



## IMPACT OF FLOATING EXCHANGE RATE ON ECONOMIC INDICATORS OF BANGLADESH: A CASE STUDY

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**Abstract:** In past few years there has been a lot of controversy about the appropriateness of the exchange rate system adopted by the country. Bangladesh has been pursuing a liberal trade policy consistent with the trend of free market economy and WTO agreement. In process of liberalization of the economy, Bangladesh adopted a free-floating exchange rate system since May 31, 2003. The level and extent of movement of exchange rate have a significant impact on the macroeconomic variables of the economy. On the other hand, unsustainable economic policies and other factors also lead to a volatile exchange rate. Both the fixed and floating exchange rates have their own merits and demerits. The present article offers an analytical discourse on the prospects and implications of floating exchange rate in Bangladesh. The study is mainly exploratory in nature. In this study the authors have tried to assess the impact of new exchange rate system on the economy of an underdeveloped country like Bangladesh.

**Key words:** floating exchange rates, economic indicators, inflation, balance of trade, balance of payments, FDI

### Introduction

The rate of exchange is the price at which a currency can be exchanged for money in terms of another currency. The term 'money' to a country represents its legal tender, which is the local currency lawfully recognized as a medium of exchange. Thus an important aspect of a foreign exchange transaction is the rate at which the conversion of one currency into another takes place. For doing such a conversion between any two currencies, one must know the value of one currency in terms of other and this is what is meant by a rate of exchange. In other words, the rate at which the conversion of one currency into another is effected or the rate at which one currency is exchanged with another is known as the rate of exchange. All dealings in foreign exchange market are carried out at specified rates of exchange.

Until late in FY03, Bangladesh followed an exchange rate policy of occasionally adjusting the rate with an eye on maintaining export competitiveness, mainly with reference to the trend of Real Effective Exchange Rate (REER) based on a trade weighted basket of currencies acted as a sort of benchmark for the banks to set their own rates. From May 31, 2003 the exchange rate for Bangladesh Bank's spot purchase and sell transactions of US dollars with authorized dealers was decided without reference to any pre-announced band, and the Taka essentially became a floating

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currency of major trade partners.

The exchange rate of Bangladesh Taka has been left on the market forces after the floatation where any intervention in foreign exchange market by the Bangladesh Bank is not enviable. The exchange rate of Bangladesh Taka against major international currencies witnessed somewhat stability since then which did not warrant any intervention in the foreign exchange market by the Bangladesh Bank. In the view of keeping foreign exchange reserve at a comfortable level, however, the Bangladesh Bank had to participate in the market.

The objective of the study was to ascertain the impact of floating exchange rate on macroeconomic variables as well as the link among those variables.

### Materials and Methods

This study was mainly based on literature review and secondary data collected primarily from Bangladesh Bank. At first, some selective indicators were identified and then data was collected and analyzed on each indicator. Afterwards, effect of exchange rate on each variable was identified in the article. Finally, conclusion was drawn. Exchange rate movements affect the following indicators: Export, Import, Remittance, Foreign Direct Investment, and Inflation.

### Results

The foreign exchange market conditions remain stable since the Taka was floated at the end of May 2003. Bangladesh Bank remained committed to limiting intervention in the market only to limit undue volatility in exchange rate which is not in line with economic fundamentals, and to build reserves.

**Exports:** In the floating exchange rate system the rate of exchange of any currency depends on the market forces i.e. demand and supply of the same currency. As a result, the rise in value of foreign currency in terms of local currency gives a boost to the export earnings of the economy, which eventually favors foreign exchange reserve and balance of payment. The growth of export earnings in FY04 reflected mainly growth in the volume of exports with a modest fall in unit value. The overall exports had a significant growth in FY 2004 over FY 2003 and aggregate exports increased by 16.1% in FY 2004 (Table 1).

In order to encourage exporters, a number of facilities were given by government like cash incentive, tax holiday but floating exchange rate had a significant impact on exporters. Growth of export was partly supported by improved external competitiveness facilitated by some depreciation of real effective exchange rate by 3.6% and 10.1%. Growth in remittance contributed to a higher performance in net foreign assets and because of a stable exchange rate, exporters had to face less vulnerability in price movement in export goods.

Table 1. Composition of merchandize exports.

Item	FY 2003	FY 2004	% Change
Raw jute	82.4	79.7	-3.3%
Jute goods	257.2	246.5	-4.2%
Tea	15.5	15.8	1.9%
Leather	191.2	211.4	10.6%
Frozen shrimps	321.8	390.3	21.3%
Woven garments	3258.3	3538.1	8.6%
Knitwear	1653.8	2148	29.9%
Fertilizer	78.6	80.7	2.7%
Terry towel	56.6	68.3	20.7%
Others	633	824.3	30.2%
Total	6548.4	7603	16.1%

**Imports:** Floating exchange rate has also some effects on import activities. However for the commencement of this new rate of exchange, import has not slumped down because our market is import based. The growth of imports in FY 2004 (12.6%) is mainly attributable to the increased requirements for the export manufacture, pick up in both domestic consumption and investment

demand and higher prices of some items (food and oil in the international markets). The commodities whose imports increased significantly in FY04 includes wheat, edible oils, sugar, fertilizer, chemicals, dyeing and tanning materials, plastic, rubber, textiles and articles thereof. Among imports robust growth also occurred in imports of cotton, yam and staple fiber, reflecting a strong export driven activity in the textile sector. Import of capital goods also recorded substantially growth in FY 2004. It reflects that because of floating exchange rate, our importers also getting a position in the world market.

**Remittances:** Remittance could be both inward and outward. Whatever the type of remittance is, exchange rate has some effect on it. Inward remittances from expatriate Bangladeshi nationals (Non Resident Bangladeshi's or in short NRBs) continued to play an increasingly important role in formation of foreign exchange reserve in Bangladesh. During the last two decades, NRBs sent to Bangladesh more than USD 20 billion. In FY 1999, volume of remittance exceeded amount of foreign exchange reserve. The total volume of remittance was USD 2.1 billion where as the foreign exchange reserve was 1.52 billion (Statistics Department, Bangladesh Bank, 2004).

Table 2. Workers remittances.

Period	USD (Million)	Taka (in Crore)
2000-01	1,882.10	10,170.01
2001-02	2,501.13	14,377.03
2002-03	3061.97	17,728.81
2003-04	3,371.97	19,869.80
July 2004	286.67	1,711.99
August	271.68	1,613.51

In FY 2004, remittance from NRBs contributed in strengthening the current account surplus for the last consecutive three years. Receipts on this account increased to USD 3,372 million in FY 2004 from USD 3,062 million of FY 2003 which increased of more than 10%. The increase resulted from the efforts to encourage remittances through official channels, by measures such as opening of new exchange house in the source countries, expansion of drawing arrangements, setting an annual remittance thresh-hold and Canadian based exchange houses, close monitoring and supervision of banks, speeding up of delivery to benefit arise, more importantly surveillance measures under the money laundering prevention act and stable exchange rule for floating exchange rate.

The substantial rise of remittances eased the pressure on foreign exchange reserve considerably and the concerned circle was relieved. The growth of remittance played an important role and facilitated to defer any possible currency crisis. Table 2 shows the workers remittances from 2000-2001 to 2003-2004.

**Foreign direct investment (FDI):** Foreign direct investment represents the investment in fixed assets in foreign countries that can be used to conduct operations. Foreign direct investment is affected by floating exchange rate system. The reason is where investors will invest their money depend on the exchange rate system in that particular country. For example, if dollar is devalued in Bangladesh, foreign investors will not be interested to invest here.

Floating exchange rate has direct effect on FDI. Because whether a foreign firm will invest into a foreign country or not obviously depends on the rate of exchange. For example, if Dollar is devalued, Bangladesh can invest in that country where the devaluation is prevailing. On the other hand, if the situation is inflationary, definitely Bangladesh would be discouraged to invest in a foreign country, even though the country will not be interested to import.

The Government has designed various programs to attract the NRB's to invest in Bangladesh. Any investment by NRB's has been considered as FDI and treated accordingly. It is well known that FDI regime in Bangladesh is most liberal in terms of incentive mix. The investment regime for NRB's is favorable not only for FDI but also for portfolio investment. A 10% quota has been fixed

for NRB's to encourage investment in Bangladesh. The NRB's can maintain foreign currency deposit in non-resident foreign deposit account.

From the survey data it is observed that, there was a downward trend in FDI from FY 2001 to FY 2003. But it is increasing in FY04 and it shows many factors like government policy,

Table 3. FDI and portfolio investment.

Particulars	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Portfolio Investment	0	0	-6	2	6
FDI Flows (net): Survey data	383	550	391	376	385
Inflow	383	564	394	379	390
Outflow	0	14	3	3	5
FDI Flows (net): Banking data	194	174	65	92	89
Inflow	194	174	66	95	89
Outflow	0	0	1	3	0

investment policy and specially exchange rate policy which is building confidence in the foreign investors. Besides, there is a growing trend in portfolio investments from FY 2003 to FY 2004 which shows the impact of floating exchange rate on portfolio and FDI.

**Inflation:** As an instrument of macroeconomic management, currency devaluation remains controversial, especially in developing countries. The perception is that devaluation causes inflation, if not stagflation (Krugman, 1991). In inflationary situation, the exchange rate of any currency is higher in terms of the host country where the foreign currency is changed. So inflation of an import based country more or less depends on exchange rate. Inflation in the country is directly related with depreciation of taka-dollar value. Being Bangladesh is an import-dominated country, so the importers are penalized due to depreciation of home currency. The following table (Table 4) shows the rate of inflation.

Table 4. Rate of inflation (12 Months' average measured by CPI Base 1995-96).

Period	Inflation	Rate of exchange with USD
2000-01	1.94	53.96
2001-02	2.79	57.43
2002-03	4.38	57.9
2003-04	5.83	58.94
July-Sept.	4.6	58.42
October-Dec.	5.13	58.48
Jan-March	5.58	58.94
April-June	5.79	59.76
2004 -05		
July-Sept.	5.95	59.39

The increase of inflation was due to mainly for the increases in international prices of major commodities like food items, international prices of rice, wheat, edible oil and sugar, which are imported and feature prominently in consumption basket. The correlation between inflation level and taka-dollar exchange rates is positive. So it can be concluded that, Taka-dollar depreciation also contributed significantly in this regard.

## Discussion

Bangladesh has been pursuing a liberal trade policy consistent with the trend of free market economy and WTO agreement. The terrorist incident of September 11, 2001 in the USA and subsequent event caused a serious setback at the beginning of FY 2002-03. But Bangladesh is gradually absorbing the shock. The exchange rate of Bangladeshi taka was made a free floating one from May 31, 2003. Since then, the exchange rate of taka against all major currencies was devaluating but showing less vulnerability. When home currency is weak, exporters earn a bonus and importers are penalized. Devaluation as a stimulus to export cannot be accepted as universally valid. Variation in exchange rate affects export in two ways- its depreciation and its validity. These two effects have received considerable attention. Depreciation lowers the foreign currency price of exports and probably increases the quantity of exports and export revenue in domestic currency. Conditions may exist, where export revenue falls, highly inelastic foreign import demand leads to falling export revenue. Ambiguity also arises, if export incorporates high import

content since the domestic cost or price of export rises with depreciation. Theory and empirical evidence exhibits ambiguity as to the effect of the exchange rate on export and export revenue. Junz and Rhomberg (1973) and Wilson and Takacs (1979) found that devaluation increases export for developed countries with fixed exchange rates, and Bahmani-Oskooee and Kara (2003) found similar results with flexible rates. In contrast, Athukorala (1991), Attukorala and Menon (1994), Abeysinghe and Yeok (1998), and Wilson and Tat (2001) found that appreciation does not lower exports in some Asian countries.

The empirical evidence on the effects of exchange rates is mixed. Pozo (1992), Chowdhury (1993) and Arize (1995, 1996) found negative effects on US, European and G-7 exports. Arize *et al.* (2000, 2003a, 2003b) identified negative effects on LDC exports using a moving sample standard deviation model.

For Bangladesh, the ready-made garments sector, the largest export earner for the country, has a price elastic export demand. But other major export items, like jute goods, leather, frozen foods, fertilizer etc. are likely to have inelastic export demand, which indicates that, large exports through devaluation might result in lower revenue from these sources. Besides, various Govt. facilities like incentives, tax holidays have some impacts on export growth. So, devaluation as a way to increase export earnings might only have marginal effect.

Expanding a free market economy and agreement with WTO have opened enormous opportunities for export on one hand, and posed a great challenge for poor country like Bangladesh with underdeveloped technology and low capital base. The growth of export in FY 04 (12.6%) was mainly attributable to the increased requirement for the export manufacture, pick up in both domestic consumption and investment demand as well as higher prices of some item (Food and oil in the international market). Robust growth of import of cotton, yarn, staple fiber and capital goods reflected a strong activity in the textile sector. As our export production incorporates high import content, the domestic cost or price of export rises with depreciation. The major portion of our import is highly price inelastic. So, the benefit that could be attained by domestic currency devaluation is offset by increase or rise in export price and price inelasticity of imported goods.

Theoretically, through floating exchange rate system, BOP or Current Account balance automatically restores to equilibrium. A BOP deficit is caused by a decrease in the demand for a country's export that would lead to a shortage of foreign currency reserves. The decrease in the value of any currency boosts the export of that currency. As a result, export increases and import decreases. The deficit shrinks and balance of payment returns to the equilibrium assuming Marshall- Lerner (Rose, 1991) condition is met. The trade deficit of Bangladesh was widened in FY 2004 from FY 2003 by USD 2319 million. The deficits in service account have increased. But the current A/C balance remained unchanged at USD 176 million in FY04. And this stable position was entirely achieved by USD 310 million increases in remittances (Statistics Department, Bangladesh Bank, 2004).

If a scenario can be considered where there will be no remittance, then the country will be in deep currency crisis leading towards major socio economic turmoil. Given that the balance of trade is static, 50% decline in remittance may trigger massive fall of taka value against foreign currency. So, the worker's remittance was a vital element in bringing a stable position in current A/C balance in FY03 and FY04. The net FDI flow in Bangladesh was not so remarkable, while most countries of the world witnessed an investment boom during late nineties. Bangladesh failed to attract any significant volume of investment despite having a very attractive FDI policy. During then the world's per capita investment was 1350 USD (Raihan, 2002), whereas Bangladesh's per capita investment was 7 USD (Raihan, 2002) during the same period. The small FDI inflow to Bangladesh had been concentrated in energy, textile, cement, chemical, telecom, engineering,

agro-based and ceramic sectors. Investments of NRB's were insignificant in these sectors. But Bangladesh requires a significant increase in investment, both public and private, and improvement in factor productivity to achieve target growth rate in FDI. And it should be recognized that factors like law and order situation, political instability, and corruption adversely affect investment climate. Effective resolution through concerted effort and structural reform of the institutions are required.

Apart from external condition, concerns were expressed about recent inflationary trend in the economy. Several observers described the rising rate of inflation to the adjustment made in exchange rate. It was contended that, these adjustments increase the cost of imported consumer goods, intermediate inputs and capital equipment causing an inflationary situations for an import dependent country like Bangladesh. And such inflammatory pressure would subsequently increase the real exchange rate. Under such situations, management of inflation would be the instruments to enhance Bangladesh's competitive strength.

### **Conclusion**

Generally it is believed that, fluctuations in the exchange rate provide an automatic adjustment for countries with large balance of payment (BOP) deficit. But incase of many other LDCs (including Bangladesh), the link between the exchange rate and BOP is not as straight forward as above would suggest. The devaluation of local currency against US dollar reflects the lower demand for Bangladeshi currency in world market hence its weak economic position.

Devaluation on the one side, would stimulate exports. This is a traditional view. But the fluctuation in exchange rate could theoretically lower exports due to profit risk as developed by Ethier (1973). Exchange rate risk displays a negative effect for six countries, resulting in negative effects in Indonesia, Japan, and Singapore, Taiwan (Fang *et al.*, 2005). Since, the negative net effects of exchange rate risk, offset, or even dominate, positive contribution from depreciation, the effect is mixed. In Bangladesh, the export is mostly dependent on imported raw materials and composition of import is mainly of price inelastic goods, the resulting inflation is offsetting the benefit of exchange rate fluctuations. To obtain the full benefit other environmental factors like inflation should be strictly regulated, law and order situation, market imperfections and institutional weaknesses including bureaucratic complexities and red-tapes should be eliminated. In reality, comprehending the effect of such policy implication is a long-term phenomenon. Since the exchange rate had been made a free floating (May 31, 2003) for only two and half years. And this small time frame is not enough to reach any decisive conclusion.

### **References**

- Abeyasinghe, T. and Yeok, T.L. 1998. Exchange rate appreciation and export competitiveness: the case of Singapore. *Applied Economics*, 30: 51-55.
- Anon. 2004a. Bangladesh Bank Statistics Department. *Annual Report 2003-04*, pp. 69.
- Anon. 2004b. Bangladesh Bank Statistics Department. *Annual Report 2003-04*, pp. 153.
- Anon. 2004c. Bangladesh Bank Statistics Department. *Economic Trends*, XXIX: 10. October, 2004, pp. 73.
- Anon. 2004d. Bangladesh Bank Statistics Department. *Economic Trends*, XXIX: 10. October, 2004, pp. 34.
- Arize, A.C. 1995. The effects of exchange-rate volatility on U.S. Exports: An empirical investigation. *Southern Economic Journal*, 62: 34-43.
- Arize, A.C. 1996. Real exchange-rate volatility and trade flows: the experience of eight European economies. *International Review of Economics and Finance*, 5: 187-205.

- Haque, R.; Rahman, S.M.Z. and Khan, E.A. 2006. Impact of floating exchange rate on economic indicators of Bangladesh: A case study. *Khulna University Studies*, 7(2): 105-111.
- Arize, A.C.; Malindretos, J. and Kasibhatla, K.M. 2003a. Does exchange-rate volatility depress export flows: the case of LDCs. *International Advances in Economics Research*, 9: 7-19.
- Arize, A.C.; Malindretos, J. and Kasibhatla, K.M. 2003b. Does exchange -rate volatility depress export flows: the case of LDCs. *Journal of Business and Economic Statistics*, 18: 10-17.
- Arize, A.C.; Osang T. and Slotje, D.J. 2000. Exchange-rate volatility and foreign trade: Evidence from thirteen LDC's. *Journal of Business and Economic Statistics*, 18: 10-17.
- Athukorala, P. 1991. Exchange rate pass-through: the case of Korean exports of manufactures, *Economic Letters*, 35:79-84.
- Athukorala, P. and Menon, J. 1994. Pricing to market behavior and exchange rate pass-through in Japanese exports. *The Economic Journal*, 104: 271-281.
- Bahmani-Oskooee, M. and Kara, O. 2003. Relative responsiveness of trade flows to a change in prices and exchange rate. *International Review of Applied Economic*, 17:293-308.
- Chowdhury, A.R. 1993. Does exchange rate volatility depress trade flows? Evidence from error-correction models. *Review of Economics and Statistics*, 75: 700-706.
- Ethier, W. 1973. International Trade and the Forward Exchange Market. *American Economic Review* 63, : 494-503.
- Fang, W.S.; Lai, Y.H. and Miller, S.M. 2005. Export promotion through exchange rate policy: exchange rate depreciation or stabilization? *Department of Economics Working Paper Series*, University of Connecticut.
- IRBD, 1997. *Independent Review of Bangladesh's Development; Crisis in Governance: A Review of Bangladesh's Development 1997*. Centre for Policy Dialogue, University Press Ltd. Dhaka, June 1997.
- Junz, H. and Rhomberg, R.R. 1973. Price competitiveness in export trade among industrial countries. *American Economic Review: Papers and Proceedings*, 63: 412-418.
- Krugman, P. 1991. Target zones and exchange rate dynamics. *The Quarterly Journal of Economics*, CVI: 32-38.
- Mamun, A. A. 2000. The crawling band exchange rate regime: A case for Bangladesh., *Bangladesh Economic Chronicle*. URL: <http://students.washington.edu/aalmamun/Crawling%20band.html>
- Pozo, S. 1992. Conditional exchange-rate volatility and the volume of international trade: evidence from the early 1990s. *Review of Economics and Statistics*, 74: 325-329.
- Raihan, A. 2002. Rethinking non resident Bangladeshis contribution to Bangladesh economy. *The Daily Star's Anniversary Issue, 2002*, URL: <http://cpd-bangladesh.org/publications/others/rethinking.doc>
- Rose, A. 1991. The role of exchange rates in a popular model of international trade: does the Marshall-Lerner condition hold? *Journal of International Economics*, 30: 301-316.
- Wilson, J.F. and Takacs, W.E. 1979. Differential responses to price and exchange rate influences in the foreign trade of selected industrial countries. *Review of Economics and Statistics*, 61: 267-279.
- Wilson, P. and Tat, K.C. 2001. Exchange rates and the trade balance: The case of Singapore 1970 to1996. *Journal of Asian Economics*, 12: 47-63.

Haque, R.; Rahman, S.M.Z. and Khan, E.A. 2006. Impact of floating exchange rate on economic indicators of Bangladesh: A case study. *Khulna University Studies*, 7(2): 105-111.