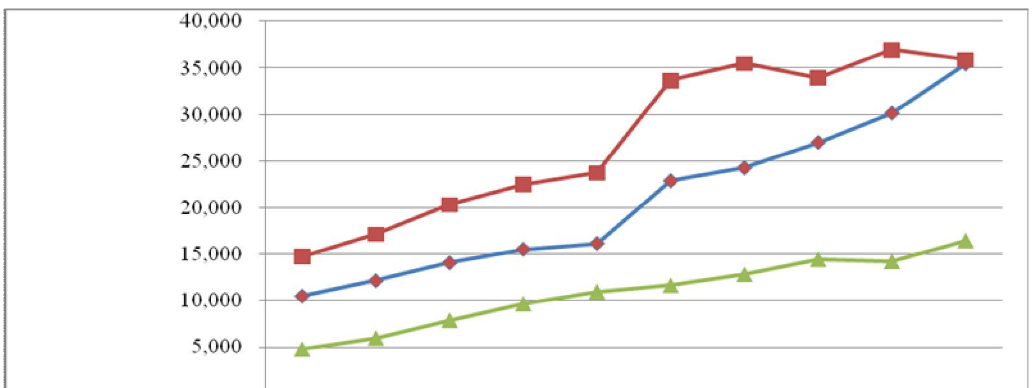
7. The Structure of Accumulated Reserve of Bangladesh

When an economy receives inward capital flows, it could potentially destabilize its domestic monetary and macro stabilities – often by increasing the monetary base, appreciating currency and raising prices. Faced with these situations, the central bank purchases foreign exchange by selling domestic currency (thus resulting in a reserve build-up) to stabilize currency value that generally offsets by open market operations (issuing bonds, treasury bills, etc.) in the domestic market. Every government wishes to keep a satisfactory reserve of foreign exchange for (a) Easy payment of import bills, (b) Repayment of foreign loans, (c) An admirable international credit rating, (d) Preparedness to face any national emergency.

The foreign exchange reserve is the accumulated balance of all receipts and payments of a country. Our major receipts are: export bills, wage earners' remittances and a few other invisible receipts.

Figure 2 states the export import and remittance of Bangladesh. Exports in Bangladesh increased to USD 2444.23 million in January of fiscal year 2014-2015 from USD 2394.94 million in December of 2014. Exports in Bangladesh reached to USD 30180 million in fiscal year 2013-14. From 1995 until 2015, Bangladesh exports stroke an all time high of USD 35478 million in 2015 and a record low of USD 1024.0 million in October of 2009. Bangladesh exports mainly readymade garments including knit wear and hosiery (75% of exports revenue). Others include: Shrimps, jute goods (including Carpet), leather goods and tea. Bangladesh main exports partners are United States (23% of total), Germany, United Kingdom, France, Japan and India. Imports in Bangladesh decreased to USD 35494 million in fiscal year 2014-15 from USD 36990 million in fiscal year 2013-14. From 1995 until 2015, Bangladesh Imports averaged USD 4303.7 million reaching an all time high of USD 20291.4 million in June of 2009 and a record low of USD 1424.2 million in August of 2009. Bangladesh imports mostly petroleum product and oil, machinery and parts, soybean and palm oil, raw cotton, iron and steel and wheat. Bangladesh main imports partners are China (17% of total), India, Indonesia, Singapore and Japan. Remittance sent home by Bangladeshi workers oversea rose 19.7 percent to a record mark of USD 8720 million in July to January of fiscal year 2014-2015, boosting the country's GDP outlook, bolstering the current account surplus and helping to offset an over reliance on garment exports. Bangladesh, the eighth biggest recipient country in the world, relies on such inflows to drive consumer spending, which accounts for nearly 80 percent of domestic GDP. Moody's projected the remittance inflow will push GDP growth above 6 percent this fiscal year, up from 5.8 percent last fiscal year. The upsurge in July remittance marked a turnaround from the 1.6 percent drop in total inward remittances to USD 14227.94 million during the fiscal year 2013-14, which ended on June 30. However, given that this remarkable increase was the third consecutive month of double-digit gains. So it can be predicted that a new, rebuts phase of payment from migrant workers has begun. Most Bangladeshi migrant workers are in Saudi Arabia, the UAE, Kuwait, Qatar and the Middle East counties. The US and UK are also key destinations for Bangladeshi overseas, which number nearly 8 million according to the Bureau of Manpower, Employment and Training in Dhaka.

Figure 2: Bangladesh export, import and remittance (Million US$)



	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Export (in million US$)	10,530	12,180	14,110	15,570	16,200	22,920	24,300	27,030	30,180	35,478
Import (in million US$)	14,750.	17,160.	20,370.	22,510.	23,740.	33,660.	35,520.	33,970.	36,990.	35,949.
Remittance (in million US$)	4,802.4	5,998.4	7,914.7	9,689.2	10,987.	11,650.	12,843.	14,461.	14,227.	16,475.

Source: Foreign Exchange Policy Department, Bangladesh Bank.

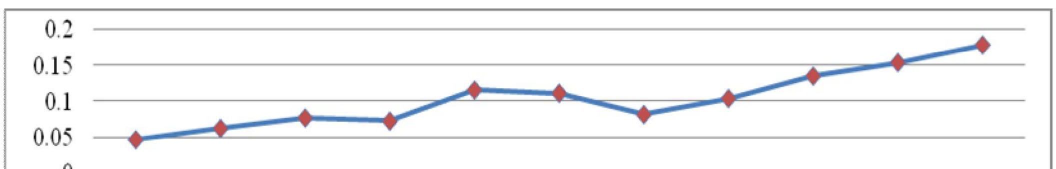
8. Adequacy Level for Excess Foreign Reserve

The IMF proposed a new metric to assess reserves adequacy in 2011.The metric was based on the careful analysis of sources of outflow during crisis. Those liquidity needs are calculated taking in consideration the relation between various components of the balance of payments and the probability of tail events using ratios. The higher the ratio of reserves to the developed metric, the lower is the risk of a crisis and the drop in consumption during a crisis. Besides that, the Fund does reserves ratios are generally adequate among emerging markets. Reserves that are above the adequacy ratio can be used in other government funds invested in more risky assets such as sovereign wealth funds or as insurance to time of crisis, such as stabilization funds. Moreover IFM (2011) states that any economy needs to have a foreign exchange reserve equivalent to at least three months' import bill, where, our reserve is enough to meet the import bills for about seven months. Such a high reserve has facilitated a comfortable financial management since the mid-20s.

8.1 Bangladesh's FX Reserve to GDP ratio

Figure 3 presents the ratio of FX reserve to GDP of Bangladesh since 2005 to 2015 showing that it is moving higher and higher time to time, which shows the efficiency in our macroeconomic condition in overall stage. 2005- 2006 fiscal year was the growing point which continues up to 2008-2009. Then FY2011-2012 stacked on some point and again FY2012-13 holds its growth level. And in FY 2014-2015 ratio stands in 0.1784 which shows quite positive signal to economy.

Figure 3: Bangladesh FX Reserve to GDP ratio



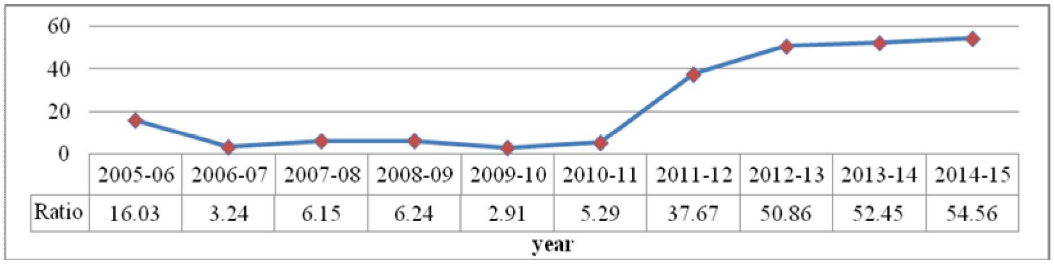
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2012-13	2013-14	2014-15
Ratio	0.0468	0.0626	0.0771	0.0727	0.1157	0.1113	0.0819	0.1041	0.1351	0.154	0.1784

Source: World Bank

8.2 Bangladesh's FX Reserve to Current account balance ratio

Figure4 states the ratio of FX reserve to Current account balance of Bangladesh since 2005 to 2015 showing that it is moving flat and then higher time to time, which shows the efficiency in our macroeconomic condition in overall stage. 2005-2006 fiscal year was the growing point which drops in FY2006-2007. Then FY2007-2008, FY2009-2010 and FY2010-2011 stacked around same point and again FY2011-2012 and FY2012-13 hold its growth level. And in FY 2014-2015 ratio stands in 54.56 which shows quite positive signal to economy.

Figure 8: Bangladesh Foreign exchange Reserve to Current account balance ratio



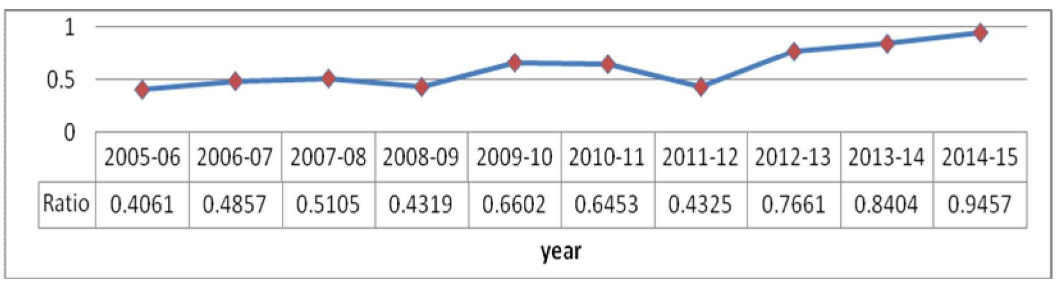
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Ratio	16.03	3.24	6.15	6.24	2.91	5.29	37.67	50.86	52.45	54.56

Source: World Bank

8.3 Bangladesh's FX Reserve to Export ratio

Figure5 presents the ratio of FX reserve to Export of Bangladesh since 2005 to 2015 showing that it is moving higher and higher time to time, which shows the efficiency in our macroeconomic condition in overall stage. 2005 - 2006 fiscal year was the growing point which continues up to 2007-2008. Then FY2008-2009, FY2011-2012 stacked on some point and again FY2012-2013 hold its growth level. And in FY 2014-2015 ratio stands in 0.9457 which shows quite positive signal to economy.

Figure 5: Bangladesh Foreign exchange Reserve to Export ratio



	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Ratio	0.4061	0.4857	0.5105	0.4319	0.6602	0.6453	0.4325	0.7661	0.8404	0.9457

Source: World Bank

8.4 Adequacy Level using regression

Before we do a back-of-the-envelope calculation of Bangladesh's foreign exchange reserve, we need to look at some of its key macro variables that have implications for reserve build-up. The Bangladesh economy has demonstrated significant economic growth in the past one and a half decades, owing to marked improvements in its key macro variables including steady development in its external sectors. Its exports and imports are growing steadily, aid flows are waning, and remittances are skyrocketing. As a result the country's major macro variables are relatively better than compared to that of a decade ago. Table 1 presents the GDP, Saving and Investment Gap and Net Asset of Bangladesh since FY 2005-06 to FY 2014-15

Table 1: FX Reserve, GDP, Savings and Investment Gap and Net Free Asset of Bangladesh (Tk. crore)

Fiscal years	FX reserve	GDP	Savings and Investment Gap	Net free asset
2005-06	22112	514865	44795	148,14
2006-07	30348	556865	458215	211,92
2007-08	41309	604585	48455	293,04
2008-09	45300	614943	50364	300,46
2009-10	8094	690570	57286.15	562,84
2010-11	87470	780273.2	69473.32	642,20
2011-12	71815	875782.4	88683.6	601,69
2012-13	99833	979113.6	107038.5	927,00
2013-14	141581	1090267	127111	1,272,57
2014-15	174708	1209242	148901.3	1,600,94

Source: Bangladesh Bureau of statistics, Export promotion Bureau, Finance Division

Table 2 gives the regression the model and analysis summery used for adequacy standard of Foreing exchange reserve taking the dependent variable foreign exchange reserve and independent variable of GDP, Savings and Investment Gap and Net Free Asset of Bangladesh.

Table 2: Regression Model and Analysis Summery

Regression model: FER= $f(GDP, SIG, NFA)$

Regression Statistics	
Multiple R	0.167945403477636
R Square	0.028205658549266
Adjusted R Square	-0.110622104515125
Standard Error	244029.809299868
Observations	9

ANOVA	df	SS	MS	F	Significance F
Regression	1	12098894207.847	12098894207.847	0.203170157947325	0.665804505433651
Residual	7	416853834788.508	59550547826.9298		
Total	8	428952728996.356			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	861239.535352175	118489.809978176	7.26846920854038	0.000167241141487408	581055.657187403	1141423.41351695	581055.657187403	1141423.4135169
44795	0.302471820233362	0.671050123684209	-0.450744004893382	0.66580450543365	1.88925321629984	1.2843095758326	-1.88925321629984	1.2843095758326

Source: Calculated by the Author.

Bangladesh's foreign exchange reserve position vis-à-vis the aforementioned criteria are summarized in above. It shows that the country's reserve is higher than average macroeconomic factors. Therefore, it is the current account-related factors of reserve criteria that are largely relevant for Bangladesh, and based on reserve to import bills, the country's reserve level is marginally higher than what it requires. In summary, Bangladesh's foreign exchange reserve is substantially higher than adequate if one considers all the reserve adequacy measures. Reserve is equivalent to seven months of import payments and sufficient to cover the country's import bills for more than seven months in case of any emergency. Hence, based on these reserve adequacy measures, there is big room to conclude that Bangladesh's reserve holding is much higher than adequate or vice-versa.

9. Suggestions for Utilizing of Foreign Exchange Reserve

As discussed, Bangladesh's FX reserve exceeds its previous records. To the extent Bangladesh's relatively large foreign exchange reserve currently hold does not have immediate productive use. Importantly FX reserve is nothing but a claim on a foreign country. This claims starts from exporter or a remitter. When they earn foreign exchange, central bank takes them away and it become a claim of central bank of other country. To take the claim from people to central bank, the latter has to pay the exporters and remitters in local currency. People either consume this local currency or invest. Having said this, it has alternative choices to make with this reserve:

- Development of infrastructure funds that should include private sector – either local or foreign – stakeholders whereby the government provides funds and the private sectors offer their technical knowhow
- Bangladesh Bank should study the possibility of buying gold from the IMF, worth about $ 4/5 billion, in a market where it is likely to appreciate further
- Export Development Fund is expected to contribute to a sustained export drive and long-term development of Bangladesh Exports by assuring a continued availability of Foreign Exchange to meet the import requirements of particularly new exporters, exporters diversifying into higher value exports and new markets
- Bangladesh's financial sector may undergo significant reform in years to come through channeling part of its FX reserve to alternative investments
- Using foreign exchange reserve as a buffer Bangladesh Bank staying in the midway of independent monetary policy and limiting exchange rate flexibility can face large and growing international capital flows
- Bangladesh can liberalize the rules concerning outward FDI, and allow some of its local companies to invest overseas as Recently Pran, Baximco Pharmaceuticals, Rahim Afroz etc has already doing business outside Bangladesh
- In a similar mechanism, some reserve can be used to develop a manpower exports fund

- Bangladesh perhaps has possibility of mobilizing additional FX funds to open FX -dollar denominated- external account, giving government guarantee and allowing, perhaps 2/3% higher interest rate compared to the outside market, all flexibilities of remittance.

Bangladesh Bank should study the possibilities in these respects. However, such initiatives should be supported by further research, as the alternative uses of reserve are a tradeoff between high risk and high return.

10. Concluding Remark and Recommendations

The country's reserve is adequate if one considers the reserve adequacy measure of IMF. The current aspect of reserve adequacy benchmark, which is most appropriate for Bangladesh, indicates it is holding excess reserve are equivalent to seven and a half months of import payments and sufficient to cover the country's import bills for more than senven months in case of any emergency. The central bank's statement on alternative uses of reserve is perhaps not a forward-looking one in the sense that it undermines an important aspect of the Bangladesh economy.

It will be able to utilize its surplus national savings due to an investment opportunity. This, in turn, shows bottlenecks in its financial sector and other institutions.

The discussion of the paper highlights the point that Bangladesh should gradually move from autarkic to a relatively open financial system using its growing reserve as buffer. Such a move could possibly address some macroeconomic disequilibrium concerning its savings and investment. The country can expedite its financial sector reform using reserve as insurance. Bangladesh's integration with the rest of the world in terms of trade is substantive but financial integration remains very shallow.

Furthermore, as evident in many emerging markets, successful sterilization needs a deep financial market. If the authorities in Bangladesh do not want to markedly disturb its reform equilibrium, the country could possibly use some of its reserve (in excess of three month import bills) in the infrastructure or similar sectors, although such an initiative should include local or foreign private sectors that have sound managerial skills and technical knowhow.

Export Development Fund (EDF) can be another best option to invest the excess reserve. For the fund it may be recalled to establish jointly by the International Development Association (IDA) and the government of Bangladesh to finance import of raw materials for non-traditional export oriented industries on sight payment basis, Direct exporters would be able to borrow for their imported inputs based on confirmed and Irrevocable L/C opened by an overseas buyer and indirect exporters would be able to borrow for imported inputs based on confirmed irrevocable inland back to back L/Cs opened by direct exporters.

What exactly should be done is beyond the scope of this paper but it recommends that such moves need further research as it is a trade-off between low yield-high liquid assets and high yield-low liquid assets. However, the country can encourage some local investment to "go global" which could ease the pressure on its domestic currency and price level.

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