

Chapter 3

Monetary and Financial Developments

3.1 Short-term Interest Rates and Bond Yields ³⁷

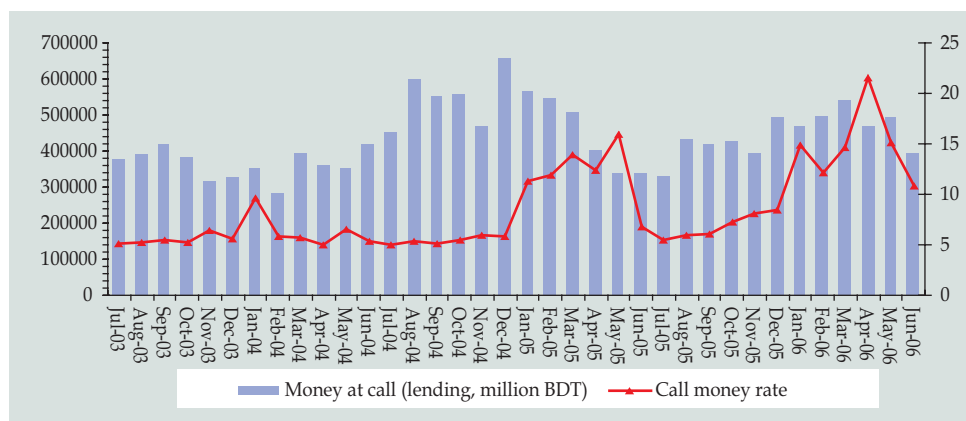
3.1.1 : Overnight Market, Short-term Interest Rates and the Yield Curve

(a) Overnight Money Market

Money market in Bangladesh, especially the overnight market, experienced significant volatility in FY06. The monetary tightening stance of BB, which started in the last quarter in FY05 has been continued in the subsequent quarters of FY06. Moreover, the pressure in the foreign exchange market and rising price level gave additional impetus to BB to pursue a cautious monetary policy that put the inter-bank market under some liquidity pressure during FY06.

Figure 3.1 demonstrates the monthly movements of call money volume and call money rates during July '03 to June '06. The monthly-average call money rate appeared moderately stable in the first half of FY06, but showed a significant volatility in the latter part. While the weighted average daily rate varied between 4.98 percent and 17.23 percent, the monthly average call rate ranged between 5.45 percent and 8.41 percent during July-December 2005. However, during January-

Figure 3.1 : Monthly Movement of Call Money Volume and Call Money Rate



Source : Data from FRTMD, Economic Trends and Major Economic Indicators: Monthly Update

June '06, these rates showed high volatility and as such the weighted average daily rate varied between 7.07 percent and 40.37 percent, while the monthly average call rate ranged between 10.84 percent and 21.54 percent. The volatility evidenced in the second half of FY06 was because of seasonally aberrant behavior associated with Eid-ul-Azha festivities in January '06 and steady mopping up of excess liquidity by the Bangladesh Bank in order to contain the domestic currency value.

³⁷ by Md. Shahiduzzaman; Research Economist, PAU.

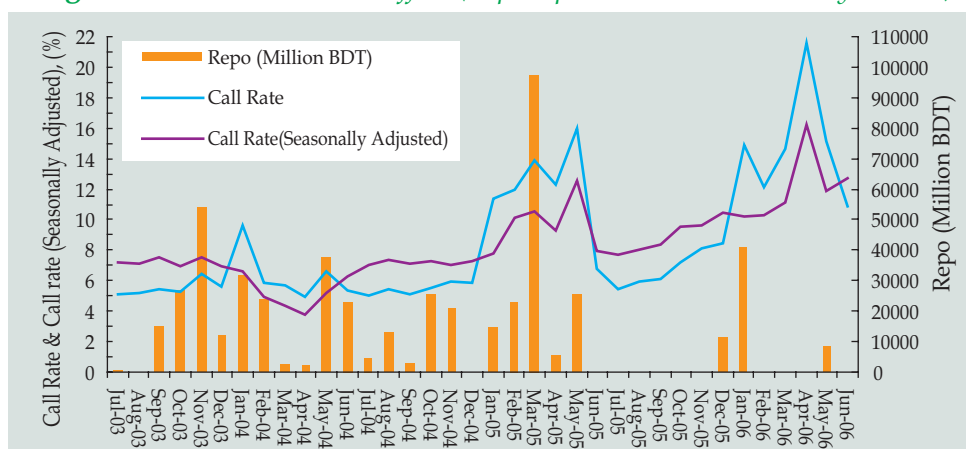
As a result of the continuous and effective monetary management of BB as well as significant growth of export and remittances in the fourth quarter, the pressure on both foreign exchange market and money market eased significantly in the last three months of FY06. In terms of volume, the highest amount of call money was traded in March '06 followed by February '06 in FY06. Total amount of call money lent was BDT538.6 billion in March '06 and BDT496.02 billion in February '06.

(b) Repo, Reverse-Repo operation and Overnight Money Market

The overnight money market (call money market) and day-to-day operation of monetary policy via indirect instruments like *repo* or *reverse repo* are linked inextricably. BB's *repo* is, in essence, a very short-term collateralized loan facility provided to the scheduled banks. Through *repo* operation, BB lends fund to a bank or financial institution by purchasing security, which the bank or financial institution repurchases upon maturity. The *reverse-repo* facility enables participating institutions to purchase government securities from Bangladesh Bank upon commitment of resale after the agreed upon term. Both *repo* and *reverse-repo* arrangements are for overnight to seven-day terms.³⁸

Since inception, Bangladesh Bank has been very successful in using the *repo* and *reverse-repo* tools to manage the pressure on rates in overnight market (*Monetary Policy Review*, 2005). During FY06, Bangladesh Bank did not accept any *repo* bid for the first five months. Instead, reverse repo operation took place on a continuous basis. The monthly average call money rate, however, remained relatively stable for that period as mentioned. From the last week of December, the daily weighted average call money rate started to show an upward trend and on December 29 it reached to the two digit level (10.37 percent). Figure 3.2 shows that this is particularly because of seasonal factors (Eid-ul-Azha); the seasonally adjusted call rate remained stable during the period. However, in order to deal with the situation, BB performed *repo* operation in December '05 and January '06. The call money rate went down slightly in February '06 before reaching a peak in April '06. The pressure on the call rate, however, eased considerably in May '06 and June '06 as cited above (Figure 3.1 and 3.2).

Figure 3.2 : Volume to Rate Effect (Repo Operation and Call Money Market)



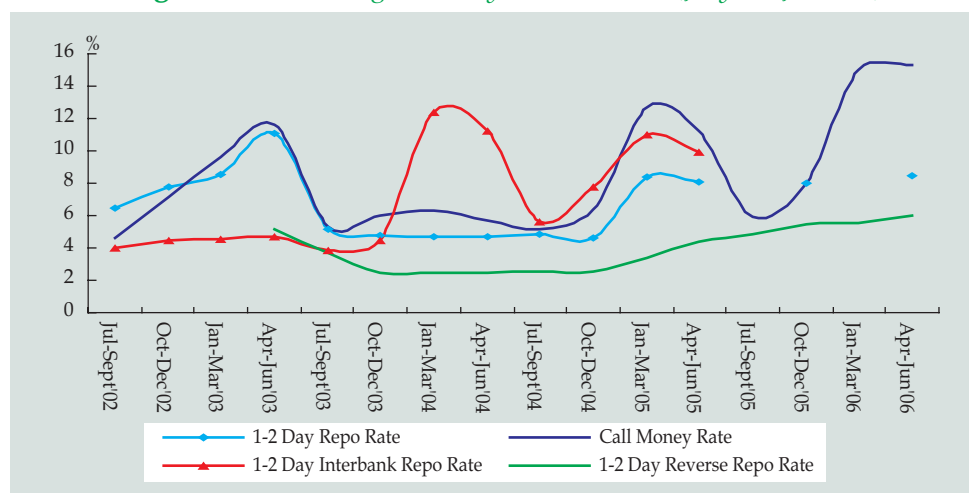
Source : Monthly data for call money rate collected from Economic Trends and for Repo Operation from Monetary Policy Department.

³⁸ The term can be extended by the number of Bank holidays within the transaction period.

Figure 3.2 shows the effect of repo operation in volume and the call money rate along with the seasonally adjusted call rate. While BB uses the repo and reverse rates to transmit interest rate signal to the money market, the Bank actually targets a volume in *repo* and *reverse repo* operation, given the estimated liquidity in the market. Although the scale of trade in *repo* operation in overnight market is very small or not placed regularly, it works as an effective fine tuning device in that market, and Bangladesh Bank has been very successful in using the *repo* and *reverse repo* tools to influence the market rates (i.e., call money).

Figure 3.3 shows the trend of quarterly average 1-2 day *repo* rate, 1-2 day *reverse-repo* rate, *call money* rate and *interbank repo* rate. Both the *repo* and *reverse repo* rates emerge from an auction process at BB and the other two rates are determined in the marketplace. The dotted lines in the figure show the overnight market rates (call money and 1-2 day interbank repo) and the solid lines show the *repo* and *reverse-repo* rates. While the quarterly average *call money* rate started to rise from 2nd quarter of FY06 and continued thereafter, the *repo* rate did not change much during the FY06 (between 8.00 to 8.50 percent). The *reverse repo* rate, however, increased from 4.86 percent in first quarter of FY06 to 6.03 percent in the last quarter of FY06. In fact, both the *repo* and *reverse repo* rates have, in particular, increased since the third quarter of FY05 in support of the restrained money policy stance as opted by BB.

Figure 3.3 : Overnight Money Market Rates (July'02-June'06)



Source : Constructed by author based on data from Monetary Policy Department and Economic Trends, BB

3.1.2 : Short-term Interest Rates and the Yield Curve

Table 3.1 reports the quarterly rate of 28-day treasury-bill, deposit, savings-deposit, 3-6 months fixed deposit and advances. Figure 3.4 shows the quarterly trend of the rates. The dotted line in Figure 3.4 shows the quarterly trend of the 28-day Treasury bill rate, which is derived from the auction process at BB. The other four rates in the figure are determined in the market place from the demand and supply of funds. The central bank raised the treasury-bill rates significantly in the last quarter of FY05 given the shift from an accommodative to a restrained monetary policy, which is still continuing.

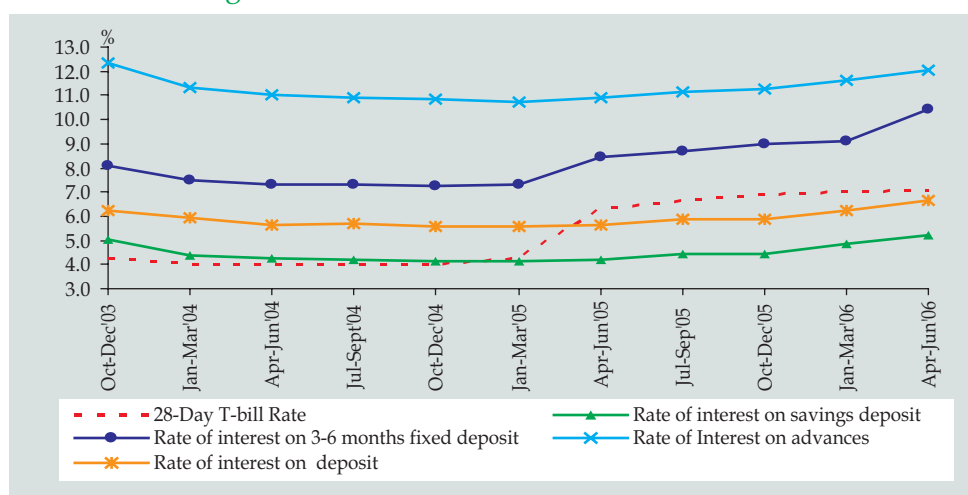
Table 3.1 : Short-term Interest Rates in the Market (October-December 2003-April-June 2006)

Quarter	28-Day T-bill Rate	Rate of interest on deposit	Rate of interest on savings deposit	Rate of interest on 3-6 months fixed deposit	Rate of Interest on advances
Oct-Dec'03	4.3	6.3	5.0	8.1	12.4
Jan-Mar'04	4.0	5.9	4.4	7.5	11.3
Apr-Jun'04	4.0	5.7	4.2	7.3	11.0
Jul-Sept'04	4.0	5.7	4.2	7.3	10.9
Oct-Dec'04	4.0	5.6	4.1	7.2	10.8
Jan-Mar'05	4.3	5.6	4.1	7.3	10.7
Apr-Jun'05	6.3	5.6	4.2	8.4	10.9
Jul-Sep'05	6.7	5.9	4.4	8.7	11.1
Oct-Dec'05	6.9	5.9	4.4	9.0	11.3
Jan-Mar'06	7.0	6.3	4.9	9.1	11.6
Apr-Jun'06	7.1	6.7	5.2	10.4	12.1

Source : Scheduled Banks Statistics and Economic Trends, Bangladesh Bank

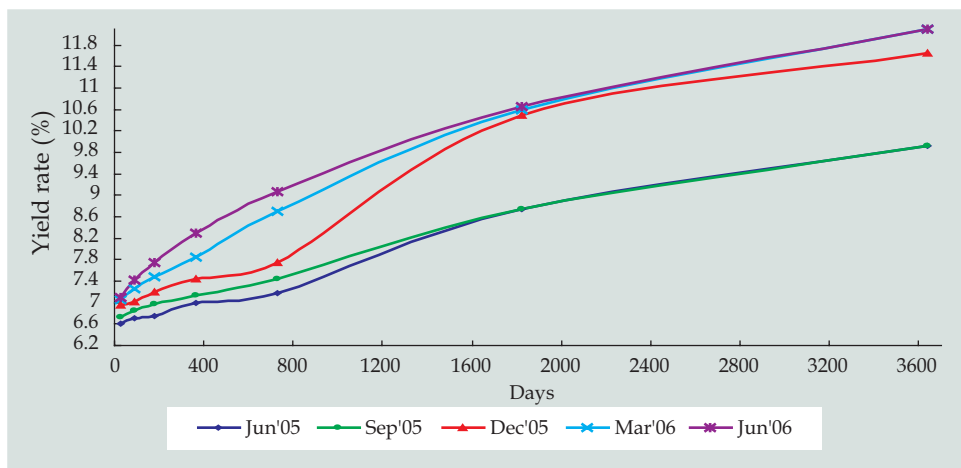
Note: "Deposit" includes all kinds (different maturities) of deposits held by a bank; "savings deposit" constitutes mainly the demand deposits. The "3-6 month's fixed deposit" category is highlighted since most time deposits are kept in this form.

It is apparent from Table 3.1 that interest rates in the market have responded positively to shifts in policy rates, however, in a different lag. After a slight change in the first quarter of FY06, the rate of interest of deposit and "saving deposit" remained unchanged for the first two quarters of FY06 before experiencing positive shifts in the last two quarters. From the third quarter of

Figure 3.4 : Short-term Interest rates in the Market

Source : Scheduled Banks Statistics, Statistics Department, BB

FY05, when the Central Bank started to raise the policy rates, to fourth quarter of FY06, the rate of interest on "deposit" increased by 110 basis points, rate of interest on "saving deposit" by 112 basis points, rate of interest on "3-6 months fixed deposit" by 310 basis points and rate of interest on advances by 132 basis points as compared to 281 basis points increase of 28 day TB rate for the same period. Most of the increases in the interest rates on deposits and advances in the last three quarters of FY06 reflect the substantial increase (between 100 and 150 basis points) in the "National Saving Directorate (NSD)" certificates of 3 to 5-year maturity that came into effect from December 12, 2005. From the perspective of transmission of policy decision, the 3-6 months fixed deposit rates has responded more than the rates on saving-deposit and advances during the period in focus (Figure 3.4).

Figure 3.5 : Shift of the yield curve on government bonds and treasury bills (June'05- June'06)

Source : Constructed based on data from Monetary Policy Department

Figure 3.5 shows the quarterly shift of yield curve in Bangladesh during June'05-June'06. The yield curve produced here is based on primary market data. It provides useful signal to the market regarding monetary policy stance of Bangladesh Bank. The top curve shows the June '06 and bottom curve shows the June '05 scenarios. The rate of 28-Day, 91-Day, 182-Day, 364-Day, 2-Year treasury-bills and 5-Year & 10-Year Bangladesh Government Treasury Bonds are taken into consideration to construct the yield curves. It can be observed from the shifts of the curves that all short- and medium-term rates (i.e., up to 2 year's maturity) moved up in each quarter of FY06, the 5-year rate has been stable since Dec '05. The long yield (i.e., of 10-year term) moved up significantly between December and March '06, which was driven by the increase in NSD rates noted above. The same factor also explains the movement of other bills of term exceeding one month. Among the treasury bills, the 2-year bill rose by 132 basis points, which is followed by 364-day bills (85 basis points), 182-day bills (55 basis points), 91-day bills (41 basis points) and 28-day bill (14.5 basis points) during Dec '05 to Jun '06. While the monthly weighted average rates for all bills have increased steadily during FY06, the longer maturity bills increase more that rendered the yield curve of June '06 steeper than that of June '05.

3.1.3 : Conclusions

In order to contain inflationary expectations and to retain the value of the domestic currency, Bangladesh Bank continued its cautious monetary policy during FY06. The tightened stance was reflected by the hikes in the key policy rates. The 28-day TB rate rose from 6.7 percent in first quarter of FY06 to 7.1 percent in last quarter of FY06. Both repo and reverse repo rates also increased in FY06. While *repo* operation was not held for first five months of FY06, the 1-2 day *repo* rate rose from 8.00 percent in Jan '06 to 8.50 percent in May'06. Besides, the *reverse repo* was held more frequently to mop up excess liquidity from the market and in the process the rate increased from 4.9 percent in first quarter of FY06 to 6.04 percent in the fourth quarter of FY06. Given the rise in the policy rates, market interest rates however responded positively even though some rates responded at a rather slower pace. In the overnight market, the monthly average call money rate, however, remained relatively stable for the first two quarters of

FY06, showing a temporary volatility during Jan-Apr '06 partly because of the seasonality and partly because of cautious monetary policy of BB. However the situation eased significantly in May and June '06.

3.2 : Long Term Rates and Inflation ³⁹

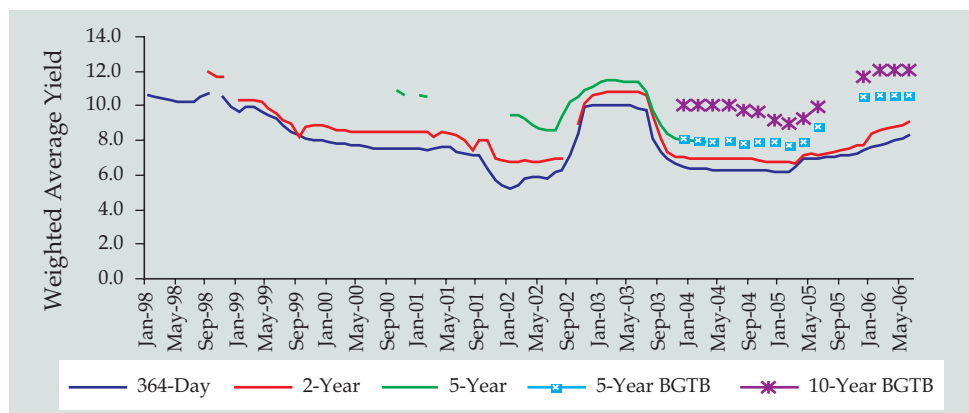
Long term real interest rates affect real economic activities such as savings and investment decisions of households and businesses. In a modern monetary system central banks have direct influence over very short term (e.g. overnight) or short term (several weeks or months) interest rates, and through successive adjustment in short term rates it expects to influence longer term rates. The latter rates, however, are influenced by inflation expectations, behaviour of public debt and real activities. A good understanding of the behaviour of long term interest rates requires a well developed secondary market for long term treasury bonds, which is still in a rudimentary stage in Bangladesh. Nevertheless, an analysis of long term interest rates (on treasury bills and bond) in the primary market and the inflation trend is important to evaluate monetary policy and inflation.

3.2.1 : Long Term Interest Rate

In Figure 3.6 yields on low-risk government treasury bills with maturities of 364-days, 2-years, and 5-years are shown from January '98 to June '06.⁴⁰ In addition, the returns on Bangladesh Government Treasury Bonds (BGTB) of 5-year and 10-year terms from December '2003 to June '2006 are plotted in the same figure.⁴¹

A declining trend is observed for the 364-day and 2-year treasury bills yield until January '02 with some periodic fluctuations. Yield on both of these bills started to rise sharply from the beginning of FY03; the yield on 5-year BGTB also began to rise, and all three rates remained high up to June '03. The above policy stance of the central bank contributed to the stable launching of floating exchange rate regime in May '03. Yield on all of three different bills fell sharply early in FY04 and remained stable up to March '05, but started to rise since then. Yield on 5-year and 10-year BGTBs also show rapid rise since April '05.

Figure 3.6 : Weighted Average yields of Treasury Bills and Bonds



³⁹ Prepared by Shubhasish Barua, Research Economist, PAU.

⁴⁰ Low risk government treasury bills of about 364-day, 2-year and 5-year, and also 5-year maturities and 10-year Bangladesh Government Treasury Bonds (BGTBs) are taken as long term interest rates.

⁴¹ The auction of 5-year treasury bills was suspended from 10 March, 2004. Auction for 5-Year and 10-year BGTBs started from 28 December

From Figure 3.5 of section 3.1 it is clear that yield curve shifted upward in consecutive quarters of FY06, reflecting the cautious policy stance of the central bank. Despite gradual increases in the short term interest rates, the term spread (5-year minus 28-day yield) increased from 2.15 in June '05 to 3.5 percentage points in December '05 and stabilized at that level up to June '06, which mostly reflects the increase in the NSD and BGTB rates (between 100 and 150 basis points) unilaterally set by the government. Ordinarily, rising long term rate would signal higher future inflation expectations. However, since long term bond yields presented above are determined in the primary market, they do not truly reflect the inflation expectations of the market participants.

Figure 3.7 : Movements of Real Interest Rate

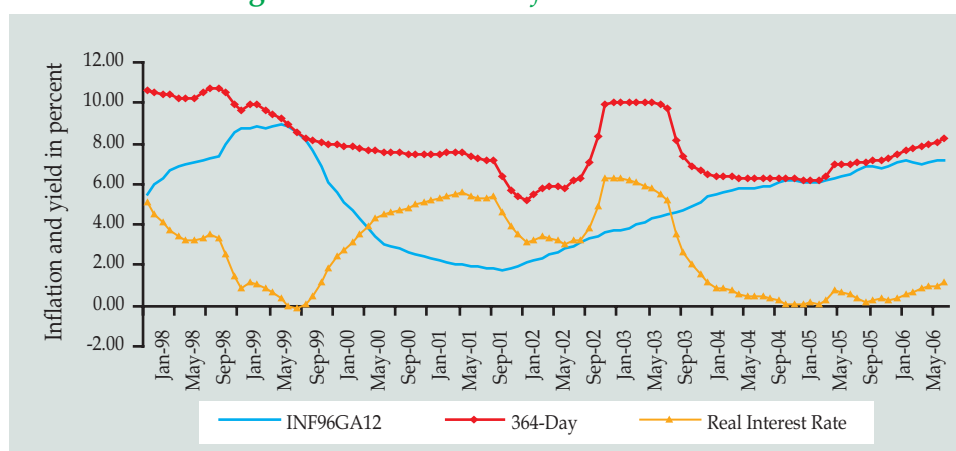
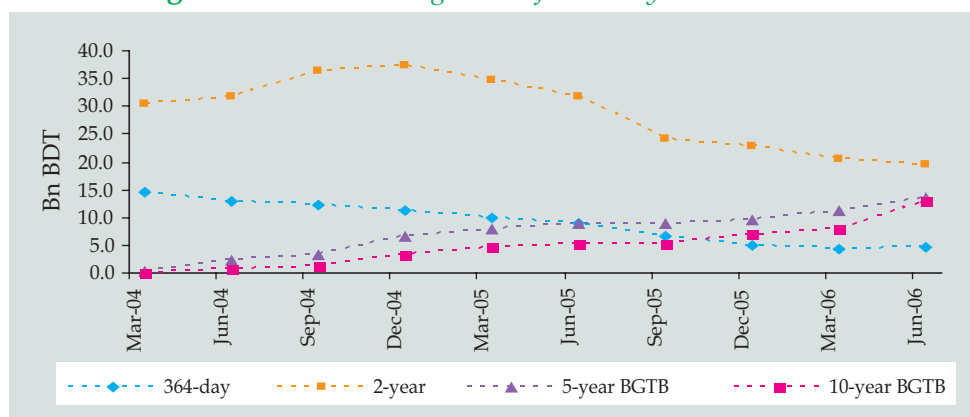


Figure-3.7 plots the movement of *real* yield on one year treasury bills from January '98 to June '06. At the end of June '06 real yield on one year treasury bills reached 1.14 percent, which was gradually increasing since August '05. However, the real yield remained below one percent during January '04 to May '05, fluctuating in the range of 0.05 to 0.95.

Figure 3.8 : Outstanding Stock of Treasury Bills and Bonds



At the end of FY06, 364-day, 2-year treasury bill yield gradually increased to 8.30 and 9.07 percent from 7.0 and 7.18 percent in end-June FY05 respectively. However, during the period outstanding stock of 364-day treasury bills declined from BDT 8.8 billion in June '05 to BDT 4.5 billion in June '06, marginally higher

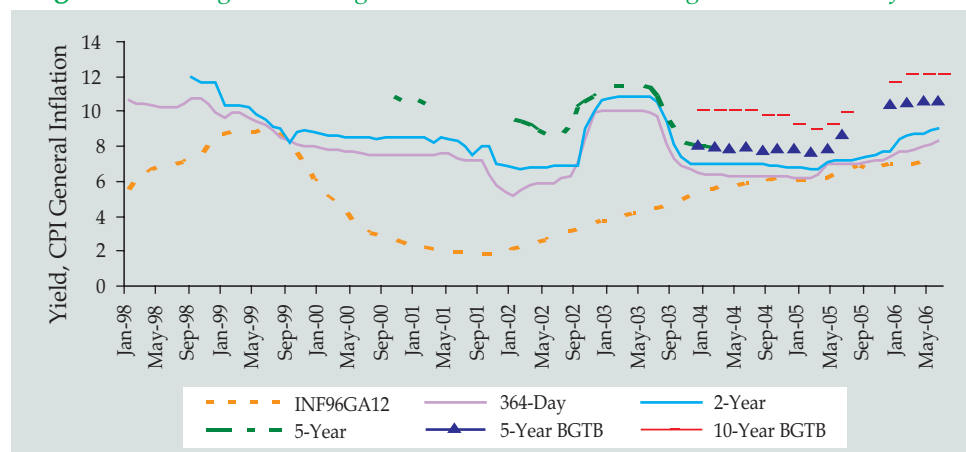
than the amount of BDT 4.2 billion in March '06. At the same time, outstanding stock of 2-year treasury bills declined to BDT 19.5 billion in June '06 from BDT 31.8 billion at end of June '05 (Figure 3.8). Yield on 5 and 10-year BGTBs increased significantly from 8.75 and 9.93 percent respectively, in June '05 to 10.5 and 11.65 percent, respectively, in December '05, and then increased gradually to 10.65 and 12.10 percent by June '06. During the period, outstanding stock of 5-year and 10-year BGTB bonds increased from BDT 8.9 and 5.4 billion in June '05 to BDT 13.7 and 12.8 billion respectively in June '06. However, total outstanding stocks of all short and long term treasury bills and bonds declined by BDT 14.5 billion (8.75 percent) in June '06 over June '05.⁴² On the other hand, rates of interest on 3-year and 5-year NSD certificates have been revised upward to 11.50 and 12.0 percent, respectively, with effect from December 4, 2005, which were 10.0 and 10.5 percent respectively until then. In June '06 total outstanding stock of NSD certificates stood at 394.6 billion, increasing by 29.6 billion (8.11 percent) over June '05.⁴³ Thus one observes a shift of portfolio from T-bills and BGTBs toward NSD certificates.

3.2.2 : Inflation trend

In situation when inflation appears to be heading above its target level central bank adjusts its monetary policy accordingly. The trend of long term treasury bills yield (i.e., duration of maturity 364 days or higher) and CPI general inflation is shown in Figure 3.9.

During the second half of FY98, yield on 364-day treasury bill moved about the level of 10.4 percent, the highest over the entire period under review. However, 12-month average CPI general inflation continued to rise, mainly driven by the CPI food inflation (shown in Figure 3.9) while non-food CPI inflation started to fall after April '98 and continued until May '2000.

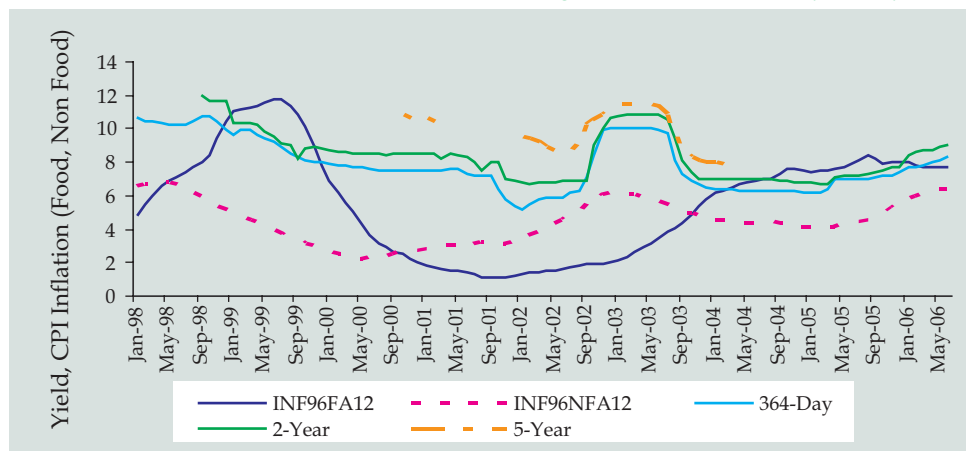
Figure 3.9 : Weighted Average Yield and 12-month Average CPI-General Inflation



There was a downward move in 364-Day, 2-Year and 5-year treasury yield since May '01, while CPI general inflation started rising from January '02, while food CPI started rising from October '01 and non-food CPI rising from November '01.

⁴² These figures include 28-day, 91-day, 182-day, 364-day, 2-year and 5-year treasury bills and 5-year and 10-year BGTBs.

⁴³ It is worth while to note that, in December '06, outstanding stock of NSD Certificates increased by 6.9 percent over December '05, while that of all short and long term treasury bills and bonds declined by 8.8 percent.

Figure 3.10 : T-bill Yields and 12-month Average CPI Food and Non-food Inflation

Non-food CPI inflation started falling after December '02 and continued up to January '05. The yield on the treasury bills on the other hand, rapidly started increasing from the beginning of FY03. Though yield on treasury bills (364-day, 2 year) and BGTBs (5-year and 10-year) rose from the third quarter of FY05, CPI inflation remained high with the adverse shock from the rising commodity and oil prices and continuous depreciation of Taka against USD. From the above trend analysis it is observed that the non-food CPI inflation tended to fall after the rising trend of T-bill yield had started, though this relationship is sometimes affected by various supply shocks.

3.2.3 : Conclusion

From the analysis of preceding section it appears that the relationship between the long term interest rate and non-food CPI-inflation is relatively closer than the food CPI-inflation, where the latter one is more susceptible to domestic supply shocks. In a developing economy with major supply side constraints and limited manoeuvrability to deal with external shocks, curbing inflation only with the help of monetary policy instruments is a challenging task indeed. In an economy where consumer prices may rise for reasons such as monopolistic control over the market by a small segment of the traders, the problem goes beyond the hand of the monetary authority.

3.3 Money Supply and Credit Market Developments⁴⁴

3.3.1 : Introduction

This section analyzes monetary and credit market developments in Bangladesh during FY05 and FY06.⁴⁵ During this period, the main objective of the monetary authority in Bangladesh was to pursue a cautiously restrained monetary policy that would still allow the growth momentum to continue by ensuring adequate credit flow to productive sectors. It was challenging for the central bank to maintain domestic price stability in one hand and support faster growth on the other, particularly in the face of the upward trend in the price of crude oil and

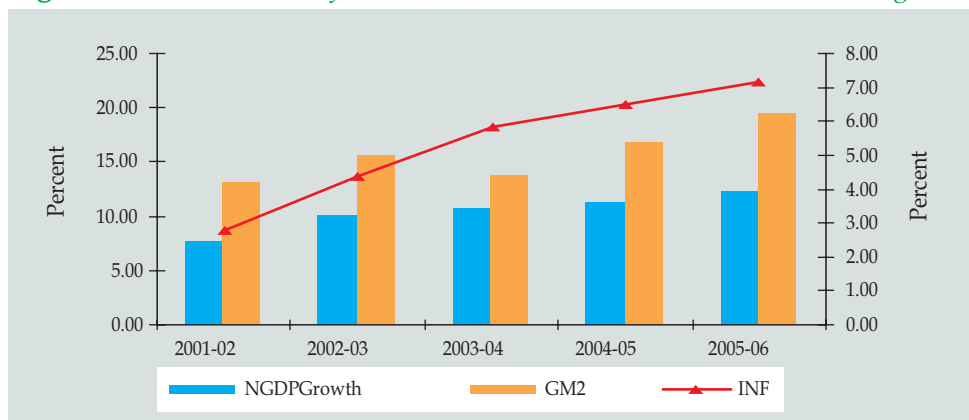
⁴⁴ Prepared by Dr. Sayera Younus, Senior Research Economist, PAU.

⁴⁵ In the previous volume of the Review, money and credit market developments during the period from FY94 to FY05 were analyzed.

other international commodities. The 12-month average inflation rate increased to 7.16 percent in FY06, which was 6.49 percent in FY05. The end-month exchange rate depreciated by 8.5 percent and stood at 69.67 at the end of FY06 which was 63.75 during the same period in the preceding year. The upward pressure on inflation was already evident early in FY05, which continued through to FY06.

In response to the risks of inflation, monetary policy has been on a cautious, restraining stance from the second half of FY05. In order to slow down the growth of domestic credit and its components, CRR and SLR were raised from 4.5 and 16.0 percent respectively to 5.0 and 18.0 percent of time and demand liabilities of scheduled banks as of October 1, 2005. *Reverse repo*, *repo* interest rates and treasury bill/bond yield rates have also been maintained on sustained uptrend. The yield on treasury bills (e.g., 28-day) rose from 6.60 in FY05 to 7.10 percent in FY06. The reverse *repo* rates too rose gradually from 4.50 percent as of end June'05 to 6.04 percent as of end-June'06, and helped BB withdraw excess liquidity and fine tune the money market. In response to the government decision to raise the NSD certificate rates of 3 and 5-year terms, yield on long-term treasury bonds (BGTBs, of 5- and 10-year maturities) also rose from 8.75 and 9.93 percent as of end-June'05 to 10.65 and 12.10 percent, respectively, as of end-June'06. Excess demand from inflationary expectations still lingered as indicated by faster growth of credit vis-à-vis deposits (20.5 vs. 18.7 percent), the former being far higher than the nominal GDP growth rate in FY06. As reviewed below, inflationary expectations are further evidenced by the faster growth of broad money and domestic credit than projected in the FY06 monetary program. Eventually the inflation rate (the 12-month average) increased gradually and reached at 7.16 percent at the end of June, 06 surpassing the target band announced 7.00 percent in January '06.

Figure 3.11 : Trends in Inflation (INF), Nominal GDP and Nominal M2 growth



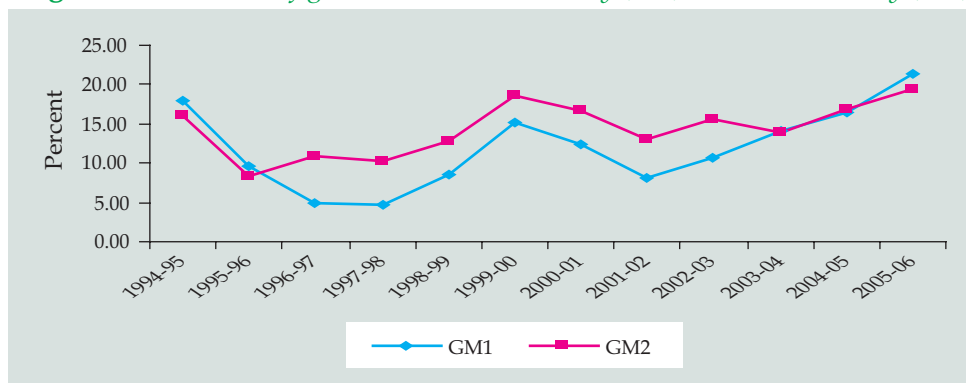
Source : Economic Trends, a Bangladesh Bank Publication

3.3.2 : Behaviour of Narrow (M1) and Broad Money (M2)

By June, 2006, the growth rate of broad money (M2) increased to 19.51 percent which was 16.81 percent during FY05; similarly narrow money (M1) grew by 21.35 percent in FY06 vis-à-vis 16.54 percent during FY05 (Figure-3.12). It is worthwhile to note that M2 grew faster than M1 during the period from FY97 to FY05, while the trend

reversed in FY06 due mainly to a large increase in currency and demand deposits (DD) than time deposits (TD) (Figure-3.14). An enhanced level of government borrowing from the Central Bank contributed to the fast growth of reserve money (RM), and thus to M1 growth in FY06. The RM behaviour is reviewed in Figure-3.18.

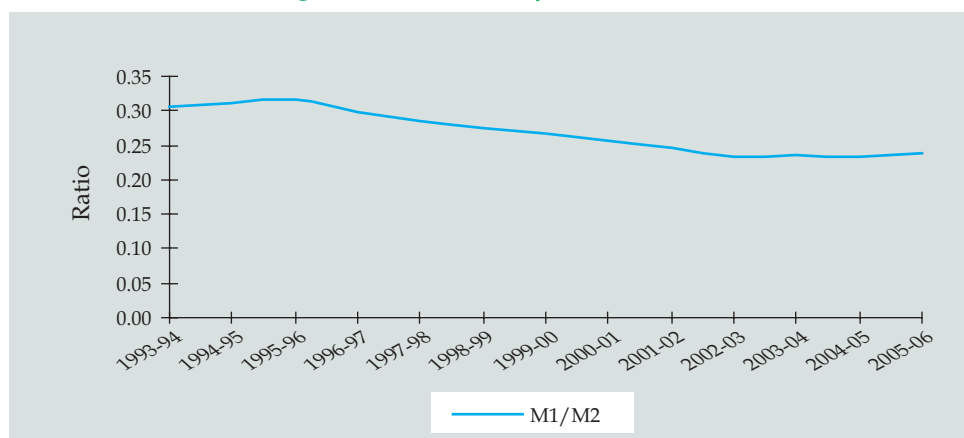
Figure 3.12 : Trends of growth in Narrow Money (M1) and Broad Money (M2)



Source : Economic Trends, a Bangladesh Bank Publication

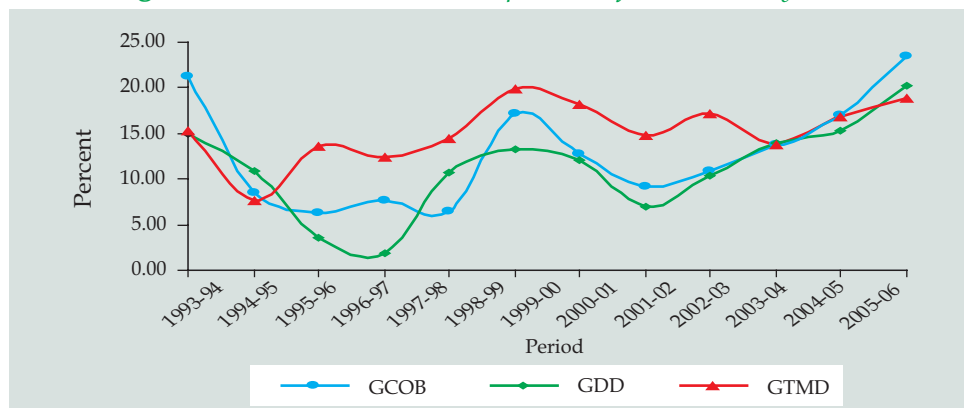
The relative growth of M1/M2 described below led to a change in the liquidity preference of the economy, as shown in Fig. 3.13 below. While declining secularly since FY96, one observes a slight upward shift in the M1/M2 ratio in FY06, a feature that is entirely consistent with the relative growth pattern described above. The latter increase would appear to be explained by an increase in the demand for holding currency and demand deposits due to lingering inflationary expectations.

Figure 3.13 : Trends of M1/M2 Ratio



Source : Economic Trends, a Bangladesh Bank Publication

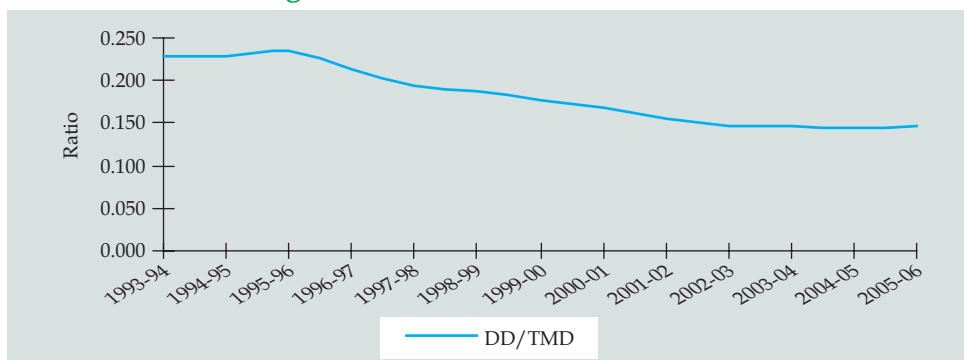
While increase in both foreign and domestic assets of BB contributed to the faster growth of reserve money (RM, of 28.1 percent) in FY06, BB's credit to the government contributed the most to the process. An analysis of the growth rate of components of broad money (M2) reveals that the pattern between the components of M2 that prevailed between FY97 and FY03 started changing by FY04 (Figure 3.14). Time Deposits (TD), which has been growing the fastest over the seven year period, started to slow, and by the end of FY06, the pattern somersaulted; TD growth became the slowest of the three components.

Figure 3.14 : Growth in the Components of Broad Money (M2)

Source : Economic Trends, a Bangladesh Bank Publication

In order to explain the behaviour of the components of M2, note that the *real* interest rate also played a role in slowing the growth of time deposits particularly over the period FY04 to FY06. While the weighted average real deposit rate has been on the decline since FY01, it actually turned negative in FY04, and only started to move up in the third quarter of FY06 (Table 3.2). The growth rate of currency (GCOB) and demand deposits (GDD) increased markedly by 23.46 and 20.31 percent, respectively during FY06 vis-à-vis increases of 17.04 and 15.31 percent, respectively, during FY05. The higher growth in currency and demand deposits than time deposits reflects higher inflationary expectations. However, the growth rate of time deposits in FY06 (18.9 percent) moved ahead than that of FY05 (16.9 percent) following interest rate hike on various term deposits. For example, nominal rate on three-to-six month fixed deposits, the dominant maturity in terms of volume, increased sharply from 8.43 percent in FY05 to 10.41 percent in FY06. The fixed deposits rates on six months to less than one year and one year to less than two years also increased from (8.12) and (8.31) percent in FY05 to (9.76) and (10.32) percent respectively in FY06.

It is seen from Figure 3.15 that since FY96 the ratio of demand deposits to time deposits has been on the decline. Indeed, the ratio (DD/TMD) started to decline from 0.23 in FY96, and gradually reached at 0.145 in FY05 reflecting higher opportunity cost of holding money following attractive returns on different term deposits during most of this period. However, the ratio increased marginally in FY06, and stood at 0.147 due to the relatively faster growth of DD in FY06.

Figure 3.15 : The DD/TMD Behaviour

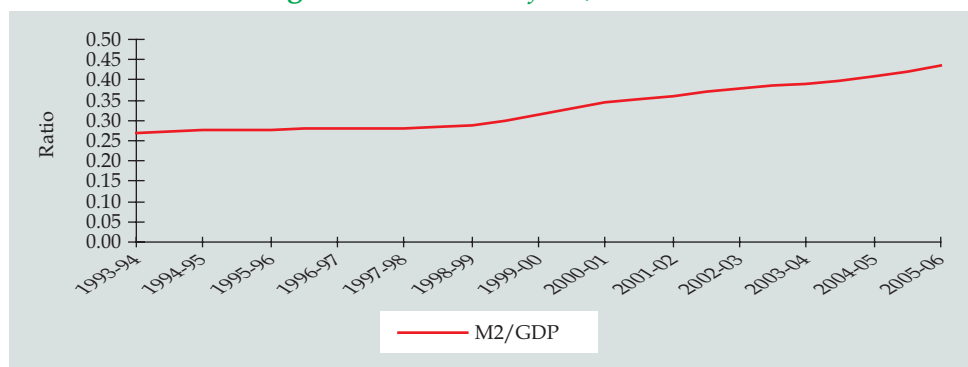
Source : Economic Trends, a Bangladesh Bank Publication

Note that in spite of the pattern of relative growth, the ratio between these two stabilised at about 0.15, and hence the evolving pattern is consistent with real deposit rates reviewed below.

3.3.3 : M2 to GDP Ratio

The rise in market based transactions may be taken as signalling greater efficiency in economic exchanges among the participants through the lowering of transaction costs. Financial intermediation is typically a prerequisite of the proliferation of markets. Consequently, in emerging market economies, one expects to find a gradual increase in the level of monetization for a given level of output. Hence it is relevant to examine the development of the M2/GDP ratio, common measure of financial deepening. The secular rise in M2 to GDP ratio which noticeably began in FY00 continued further and stood at 0.44 at the end of June, 2006 (Fig-3.16). The higher monetary expansion during this period was principally driven by the acceleration in net domestic assets (NDA). This pattern also confirms higher monetization of the economy in conjunction with increasing financial sector intermediation of economic activities.

Figure 3.16 : Trends of M2/GDP Ratio

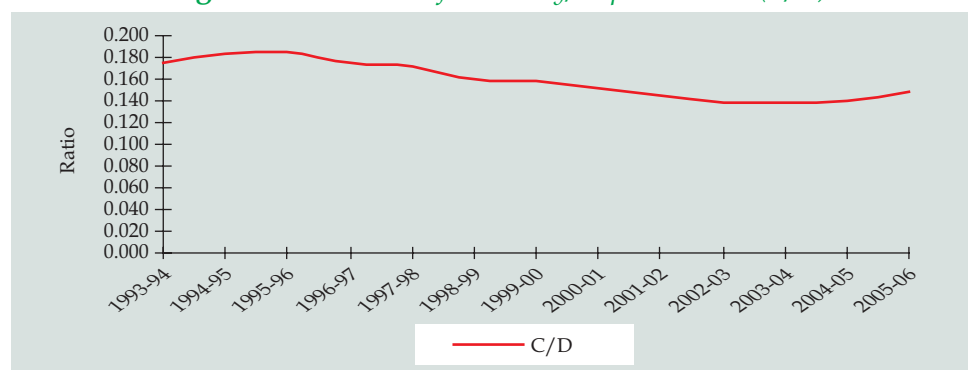


Source : Economic Trends, a Bangladesh Bank Publication

3.3.4 : Currency-Deposit Ratio (C/D)

The currency to total deposits ($D = DD + TD$) ratio (Fig 3.17) started to decline from 0.18 in FY97 due to growing intermediation through the banking channel in Bangladesh, and reached its lowest level at 0.13 in FY03 which remained constant

Figure 3.17 : Trends of Currency/Deposits Ratio (C/D)

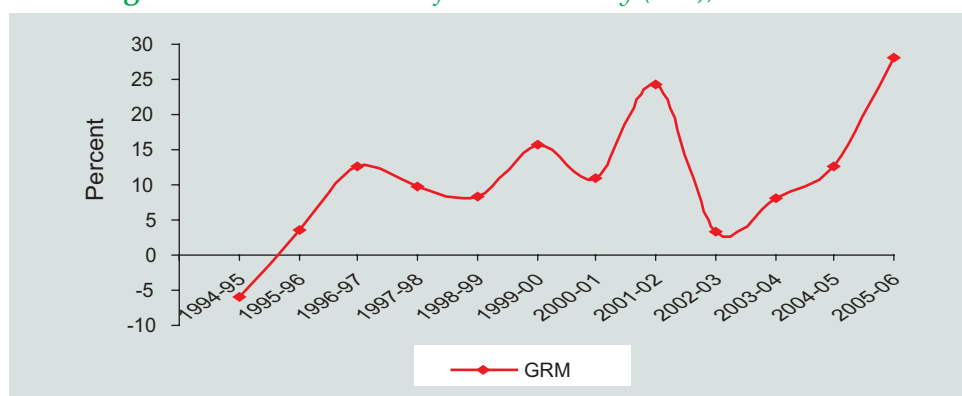


Source : Economic Trends, a Bangladesh Bank Publication

until FY05. However, the trend reversed in FY06 as the ratio inched up to 0.145. The FY06 pattern is consistent with the hypothesis that relates higher relative demand for currency with concomitant inflation expectations on the part of economic agents.⁴⁶

The growth rate of reserve money (RM) showed a steady upward trend (Figure 3.18) during from FY04 to FY06 with the FY06 growth being the steepest. At the end of June 2006, the growth rate of RM stood at 28.14 percent, which was 12.53 percent during the same period last year. The reason for high growth in RM is due to higher growth in NDA, particularly, credit to the government sector, which rose by 59.47 percent on a net basis in FY06. An analysis of the components of reserve money (RM) growth shows that currency outside banks during this period increased to 23.46 from 17.12 percent while cash in tills decreased from 22.58 to 12.28 percent. On the other hand, deposits of banks with BB increased dramatically from 2.79 in FY05 to 40.67 percent in FY06 mainly due to the increased reserve requirements, particularly, SLR. Deposits of banks with BB increased from BDT 92.2 billion in FY05 to BDT 129.7 billion in FY06.

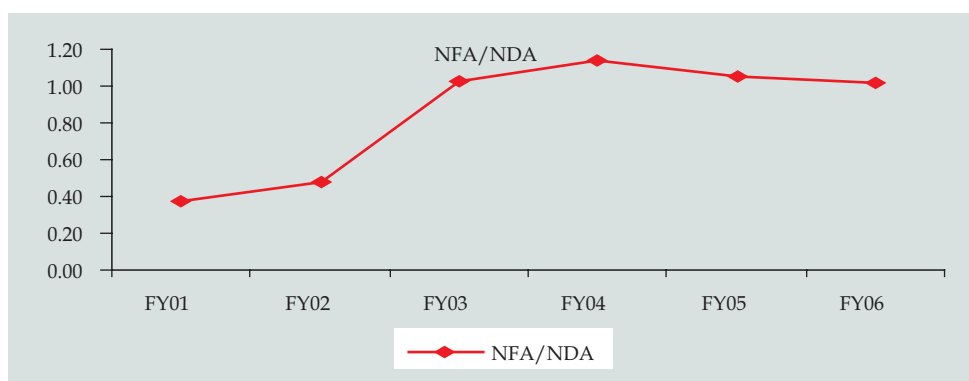
Figure 3.18 : Growth Rate of Reserve Money (RM), FY94 to FY06



Source : Economic Trends, a Bangladesh Bank Publication

An analysis of the sources of RM shows that the (NFA/NDA)-ratio started to increase from 0.37 since FY01 and reached its highest level at 1.13 in FY04 before coming down to 1.02 in FY06 (Figure-19). This reveals that during FY01 and FY02

Figure 3.19 : Sources of Reserve Money (RM)



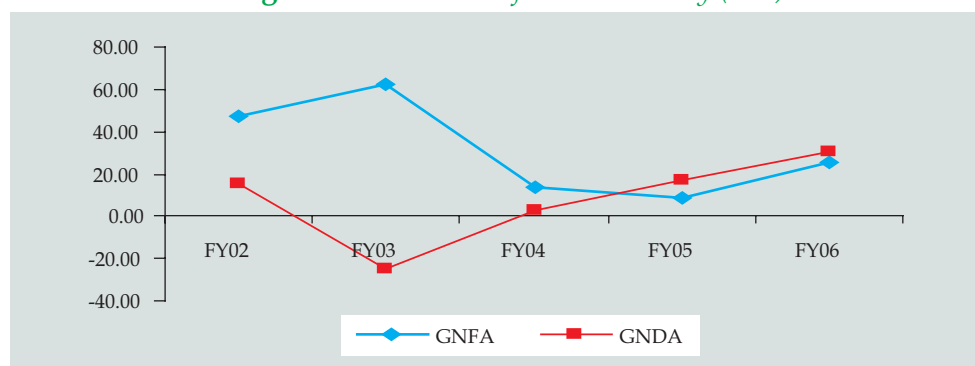
Source : Economic Trends, a Bangladesh Bank Publication

⁴⁶ It ought to be noted that alternative explanations of increased demand for currency are also plausible at various lines of reasoning, these include growth of underground economy and capital flight.

the contribution of NDA in the reserve money was higher than NFA, which reversed during FY03 and FY04 where NFA increased markedly (from BDT 75.9 in FY02 to BDT 123.1 billion in FY03, while NDA decreased from BDT 159.4 to BDT 120.01 billion during the same period. However, the pattern changed again, and NDA increased (29.83 percent) more than NFA (26.54 percent) in FY06 following significant amount of government borrowing during the period mentioned above.

An investigation shows that NDA grew faster than NFA since FY03 and eventually became higher than NFA during FY05 and FY06 due to higher claims on Government (net) following higher public borrowing.

Figure 3.20 : Sources of Reserve Money (RM)

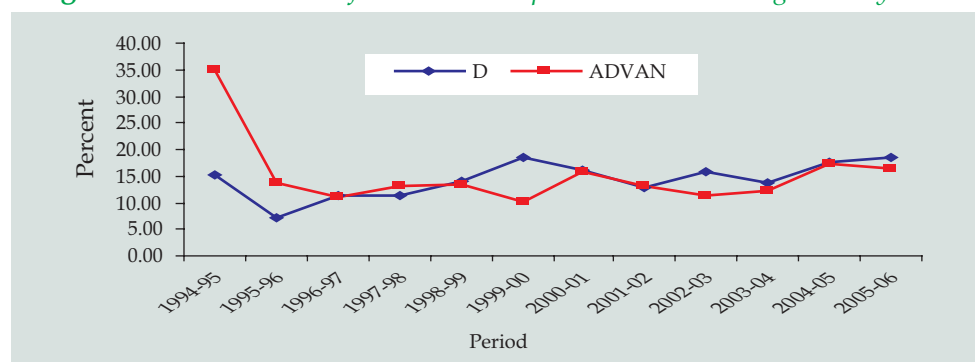


Source : Major Economic Indicators: Monthly Update, MPD, BB.

3.3.5 : Bank Deposits and Advances

The movements of total deposits (D) and advances (ADVAN) of the DMBs show that (Fig 3.21) during the period from FY95 to FY06 the growth rate of bank deposits was higher than that of advances, except for a few deviations. In FY06, the growth rate of total deposits increased to 18.71 percent from 16.69 percent in FY05, while the growth rate of advances grew by 16.31 percent in FY05, which was 17.33 percent in FY06. The deposits rate in FY06 stood higher than advances due to higher attractive deposits rate during this period. For example, the weighted average rates of interest on deposits increase to 6.68 percent in FY06 from 5.62 percent in FY05. The growth rate of advances slowed due to increases in the rate structure following the restrained monetary policy stance taken by the monetary authority and the government's decision to raise the deposit rate on NSDs.

Figure 3.21 : Movements of Total Bank Deposits and Advances growth by DMB's



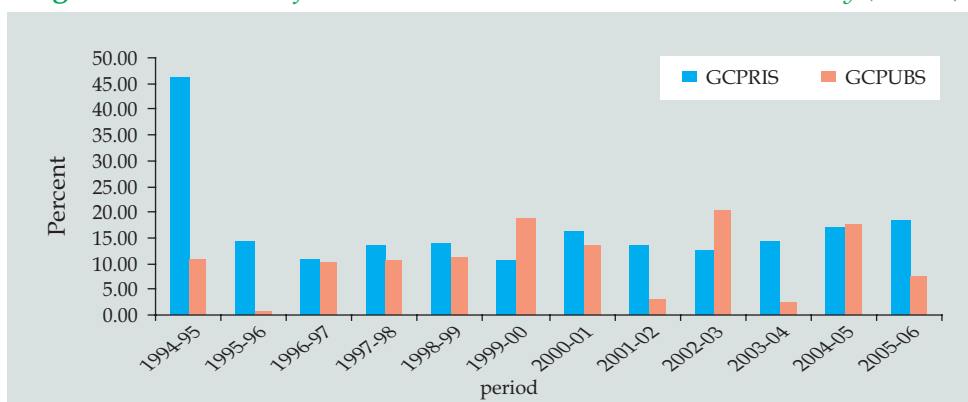
Source : Economic Trends, a Bangladesh Bank Publication

However, domestic credit (inclusive of central bank's claims on the government) has grown even faster in FY06 particularly in the fourth quarter than in the same period of last year. Given deposit mobilization growth of 18.71 percent in FY06, domestic credit grew by 20.5 percent. This trend is inflationary since credit growth exceeded the pace in deposit mobilization.

3.3.6 : Credit to the Public and Private Sector by DMBs

The growth rate of the credit to the public sector continues to be volatile from one year to the next, and FY06 was no exception (Figure 3.22). An analysis of the trend of the credit to the public and private sector by DMBs during the period from FY95 to June FY06 shows that growth of credit to the private sector has been on uptrend since FY04.

Figure 3.22 : Trends of Growth in Private and Public sector Credit by (DMBs)



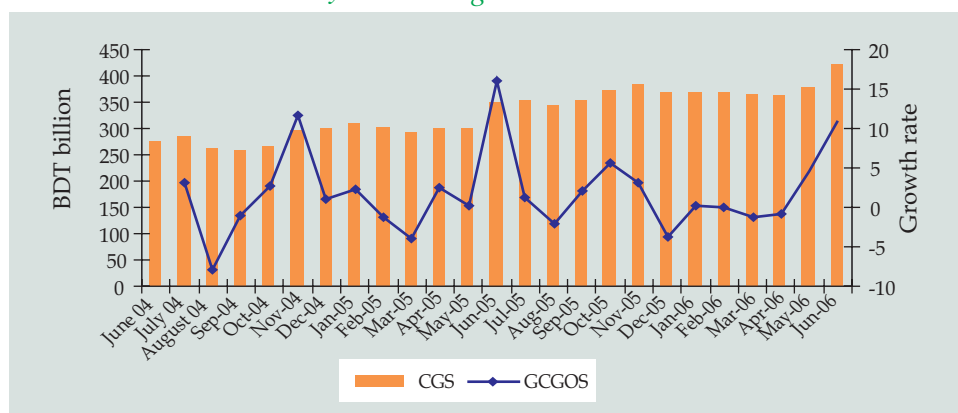
Source : Economic Trends, a Bangladesh Bank Publication

Credit to the public sector expanded much faster in FY06 (27.0 vs. 19.1 percent in FY05) reflecting the need to finance both the widening fiscal deficit as well as the import of petroleum products.⁴⁷ Credit growth to the central government and to “other public sector” increased from 16.8 and 24.8 percent in FY05 to 27.0 and 34.9 percent, respectively, in FY06, while credit to the private sector also increased moderately from 17.0 in FY05 to 18.3 percent in FY06 due to a larger fraction of the ADP expenditures being financed out of credit than in the last fiscal year. It is thus seen that in spite of the restrained monetary policy stance follow through FY06 private sector credit expanded significantly fast to accommodate the targeted real economic growth. Indeed faster credit expansion ensured no crowding out, hence, possibly at the expense of adding to the inflationary pressure.

3.3.7 : Total Credit to the Government by the Banking System

A month over month changes of the credit to the Government sector (loans and advances and investment by the banking system (Central bank and Scheduled bank) shows considerable volatility mostly reflecting seasonality in the government spending. Figure-3.23 shows that credit to the government sector reached its highest level at 16.41 percent in June, 05 before coming down to 10.91 percent in FY06.

⁴⁷ See section 3.4 for more details on the financing of government budgetary deficit.

Figure 3.23 : Growth Rate of Total Credit to Government Sector by the Banking System during FY05 and FY06

Source : Economic Trends, a Bangladesh Bank Publication

3.3.8 : Weighted Average Lending and Deposits Rates

Table-3.2 illustrates weighted average interest rates of scheduled banks on deposits and advances along with the spread during FY03 to FY06. It is evident from the Table-3.2 that the weighted average interest rates on deposits and advances declined till FY05, and the trend was reversed in FY06. The nominal spread between advances and deposit rates also declined gradually from 6.49 in FY03 to 5.38 percentage points in FY06. The low real interest rate on deposits, indeed negative in the last three years is unsustainable. However, if we focus on 3-6 months deposits, it is seen that the real interest rate on this rate is positive.

Table 3.2 : Weighted Average Lending and Deposits Rates (in percent)

Period	Inflation (12 month (Avg.))	Lending Rate		Deposits Rate		Spread	3-6 months Deposits Rate	
		Nominal	Real	Nominal	Real		Nominal	Real
2002-03	4.38	12.78	8.4	6.29	1.91	6.49	8.33	3.95
2003-04	5.83	11.01	5.18	5.65	-0.18	5.36	7.29	1.46
2004-05	6.49	10.93	4.44	5.62	-0.87	5.31	8.43	1.94
2005-06	7.16	12.06	4.9	6.68	-0.48	5.38	10.41	3.25

Source : Economic Trends, a Bangladesh Bank Publication
P = Provisional

3.3.9 : Conclusion

The central bank has been successful in carrying out its restrained policy stance by mopping up the excess liquidity in the banking system via open market operations, which saw several key rates (T-bill of various maturities and the reverse repo) move significantly higher by the end of the last fiscal year. This pattern also led to higher rates in the inter-bank call money market. However, credit expansion to the private and especially to the public sector grew much faster than targeted. Funding of a much larger share of the fiscal deficit through bank credit also contributed to the public sector credit expansion.

3.4 Financing of Public Debt and Inflation⁴⁸

3.4.1 : Fiscal Policy Stance in Bangladesh

The purpose of this section is to analyse whether government borrowing from the banking system has any relationship with inflation. In the early years of independence Bangladesh government followed an expansionary fiscal policy. Indeed, the financial losses in the state-owned enterprises (SOEs) have traditionally been the root cause of consolidated fiscal deficits.

Table 3.3 : Government Revenue, Expenditure and Fiscal Balance in Bangladesh (% of GDP)

Year (end June)	Revenue (T)	Expenditure (G)	Fiscal Balance (T-G)
2000-01	9.6	14.8	-5.2
2001-02	10.2	14.9	-4.7
2002-03	10.4	14.6	-4.2
2003-04	10.6	14.8	-4.2
2004-05	10.6	15.0	-4.4
2005-06	11.0	15.5	-4.5
2006-07*	11.3	15.7	-4.4
2007-08*	11.6	16.0	-4.4
2008-09*	12.0	16.4	-4.4

Source : Bangladesh Economic Review, 2006, Ministry of Finance (MOF).

* = Projected

It is observed from Table 3.3 that the Government of Bangladesh witnessed a relatively high fiscal deficit of 5.2 percent of GDP during FY01, which moderated to 4.2 percent during FY04. It rose to 4.5 percent in FY06 in spite of a slight growth in revenue. In FY06, deficits are provisionally estimated to be 4.5 percent of GDP by the fiscal authority of Bangladesh. The MOF budget data do not always tally with similar data processed by other agencies including Bangladesh Bank. The MOF data typically includes "foreign grants" under revenue, and, correspondingly records deficits alternatively as including/excluding grants. Even though the budget deficits during FY07 to FY09 are projected to be about of 4.4 percent of GDP, the actual deficit may be higher if expenditures remain on target and since revenue collection is likely to fall short lacking major reforms. However, historically, expenditures have also been constrained by the weak capacity of the implementing departments and ministries.

3.4.2 Government Borrowing from the Bank, Non-bank and External Sources in Bangladesh

Table-3.4 shows that though historically government borrowing from the external sources dominated domestic sources, the pattern reversed in FY06 due to high cost of energy imports and decline in the realized level of official development assistance. Borrowing from the non-bank sources also shows declining trend since FY02.

⁴⁸ By Dr. Sayera Younus, Senior Research Economist, PAU.

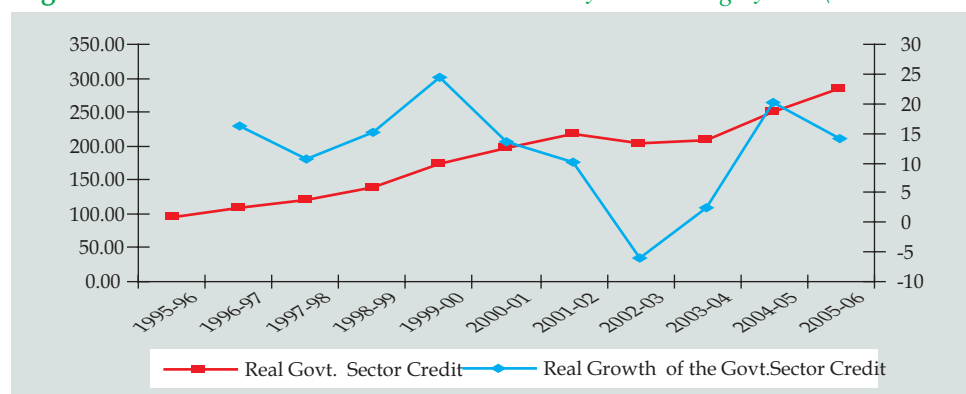
Table 3.4 : Government Borrowing from Bank, Non-Bank and External Sources

Year	CPI (General)	Govt. Borrowing from the Banking system (billion BDT)	Govt. Borrowing from the Non-Bank Public (billion BDT)	Borrowing from the External sources (billion BDT)	Realized level of Annual Development Program (billion BDT)
2001-02	129.92	24.87	47.11	58.58	160.0
2002-03	134.49	-11.03	47.95	65.60	169.0
2003-04	142.54	12.46	45.98	32.79	168.0
2004-05	151.29	31.07	29.08	49.79	135.0
2005-06	161.39	56.67	27.59	50.45	206.4

Source : BBQ, Vol. III (4), Table III.1 (p-60).

3.4.3 : Real growth in the Credit to the Government Sector from the Banking System ⁴⁹

Total real credit growth to the government sector during FY96 was 16 percent, which came down to 11 percent during FY97 before increasing to its highest level in FY00 at 20 percent. Subsequently, real credit growth slipped to negative 5 percent in FY03, but went up to 20 percent during FY05 before coming down to 14.3 percent in FY06.

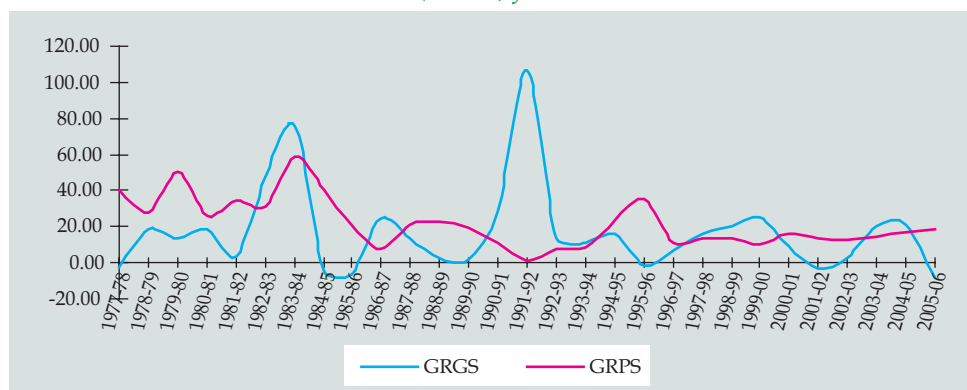
Figure 3.24 : Real Credit to the Government Sector by the Banking System (Growth Rate)


Source : Economic Trends, BB, various issues

It is evident from the Figure-3.25 that even though real credit to the government sector has been increasing, its growth rate fluctuates mainly due to the relative ease of alternative sources of funds and the inherent capacity to effect the spending program.

It may appear from Figure-3.25 that the total credit from DMBs to the government and private sector are generally mutually exclusive; the higher the government sector credit, the lower is the private sector credit except for FY75 to FY82 and again from FY83 to FY86. Though a correlation analysis for the whole sample period (from 1977-78 to 2005-06) is inconclusive, that for the post-1990 period reveals that there is indeed a negative and significant relationship between public and private credit disbursed by DMBs (Table-3.5). The above pattern therefore is suggestive of crowding out of private by public investment.

⁴⁹ Real growth rate in the credit to the government sector is calculated dividing nominal credit by the GDP deflator at constant prices (base:1995/96=100)

Figure 3.25 : Growth of Total Credit to the Government Sector (GRGS) and Private Sector (GRPS) from DMBs

Source : Economic Trends, BB, various issues

Table-3.5 : Pearson Correlation Coefficients, N = 17
Prob > [r] under H0 : Rho = 0, Sample Period : 1989 - to 2005-06

	GRGS	GRPS
GRGS	1.00000	-0.58135 (0.0144)
GRPS	-0.58135 (0.0144)	1.00000

3.4.4 : Relationship between the Price Level and Government Borrowing

An attempt has been made to gauge the relationship among various government borrowing sources and the price level. The correlation matrix (Table-3.6) shows that annual development program (ADP) of the government, and lag of ADP have strong significant positive relationship with the price level in Bangladesh. Correlation matrix shows that government borrowing from the banking system

Table-3.6 : Pearson Correlation Coefficients:2001-02 to 2005-06

	CPI	ADP	Lag of ADP	Bank Borrowing	Lag of Bank Borrowing	Total Internal Debt	Lag of Internal Debt	Foreign Debt	Lag of Foreign Debt
CPI	1.00	0.98 (0.00)	0.99 (0.00)	0.76 (0.13)	0.33 (0.66)	-0.91 (0.03)	-0.83 (0.16)	-0.37 (0.52)	-0.52 (0.47)
ADP		1.00	0.97 (0.02)	0.66 (0.22)	0.24 (0.76)	-0.90 (0.03)	-0.71 (0.28)	-0.42 (0.48)	-0.64 (0.36)
Lag of ADP			1.00	0.99 (0.00)	0.66 (0.22)	-0.92 (0.07)	-0.91 (0.03)	-0.23 (0.76)	-0.42 (0.48)
Bank Borrowing				1.00	0.28 (0.71)	-0.81 (0.09)	-0.82 (0.17)	-0.26 (0.67)	-0.49 (0.50)
Lag of Bank Borrowing					1.00	-0.42 (0.57)	0.81 (0.09)	0.81 (0.18)	-0.26 (0.67)
Total Internal Debt						1.00	0.67 (0.32)	0.16 (0.79)	0.80 (0.19)
Lag of Internal Debt							1.00	-0.07 (0.92)	0.16 (0.79)
Foreign Debt								1.00	-0.23 (0.77)
Lag foreign borrowing									1.00

does not have significant correlation with the price level, while borrowings from the non-bank public appear to co-move with inflation negatively. All the above cited correlation coefficients are highly significant. While tentative, the associations observed in the statistical analysis are policy relevant, and hence should be analyzed more fully with additional data, and in the context of a behavioural model.

3.4.5 : Conclusion

Historically net foreign financing of the national budget deficit has dominated domestic financing as seen between FY91-95. This pattern was reversed during FY96-98, only to resume in FY99-FY04 with the exception of FY01. However, the percentage of deficit financing from the domestic sources increased markedly mainly due to the high cost of energy imports and a concomitant decline in the realized level of official development assistance. An analysis of the correlation matrix shows that borrowing from the domestic sources does not have strong relationship with the price level, while annual development program have both contemporaneous and lagged significant relationship with the price level. The negative and significant correlation between borrowings from the non-bank public and the price level suggest that if government were to borrow more from the non-bank sources it would have been associated with a lower price level in Bangladesh.

3.5 The Foreign Exchange Market ⁵⁰

3.5.1 Background

The analysis of the behaviour in the foreign exchange market in Bangladesh, particularly the volatility in the foreign exchange market and its transmission into the money market requires some special attention for effective policy making. Available data for the last two fiscal years indicate that the foreign exchange market in Bangladesh experienced notable volatility, which resulted in substantial depreciation of BDT against major currencies. In the last quarter of FY06, however, pressure on the exchange rate eased significantly. The current section of the *Review* attempts to analyze the underlying causes and impact of the recent developments in the foreign exchange market with special attention to the balance of payments situation and money market factors.

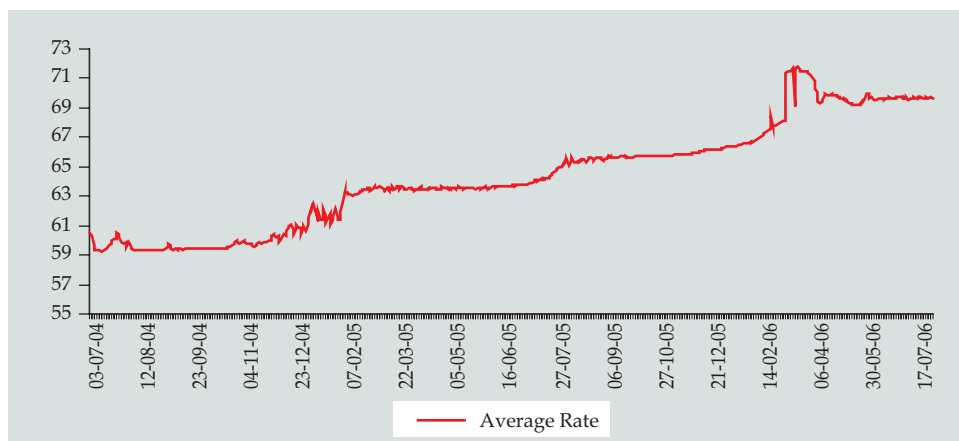
3.5.2 Behaviour of the Foreign Exchange Market

During the early stage of the floatation, the foreign exchange market in Bangladesh remained stable with low volatility and minimal depreciation of Taka due to the sound transition to the floating regime facilitated by the adequate preparatory steps taken by Bangladesh Bank and the then low inflationary global economic environment.⁵¹ From June '03 to April '04 the BDT/USD exchange rate remained fairly stable while during FY05 and FY06 it experienced substantial volatility as well as depreciating pressure.

⁵⁰ Prepared by Dr. Md. Habibur Rahman, Senior Research Economist and Shubhasish Barua, Research Economist, PAU.

⁵¹ Note that the BDT went into a floating exchange rate regime on May 31, 2003.

Figure 3.26 : Daily Exchange Rate (weighted average)



Source : Monetary Policy Department, Bangladesh Bank.

Despite significant growth of remittances and exports and a moderating growth in overall imports, BDT maintained its depreciating trend against USD during the first three quarters of FY06 due to a combination of high cost of energy imports, bunching of LC settlements, and deficits in the income and services components of the current account. The fourth quarter however was relatively calm. While the volume of imports was stimulated by internal demand reflecting broad based expansion of economic activities, the cost of imports reflected higher commodity prices, especially oil, in the international markets. The weighted average BDT/USD exchange rate stood at BDT 69.67 at the end of FY06 from BDT 63.67 in the same period of the previous year reflecting 8.61 percent depreciation over the year⁵². The weighted average BDT/USD exchange rate reached its peak at BDT 71.75 in the inter-bank foreign exchange market on 21st March '06 and fluctuated within the range of BDT 66.20-71.75 with the average rate of BDT 68.07 per Dollar during January-March '06. The average volume of transactions was USD 12 million per day during the same quarter. During the corresponding period of FY05, BDT/USD rate varied within the range of BDT 60.59-63.67 with the average rate and volume of transactions of BDT 62.8 per Dollar and USD 13.3 million per day respectively.

Based on monthly movements, the BDT/USD exchange rate witnessed the highest level of volatility since the floatation in March '06 resulting in a depreciation of about 4.57 percent over the previous month.⁵³ Afterwards, the depreciating pressure on the Bangladeshi currency eased significantly and remained stable during April-June '06 period reflecting a sizeable supply of foreign currency emanating from the export growth and the growing inflow of workers' remittances. The volatility of BDT/USD exchange rate as measured by standard deviation reached 2.04 in the third quarter of FY06 vis-à-vis 0.91 in the same quarter of FY05 (Table 3.7).⁵⁴

⁵² These are weighted average exchange rate in the inter-bank foreign exchange market.

⁵³ In line with nominal exchange rate depreciation, the Real Effective Exchange Rate (REER) index also depreciated marginally from 89.72 in February FY05 to 89.43 in February FY06.

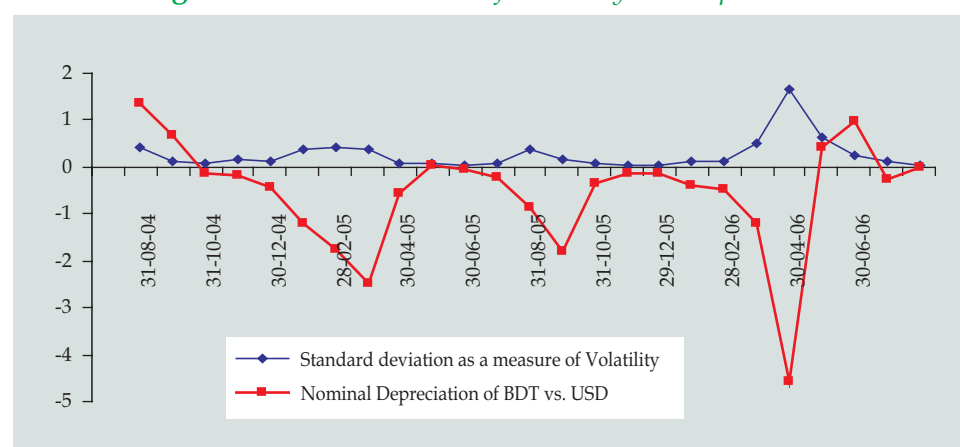
⁵⁴ Note that the standard deviation in the exchange rate during January-March period appears to be larger in every year indicating some seasonality in the movements of the BDT/USD exchange rate.

Table 3.7 : Quarterly Statistics of BDT/USD Exchange Rate

	AVG	MAX	MIN	ST. DEV
Jul-Sep FY05	59.52	60.51	59.26	0.30
Oct-Dec FY05	59.97	61.09	59.45	0.49
Jan-Mar FY05	62.80	63.67	60.59	0.91
Apr-Jun FY05	63.59	63.75	63.39	0.09
Jul-Sep FY06	65.06	65.71	63.76	0.67
Oct-Dec FY06	65.87	66.21	65.66	0.17
Jan-Mar FY06	68.07	71.75	66.20	2.04
Apr-Jun FY06	69.74	71.38	69.16	0.48

Source : Authors' calculation

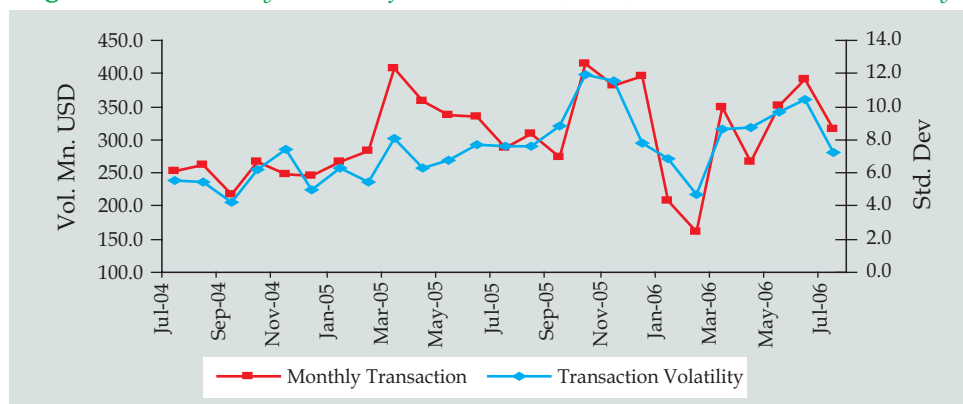
Although the direct intervention in the foreign exchange market under the floating exchange rate regime has largely been avoided, the central bank does intervene on occasions by selling and purchasing foreign currency to bring an orderly adjustment in the exchange rate. Indeed, Bangladesh Bank bought and sold USD 77.0 million and USD 413.0 million respectively during FY06 reflecting a net injection of USD 336.0 million in the inter-bank foreign market.

Figure 3.27 : Co-movement of Volatility and Depreciation

Source : Authors' calculation

Relatively higher inflow of foreign exchange in the fourth quarter has improved the liquidity condition in the inter-bank market, relieving the pressure on the exchange rate. Furthermore, the restrained monetary policy allowed banks to successfully maintain the foreign liabilities within tolerable limits during this period, which also helped in maintaining a proper balance between supply and demand.

It is observed that there is a strong negative relationship between volatility and depreciation, namely that high volatility is matched by significant currency depreciation. The correlation coefficient between the two is -0.67. Further, it is seen that there is a strong positive relationship between the volume of foreign exchange transactions and transaction volatility with a correlation coefficient of 0.82 during FY05-06 (Figures-3.28).

Figure 3.28 : Monthly Volume of Transactions (USD) and Transactions Volatility

Source : Authors' calculation

3.5.3 Possible Explanation of Exchange Rate Movements

The behaviour of exchange rate movements depends on the demand and supply of foreign currency, which itself is determined by the interactions of different components of the market. An attempt is made below to explain the recent movements in the exchange rate in terms of changes in different segments of the foreign exchange market as well as the money market factors.

(a) Movements of the Foreign Exchange Market Variables

It is observed that trade as well as the overall balance of payments (BOP) improved significantly in FY06 over FY05 reflecting about USD 418 million reduction in trade deficits accompanied by about USD 300 million rise in the BOP surplus. This behavior has been brought about by the rise in exports (21.5 percent) and remittances (24.8 percent), and by containing import demand (12.2 percent). Despite recent payments made through the Asian Clearing Union (ACU) and the declining trend in the foreign grants and loans, the Gross International Reserves (GIR) position continued to maintain its upward trend in the last three financial years. GIR position reached its record high of about USD 3.48 billion at the end of June '06, which was USD 2.93 billion and USD 2.71 billion, respectively, at the end of FY05 and FY04.

However, the observed pressure in foreign exchange market over the last two fiscal years has plausibly been caused by seasonal pattern in the flow of imports and exports and bunching of LC openings coupled with shortfalls in income and service accounts. The gap between the flow of imports and exports reached more than 500 million USD during March-April '06. In February '06 import payments increased by USD 62.2 million and exports reduced by USD 32.54 million over the previous month. This was further exacerbated in March '06 due to a sharp rise in import payments (184 million USD) and a relatively modest rise in export earnings. The gap was more than USD 550 million during March-April '05. It is also observed that the import LCs opened in March '06 is USD 202.1 million higher than the monthly average of the same year and 10.58 percent higher over its previous month. Similarly for March '05, the LC-level rose by USD 251.8 million or 22.8 per cent higher over the previous month. It is evident that in both

the last two fiscal years there was a sharp rise in demand for import LCs, thus precipitating a temporary instability in the foreign exchange market. Table-3.8 represents a correlation analysis among the depreciation of BDT/USD exchange rate and volatility of exchange rate along with some important variables, such as monthly Import-Export gap, Import LCs opening, Remittances as shares of gross foreign exchange reserves.⁵⁵ It is observed that, when the gap between the monthly flow of imports and exports widens or demand for opening import LCs rises (as share of reserves), the exchange rate of BDT/USD tends to depreciate. In the same way, volatility of the exchange rate appears to move in tandem with the two aforementioned pressures.⁵⁶

Table 3.8 : Correlation between depreciation, volatility and other variables, FY05 and FY06

	Depreciation	Volatility	IMEXGAP/ Reserve	LCOP/ Reserve	REM/ Reserve
Depreciation	1				
Volatility	-0.67	1			
IMEXGAP/Reserve	-0.40	0.22	1		
LCOP/Reserve	-0.32	0.45	0.37	1	
REM/Reserve	-0.26	0.41	0.16	0.69	1

Source : Authors' calculation

(b) The Money Market Factors

An increase in the import payments generates pressure on the exchange rate, which lead to higher credit demand generating pressure in the money market. The consequent increase in the interest rate, on the other hand, limits the expansion of credit and thereby limits the flow of import payments and eases the depreciating pressure on the home currency. With a view to controlling the twin pressures, namely of high inflation and exchange rate depreciation, the monetary authority in Bangladesh continued to pursue a restrained monetary policy stance during FY06. The monetary stance and a relatively higher inflow of foreign reserves led to an improvement of the liquidity condition in the inter-bank foreign exchange market such that the pressure on BDT/USD exchange rate eased significantly in the last quarter of FY06.

3.5.4 Conclusion

Behaviour of the foreign exchange market is affected by demand for import payments and supply of foreign exchange from exports and inward remittances. It is apparent that these factors are subject to seasonal fluctuations, which causes temporary instability in the foreign exchange market from time to time. Orderly management of foreign exchange by the banks is also important to keep balance between supply and demand of foreign exchange. Recent increase in international reserves is expected to contribute towards better functioning of foreign exchange market in the coming months.

⁵⁵ Monthly data of IMEXGAP, LCOP, REM and Reserve are taken for FY05 to FY06 to calculate the ratios.

⁵⁶ It is also seen that LC opening and remittance receipts are highly correlated. While no a priori relationships is apparent, remittances do facilitate LC opening.

3.6 Monetary Policy and the Equity Market⁵⁷

3.6.1 : Introduction

In a monetary policy context, the nexus between the capital market and the money market is an important one, which has not been explored thoroughly in the Bangladesh context.⁵⁸ Financial investors see these two markets as offering both competing and complementary investment instruments. They are complementary at the extensive margin in that diversification avoids the pitfall of “putting all of one’s eggs in one basket”, and at the intensive margin, these are substitutes. The direction and quantity of funds to be allocated between the two is determined by the associated opportunity costs and risks, and of course by an individual’s personal attributes and investment goals. Ideally, the equity and long-term bonds (corporate and government) provide vehicles for longer term investments, with a relatively smaller portion kept as cash (i.e., in money market instruments). A notable characteristic of the capital market of Bangladesh has been its limited role in funding long term investment as compared to banks and non-bank financial institution (NBFIs). The latest statistics suggests that term lending by banks and NBFIs during the FY06 amounted to BDT 96.5 billion⁵⁹ whereas total capital issued by DSE over the same period was only BDT 19.33 billion.⁶⁰ Thus the latter contributed only 16.8 percent of total new financing.

In a fully integrated financial system, monetary policy would have a swift and important bearing on capital market activities. Though the typical monetary interventions directly target the interest rates on overnight loans, the latter usually lead to revisions in the entire term structure of interest rates. Often the longer term rate adjustments take place in advance of any policy announcement if the latter is well anticipated. In advanced financial markets, in the event of unanticipated moves, stock market indices typically respond within minutes of the news. This proximity of various debt and equity instruments (or derivatives thereof) as alternative assets in the investment portfolios of household and firms hastens the process of broad macroeconomic impact of monetary policy. In an underdeveloped financial system, the linkage is weak due to the thinness of the range of instruments, and hence individual behaviour is slow to respond to policy, which in turn compromises the efficacy of the policy stance itself. An attempt will be made in this section to explore the extent to which the capital market in Bangladesh responds to monetary policy actions and to examine the nature of the relationship. This understanding will assist in the formulation of more effective policies.

3.6.2 : The Transmission Channel

Bangladesh Bank as part of its mandate routinely adjusts the principal instruments of intervention, namely the repo and reverse repo rates as well as T-bills of both short (28-day) and longer (90-day and longer) maturities in order to maintain the level of excess liquidity at a prudent level. The central bank also

⁵⁷ Prepared by Md. Alauddin Majumder, Research Economist, PAU.

⁵⁸ An overview of debt and equity market can be found in the Monetary Policy Review (Volume 1, Number-1, October 2005) and the Financial Sector Review (Volume 1, Number 1, May 2006).

⁵⁹ Bangladesh Bank 2006.

⁶⁰ DSE 2005 and DSE 2006.

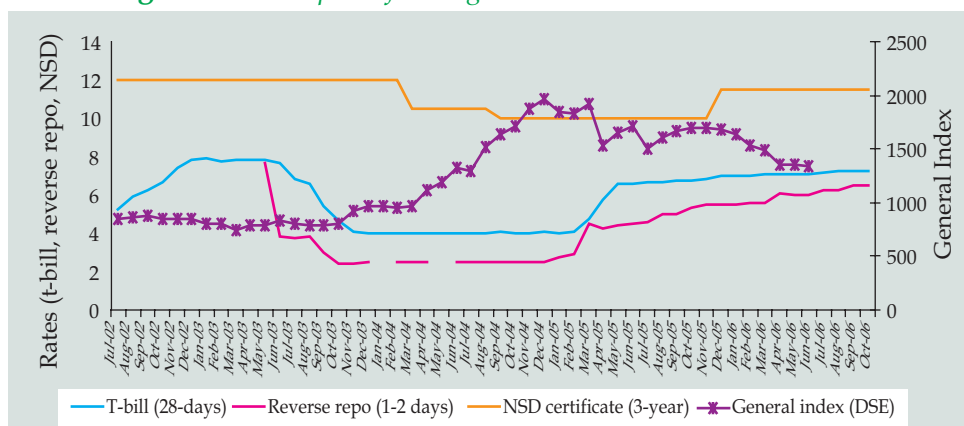
auctions off longer term (5 and 10-year) government bonds (BGTBs). Presently all the above cited instruments are only available to scheduled banks and non-bank financial institutions (NBFIs). In addition, the government also borrows directly from the non-bank public through NSD certificates (3 and 5-year terms), post-office deposit plans, and related instruments. The returns on the latter facilities are primarily determined by the Ministry of Finance (MOF).

Does the Bangladesh monetary policy stance, be it restrained or of an accommodative character, effectively signal financial investors to make prudent portfolio allocation decisions, which may lead to equity price changes? Ordinarily, in a tighter policy environment, the higher short-term money market interest rates, especially early in a tightening cycle, would lead to increases in longer term yields as well, which signals portfolio re-evaluation. Two mutually reinforcing processes take hold. On one hand, the higher yield implies that longer-term bond prices have become cheaper, and thus more attractive than equity; on the other hand, equity prices, also drop since these primarily reflect the present discounted value of the stream of future dividends, thereby triggering a sell-off. Hence one would observe an equity market correction early in the tightening phase, and the opposite as the central bank enters into a period of monetary accommodation. What has been the Bangladesh experience?

3.6.3 : The Recent Experience

In order to gain a bird's eye view of the working of the above cited processes, monthly data of interest rate on reverse repo (1-2 day), T-bill (28-day) and NSD certificate (3-year) and the general share price index for the period from July, 2002 to October, 2006 have been plotted in Figure 3.29⁶¹ The plot identifies two episodes of clear shifts in the policy stance. The first, one of monetary accommodation, unfolded over a six month period starting in June '03 as the 28-day T-bill rate dropped by about 200 basis points and the yield on the newly launched reverse repo facility dropped by an even larger magnitude. However

Figure 3. 29 : Impact of Changes in Interest Rates on Stock Price



Source : 1. *Economic Trends, Bangladesh Bank, various issues.*

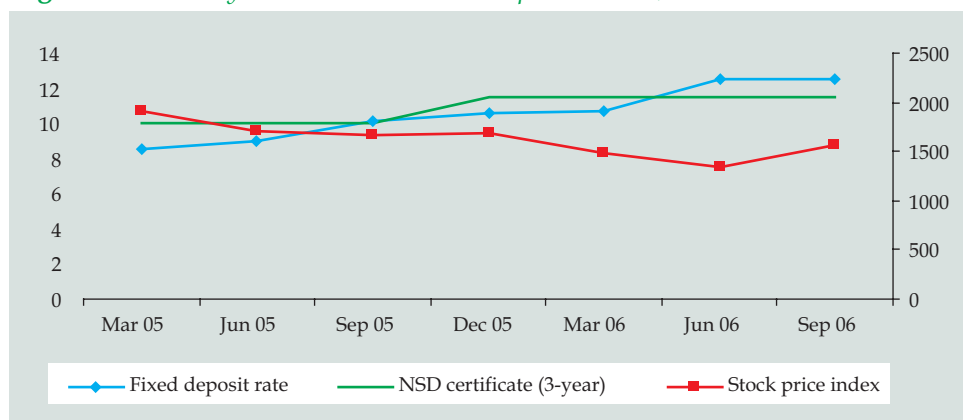
2. *Major Economic Indicators: Monthly Update, Bangladesh Bank, various issues.*

⁶¹ Among monetary policy indicators ideally both repo and reverse repo rates ought to be focussed, however to keep the graph simple, only the reverse repo is included here. As described earlier in this chapter both moved together and hence there no loss of generality by the choice made. Further, as note above, during FY06 there were a limited number of repo auctions.

the stock index hardly budged.⁶² The tighter policy stance adopted in the 4th quarter of FY05, when the T-bill rate moved up by over 200 basis points, can be described as the second episode. The process is still on, as the policy rates have been on a gradual but steady upward climb. By October '06, the rate on reverse repo and 28-day T-bill had risen to as high as 6.50 and 7.24 percent as opposed to 5.50 and 6.96 percent, respectively, in December '05. Note that the rates had stood at 2.53 and 4.05 percent respectively at the start of the tightening cycle. In this episode the stock index fell fairly sharply with a rather short lag, and appeared to fluctuate though the trend was one of a clear downward correction. How does one explain this parallel between monetary tightening and downward pressure on stock prices?

Examining the behaviour of the 3-year NSD certificate, it is observed that the rate on this instrument did not show any adjustment for almost a full year since the monetary accommodation stance began in the summer of 2003. However when the NSD rates were lowered in the 3rd quarter of FY04 (by 150 basis points), followed by another smaller one in the first quarter of FY05, the equity market appeared to experience a shot in the arm, and moved up rapidly and steadily for about a full year. It reached a peak at the end of the second quarter of FY05, and continued until the current tightening phase began. The next move in the NSD rate came in December '05 (an increase of 150 basis points), about nine months following the shift in the monetary stance, and it may appear that the stock index took an immediate hit (see Figure-3.30). However, it must be noted that even though the NSD rate did not respond in tandem with the policy shift, interest rate paid on bank deposits (3 months and up) kept moving up quite sharply and indeed it is the latter response rather than the initial shift in the policy rates that likely explains the drop in equity prices. This view is confirmed by examining the behaviour of the interest payable on fixed one-year deposits of commercial banks as illustrated in Figure 3.30.⁶³ It is seen that while the NSD rate had remained unchanged, in view of the overall monetary tightening (whereby excess liquidity had been systematically withdrawn from the market), the fixed deposit rate moved up gradually from 8.5 percent in March'05 to 10.12 percent in September

Figure 3.30 : One-year Commercial Bank Deposit Rate,⁶⁴ NSD Rate and Stock Index



Source : Economic Trends, Bangladesh Bank, various issues

⁶² It would be hard to relate the increase in the stock index at the end of 2003 to monetary easing

⁶³ The one-year rate is taken as representative of the class of fixed deposit of term of 3 months and up. Commercial bank deposits mostly come in 6-month and one-year categories.

⁶⁴ Deposit rate of Prime Bank Limited has been taken as representative of all private commercial banks.

'05, and it shifted up further to 12.5 percent between March and June '06. By then the latter had exceeded the 3-year NSD rate of 11.5 percent. The plot shows that the stock index followed a predictable decline as soon as the fixed deposit rates had started to move up, and continued to fall for about 4-5 months before stabilizing. The small increase in the index during the first quarter of FY07 came when all deposit rates had already stabilized.

This evidence cited above, though of a limited scope, suggests that Bangladesh investors treat the longer term fixed investment instruments such as commercial bank deposit or NSD certificates or as alternatives to holding equity. Therefore, it would seem that the link between the key policy rates and the longer term rates reviewed above is less than proportionate and not contemporaneous, which makes for an indirect, less timely, and somewhat imprecise monetary policy impact on the stock market. To the extent commercial banks/NBFIs anticipate the course of monetary policy stance (and the extent of its manifestation) and initiate adjustments in the interest rate payable on deposit of various terms, the faster will be the response in the stock market even in the absence of timely adjustment of NSD rates.

3.6.4 : Possible Explanation behind the Weak Monetary Policy Effects

It would appear that the factors explaining the tenuous links between the monetary policy stance and stock market behaviour are several. First, note that the participants of T-bill and reverse repo arrangement include only scheduled banks and NBFIs, and then only those among them having merchant banking licence have access to the capital market as regular traders. Secondly, and as noted elsewhere in this *Review*, government securities are not retailed to the individual investors via brokers and dealers with access to the primary auction. Further there is yet no active secondary trading of T-bills and BGTBs in the stock market, which essentially short circuit the stock versus bond choice in the construction of optimal household and firm portfolios. Consequently the rates offered on these securities are determined in a process where only a limited set of agents participate, and hence the resulting equilibrium (outcome) cannot be efficient.

3.6.5 : Policy Implications

The lack of a direct and simultaneous impact of the key monetary policy rates such as those on repo, reverse repo, and 28-day T-bill instruments on the full range of deposit instruments of commercial banks warrants a review. While a comprehensive analysis is beyond the scope of present analysis, the preceding discussion has identified elements which have direct policy implications. These typically call for establishing an enabling framework via institutional and regulatory changes. Means ought to be explored to allow wider participation in stock trading by financial institutions, brokers, and agents under a suitable regulatory framework, which may require joint BB and SEC overview. The institutional-regulatory framework cited above should be comprehensive so as to permit the retailing and secondary trading of government securities by appropriate agents, which would allow households and non-financial firms access to a set of investment instruments that are necessary to construct optimal portfolios. Finally, the preceding analysis also suggests the need for greater coordination in setting the rate structure on NSD certificates with the anticipated direction of the monetary policy stance in a timely manner.

3.7 Price Developments: Demand Side Pressure ⁶⁵

This section analyzes price developments from the demand side perspective to the extent these are manifested in money and credit market behaviour. The supply side issues are analyzed in Chapter 4 (section 4.5). A comprehensive discussion of the inflationary process underway is taken up further in chapter 5 (section 5.3) where both supply and demand side forces are brought together for examination. However, before reviewing the Bangladesh case, a brief overview is given below of global and regional price developments.

3.7.1 : Global Inflation

Headline inflation witnessed an increasing trend in most major economies during FY05 and FY06. Consumer prices in the US increased at a seasonally adjusted annual rate (SAAR) of 4.3 and 5.1 percent in the first and second quarters of calendar 2006, respectively. However, the rate slowed significantly to 0.8 percent in the quarter ending in September, which brought the year-to-date annual inflation to 3.4 percent from 4.3 percent prevailing in June '06. Note that the calendar 2005 rate had stood at 3.4 percent. Evidently, the falling oil price contributed to the third quarter softening of prices. According to the US Bureau of Labour Statistics, the index for energy prices, which had advanced at annual rates of 21.8 and 23.8 percent, respectively, in the first two quarters of 2006, actually declined by 15.6 percent rate in the third quarter. The core urban inflation (i.e., excluding food and energy), on the other hand, increased by 2.7 percent SAAR in the third quarter, following increases of 2.8 and 3.6 percent in the first two quarters of 2006, respectively. The rise by 3.0 percent SAAR over the first nine months of 2006 compares with a 2.2 percent rise in urban consumer prices in all of 2005.

The recent EU figures show decline of consumer price inflation (HICP, the Harmonized Index of Consumer Prices) to 1.7 percent in September from 2.3 percent in August of this year. Though ECB considers the immediate outlook to be somewhat volatile, the level of inflation in EU has been rather stable at about 2 percent over the past few years, and the longer term inflation expectations appear to be consistent with a stable inflation outlook. In contrast, the UK inflation has moved up substantially since end of 2004, and has remained mostly above 2.0 percent over the past 12 months or so. Annual HICP inflation in September was 2.4 percent, equalling its average value for the third quarter. Survey based studies indicated an increase in British inflation expectations across a range of measures during the early part 2006, though these moderated later in the year. Bank of England is concerned that inflation may be stoked further by higher domestic energy prices (electricity and natural gas) later in the year. Import price inflation in UK had also picked up, reflecting rises in commodity prices and strong global growth.

Since the start of 2006, consumer prices in Japan have been steadily on the rise marking a definite end to the deflation that had persisted for about a decade. The inflation behaviour saw movements both above and below the zero line over much of 2004 and 2005. Inflation though positive is still below one percent, and the September rise was at the annualized rate of mere 0.6 percent. Producer prices by contrast rose much sharper in September, by 3.6 percent, in view of high commodity and base metal prices.

⁶⁵ By Dr. Sayera Younus, Senior Research Economist, PAU.

The response to the inflationary pressures has been a gradual tightening of the monetary policy stance in most countries. The US Federal Reserve raised the overnight *federal funds rate* seventeen times in a row, which appears to have stalled for the time being, the last increase being in June '06. Over this episode, which started in June '04, the rate has steadily risen from 1.00 percent to 5.25 percent. Though core inflation estimates have risen of late, and the lack of excess capacity retains the potential to sustain inflationary pressures, the Fed expects inflation to moderate over time. The rationale for holding the line on interest rates appears to be the positive outlook reflecting reduced impetus from energy prices, contained inflation expectations, and the cumulative demand side restraints afforded by a vigilant monetary policy regime that had been in force for some time.

While the inflation outlook for EU seems a little on the upside vis-à-vis the target of less than two percent, ECB has also been maintaining strong vigilance. The benchmark rate (for deposit facility) has risen steadily over the past 12 months by nearly 100 basis points. Currently, it stands at 2.25 percent, and the stance is for further tightening should events so warrant. Monetary tightening came to UK much later than in EU. In early August '06 the Bank of England shifted gear and increased the benchmark repo rate (paid on commercial bank reserves), known as the official *bank rate* in UK, to 4.75 percent after keeping it unchanged for a year at 4.5 percent. However, given four consecutive quarters of solid output growth, the output gap is believed to have shrunk considerably. Further, in view of concern that inflation would exceed the target in the short term, a further rise is being anticipated by the financial community to bring CPI inflation back to the target over the medium term.

Japan also increased the uncollateralized overnight call rate (which is adopted as the operating target for monetary policy) to 0.25 percent in July '06. This was the first increase in six years and the previous rate was near zero (0.069 percent), as a fitting signal of the end of a long deflation. Business investment, exports, and consumer demand have all shown strong growth. Monetary tightening has also been in progress in other industrial countries such as Canada, Australia, Switzerland, Sweden, and Norway. Many believe that benchmark policy rates are already at or close to the peak in major industrial countries in this segment of the economic cycle amid signals of moderation of growth in these countries.

3.7.2 : Regional Inflation Outlook

In emerging Asia, even though inflation remains modest, strong economic recovery and high oil prices prompted the Bank of Korea to raise the policy rate by 25 basis points to 4.25 percent in June 2006. People's Bank of China (PBOC) has been trying to grapple with the overheating economy where GDP surged by 10.9 percent in the first half of 2006 underpinned, among other, by urban fixed investment growth of 30.5 percent in the first seven months of '06 and the burgeoning trillion dollar foreign reserves. Continuing to pursue macro stability, the monetary measures have already included three hikes (of 0.5 percentage points each) this year in commercial lenders' deposit reserve ratio, which stands at nine percent. It has also raised the benchmark 1-year lending rate by 27 basis points twice (and the deposit rate once) since late April to slow a credit driven

capital spending spree. Annual growth in M2 slowed in September to 16.8 percent, the slowest pace since July 2005, from 17.9 percent in August. Though annual loan growth has slowed to 15.2 percent in September from 16.1 percent in August, it is already well past the 2.5 trillion-dollar annual target for the year.⁶⁶

(a) *India*⁶⁷: The average wholesale price index (WPI) inflation rate in India eased to 4.5 percent during FY06 from 6.4 percent a year ago due to a number of measures that have been undertaken recently.⁶⁸ CPI inflation, according to the IFS data, however increased faster at an annual rate of 6.0 percent over the 11-month period since September '05. According to RBI estimates, domestic WPI inflation during FY06 was dominated by a few items, especially oil prices, which alone contributed almost 41 percent of the headline inflation. Manufactured products' contribution fell to 22.1 percent largely on account of a decline in iron and steel prices. On the other hand, primary articles' contribution to the overall inflation increased mainly due to higher prices of wheat, pulses, vegetables and eggs, meat and fish. The repo, reverse repo and the bank rate presently stand at 7.25, 6.00 and 6.00 percent respectively.⁶⁹ While the repo and reverse repo rates have both been increased by 100 basis points over the past 12 months to contain inflationary expectations, maintaining the bank rate unchanged over this period is suggestive of the central bank's confidence in meeting its medium term inflation target by maintaining the current policy stance.

(b) *Pakistan*: State Bank of Pakistan (SBP) have succeeded in containing inflationary pressure in FY06 with an increase in general consumer price index (urban) at an annual rate of 7.9 percent, which is just within the target of 8.0 percent and well below the 9.3 percent figure for FY05. The price development over the first 3 quarters of 2006 shows a similar growth of 7.9 percent, even though inflation was rather brisk (annual rate of 12.8 percent) in the quarter ending in Sept' 06. The latter phenomenon caused the 12-month inflation to move up to 8.7 percent as of September '06, which may jeopardize the chances of meeting the FY07 inflation target of 6.5 percent. Inflationary pressure appears to be working both via aggregate demand as well as the pass-through of global energy prices onto domestic tariff. SBP adopted a tightened bias in its monetary policy in FY05, and the first major push came in April 2005 when it raised the key policy rate (the 3-day repo rate or *discount rate*) from 7.5 percent to 9.0 percent. While the discount rate had remained unchanged during FY06, a tighter check was kept on the excess liquidity in the financial system. However, in July '06, SBP further tightened its policy stance by raising the 3-day repo rate from 9 percent by 50 basis points to 9.5 percent, and by modifying the reserve ratios. While SLR has been raised from 15 to 18 percent (of time and demand liabilities, TDL), an innovative mechanism has been devised by separating the CRR provisions applicable to time and demand liabilities.

(c) *Sri Lanka*: Consumer price inflation has been rather volatile in Sri Lanka in recent years. Tracking the 12-month (September-over-September) moving

⁶⁶ PBOC website.

⁶⁷ First Quarter Review of Annual Statement on Monetary Policy for the Year 2006-07, RBI, India.

⁶⁸ For example, import duty on wheat was reduced from 50 percent to 5 percent to moderate the landed import costs, private entities were allowed to import wheat, pulses and sugar under easier terms to contain inflation. Besides, a general ban has been applied on the export of refined sugar and pulses until the end of March 2007.

⁶⁹ Unfortunately, the terms repo and reverse repo are often interpreted differently (actually inversely) by different central banks. For example, the Bank of England describes the repo rate as that paid on commercial bank reserves with the central bank; in Bangladesh and India these are called reverse repo facilities.

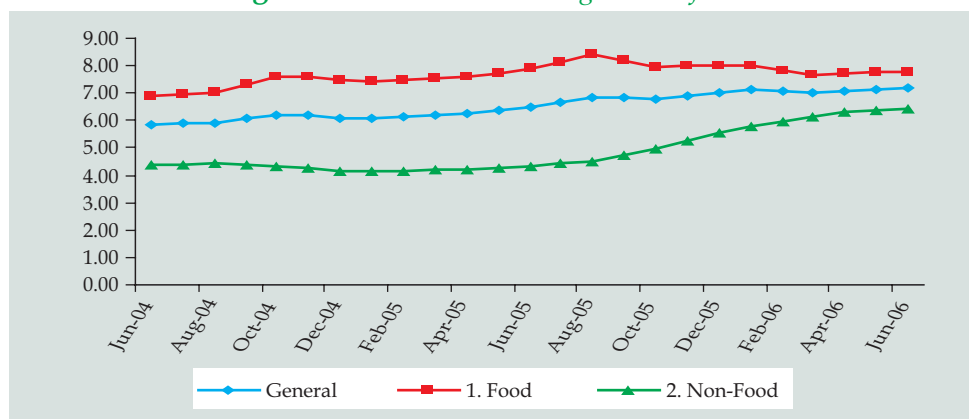
average, it is seen that the Sri Lanka Consumers' Price Index (SLCPI) had dropped from 11.7 percent in 2002 to 4.1 percent in 2004, only to shoot up to 13.5 percent in 2005. Average inflation has since moderated significantly to 6.8 percent as of September '06. The point-to-point change over the first three quarters of 2006 has also been rather moderate at 6.7 percent.⁷⁰ Economic growth has been robust since 2004, with output growing at 6 percent in 2005. The first quarter GDP growth in '06 came to 8.1 percent which is consistent with the target 12-month growth of 7.0 percent for the year. Monetary policy has been put on a tightened bias since end-2004. In 2006 alone, there have been *three* revisions in the policy rates and open market operations have been relied upon to help stabilize the liquidity position. The repo and reverse repo rates stand at 9.6 and 11.1 percent respectively as of September '06.

3.7.3 : Inflation in Bangladesh

Compared with the neighbouring countries, the 12-month average inflation rate in Bangladesh at 6.97 percent as of September '06 is lower than in both Pakistan and Sri Lanka, though a little higher than in India. The end-FY06 (i.e., June) rate stood at 7.16 percent, which marginally exceeded the target of 7.00 percent for FY06, and also showed a modest increase over the 6.50 percent figure for FY05. The first quarter of FY07 witnessed a confirmation of inflation rate stabilization; average food inflation moderated down to 7.55 percent from 7.76 as of June '06. Indeed the rate had remained rather stable since March '06. Average 12-month non-food inflation however kept up the gradual upward climb over the last quarter of FY06, with only a hint of moderation beginning to set in as of September '06.

While inflation had been on the rise since FY01, the 12-month average rate reached 4.4 percent by the end of FY03. By FY05 however inflationary expectations appeared firmly entrenched, and BB responded promptly by tightening monetary policy. Bangladesh Bank revised the *cash reserve requirement* (CRR) for the scheduled banks from 4.0 percent to 4.5 percent of their demand and time liabilities (TDL) effective March '05, which was increased further to 5.0

Figure 3.31 : 12-month average CPI inflation



Source: Research Department, BB

⁷⁰ The Colombo Price Indices (CCPI) for 2006, on the other hand, indicate much higher inflation. For example the 12-month moving average inflation has risen to 11.2 percent in September '06.

percent as of October '05. The SLR was also raised to 18.0 percent of TDL as of the latter date. The reverse repo rate was also raised gradually to withdraw excess liquidity and fine tune the money market; the rate increased from 4.50 percent as of end June '05 to 6.04 percent as of end June '06. The yield on 28-day treasury bills rose from 6.60 percent during FY05 to 7.10 percent during FY06. The yield on treasury bonds (BGTBs, of 5-year and 10-year maturities) also rose from 8.75 percent and 9.93 percent as of end June '05 to 10.65 percent and 12.10 percent, respectively, as of end June '06. Despite these developments, the inflation rate (the 12-month average) kept on rising gradually and reached 7.16 percent at the end of June '06 crossing its target of 7.0 percent announced in the monetary policy statement published by the Bangladesh Bank in January '06. However, it has moderated slightly to 6.97 percent in September '06.

(a) *Excess Demand Pressure*: A review of monetary and credit developments analyzed earlier in this chapter revealed that domestic credit growth had exceeded the growth of DMB deposits, a sign of excess demand arising out of persisting inflationary expectations and the consequent upward pressure on the price level. However, since a good part of the credit growth is also due to public sector demand, including borrowing by SOEs, which in the case of BPC may be seen as arising out of supply shocks, namely the sustained high global price of crude oil and related energy products. The incomplete pass-through of the high import costs onto domestic consumer tariff leaves BPC in a perennial cash-flow crisis. Thus in practice it may be difficult to disentangle the demand from supply side forces.⁷¹

(b) *Food vs Non-food Inflation*: Figure 3.31 shows that even though 12-month average CPI inflation has been largely influenced by food inflation during the period from FY04 to FY06, its contribution started to decline since October '05. Correspondingly, the contribution from the non-food category started to increase since the start of FY06, partly influenced by sharp rise in the cost of "gross rent, fuel and lighting" component, which has a weight of 16.9 percent in non-food inflation.⁷² Though appearing to converge to the overall pattern, non-food inflation level still remains a little below the general and food inflation during the period examined above.

(c) *Yield on Longer-term Securities and 12-Month Average CPI Food and Non-food Inflation*: There was a downward shift in 364-day, 2-year and 5-year Treasury bill yields since May 2001, while general CPI inflation started to increase from January 2002. In particular, the steep decline in food CPI that started in June'99 gradually ended in October 2001; it peaked during the first quarter of FY06, and would appear to be in a holding pattern as of the first quarter of FY07 with a mild trend for moderation. The non-food inflation cycle, which is historically much less pronounced than for food, shifted gear in the first quarter of FY01 (Figure 3.33)

⁷¹ A preliminary analysis suggests little correlation between government borrowing and CPI inflation in Bangladesh. Particularly one would presume that government borrowing from the central bank would be inflationary. However the latter view may not hold in the recent Bangladesh case due to the fact that typically a portion of government borrowing from BB has been used to pay off accumulated debt owed by the government to NCBs, which temporarily improves the liquidity position of these entities, and allows them to issue fresh loans to SOEs. Therefore a part of the BB credit to the government is in effect used to finance the import of oil, and not spent on usual public expenditure categories, and hence non-inflationary.

⁷² While the "recreation, entertainment, education and culture" component of non-food inflation appears to have risen the most in FY06 (i.e. by 10 percent), its share is only 4.1 percent in the index, and hence its impact on annual non-food inflation is in the order of adding an extra 15 basis points to the average rate.

reaching a relative peak in June'03; it then entered into a moderating phase which ended in the last quarter of FY05. It moved up briskly during the next two quarters before starting to stabilize by the end of FY06. It is seen from Figure 3.33 that yield on treasury bills of one year maturity and longer rapidly increased by several percentage points at the beginning of FY03, and also climbed down by a similar margin within about four quarters.⁷³ Though yield on treasury bills rose again with the increase in the return on BGTBs (5-year and 10-year) that took effect from December '05, CPI inflation remained high aided by adverse supply shocks in the form of rising commodity and oil prices and gradual depreciation of the Taka against major currencies. Examining the recent trend it is observed that the non-food CPI inflation have tended to moderate in the first quarter of FY07, following a lag of about 3 quarters since the treasury bills yields started to rise in December '05. However the overall impact of interest rate developments on longer term government securities on CPI appears to have been rather muted.⁷⁴

Figure 3.32 : 12-month average CPI inflation non-food components

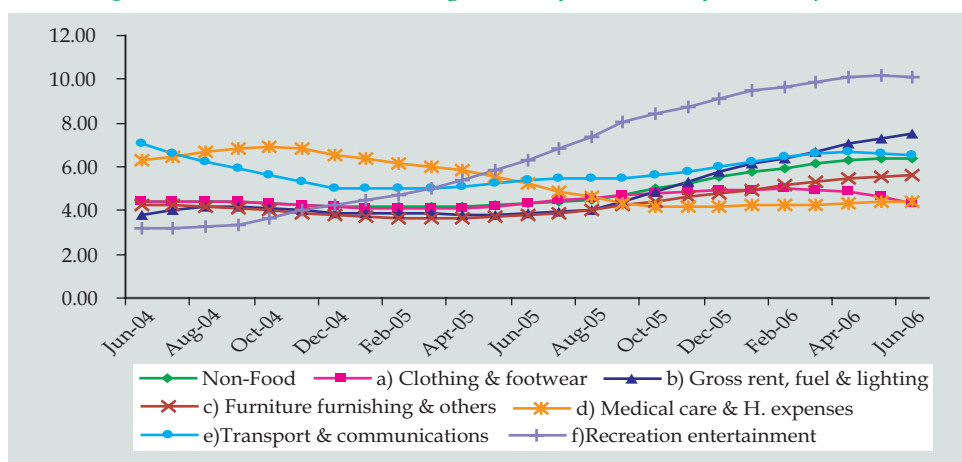
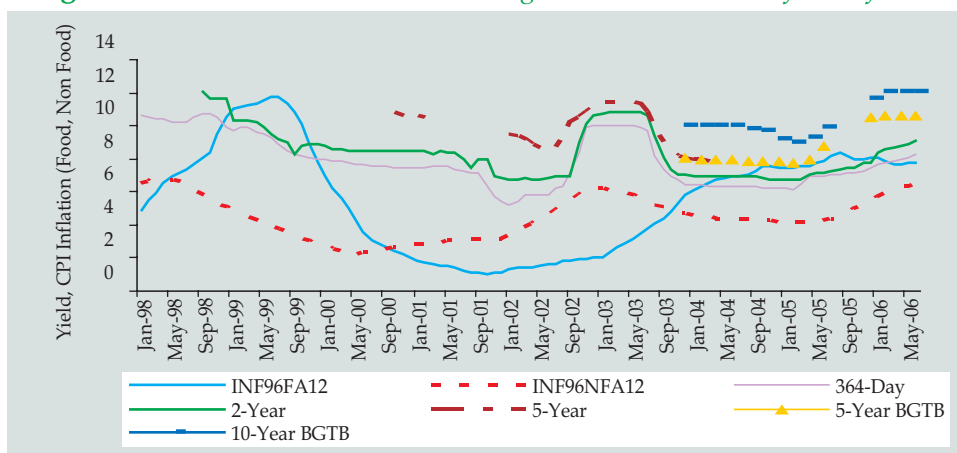


Figure 3.33 : Yield and 12-Month Average CPI Food and Non-food Inflation

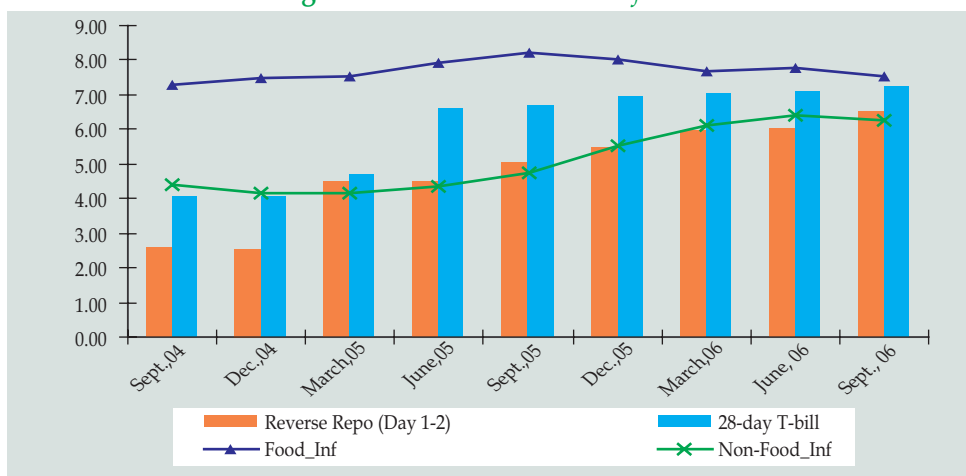


⁷³ The starting point of this short yield cycle coincided with the launching of the floating exchange rate regime.

⁷⁴ Price development, both for food and non-food components are analyzed in greater depth in Chapter 5 where both demand and supply side elements are fully brought into focus.

Short-term yields and Inflation: It is evident from Figure-3.34 that interest rate on reverse repo and 28-day T-bills started to increase since the third quarter of FY05 as the prior stance of monetary accommodation was abandoned in favour of a restrained bias following evidence of persisting food inflation emanating from domestic commodity prices in the wake of 2004 flood losses. The benchmark policy rate of reverse repo auctions started to gradually move up in order to dampen inflationary expectations by curbing excess demand, a process that is still underway. The 28-day T-bill rate has also moved up in tandem with the repo and reverse repo rates. This restrained monetary policy stance appears to show a moderating effect on non-food inflation with a lag as also noted above, but food inflation seems harder to influence with monetary policy interventions; growing trade in cereal, pulses, fish and vegetables have resulted in steady price increases of these products. However, the slight price moderation over the past three quarters has been due partly to bumper food production in FY06 beginning with the *t-aman* harvest in the second quarter.

Figure 3.34 : Interest rate and Inflation



3.7.4 : Conclusion

Global inflation had gradually gained momentum during FY04 to FY06 following international commodity, energy and related fuel prices. In Bangladesh, on the domestic front, demand side factors, e.g., excess credit demand growing ahead of deposits mobilization indicated lingering inflationary expectations during FY06. An analysis of the food and non-food inflation shows that even though the 12-month average CPI inflation has been largely influenced by food inflation during the period from FY04 to FY06, its contribution started to decline since October '05. Correspondingly, the contribution from the non-food category started to increase since the beginning of FY06 mainly due to steady increase in the cost of "gross rent, fuel and lighting" component. In response, BB pursued a tightened monetary policy stance as reflected in increases of CRR and SLR of scheduled banks during FY05 and FY06 and by the steady upward movement of the key policy rates, e.g., repo, reverse repo, and short and long term T-bills. BB has also been using the reverse repo auctions in order to mop up excess liquidity in its attempt to cool inflationary pressures.