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Monetary Policy Stance and Recent Movements in Monetary Aggregates: Policy Implications

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Monetary Policy Stance and Recent Movements in Monetary Aggregates: Policy Implications*

The Bangladesh Bank's (BB) bi-annual monetary policy statement adopted a policy stance for the first half (July-December 2008) of FY09 that aims at ensuring reasonable price stability and supporting sustainable output growth. In the backdrop of 6.2 percent GDP growth and 9.94 percent average CPI inflation in FY08, annual monetary program of BB for FY09 has been set assuming real GDP growth of 6.5 percent and average inflation of around 9.0 percent during the fiscal year.[1] It may be mentioned that BB's monetary policy uses repo, reverse repo, and BB bill rates as policy instruments for influencing financial and real sector prices toward the targeted path of inflation. The annual monetary program adopts reserve money (RM) as the operating target while broad money (M2) is used as the intermediate target.

The underlying assumption is that the growth of monetary aggregates (such as M2) has a direct impact on the domestic price level. Therefore, by controlling the growth of monetary aggregates, BB aims to achieve price stability. In practice, BB sets a growth rate of RM that is deemed consistent with targeted inflation, with the idea that this RM growth will in turn lead to a growth rate of M2 that is consistent with target inflation and adequate liquidity in the economy.[2]

This note examines recent movements in net domestic asset (NDA) and net foreign asset (NFA) of BB vis-à-vis the proposed monetary program for FY09 and brings out possible policy implications and management options that might become necessary in the event of any potential surge in liquidity expansion.

1. Past Movements in Monetary Aggregates

This section examines the movement in monetary aggregates in the recent past in order to draw conclusions regarding the nature of relationship between relevant variables and their probable impacts.

1.1 Inflation and M2 Growth

The relationship between the growth rate of M2 and inflation is relatively weak in Bangladesh (Figure 1).[3] In general, there does not exist any credible evidence of a clear, stable relationship between the growth of M2 and inflationary dynamics in the country in recent times. Moreover, the relationship seems to have become much less clear even after taking into account the lagged impact of M2 growth on inflation. This shows that although BB is able to influence the monetary aggregates using the policy tools, the tools are losing effectiveness in controlling inflation in view of the increasingly complex nature of price dynamics in the country. One important

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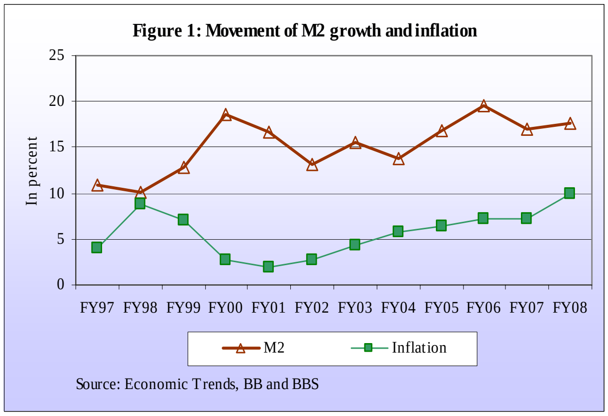
* This note has been prepared by Mustafa K. Mujeri and Md. Ezazul Islam of Policy Analysis Unit and Abdus Samad Sarkar of Monetary Policy Department, Bangladesh Bank.

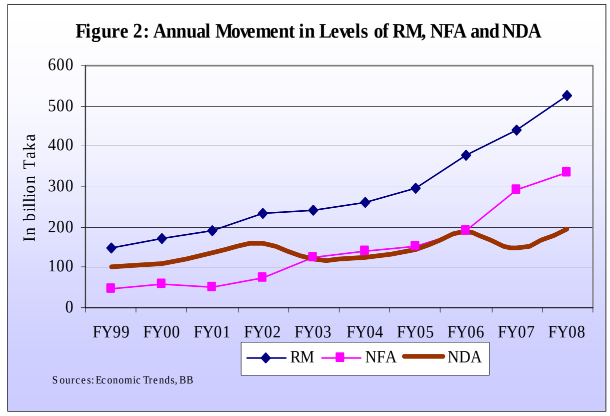
[1] See, Monetary Policy Statement July-December 2008, *Bangladesh Bank Quarterly*, 5(4), April-June 2008, Bangladesh Bank.

[2] However, if the close link between RM and M2 weakens as the financial sector develops and a more diverse array of financial assets becomes available, a new approach to monetary policy would be warranted.

[3] Over the last 12 years, the correlation coefficient between M2 growth and inflation turns out negative while the value is estimated at 0.33 between FY00 and FY08.

implication of the above development is that, in such situations, contractionary monetary policy may not be very effective in maintaining low inflation.





One reason for this weak relationship lies in the underlying sources of inflationary pressure. Recent inflationary pressures have originated largely from supply shocks affecting several key prices such as food, fuel, and other essential products.[4] In such situations, undue reduction of M2 growth may become counterproductive through worsening the negative impact of inflationary supply side shocks on economic growth through reducing liquidity and raising interest rates.

Table 1: Share of NDA and NFA in RM Changes

Fiscal year	Change in RM (billion Tk)	Share (%) of NFA	Share (%) of NDA	Share (%) of Total
FY00	23.2	54.4	45.6	100
FY01	18.6	-44.4	144.4	100
FY02	46.1	53.1	46.9	100
FY03	7.8	605.7	-505.7	100
FY04	19.4	84.8	15.2	100
FY05	32.9	35.5	64.5	100
FY06	83.2	48.3	51.7	100
FY07	62.1	163.1	-63.1	100
FY08	87.2	47.0	53.0	100

Source: *Economic Trends*, BB.

1.2 Movement in Reserve Money

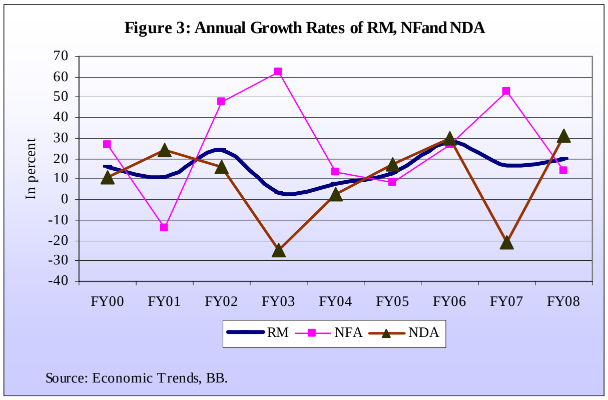
In absolute terms, reserve money (RM) has experienced a secular rise over the years reaching Tk. 527.9 billion in FY08 from Tk. 170.7 billion in FY00. This has been contributed by increase in both net domestic asset (NDA) and net foreign asset (NFA), although there has been some change in their relative contribution with NFA regaining its importance since FY06 (Figure 2). Moreover, wide fluctuation can be observed in the yearly growth rate of RM since FY00; varying within a range of 3.3 percent in FY03 and 28.1 percent in FY06 (Figure 3). The growth rate was 16.4 percent in FY07 and 19.8 percent in FY08.

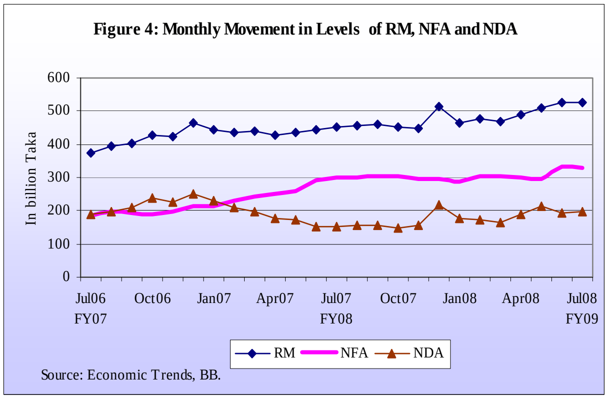
The growth rates of NDA and NFA, however, showed more violent changes. The NDA growth varied between (-) 24.7 percent in FY03 and 31.2 percent in FY08 while NFA growth fluctuated between (-) 13.9 percent in FY01 and 62.2 percent in FY03.[5] The growth rate of NDA was (-)

[4] Monetary aggregates influence the domestic price level through demand side effects on purchasing power. If, however, inflationary pressures originate from supply side shocks, changes in M2 growth will have a limited impact on inflation dynamics.

[5] Over FY00-FY08, the coefficient of variation of NDA is 19.7 whereas similar value for NFA is high at 63.2.

20.9 percent in FY07 and 31.2 percent in FY08 while the corresponding values were 52.9 percent and 14.0 percent for NFA.

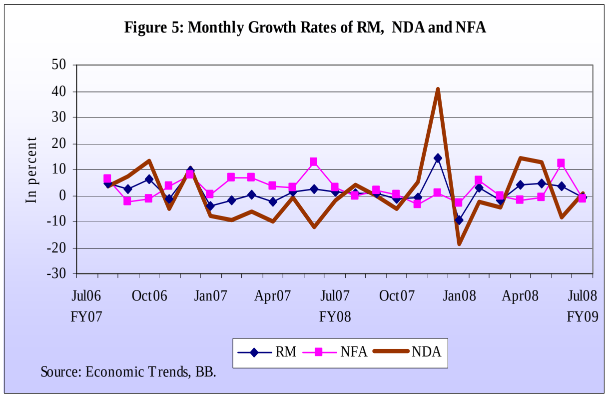


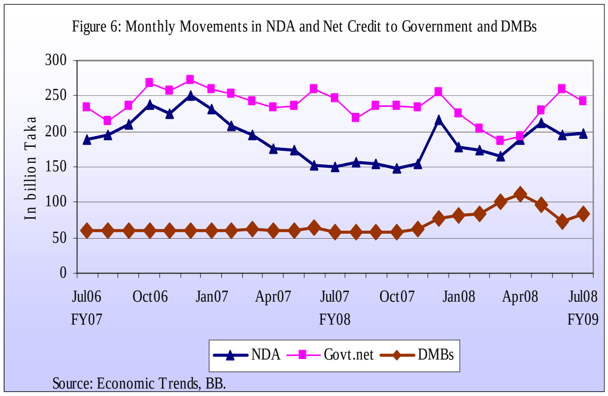


Over the years, one important characteristic of changes in NDA and NFA is noticed. In most years, their growth rates moved in opposing directions thereby reducing the vulnerability of RM growth. This can also be seen from the contribution of NDA and NFA to absolute yearly change in RM (Table 1). Although no definite pattern emerges, it is clear that any large movement of NDA (or NFA) is generally offset by countervailing movement in the other.

Monthly variations in NDA and NFA

The monthly movements in the level and growth of RM, NDA and NFA during FY07 and FY08 are plotted in Figures 4 and 5. Although the fluctuations in the levels are mostly irregular, the monthly growth rates reveal some seasonal patterns. For NDA, seasonal peaks are observed in September, December, and around April/May while the troughs are in November, January, and June of the fiscal year. On the other hand, the peaks for NFA are in December and June while the troughs are in September, January, and April/May.





The above analysis shows two important characteristics of NDA and NFA. *First*, movements in NDA and NFA are such that their growth should not be seen in isolation in order to assess the potential impact on monetary expansion. *Second*, movements in NDA and NFA have some distinct seasonal patterns which should be taken into account in evaluating the potential impact on yearly monetary aggregates.

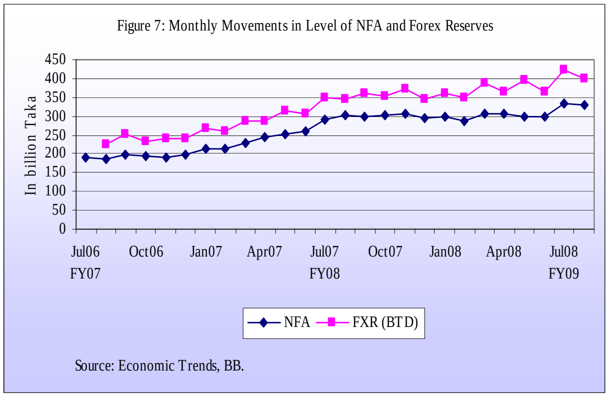


Figure 7: Monthly Movements in Level of NFA and Forex Reserves

Source: Economic Trends, BB.

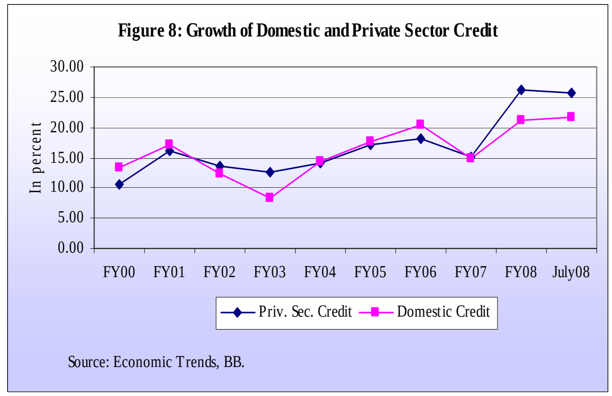


Figure 8: Growth of Domestic and Private Sector Credit

Source: Economic Trends, BB.

The movement in NDA is governed by two of its important constituents—net credit to the government and to DMBs (Figure 6). For NFA, the single most important determinant is the foreign exchange reserves (Figure 7). The accumulation of reserves is governed by the overall balance in the balance of payments. Over the last three years, overall balance has been positive: USD 338 million, USD 1493 million, and USD 604 million in FY06, FY07, and FY08 respectively.

2. Monetary Program for FY09 and Recent Developments

The monetary program of BB sets RM growth at 17.2 percent and M2 growth at 17.5 percent for FY09 compared with 19.8 percent and 17.6 percent respectively in FY08. It is presumed that the growth of private sector credit would be 18.5 percent and, as indicated in FY09 budget, net credit to the government would not exceed Tk. 135 billion in FY09. In addition, it is assumed that net credit to the non-financial public sector would be Tk. 10 billion.[6] During the year, the assumed increase in NFA would be by Tk. 56.6 billion (Tk. 41.2 billion on account of BB's balance sheet and Tk. 15.4 billion based on BoP).

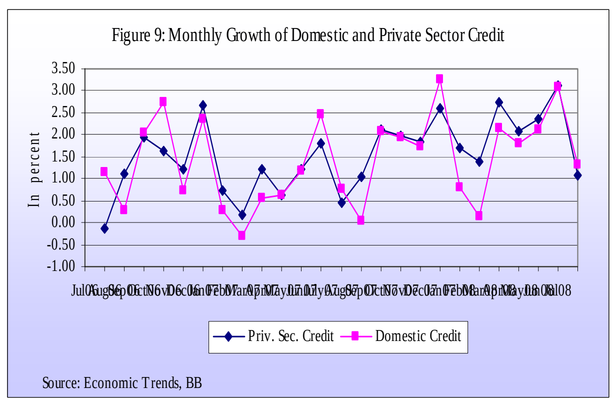


Figure 9: Monthly Growth of Domestic and Private Sector Credit

Source: Economic Trends, BB

[6] This represents fuel and related subsidy for BPC, PDB, and Petrobangla. The amount was (-)55 billion in FY08 due to adjustment of credit through issue of bond (Tk 73.23 billion) by the government in favor of BPC. Despite this adjustment, BPC borrowed around Tk. 21.0 billion in FY08.

Recent changes in related monetary aggregates are given in Table 2. It shows that although RM grew until June 2008, it slightly declined in July 2008. As for NDA, it fell in June 2008 after reaching a peak in May 2008 but marginally increased in July 2008. On the other hand, NFA reached its peak in June 2008 and declined in July 2008. In general, these monthly movements seem consistent with the seasonal pattern as indicated earlier.

Table 2: Recent Movements in Selected Monetary Aggregates

Month/year	Value (in billion Taka)			Net credit (in Billion Taka)		Forex reserve (in million USD)
	RM	NDA	NFA	Govt.	DMBs	
Jun 06	378.6	187.2	191.4	250.8	63.5	3,483.8
Jun 07	445.6	152.9	292.7	259.3	64.4	5,077.2
Dec 07	514.6	217.1	297.5	255.5	77.1	5,514.6
Mar 08	469.6	164.8	304.8	186.9	101.0	5,302.5
Apr 08	487.9	188.3	299.6	193.5	111.3	5,773.0
May 08	509.1	212.0	297.1	228.3	97.3	5,335.4
Jun 08	527.9	194.3	333.6	260.0	73.3	6,148.8
Jul 08	524.9	196.4	328.5	241.6	82.6	5,820.1
Aug 08[P]	478.6	185.8	292.8	213.1	65.8	5,965.8

Source: *Economic Trends*, BB. P= Provisional

Domestic credit has, however, expanded significantly during the period (Figure 8). Overall, domestic credit grew by 21.1 percent in FY08, highest over the last ten years and the growth rate increased to 21.6 percent (year-on-year basis) in July 2008. The growth rate of private sector credit has also been higher at 26.1 percent in FY08 which slightly declined to 25.7 percent in July 2008. The monthly movement in the growth of private sector credit also shows sustained increase especially since March 2008 (Figure 9).

On the external front, despite significant increase in trade deficit to more than USD 5.5 billion, the current account balance (CAB) showed a surplus of USD 672 million in FY08 due mainly to robust growth of remittances by more than 32 percent to USD 7.9 billion. The overall balance was recorded at USD 604 million with a total aid inflow of nearly USD 2.0 billion (up from USD 1.6 billion in FY07). Recent data show that the external sector continues to show robust performance. Total exports grew by 15.9 percent in FY08 and export growth in July 2008 is more than 4 percent over the previous month. Import payments during FY08 increased by 26.1 percent over the previous fiscal year. In terms of LC settlement, import growth (year-on-year) was nearly 32 percent in July 2008 but was lower by 6.8 percent over June 2008. The provisional figure shows that LC settled further declined to USD 1.81 billion in August 2008 from USD 1.95 billion in the previous month reflecting lower import of food products. For remittances, the growth rate was 32.4 percent in FY08. The year-on-year growth in remittances was 44.7 percent in July and 55.6 percent (provisional) in August 2008; however growth rates over previous months were 8.9 percent and (-) 10.7 percent respectively.

In general, recent developments indicate that the external sector performance is likely to become more favorable with corrections in most food commodity markets including the oil market. Among others, this would reduce the pressure on trade balance and, with expected healthy growth in remittances, it is more likely that the overall balance of payments would not be strained in the coming months. The monetary program of BB assumes NFA to grow by 15.0 percent (14.3 percent of BB) during FY09. However, if there is a potential surge in NFA, BB needs to take measures to maintain exchange rate stability and prevent appreciation of Taka resulting from reserve build up. In such a situation, BB needs also to contain resulting monetary expansion in order to prevent any inflationary pressure.

3. Policy Implications

In Bangladesh, the most immediately recognizable causes of recent inflation are the coincident increase in food (due to domestic production disruptions and world price hikes) and oil prices. Despite recent drops, the prices of both food and oil are likely to remain high in real terms for a while in the world market.

The twelve month point-to-point CPI inflation in the country increased to 10.82 percent in July 2008 from 10.04 percent in June 2008. Although food inflation declined during the month (from 14.10 percent in June 2008 to 13.92 percent in July 2008), nonfood inflation sharply rose from 3.54 percent to 5.93 percent over the period responding mainly to the upward adjustment in fuel oil prices in the domestic market. It is expected that the present downward trend in food inflation will continue in the coming months and, with a weight of nearly 59 percent of food items in the consumption basket, this will create significant moderating effect on the overall inflationary pressure. However, the increase in nonfood inflation may remain as a matter of concern especially in bringing overall inflation down significantly as noted earlier. In addition to fuel oil price adjustment, high nonfood inflation may persist in the coming months due to three major factors: (i) strong domestic demand;[7] (ii) high private sector credit growth; and (iii) high consumer spending emanating from Eid and Puja festivals.

In the domestic economy, the recent rebound of agriculture (especially *boro* rice production) and manufacturing sectors would clearly help BB in bringing inflation down from beyond its comfort level. With several favorable developments, the government also has a greater leverage on the domestic food grains market at present.[8] Thus higher domestic production and downward movement in prices of essential commodities in the global market are likely to ease domestic inflationary pressures in the coming months. Some preliminary analysis by PAU indicates that although CPI inflation for the next few months will be around the current levels, it will start moderating from the second half of FY09 in the absence of any unexpected shocks, and inflation will come down to 7.75-8.25 percent by the end of FY09.

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[7] There are multiple sources of demand pressure currently operating in the economy, such as historically observed destabilizing nature of the fiscal policy (see *Monetary Policy Review* 3(2), April 2008) fueled by record increase in current spending, rise in public sector salaries and wage/salary adjustments in other sectors, and high inflow of remittances. Moreover, with national and upazila elections scheduled in December 2008, private sector spending is likely to be higher than normal. In this context, it is also important to note that countries like India, Pakistan, Sri Lanka, and Vietnam are currently facing high rates of inflation mainly due to excessive demand pressure and high domestic liquidity expansion.

[8] Among others, the government rice stock has increased to nearly 1.2 million tons which is well above the level of 0.5 million tons during this time last year. The expectation of coming *aman* crop production appears bright as well with no substantial damage expected from flood or natural calamities. The activities in other sectors are also picking up as evidenced from upturn in import of capital and intermediate goods and private sector credit demand. Overall, production levels are likely to go up significantly in FY09 that may result in a GDP growth exceeding the fiscal year's target of 6.5 percent.

In the face of these likely developments, BB's liquidity management in FY09 has to face three major challenges: *first*, injections from high fiscal deficit; *second*, liquidity implication arising from potentially high NFA; and *third*, limiting domestic liquidity at the programmed level in the face of strong credit demand by both public and private sectors.

The FY09 monetary program takes into account a total amount of government borrowing of Tk. 135 billion as envisaged in the FY09 budget. The amount includes government borrowing of around Tk. 68 billion from BB. For ensuring stability, it would be prudent for the government to keep the deficit within the budgeted amount especially keeping in view the compulsions of increasing government spending and challenges in meeting the ambitious revenue target.

With expected good growth in exports and remittances and slow down in import payments resulting from declining food and oil prices, NFA of the banking system is likely to become a major source of liquidity expansion in FY09. This will also have implications for exchange rate stability.

As identified earlier, several factors are likely to contribute to excessive liquidity expansion in FY09. It would therefore be appropriate for BB to explore a combination of actions for managing the liquidity situation. In this respect, it would also be important to recognize that raising the policy rates is not likely to be very effective under the present situation.[9] If interest rates are raised, growth is likely to be sacrificed. But this would not have much impact on inflation since supply side factors are clearly not within BB's control. In such a situation, demand side measures will pay little dividend with growth sacrificed needlessly.

While the above may be true, it is important to recognize for policy purposes that although the root cause of current inflation lies in the supply side, the way inflation works is that, even if it has a supply side and/or external source, it starts to feed on itself after a point. At the present juncture, inflation in Bangladesh seems to have reached a similar situation. At this stage, BB needs to give clear signal and ensure that high inflation does not enter into the medium/long term expectations of the economic agents. If relatively high inflation is taken for granted, inflation would become a vicious cycle of its own. It is true that the shocks came from outside the monetary system, but what BB can do is to use its tools to contain it and ensure that it does not become a permanent feature.[10]

As a preemptive measure to limiting liquidity expansion, BB raised the repo rate from 8.50 percent to 8.75 percent on 17 September 2008 after a period of more than three years. The hike in the repo rate--the rate at which BB lends funds to the banks--has implications on other interest

[9] The experience of several countries including India, Pakistan, and Vietnam of using central bank policy rates and CRR in containing domestic liquidity and inflation indicates that such measures are largely ineffective in the present situation.

[10] In this context, it is important to consider the global developments. Despite consumption binge and mammoth current account deficit, the US has not raised interest rates in response to global inflationary pressures. On the contrary, US Federal Reserve loosened monetary policies in 2007, followed by loose fiscal policy by the US Government. With high food and oil prices to remain for some time in the global market, inflation is likely to come down eventually in response to global credit crunch. Under such a situation, the issue of equity comes to the forefront in terms of shouldering the burden of fighting globally generated inflation by raising interest rates and reducing growth by the less developed countries vis-à-vis the policies of the developed countries.

rates and the economy. As a result, loans are likely to be expensive and thus the measure would contribute to meeting the monetary policy objectives through curbing credit growth and correcting the short-term debt yield curve. In view of the favorable supply situation of food and other essential commodities at present, the rate hike is timely and could be enough to convey BB's intention of limiting undesired credit expansion and achieving the target domestic credit growth as programmed in the annual monetary program for FY09. In addition, this would contribute toward 'planning for tomorrow' especially in terms of dampening inflation expectations and moving toward price stability.

In addition, in the event of a surge in NFA and resulting threat of undue liquidity expansion, BB could proceed for sterilization using appropriate instruments. Some possible actions could be as follows:

- Continue with the practice of keeping a close watch on monetary developments especially the flow of credit to different sectors/activities. The intention would be to ensure the flow of adequate credit to productive/priority sectors and discourage credit flows to non essential and speculative uses. If necessary, BB could implement appropriate measures such as imposing higher general provision requirement on such loans to achieve the desired goals.
- Monitor the outcome of the increase in the repo rate and allow adequate time for the effects of the rate hike to be fully realized in the backdrop of improved domestic supply situation.
- In view of the close links in the movement of NDA and NFA and their pronounced seasonal characteristics, monitor their movements in tandem and take measures (e.g. through buying/selling of foreign exchange in the inter-bank market) to maintain reasonable exchange rate stability and prevent undue appreciation of Taka due to foreign exchange reserve accumulation.
- Use instruments, such as reverse repo (raising rate and volume) and BB bills (issuance of Bills especially 91-day bills), more frequently as and when needed, to mop up excess liquidity from the market. In addition, repo may be temporarily suspended or discouraged if necessary.
- Consider other alternatives for mopping up excess liquidity, such as floatation of income tax bond for tax rebate, prize bonds of higher denomination, secondary trading, and similar other options.
- Encourage the banks to divert increasing amount of remittances to investment in productive sectors.
- The FY09 monetary program includes government borrowing of Tk. 135 billion out of which Tk. 68 billion is from BB. In the event it becomes necessary to limit undue liquidity expansion, the entire amount may be borrowed from the commercial banks.

The success of the policy actions would require greater fiscal and monetary coordination to ensure clear recognition of the importance of the monetary policy stance and appropriate alignment of relevant policy parameters within the overall macroeconomic framework. In addition, bringing appropriate changes in the government's debt management strategy would be important to improve the balance between short and long term borrowing since any shift in the borrowing pattern has implications for the conduct of monetary policy.