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Inflation and the Poor in Bangladesh

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1. Background

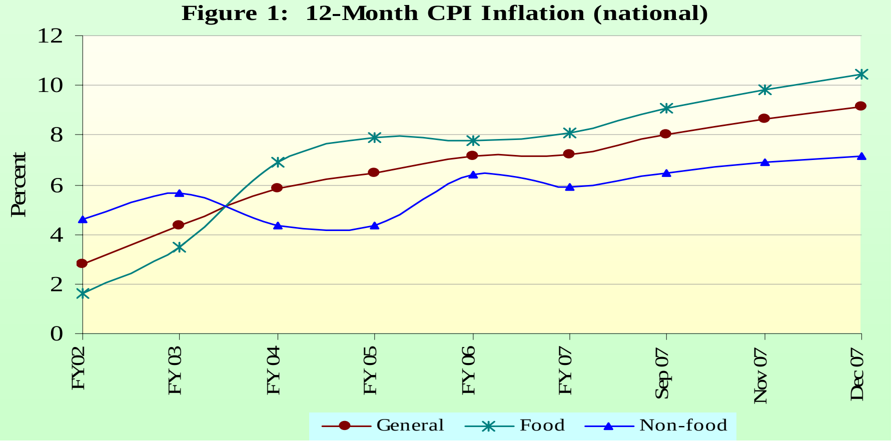
In Bangladesh, development challenges are such that the macroeconomic framework needs to ensure both reasonable macroeconomic stability and rapid economic growth necessary to achieve the MDGs and other development goals. For this, it is important to pursue a fiscal policy that fosters rising public and private investments and increases public revenues; an exchange rate policy that promotes export competitiveness and currency stability; and a monetary policy that supports price stability along with economic growth and export promotion.

In recent years, the Bangladesh economy has experienced a rising rate of inflation that poses a major threat to maintaining macroeconomic stability. This has also raised an alarm across all sections of the population relating to the adverse impact of inflation on the economy, especially its negative welfare consequences on different socioeconomic groups particularly on the poor and vulnerable groups. This note analyzes the major characteristics of the current inflationary episode in the economy along with its probable impact on different population groups and draws some policy implications.

2. Recent inflationary trend and its important characteristics

After experiencing a low rate of CPI inflation at an average rate of less than 2.5 percent during FY01-FY02, the inflation rate increased to 4.4 percent in FY03 and continued with its rising trend to reach 7.2 percent in FY07 (Figure 1). Recent statistics show that the 12-month average inflation rate has further risen to 9.1 percent in December 2007.

Figure 1: 12-Month CPI Inflation (national)



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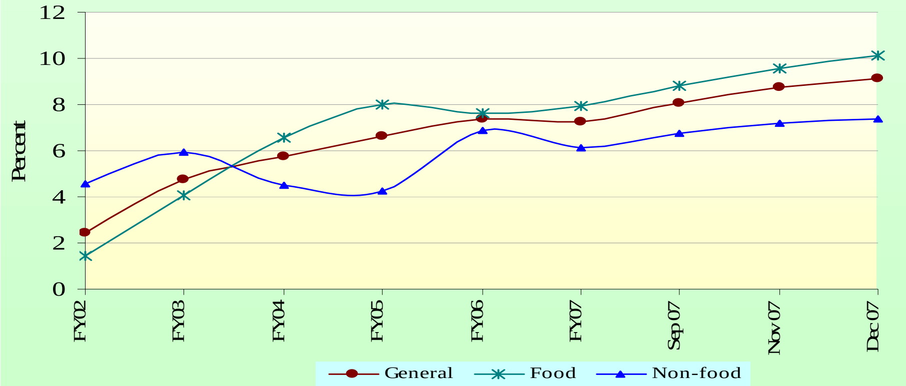
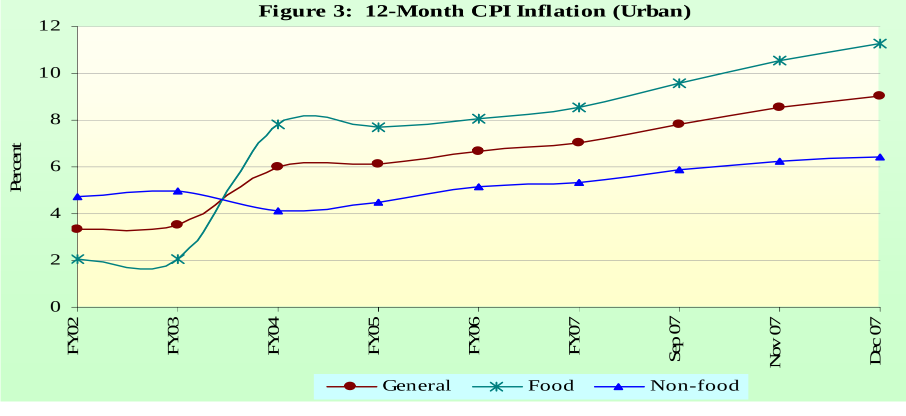
One significant characteristic of the current inflationary trend is the rising gap between food and nonfood inflation. While the average food inflation was 1.5 percent compared with the nonfood inflation rate of 3.8 percent in FY01-FY02, food inflation reached 8.1 percent outstripping the nonfood inflation rate of 5.9 percent in FY07. The gap between 12-month average food and nonfood inflation rates has further increased in recent months, reaching 10.5 percent for food and 7.1 percent for nonfood inflation in December 2007 (Figure 1).

Figure 2: 12-Month CPI Inflation (Rural)



Another important characteristic of the inflation rate, which is likely to have significant distributional implications on different population groups, is its difference in terms of rural and urban areas (Figures 2 and 3). During FY01-FY02, average inflation rates in rural and urban areas were very similar: 2.3 percent in rural areas and 2.4 percent in urban areas. During the period, the difference between food and nonfood inflation was, however, more pronounced and had contrasting values in rural and urban areas. The average food inflation was 1.3 percent in rural areas while the same was 2.0 percent in urban areas; while, in the case of nonfood inflation, the rates were 4.2 percent in rural areas and 2.9 percent in urban areas. In FY07, the average food inflation was 7.9 percent in rural areas compared with 8.5 percent in urban areas. In the case of nonfood category, rural areas experienced an inflation rate of 6.1 percent in FY07 while the rate was 5.3 percent in urban areas. In December 2007, 12-month average food inflation was 10.1 percent in rural areas and 11.3 percent in urban areas; while the nonfood inflation rates were 7.4 percent and 6.4 percent in rural and urban areas respectively. This shows that, in general, the urban people has been facing a higher rate of food inflation relative to the rural population while the picture is opposite in the case of nonfood inflation.

Figure 3: 12-Month CPI Inflation (Urban)



In terms of different commodity groups in the nonfood bundle, the costs of several items such as housing, household items, and medical care and health services have shown more rapid increase in the recent period, especially in the rural areas. In addition to the possible squeeze in expenditure on basic nonfood items resulting from high food inflation, such price movements can have significant adverse implications not only on the current quality of life and human welfare but also on future human development, especially of the poor.

3. Some implications of rising inflation

Despite the claim by the traditional theory that there is a trade off between inflation and growth (alternatively between inflation and unemployment) and inflation control is the most important objective of monetary policy, recent evidence shows that such relationships are somewhat elusive and unstable. It is also emphasized that even if such relationship exists, it is more likely to be non-linear and the desired rate of inflation can change in space and over time. The conclusion is that even though high inflation can harm the poor, low inflation can also have similar results.[1]

In Bangladesh, it is important to recognize the costs of inflation for the poor in terms of both macroeconomic and distributive costs, such as level and distribution of income and the costs for the poor of inflation stabilization policies in terms of growth and employment. The traditional claim is that inflation is especially costly for the poor, since their purchasing power is eroded especially for those groups whose earnings are fixed in nominal terms, their assets are devalued more as they hold a larger share of their assets in liquid form compared with the non-poor, and it is difficult for the poor to hedge against inflation due to their limited access to the financial system.

In Bangladesh, these losses are probably true but this does not give the full picture. *First,* if the real wage falls due to inflation, employment should rise and employment effect of inflation could outweigh the real wage effect on poverty especially since the inflation (real wage) elasticity of poverty is likely to be less than the output (employment) elasticity of poverty.[2] *Second,* many poor people, especially the extreme poor in rural areas, are relatively less exposed to the monetary economy than the urban population. It may be argued that although inflation erodes the poor's wage income, the confiscation of their savings in not specially serious as they hold little cash. *Third,* the poor are often net debtors, and inflation possibly reduces their debt burden. *Fourth,* since the relative price of food is increasing through inflation in Bangladesh, at least some of the poor who are net food producers might be benefiting. However, inflation makes net purchasers of food among the poor as well as the middle class especially those having fixed incomes in monetary terms vulnerable because the middle class is highly dependent on monetary

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[1] See, for instance, Bruno, M. "Does Inflation Really Lower Growth?" *Finance and Development,* 32(3), 1995; Bruno, M. and W. Easterly, "Inflation and Growth: In Search of a Stable Relationship", *Federal Reserve Bank of St. Louis Review,* May-June 1996; Pollin, R. and A. Zhu, *Inflation and Economic Growth: A Cross-Country Non-Linear Analysis,* PERI Working Papers Series No. 109, Department of Economics, University of Massachusetts, Amherst, 2005.

[2] One study by Garuda using pooled cross section data for 85 countries reports that the inflation elasticity of the poor's income is 0.03 in contrast with an output elasticity of 0.94. See, G. Garuda, "The Distributional Effects of IMF Programs: A Cross-Country Analysis", *World Development,* 28, 2000.

exchanges, has little surplus cash, and does not have much access to own produced basic goods.

Expenditure pattern and inflationary implications: The distribution pattern of consumption expenditure for food and nonfood items in rural and urban areas in 2005 shows the overwhelming dominance of food items. The average share of food items is 58.6 percent in rural areas; while the share is 45.2 percent in urban areas.[3] These shares of food items, moreover, remain at high levels across different decile groups; declining slowly from 68.3 percent for the bottom 5 percent to 61.7 percent for the 8th decile in rural areas; and from 66.7 percent for the bottom 5 percent to 51.0 percent for the 7th decile in urban areas. Moreover, the share of cereals (mostly rice) in total food expenditure is high; 42.3 percent in rural areas and 31.3 percent in urban areas. The above shows that, although current trend shows lower food inflation in the rural areas compared with the same in the urban areas, the impact of food price inflation on the rural people could be significant in view of the high weights of food items in their consumption basket. Moreover, the burden increases for the lower income groups as these groups spend a larger share of their budget on food.

Benefit of increasing food prices: The welfare gain (or loss) of different income groups, especially the producers of food crops, resulting from increasing food prices is a contentious issue in Bangladesh. The majority of the farmers in the country are rice producers and their welfare, no doubt, is significantly determined by returns to rice production. Moreover, the variability of returns from crop production is high, especially in the *aus* and *aman* seasons, mainly due to frequent incidence of floods and other natural disasters (such as two consecutive floods in July-September 2007 and the cyclone in November 2007). Similarly, production in the *boro* season critically depends on timely and uninterrupted availability of required quantity of fertilizer, diesel, electricity, high quality seeds, agricultural credit, and other inputs by the farmers. In this context, it is also important to highlight that the overwhelming majority of the farmers in Bangladesh belong to small and marginal category who own and operate small pieces of land. In 2005, about 90.5 percent of the rural households had owned land of less than 2.5 acres; while 72.9 percent had less than 1.0 acre. The distribution of operated land is also very similar: 90.3 percent operate less than 2.5 acres and the operated land for 71.2 percent is less than 1.0 acre. This shows that the vast majority of the crop producers in Bangladesh, including the rice producers, are small and marginal farmers and they mostly constitute net purchasers of food items, especially rice.

In recent years, prices of food commodities, especially that of rice, have been increasing in the country. The average retail price of fine quality rice in Dhaka city rose by 41 percent in December 2007 over its average value in FY07; while the increase in the case of coarse rice over the same period was by 33 percent. The prices of other essential food commodities experienced similar increases. In the rural areas, retail prices of rice and other major food commodities have also shown similar trends.

The average price of rice at the producers' level, however, increased at a slower rate; by less than 12 percent between January 2005 and July 2007, with little fluctuations around the

[3] Similar shares were 59.3 percent in rural areas and 44.6 percent in urban areas in 2000. See, *Report of the Household Income and Expenditure Survey 2005,* BBS, 2007.

modestly rising trend. On the other hand, producers' prices of other major agricultural commodities, especially seasonal products and vegetables, showed increasing but more fluctuating price movements.

The increase in the market price of rice is likely to have different implications on various population groups in the country. An analysis of the value chain of domestically produced rice in Bangladesh shows that, on average, around 44 percent of the unit price paid by the consumers is attributed to production and processing costs, 19 percent goes as margin to the producers, nearly 24 percent is appropriated by the millers and wholesalers, 12 percent goes to the retailers, and less than 1 percent goes to local traders. In the case of imported rice, import cost accounts for 85 percent, while 5 percent is retained as margin by the importers, and less than 10 percent goes as wholesale and retail margins (Table 1).

Table 1: Value chain for domestically produced and imported rice in Bangladesh

(percent of unit price)

Production/marketing stage	Participating agents/activities	Percent of unit price paid by consumers	
		Domestically produced rice	Imported rice
Production/ Import and local marketing	Production/processing and import cost	44.3	85.2
	Producers/ importers	19.2	5.3
	Local traders/intermediaries	0.7	…
Milling and trading	Millers and wholesalers	23.6	…
	Retailers	12.2	9.5*
Total		100	100

*Includes both wholesale and retail margins.
Source: CPD

The above shows that, on average, less than a fifth of the price paid by the consumers accrues to the domestic rice farmers as margin. The important point, however, is that the above margin goes to the producers only on the price at which they actually transact in the market. Since the vast majority of the rice producers in the country belong to small and marginal farmer groups, most of them have little, if any, marketable surplus. Moreover, they usually sell the surplus immediately after the harvest to meet other pressing needs; and even if they do not have any surplus, they usually sell a part of their production to meet such demands and purchase rice later on presumably at higher prices. This shows that the benefit of higher rice prices can accrue to the majority of the rice farmers only if rice prices are high in the harvesting seasons; while any subsequent increase in rice prices in the retail market mostly benefits the millers, wholesalers, and the retailers.

In this context, it is also important to note that, since more than 90 percent of the farmers including the rice cultivators, belong to the small and marginal category; the vast majority of the rural people including the landless rural laborers and other disadvantaged groups are net purchasers of rice in the country. In the urban areas, the share of households who belong to the net purchasers of rice category and is dependent on the market is likely to be higher. The above shows that any price increase of domestically produced rice could bring benefit to the majority of the rice growers through providing a share of higher prices to them only when reasonable and competitive rice prices are maintained after harvest. The gain resulting from any subsequent rise in rice prices in the retail market largely accrues to the millers, stock holders, other dealers, and probably a few large rice producers without much benefit to the majority of the small rice producers who form the overwhelming majority. In the case of imported rice, the margin from higher retail prices is shared between the importers and the wholesalers and retailers. On the other hand, since the vast majority of the population in both rural and urban areas are net purchasers of rice, this large group especially the poor faces significant disadvantages and real income erosion when rice price increases.

The increase in prices of most other domestically produced food crops, especially vegetables, has strong seasonal dimensions. The prices of these commodities usually show wide fluctuations depending on market availability and temporary shortages and disruptions in the supply chain. While the major share of higher prices in the retail market is normally appropriated by the intermediaries, a small share probably percolates down to the producers facilitated by 'imperfect' adjustments in producers' prices in line with retail price changes. The producers, even the small ones, are able to derive the benefit mainly due to the practice of harvesting and selling in small lots over a period. The major impediment, however, is the weak market (including lengthy and often imperfect supply and transport networks) and its disjointed chain that create supply-demand mismatch at the local level leading to gluts in supply especially in the peak season and distress sells and wastages (this is especially true for bulk, low value, and perishable products) in the absence of preserving and processing facilities.

Inflation and income adjustment of the poor: One obvious consequence of inflation is the erosion of real income of the people resulting from the general increase in prices. The burden of income loss, however, differs across different income groups. No doubt, the household groups who are employed in the formal sector and whose salaries/wages are fixed in nominal terms and are re-fixed periodically are the worst sufferers. The same is true for those employees in the informal sector who have income fixed in nominal terms. In Bangladesh, a major concern, however, is the inflation-induced loss of real income of the poor.

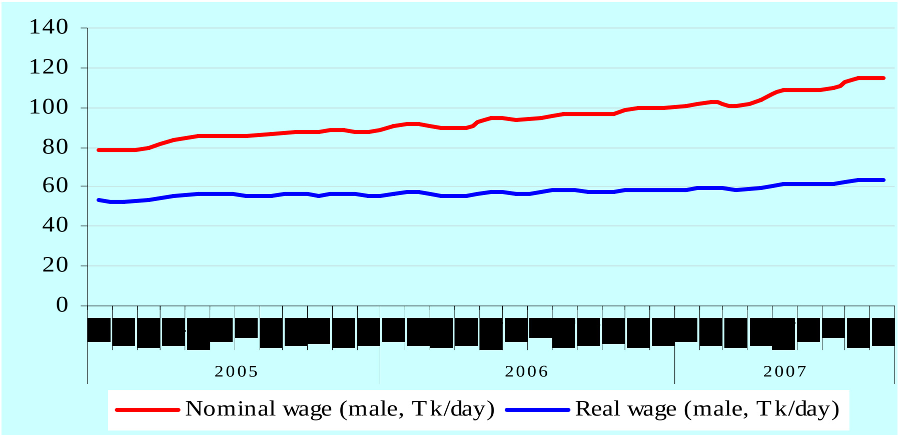
While assessing the impact of inflation on the poor's income, it is important to keep in view that the poor is not a homogeneous group and they derive income from a variety of sources. The livelihood activities of the poor are diverse and their sources of household income are multiple, often involving subsistence and home-based production and participation in the low-remunerative activities in both formal and informal economy.[4] The Household Income and Expenditure Survey (HIES) 2005 shows that, in the rural areas, the poor mostly consist of wage-labor based workers in agriculture and other nonfarm sectors, and other low-paid workers in production, services, and other activities. In the urban areas, the profile of the

[4] In terms of occupation, agricultural labor households have a high incidence of poverty as do non-agricultural casual and unskilled worker households. According to HIES 2000, in both rural and urban areas, the incidence of poverty is significantly high (75 percent and 67 percent respectively) for the households headed by casual wage laborers. Of the total number of the poor, 46 percent in the rural areas and 36 percent in the urban areas belong to this category. Households whose heads are self-employed in agriculture and non-agriculture sectors, account for 40 percent and 35 percent of the poor in rural and urban areas respectively. Of the remaining poor, salaried employment accounts for 6 percent in the rural areas and 20 percent in the urban areas, while 8 percent in the rural areas and 9 percent in the urban areas belong to unemployed/not working category. The income profile shows a high reliance on daily wage labor as the major source of income of the poor households. For the poorest 20 percent households, daily wage income provides nearly half of their total income.

poor is very similar with daily wage laborers forming the majority. This shows that, since labor is the only major asset of the poor, the return to labor is the major source of their income.

In the face of inflation, it is important therefore to examine whether the laborers are able to adjust the wage rate in order to make up, even if partially, for the loss in real income. In this note, we have examined the trend in daily wage of agricultural labor (Figure 4). In practice, daily wages of unskilled workers (which is relevant to the poor) in other sectors follow similar trends.

Figure 4: Changes in agricultural wages



From the figure, it can be seen that the daily agricultural wage rate in real terms over the period from January 2005 to September 2007 has not declined, rather it has shown a slightly increasing trend. This shows that agricultural laborers, who constitute the largest poor group in the country, usually turn out successful in maintaining the level of their daily real wage almost unchanged through upward adjustment in the nominal wage rate without any substantial time lag.[5] One factor that seems to facilitate such quick indexation of the nominal wage rate to inflation is the prevailing characteristics of the agricultural labor market that ensure flexibility and permit almost daily wage bargaining keeping in mind the reservation wage of a minimum quantity of the wage good (rice). A similar behavior may also be noticed in the informal labor markets that set the daily wage rates in construction, services, and other low-paid activities in which the poor are the major participants.

The evidence on income adjustment thus indicates that the poor day laborers in Bangladesh have some ability to at least partially revise their nominal wage income in a quick manner to compensate for the loss in real income due to inflation. This shows that nearly half of the poor in the rural areas and more than one-third in the urban areas can negotiate an upward adjustment in their major source of earning, the wage component of household income, in the face of inflation and therefore can somewhat protect themselves against the onslaught of inflation although the net welfare impact could go either way since they would probably

[5] For instance, this is often made possible through the pursuit of the widely used practice of setting nominal wage rate in many locations keeping in view the price of rice in the local market. This not only protects the real income of the poor day laborers but also ensures the access to a minimum quantity of the wage good (rice).

receive higher prices for some of the commodities that they sale (e.g. household production items) while they would pay higher prices for many of their purchased goods. On the other hand, most of the components of income and expenditure of the poor households belonging to the self-employed category, who constitute more than one-third of the poor households in both rural and urban areas, are affected in diverse ways so that the net impact of inflation is difficult to predict a priori. The welfare of the salaried poor households, though constitute only around 5 percent of the rural poor households but around a fifth of urban poor households, are more likely to be negatively affected since their real income is eroded by rising inflation while they pay higher prices for purchased goods. The remaining major poor group comprising nearly 10 percent of the poor households in both rural and urban areas belongs to unemployed/not working category households and these households no doubt become extremely disadvantaged with rising inflation.

4. Conclusions and policy implications

In Bangladesh, the persistent increase in the rate of inflation since FY03, especially the rise in food prices, seems to be the outcome of both supply and demand side factors. A recent study by the Policy Analysis Unit (PAU) of the Bangladesh Bank identifies several short and long term factors, including supply shortages of essential commodities due to disruptions in domestic production resulting from natural disasters and other factors; persistent rise in world market prices of food and other commodities that Bangladesh imports; high expected inflation; depreciation of the exchange rate; and others which contribute to generating inflationary pressure in the economy.[6] The results highlight the importance of prudent supply management in a situation when the Bangladesh economy is becoming increasingly integrated into the global economy.

Under the present situation, it is important to pursue specific direct measures to dampen inflationary pressures in the economy resulting from supply shocks and other events; instead of putting the burden of keeping inflation at low levels on demand management policies alone. In view of recent developments, demand management policies may not succeed in bringing about the desired results and may hold back economic growth by raising interest rates and limiting the access to credit by productive sectors. The present inflationary characteristics point out that the economy is in the midst of supply-shock inflation fed by rapid rise in food prices resulting from production and supply disruptions. In addition, the rise in prices of food and other necessities exerts upward pressure on other prices both directly and indirectly. In this context, it is important to recognize that such price increases tend to persist through inertial momentum, at least for some time. One useful way to dampen the price effects of food supply shocks without resorting to very tight monetary policy that Bangladesh has adopted over a long time is the practice of maintaining adequate strategic buffer stock of food (under the public food distribution system) that is released when needed through different food transfer programs targeted to the poor and food insecure households. In the present situation, it is necessary to enhance the scope and increase the coverage of these programs in order to make a perceptible impact on both the food market and the targeted households.

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[6] See, Ahsan, S.M. and PAU, *Inflation in Bangladesh: The Evidence and Policy Alternatives,* mimeo, Policy Analysis Unit, Bangladesh Bank, Dhaka, 2007.

Similarly, the inflationary impact of a rise in import prices of such essential items as food, machinery, chemicals, oil, and other commodities can be strong especially in the short run, because of their rising and inelastic demand in the domestic market. Hence, it might be important to pursue policies that would not unduly depreciate the domestic currency to generate any inflationary pressure. In this context, the pursuit of capital management policies, based on the premise that unrestricted capital flows in and out of the country is not optimal, could contribute to ensuring exchange rate stability in future. The issue has received less attention so far largely because speculative capital flows are still relatively modest in Bangladesh. However, as the country's equity and bond markets become increasingly sophisticated, the problem of volatile private capital flows and related exchange rate uncertainty is likely to assume greater importance.

In view of the distributional consequences of rising prices of domestically produced rice and other agricultural products, it is important to adopt effective policies that reduce seasonal variability in the prices of different commodities especially rice, and provide a remunerative and fair price of rice to the growers after harvest. For vegetables and other non-rice food crops, the priority would be to strengthen the marketing links, both horizontally and vertically, promote market integration, and support processing and high value activities.

In the present situation, monetary policy needs to focus more on stabilizing supply in the face of adverse shocks in order to protect the poor. This can be achieved through facilitating imports of essential commodities in the short run alongside measures to increase domestic production. Otherwise, the poor would tend to lose in absolute as well as in relative terms through reduction in real wages and the depressing impact of slow economic growth. In the case of reduced output growth and real wage decline, the first group to lose jobs would be the unskilled and unorganized workers leading to decline in the average income and welfare of this group. It is more likely that the average income of the poor is negatively related to aggregate demand variability in Bangladesh.

Under the circumstances, the major thrust of the government's policies should be to increase domestic production, especially the production of food and other essential items, as the most effective measure to fight inflation. Likewise, the Bangladesh Bank's monetary policy stance should aim at providing support to growth enhancing policies and keeping the demand side pressures under control in line with emerging developments and requirements of the economy so as to keep inflation expectations under control.

The present monetary policy stance adopted by the Bangladesh Bank reflects the above concerns.[7] In addition to building smooth adjustment capacity to withstand internal and external shocks, the strategic thrust of the monetary policy being implemented by the Bangladesh Bank is to create a wider and better scope for accommodating and supporting growth augmenting policies along with ensuring reasonable price stability. For sustaining the efforts, the policy stance gives priority to the flow of adequate credit to all productive sectors, especially agriculture, SMEs, infrastructure, and other rural activities; and to women entrepreneurs.[8] For augmenting supply and ease the shortages in the domestic

[7] For details, see *Monetary Policy Statement, January-June 2008,* Bangladesh Bank, Dhaka, January 2008.

[8] In addition to the quantity of credit, the policy stance adopts several measures including effective monitoring and supervision such that the financial institutions can increase efficiency and reduce the burden of non-

market in the short run, facilitating policies have been adopted for the import of essential commodities, especially food items. Measures have also been taken to achieve greater fiscal and monetary coordination such that the current imperatives are clearly recognized within the policy framework ensuring macroeconomic stability and rapid growth.

As highlighted earlier, recent domestic and global developments including recurrent floods and the cyclone in 2007, temporary disruptions in domestic production, and adverse price movements in the international market have contributed not only to reduced growth in the real sector of the economy but have also fed into the current inflationary process.[9] In particular, crop sector growth has slowed down due to shortfall in *aus* and *aman* production. In addition, significant losses were sustained in the production of other crops and in other agricultural and non-agricultural sub-sectors including livestock, forestry, poultry, aquaculture, handloom, and other rural industries. The poultry sector has suffered further losses due to the large scale outbreak of avian flu in most parts of the country. Under the situation, it is important to ensure rapid rehabilitation of the livelihood activities in the flood and cyclone affected areas such that the adverse impact of the disasters are mitigated within the shortest possible time, production losses are recouped, and the supply of essential products increases to create positive impact on food and essential commodity prices. The potential of recovery of all economic sectors is strong, so that adequate credit and other critical input flows to productive activities would be crucial to realizing the expected increase in economic activities.

The government has taken measures for speedy rehabilitation of damaged infrastructure, livelihood support systems, and economic and production activities in different sub-sectors in disaster affected areas. Special emphasis has been put to increase crop production in the forthcoming *boro* season for which Bangladesh Bank has ensured timely disbursement of adequate agricultural credit and the government has taken various steps for streamlining the agricultural input distribution system to ensure timely supply of required agricultural inputs such as fertilizer, electricity, diesel, and good quality seeds.

Obviously, efforts to keep inflation within tolerable limits involve a long term battle with support of prudent policies. For this, it is important to ensure the highest sustainable growth in domestic output consistent with price stability that requires continuous pursuit of supportive macroeconomic policies; heightened business confidence and desired growth in private sector led investment; effective measures to address power, transport, and other infrastructure constraints affecting production and other economic activities; speedy implementation of ongoing structural, institutional, and financial sector reforms; and policy continuity and reasonable socio-political stability over the medium term.

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performing loans enabling the banks to reduce the interest rate spread and lower the lending rates in order to ensure that the cost of borrowing does not put undue pressure on investors.

[9] The latest projection of the Policy Analysis Unit (PAU) of the Bangladesh Bank puts the growth rate of real GDP in the range of 6.0 percent and 6.2 percent in FY08 compared with the target of 7.0 percent in the budget of the current fiscal year. See, *Bangladesh Bank Quarterly,* vol. V, no. 2, October-December 2007.