

# Chapter 1

## The Monetary Policy Framework of the Bangladesh Bank<sup>2</sup>

### 1.1 Background

As outlined in the first issue of *Monetary Policy Review* (MPR, Bangladesh Bank, 2005), monetary policy in Bangladesh has the objective of maintaining price stability underpinned by the highest sustainable output growth, and is, therefore, formulated around inflation and output growth rates as the basic policy targets.

In light of current and unfolding developments, Bangladesh Bank (BB) has lately been evaluating and appropriately setting the GDP growth projections for monetary policy formulation. The earlier issue of MPR (BB, 2005) had forecasted real GDP growth to lie in the 6.3 to 6.8 percent range for FY06, which was also reiterated in the first issue of the Monetary Policy Statement issued by BB in January '06 (BB, 2006), and correspondingly FY06 monetary policy framework had taken 6.8 percent as the target growth rate.<sup>3</sup> Based on a disaggregated sectoral analysis, the current issue of MPR projects FY07 growth to be in the range of 6.6 to 7.1 percent (see Chapter 5). The forecast is consistent with the growth target (between 6.5 and 6.8 percent) used by BB in the monetary program for FY07.

In monetary policy formulation, the target level of CPI inflation is chosen taking into account the recent inflation history, current price developments, and the unfolding domestic and external shocks that may impact on the current trend of domestic inflation. Accordingly, the first issue of MPR (BB, 2005) predicted the 12-month average increase in the price level in FY06 unlikely to exceed 7.0 percent, a view also endorsed by MPS of January '06. A similar, but more detailed disaggregated analysis offered in Chapter 5 of the current issue of MPR projects FY07 average inflation to moderate to the range of 6.20-6.70 percent. The expected gain on the inflation front in FY07 is premised on the continuation of Bangladesh Bank's policy of restrained monetary and credit expansion, a sobering outlook of world energy prices, the cautious policy stance of the US Federal Reserve and the European Central Bank (ECB), and the strengthening of the Bangladesh foreign exchange reserves and hence enhanced currency stability.

Should BB target even lower inflation? As MPS (BB, 2006) has observed, excepting the administered energy prices, consumer prices in Bangladesh are largely market driven, and, in an era of growing economic integration, domestic prices of tradables in emerging economies are increasingly following global price trends. Consequently, the major divergence between domestic and global inflation trend arises out of the price behaviour of non-tradables. Consumer price inflation in

<sup>2</sup> Edited by the Resident Economic Adviser based on an early draft on sections of the chapter prepared by Dr. Md. Habibur Rahman, and in light of discussions held both within PAU and BB.

<sup>3</sup> Note that these figures turned out to be very close to the eventual provisional BBS estimate of FY06 GDP growth of 6.7 percent.

developing economies like Bangladesh over the medium term can thus be expected to be somewhat higher than in mature industrial countries as the historically lower prices of non-tradables gradually increase with rising income.

### 1.2 Framework of Monetary Policy<sup>4</sup>

Conceptually, the monetary policy framework refers to a logical and sequential set of actions that a central bank has to design, where the instruments (i.e., tools) and goals are at the two ends with the targets being in between. In current practice, monetary policy decisions typically involve setting the interest rate on overnight loans in the money market. The successful prediction of successive short-term rates eventually allows the private sector to gauge the longer term interest rates, which essentially guide private investment decisions as well as household asset behaviour, albeit with a time lag. The impact of monetary policy on aggregate demand is therefore both indirect and delayed.

While movements in the short-term rates are expected to be passed on to the entire structure of deposit and lending rates, changes in the latter rates affect economic activity and inflation with much longer lags. There are several distinct channels through which changes in interest rates ultimately affect prices (and hence inflation) in the economy; these are illustrated in Figure 1.1. Over and above, the impact on savings and investment behaviour, interest rates can affect the supply of credit, asset prices and the exchange rate, all of which may eventually affect the level of aggregate demand. Developments in aggregate demand, in conjunction with developments in aggregate supply, in turn, have an effect on the level of inflation in the economy. Inflation is also influenced by the effect that changes in interest rates have on imported goods prices, via the exchange rate, and more generally through their effect on inflation expectations in the economy.

Recent research at the Bangladesh Bank however lends support to the prior belief that the pass-through effects of the overnight market rates onto the structure of deposit and lending rates are minimal in the Bangladesh context (Ahmed and Islam, 2006).<sup>5</sup> Primary reason behind this phenomenon is the disconnect between returns on short-term open market instruments (including the 28- and 91-day T-bills) vis-à-vis those on commercial bank deposits of comparable maturity. Development of modalities that permit financial intermediaries to retail the short term money market instruments to individuals and firms, and activation of secondary trading in government bonds of all maturities are innovations that may contribute towards bridging the above cited gap. The eventual yield pattern on government bonds would then resemble the returns on commercial bank (or NBFIs) deposits of comparable maturity on a risk adjusted basis.

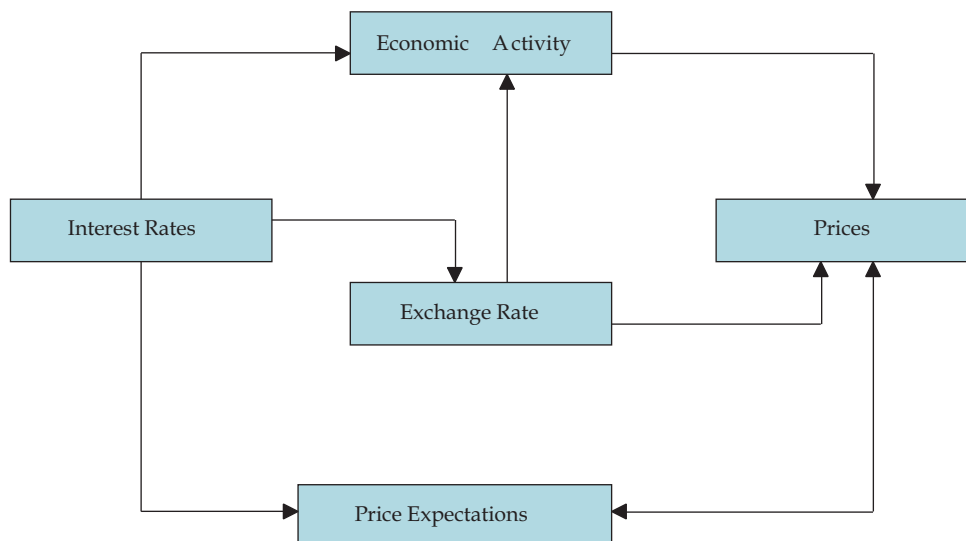
While the reverse repo and repo operations are routinely employed as primary monetary policy instruments, and these contribute to the smooth functioning of the inter-bank call money market, as implied above, the overnight market rates appear to have little pass-through effect onto the regime of rates that affect

<sup>4</sup> An extensive analysis of the monetary policy framework suitable for Bangladesh, covering a broad range of issues, namely monetary programming versus inflation targeting methodologies and the Taylor's rule and its variants, was offered in the first issue of MPR (BB, 2005), and will therefore not be repeated here.

<sup>5</sup> The study found that the 1-2 day repo rate does not have any material effect on either the "weighted average deposit rate", or, the "weighted average savings deposit rate", or, on the "1-2 year fixed deposit rate".

aggregate demand. However, with these instruments, BB simultaneously targets the available liquidity flow in the market, routinely mopping up excess liquidity and injecting it as appropriate.<sup>6</sup> Hence these as well as the Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) are primarily used to influence the quantity of credit available in the banking system. It should be noted that since October '05, neither CRR nor SLR has been altered.

**Figure 1.1 : Interest Rate Transmission Channels**



A recent development in the monetary policy operation at BB has been a change in the auction procedure. Up to August 2006, T-bills and government bonds were auctioned off with the twin objectives of facilitating government borrowing from the banking sector as well as monetary policy operation of BB. From September 2006, a dedicated set of instruments has been earmarked for each function; T-bill and government bond auctions now only perform the task of government debt management. Correspondingly, 30-day and 91-day "Bangladesh Bank Bills" (BB bills) have been re-introduced (previously used in the '90s) in order to perform monetary policy operation, alongside repo and reverse-repo auctions. The re-introduced BB bills will henceforth be considered as eligible securities for the holding of SLR and CRR by banks, and also be used for the inter-bank *repo* operation.

A major aspect of the BB monetary policy initiative is the development and implementation of the *annual monetary program* (AMP), which delineates the growth of *reserve money* (RM) and *broad money* (M2) as intermediate targets over the entire fiscal year, based on the targeted inflation and projected GDP growth rate while simultaneously tracking other credit and deposit aggregates. AMP is continually monitored and adjusted in light of unfolding events. Since the analytical underpinnings of the relationship between monetary aggregates and inflation have been discussed in some detail elsewhere, there is no need for repetition here.<sup>7</sup> Suffice it to say that the positive correlation between inflation

<sup>6</sup> In FY06, the prevailing situation dictated that no repo operation be held except occasionally (e.g., in the months of December and March, and then again only for terms of 3-9 days, and none at all for the 1-2 day term).

<sup>7</sup> See BB (2005, pp17-19) and BB (2006).

and growth rate of money stock holds only over the longer term, and significant short term departures between the two may emerge due to continuing financial innovations and deepening in emerging economies. Nevertheless, tracking the monetary program and its components on a regular basis, for example, allows the Central Bank to monitor the growth rates of currency in circulation and demand deposits as early indicators of inflationary bias. Similarly, growth rate of domestic (i.e., public and private sector) credit vis-à-vis (a) the program target, (b) the expected GDP growth potential, and, (c) the rate of deposit mobilization may each indicate prevalence of excess demand induced by inflationary expectations. Such a regular scrutiny allows BB to follow up with corrective measures as appropriate in a timely manner as has been practiced in the recent past (BB, 2006).<sup>8</sup>

### 1.3 Conduct of Monetary Policy

As discussed above, a medium-term objective of monetary policy is to control inflation. As such, announcing the target rate of inflation in advance for the coming fiscal year permits it to serve as an anchor for private sector inflation expectations. The inflation target is typically understood to be an indicative target band that will be realizable over the medium term, so that unfolding events may be accommodated within the band and within the time frame. Nevertheless, the determination of the target band may suffer from measurement errors, inherent uncertainties involved in forecasting, and lags in the effects of monetary policy on the real activities.

Adverse climatic conditions (e.g., drought, flood and monsoon), unanticipated external trade environment and other transitory phenomena rob the headline CPI inflation of its credibility as a short or medium term guide in the operation of monetary policy. Accordingly, as the previous issue of MPR pointed out, identifying a measure of ‘core’ inflation can be a useful step even though the overall target would be to control the headline CPI inflation simply because monetary policy is better able to affect the core inflation. However, there is as yet no standard measure of core inflation used either by BB or the Bangladesh Bureau of Statistics (BBS). This is a serious shortcoming. Initiatives are, therefore, being taken by BB researchers to propose suitable measures of core inflation in the Bangladesh context. A first such attempt focuses on the popular ‘exclusion’ and ‘trimmed mean’ approaches using monthly data for the period of 2001:7 to 2006:5 (Shahiduzzaman, 2006).

The above cited study finds the superiority of trimmed mean measures over the exclusion measures of core inflation in Bangladesh (Table 1.1). In general, core inflation measures using the exclusion method remain above the mean of CPI inflation, and the mean core inflation measures using trimmed mean method remain a little below the mean of CPI inflation. The mean value of ‘CPIT2208’ is closest to CPI for monthly inflation rates over the horizon analyzed here.<sup>9</sup> In terms of the absolute variability, the trimmed mean measures have lower standard deviation than the exclusion-based measures, and, according to Root Mean Square Error (RMSE), trimmed mean measures better track the trend inflation. From Table 1.1 it is evident that, unlike many advanced country cases,

<sup>8</sup> The current version of the FY07 monetary program is appended to this chapter for illustration.

<sup>9</sup> CPIT2208 is a trimmed mean measure of inflation constructed by eliminating extreme parts of the distribution of price changes. See Shahiduzzaman (2006) for more details.

core measures developed here do not lead to significantly lower inflation rates vis-à-vis the headline inflation. In other words, the more volatile components do not necessarily suffer from high mean inflation than the overall index.

**Table 1.1 : Mean and Standard Deviation of Monthly Inflation Rates**

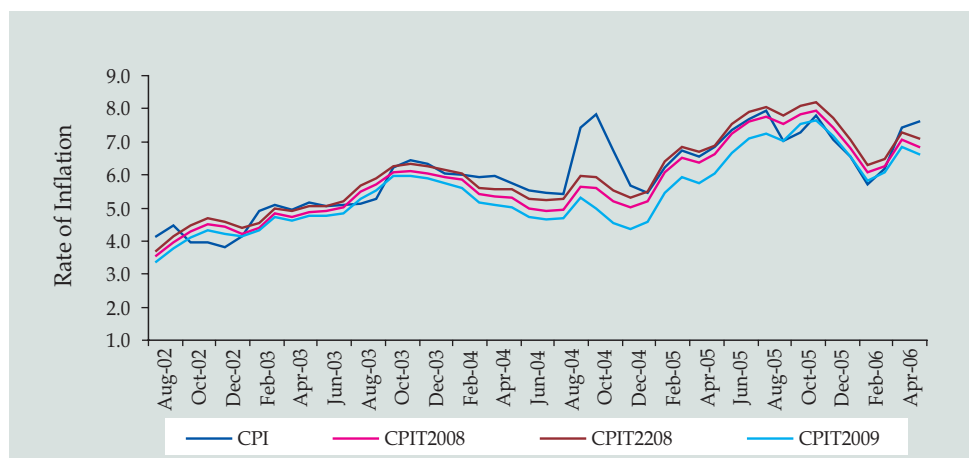
Price Indices	Mean	Std . Dev.	RMSE
CPI	5.69	5.88	5.73
CPIXV	5.78	4.30	4.31
CPIXR4	6.03	4.28	4.37
CPIXC4	5.98	3.96	4.09
CPIT2208	5.63	3.33	3.23
CPIT2009	5.13	3.26	3.15
CPIT2008	5.41	3.29	3.17

Shahiduzzaman (2006), p.23.

"CPIXV" is the CPI excluding most volatile components that are found more than three times as variable as compared to that of overall CPI, "CPIXR4" is CPI excluding rice and 4 most volatile items, "CPIXC4" is CPI excluding cereal and 4 most volatile items. "CPIT2208", "CPIT2009" and "CPIT2008" are three alternative trimmed mean measures.

Figure 1.2 plots the point-to-point inflation for CPI and the three trimmed mean measures. It is seen that the constructed measures reduce the volatility and may reflect both the current dynamics and underlying trend of price development more realistically than the headline inflation. One inherent drawback of the trimmed mean and exclusion based measures is that along with volatility a part of the trend may also be eliminated.

**Figure 1.2 : Point-to-point Inflation : Headline vs. Trimmed Means (Aug' 02-May 06)**



Shahiduzzaman (2006), p.22.

Hence more suitable measures can be developed once the sample period can be extended and the level of aggregation of components is reduced. Further, newly proposed methods such as "dynamic factor inflation" (DFI), where the persistent trend can be identified by disentangling the "common" from the "idiosyncratic" part of various CPI components, should also be explored.

### 1.4 Further Issues

One major shortcoming in the conduct of monetary policy is the non-availability of quarterly GDP growth estimates, which makes it difficult to adequately monitor the pace of real activity, and therefore undertake necessary revisions of the policy regime. Strengthening the capabilities of BBS towards regular estimation and release of reliable quarterly GDP data has therefore assumed priority, a point that has also been made elsewhere (BB, 2006).

#### References

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Table 1.2 : Bangladesh Monetary Program, December 2004-June 2007

Components	June-05	Sept-05		Sept.05	Dec-05	Dec-05		Feb-05	Mar-05		June-06			Sept-06	Dec-06	Mar-07	Jun-07
	Actual	Prog.	Actual			Rev. Prog	Actual	Actual	Rev. Prog.	Actual	Rev. Prog.	Proj.	Actual	Program FY 07			
(End of Periods: In billions of taka)																	
Net Foreign Assets	186	187	180	195		181	185	184	183	196	203	215	218	220	227	234	255
Bangladesh Bank	130	134	121	136	127	122	132	132	126	142	140	153	155	153	155	156	172
Commercial banks	55	53	59	58		60	53	53	56	54	63	62	63	67	72	77	83
Net Domestic Assets	1,328	1,337	1,377	1,338		1,435	1,460	1,480	1,466	1,484	1,528	1,536	1,588	1,653	1,687	1,714	1,817
Domestic Credit	1,431	1,439	1,495	1,441		1,562	1,571	1,599	1,600	1,619	1,675	1,674	1,732	1,797	1,831	1,864	1,975
Net Credit to Central Government	237	236	246	222	259	259	254	258	277	247	302	289	296	296	300	316	360
Credit to other nonfinancial Public Sector	86	78	104	88		109	126	117	111	127	112	112	127	127	127	127	123
Credit to Private Sector	1,107	1,125	1,145	1,130		1,194	1,191	1,224	1,212	1,246	1,261	1,273	1,309	1,374	1,404	1,422	1,492
Other items, net 1/	-102	-103	-119	-103		0	-110	-119	-134	-136	-147	-138	-144	-144	-144	-150	-158
Broad Money(M2)	1,514	1,524	1,557	1,533		1,617	1,645	1,664	1,649	1,680	1,730	1,751	1,806	1,873	1,914	1,948	2,072
(Change since start of fiscal year in billions of taka)																	
Net Foreign Assets	23	8	-6	9		-4	-1		-3	10	17	29	32	2	9	16	37
Net Domestic Assets	194	35	48	10		107	132		138	156	199	208	260	64	99	126	229
Domestic Credit	213	37	64	10		131	140		170	189	242	244	301	65	99	132	243
Net Credit to Central Government	34	-4	9	-15	21	22	16		40	9	63	52	59	0	4	20	64
Credit to other nonfinancial Public Sector	18	2	17	2		22	39		24	41	25	25	40	0	0	0	-4
Credit to Private Sector	160	39	38	24		87	85		105	139	154	167	202	65	95	113	183
Other items, net	-18	-3	-16	-127		-24	-8		-32	-33	-43	-36	-41	0	0	-6	-14
Broad Money(M2)	217	43	43	19		103	131		135	166	216	237	292	67	108	142	266
(Year on year percent change)																	
Net Foreign Assets	14.2	0.2	-3.4	4.3		-5.8	-3.8		-6.0	0.8	9.2	15.7	17.2	22.1	22.5	19.2	17.0
Net Domestic Assets	17.1	16.5	20.0	16.7		18.3	20.4		20.6	22.0	15.0	15.7	19.6	20.1	15.6	15.5	14.4
Domestic Credit	17.4	16.6	21.1	16.9		18.9	19.6		19.7	21.2	16.9	17.0	21.1	20.2	16.6	15.1	14.1
Net Credit to Central Government	16.9	24.8	30.4	17.6		24.4	21.6		38.1	22.8	26.5	21.8	24.8	20.0	18.5	28.0	21.5
Credit to other nonfinancial Public Sector	25.8	14.6	51.8	29.3		60.9	85.7		56.8	79.7	29.4	29.4	46.7	22.2	1.0	-0.1	-2.8
Credir to Private Sector	17.0	15.2	17.2	15.7		15.1	14.9		13.8	17.0	13.9	15.0	18.3	20	17.8	14.1	14.0
Other items, net	22.0	17.7	36.1	17.7		26.6	10.4		11.3	12.6	41.5	34.8	40.2	21.5	30.5	10.5	10.1
Broad Money(M2)	16.7	14.2	16.7	14.9		15.0	17.1		16.9	19.1	14.3	15.7	19.3	20.3	16.3	16.0	14.7
(In billions of taka, unless otherwise noted)																	
Memorandum items :																	
Broad Money Multiplier	5.53	5.60	5.56	5.41		5.38	5.28		5.35	5.35	5.44	5.41	5.32	5.2	5.19	5.24	5.36
Broad Money Velocity	2.45	2.52	2.65	2.50		2.44	2.39		2.45	2.41	2.40	2.37	2.31	2.28	2.3	2.33	2.26
Net Domestic Financing of Central govt. (since beginning of FY)	63	8	14	-3		32	25		55	33	83	83	86.39	8	21	45	112
Banks	34	-4	9	-15	21	22	16	24	40	9	63	52	58.79	0	4	20	64
Nonbanks	29	12	5	12		10	9		15	24	20	31	27.59	9	17	26	48

Sources : Data provided by the Bangladeshi Authorities and Fund staff estimates and Projections.