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Pragmatic Solutions for Post-Flood Rehabilitation in Bangladesh

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Pragmatic Solutions and Policy Recommendations for Post-Flood SME Rehabilitation in Bangladesh

Forrest Cookson

Executive Summary

Small enterprises in the Dhaka area were badly damaged by the 1998 flood. This paper reviews the damage incurred in the worse effected areas around Dhaka and presents several actions that may be taken to assist these enterprises to recover from the losses incurred in the flood. In this paper SMEs are defined as those with less than 50 employees, producing in the manufacturing sector and employing persons other than owners. Thus cottage industries are excluded.

One of the central problems of SMEs is financing. This issue, long contentious and the subject of many projects and programs, remains unsatisfactory. This area is much studied but correct information remains scanty and subject to much controversy. The available data are inadequate in coverage and accuracy. However, the general belief is that there is limited access to the banking sector and that trade credit is the main source of finance. Furthermore, such enterprises provide trade credit as well as receive it. In addition it is believed that there is heavy reliance on informal credit markets and friends and relatives to finance these enterprises. A continuing problem is linking more of the SMEs to the private sector banking system.

A small survey was carried out to achieve three objectives: (1) Obtain a current picture of the financing situation facing the enterprises; (2) determine the losses incurred from the floods; (3) provide a framework for assessing the impact of different approaches to funding rehabilitation. The survey was carried out in Narayanganj, Munshiganj, Narsingdi, and two severely effected thanas of Dhaka; 208 completed questionnaires were accepted for data analysis. The survey was done after the floodwaters had stopped rising and cleaning and rehabilitation of the businesses were starting. The survey instrument was kept simple and sought to obtain a brief description of the establishment, the damages that had been incurred, and the financing arrangements that the firm was using. The statistical universe is not well defined; the BBS list contained 3891 industrial establishments with 10-50 employees in the areas surveyed.[Last available list dated 91/92] It turned out to be very difficult to match establishments on the list with those on the ground. As a consequence we are uncertain about the total number of small enterprises in the surveyed areas. However, we believe that the establishment selection process used in the survey is random so that the statistical characteristics found reflect the typical establishment in the area. It is the total number of such businesses that is uncertain.

The firms covered were concentrated in the following sectors: flour mills, salt mills, rice mills, bakery products, soap, textiles, engineering, and vegetable oil mills. These sectors reflect the overall structure of the manufacturing sector with heavy concentration in agro-processing and textiles. Of the firms covered 34% employed less than ten persons, 7% more than 50, and the remaining 50% were in the 10-50 person range. The median firm has an investment of 1.2 million Taka, a return of 43% on investment, employees 14 persons, and has sales of Taka 250,000. Half of the firms surveyed have been established since 1990; 7% were established before 1981.

The financing of these firms relies heavily on trade credit and the informal sector. Of the total 34% had working capital loans from the formal financial sector; 7% had term loans from the banks. Some 40% of the firms have loans from friends and relatives; 40% from money lenders; and 80% received trade credit. As is usually the case 77% gave trade credit. Indeed the supply of credit was slightly larger than the receipt of credit.

Flood Damage

Flood damage was divided into production loss and asset loss. The production loss information could be checked to some extent with other information provided by the respondents and is consistent for the sample as a whole. The asset loss information is more difficult to assess but the conclusion is that the amounts given are not unreasonable. There is certainly a bias on the high side but there is no estimate of how large such a bias might be.

Production loss: Production loss is defined as the loss of sales due to the flood. The mean loss was reported at Taka 1.3 million; the median loss at 0.45 million Taka. However, sales value is not the true loss to the firm; we take the incurred costs at 20% of the sales value; this represents the labor cost and 10% for other costs that are actually incurred. The production losses represent about 1.5 months of production, which is a reasonable estimate of the impact of the flood. Thus we estimate the losses to the business at 0.26 million. This estimate is accurate to plus or minus 20%.

Asset losses: Asset losses are divided into fixed capital and inventories. Most of the reported losses are in inventories. The average loss of the fixed assets was reported at Taka 90,000. Inventory losses for inputs were estimated at Taka 86,000; we estimate that the stock of inputs is Taka 125,000 so the reported losses are reasonable. The average loss of finished goods is estimated at Taka 44,000, compared to an average stock of Taka 100,000. Again the loss level is reasonable. Total loss of assets is estimated Taka 220,000 per establishment.

Total loss from the flood is estimated at Taka 480,000 per establishment. In the areas covered we estimate that there were 6,000 establishments so that the total losses come to Taka 2.88 billion. The estimate of the loss per establishment is within plus or minus 20% [two standard deviations]. The number of establishments is less certain. There were 3900 establishments listed in 91/92 and we have assumed that these have increased by 50% over the past few years –a rate of 5% per year which is close to the increase of value added by small enterprises.

The conclusion is that in the areas studied the flood adversely effected all firms. The loss of fixed assets was not very great and represents no serious problem for most firms [these are averages being reported so there are certainly some firms that have experienced considerable loss in fixed assets.] The estimate of the size of the losses provides an estimate of the level of losses that the rehabilitation program should seek to compensate.

An action program

Three short-term action programs and two long-term programs are recommended. These are built on two assumptions: First, that a substantial share of the losses incurred by the small industrial enterprises should be carried by the society. Second that the financing arrangements for these enterprises need strengthening to deal with future natural disasters. Natural disasters are part of the environment of Bangladesh. Protection for the small industries must be expanded to provide resources for rehabilitation in the case of future disasters.

As the SMEs are so highly dependent on trade credit an important part of post flood rehabilitation is an easier monetary policy. This will make trade credits easier to obtain and permit the SMEs to finance their raw material inputs through the familiar channels.

Short term programs

1. The banks should, henceforth, charge a premium of 6% on the lending rate for SMEs; this addition is an insurance premium against inability to repay a loan arising natural disasters in the future. The management of this described as one of the long-term programs. The short term action is to start to charge this premium effectively raising the interest rate.

2. The Government would put in place a program for a period of three months, with the banks, which pays to the bank 10% of all loans disbursed to new customers who are in the SME category. The intent of this program is to enable the banks to increase the staff working on SME loans; this greater staff effort will improve the speed of issuing loans, will improve the management of the loans, and will enable the banks to earn more return for working in this difficult area. However, the banks would be expected to maintain in the future this greater staff effort to supervise lending and recovery.

3. The Government would institute a program for small industries adversely affected by the flood for periods of paying the employment costs for 3 or 6 months as described below. This would be paid out of the budget resources. This program is a direct grant implemented by providing the labor force free to the factory for a limited period of time. This operates effectively like a public works program; if the business gets into production rapidly then the entrepreneur benefits from this, but if the plant does not go into production rapidly then it is only the workers who benefit.

The impact of these programs on different categories of businesses is described.

a. **Establishments with performing loans [25%]**. For these cases the bank would increase its lending and the firm would receive a three months grant. The loan increase for the average firm would be 300,000 Taka and the direct labor grant would be three months or 150,000 Taka for the average firm. Since there is interest to be paid by the firm on the loan the net return to the establishment is about 400,000 Taka.

b. **Establishments with loans** which are not performing [9%]. The bank decides whether to rehabilitate this business; if it does so then there is the conditions of a. above apply. The bank will lend money and the labor force grant will come into effect. If the bank decided not to support the establishment then nothing is to be done. The establishment is effectively in default and no effort should be made to assist.

c. **Establishments without loans** [67%] are encouraged to take loans. To encourage the banks to increase lending the program of 10% payment to the bank would be allowed. This would only apply in those areas where there is a natural disaster and for loans which are disbursed over the next three months. It would not be a nationwide program. It should be available to the private banks as well as the government banks. We believe that with this subsidy there would be a significant increase in the amount of lending.

d. **Establishments without loans** that are unable to obtain a loan would receive the labor grant for a period of 3-6 months. NGOs using public funds would administer this program. The NGOs would receive a fee of 10% of the amount that they disburse to the factories and would also have an obligation to provide a report on the credit worthiness of the establishment and the prospects for lending.

These short-term programs applied to 12,000 flood distressed SMEs would cost the Government about Taka 4-4.5 billion. This is what we estimate it will take to rebuild the small industry sector.

Long-term programs

1. The funds earned from the insurance program would be partly used to build a fund that would be available to the banking system to mange loans to companies that are damaged by natural disasters. The funds would be used to write-off the loan. This is best done from a central program creating a fund for natural disasters for industrial lending to which all banks involved contribute and all draw upon the fund when their customers suffer. The details of this approach are developed.

2. The interest rate must be increased so that the banks can increase the supervision for these projects. The supervision effort should reach about 10% of the size of the loan; at that point recovery should be satisfactory and the lending programs work much better. As an outcome of the second short-term program and the imposition of the 6% insurance fee against natural disasters, the evidence should emerge that the business community has no difficulty with interest rates of the 20-25% range and that better supervision will improve the quality of the portfolio.

Introduction

This paper reviews the impact of the floods on small enterprises and recommends a set of programs to assist in the rehabilitation. The first section reviews the small enterprise situation and describes the survey carried out to inform on the flood situation. This is followed by a section on financing of SMEs and an assessment of the flood damage. The heart of the paper is a series of proposals for prompt action.

Small enterprises

The development of manufacturing in Bangladesh is a recent phenomena. Manufacturing in 1998 still comprises only 14% of GDP of which approximately one third arises from SMEs. (Table 1)

Table 1

Share of Large and Small manufacturing enterprises in GDP
(Percent of GDP)

	1989/90	1995/96	Growth rate
Manufacturing	11.43	13.96	8.0
Large scale	7.59	9.33	8.2
Small scale	3.84	4.62	7.8

Source: National Accounts Statistics of Bangladesh, July 1997. BBS

From the sample of small enterprises studied there is clear evidence that the rate of establishment of enterprise accelerated starting in 1989-90 continuing to the present. Of the establishments studied 85% had been established since 1985, and 51% since 1990 (Table 2).

Table 2

Year Firm Established
(Percent)

Before 1981	7.2
Between 1981 to 1985	8.2
Between 1986 to 1990	33.7
Between 1991 to 1995	35.6
Between 1996 to 1998	15.4

Source: DID Survey

The survey initially based itself on the BBS's establishment list that is adjusted from the Economic Census of 1986. We found that most of the SME establishments on the list could not be located; even taking account of the difficulties of moving around in the post flood environment it is compelling that many of these older enterprises had either failed or changed location.

A small survey was carried out to achieve three objectives: (1) Obtain a current picture of the financing situation facing the enterprises; (2) determine the losses incurred from the floods; (3) provide a framework for assessing the impact of different approaches to funding rehabilitation. The survey was carried out in Narayanganj, Munshiganj, Narsingdi, and two severely effected thanas of Dhaka; 208 completed questionnaires were accepted for data analysis. The survey was done the last week of September 1998 after the floodwaters had begun to recede and cleaning and rehabilitation were starting. The survey instrument was kept simple and sought to obtain a brief description of the establishment, the damages that had been incurred from the flood, and the financing arrangements that the firm was using.

The statistical universe is not well defined; the BBS list contained 3891 industrial establishments with 10-50 employees in the areas surveyed.[last available list dated 91/92] It turned out to be very difficult to match establishments on the list with those on the ground. As a consequence we are uncertain about the total picture of small enterprise in these areas. However, we believe that the establishment selection process is random so that the statistical characteristics reflect the typical establishment. It is the total number of such businesses that is uncertain.

The firms covered were concentrated in the following sectors: flour mills, salt mills, rice mills, bakery products, soap, textiles, engineering, and vegetable oil mills. (Table 3)

Table 3

Type of Manufacturing unit surveyed
(Percent)

Paint / Chemical	0.5
Ice / Ice cream	3.4
Soap	3.8
Flour mill	4.3
Construction material	5.3
Salt mill	5.8
Agro processing	7.2
Bakery product	7.2
Oil mill	8.2
Rice mill	8.7
Engineering	13.9
Textile	31.7

Source: DID Survey

These sectors reflect the overall structure of the manufacturing sector with heavy concentration in agro-processing and textiles. Of the firms covered 34% employed less than ten persons, 7% more than 50, and the remainder in the 10-50 person range. (Table 4)

Table 4

Distribution of firms by size of employment
(Percent)

Less than 10	33.7
Between 11 to 20	31.7
Between 21 to 30	11.5
Between 31 to 40	6.7
Between 41 to 50	9.6
More than 50	6.7

Source: DID Survey

The median firm has an investment of 1.2 million Taka (mean Taka 2.8 million), a return of 43% on investment, employs 14 persons (mean 22), and has sales of Taka 250,000 (mean Taka 837,000). On the average 86% of raw materials were locally produced. Only 2 out of 208 establishments exported their products. This sketch represents the typical SMEs in Bangladesh.

The financing of small enterprises

Small enterprises in Bangladesh have complex financing arrangements that have grown up over the years in response to the limited capability of the banking system to provide financial services. Although for the last twenty years there has been a great deal of attention paid to the finance of SMEs the current situation is really not well understood. Essentially there are five channels of financing: (1) Own resources or equity participation by friends and relatives where it is understood that the profits are to be shared but there are no interest payments to be made; (2) borrowing from banks and other formal financial institutions; (3) borrowing from friends and relatives where there is an obligation to repay the loan on some schedule in some way; (4) loan from the informal money market [money lender]; (5) trade credit received from the suppliers. In addition to the sources of financing most small firms are involved in providing trade credit to their customers.

For the small enterprises studied [a total of 208] 34% reported a working capital loan from a formal financial institution but only 7% reported a loan for financing fixed assets. On the other hand 39% reported having a loan from friends or relatives and 40% have loans from moneylenders. The dominance of trade credit is evident: 79% received trade credit and 77% give credit. The average firm received Taka 350,000 in trade credit [July 1998] and gave Taka 425,000. Thus on the average the small producer claims to be sources of trade credit. However the difference is small and the medians are equal at Taka 60,000.

Businesses had multiple sources of finance; 30% had three financing sources and 8% had four. Only 8% had no financing arrangements. (Table 5)

Table 5

Multiple Sources of Financing
(Percent)

No Financing	8.7
Financing from one source	29.3
Financing from two sources	24.0
Financing from three sources	29.8
Financing from four sources	8.2

Source: DID Survey

The trade credit system had collapsed in September 1998 under the disruption of the flood and the median volume of credit either received or given was zero.

The picture of credit for small enterprises is consistent with previous work in this area: Limited linkages with formal financial institutions, considerable dependence on informal credit sources and very heavy reliance on trade credits. Moreover firms are involved with both the formal and the informal financial markets at the same time, it is not either/or.

The character of this credit can be assessed from the following: The median value of sales was Taka 250,000 per month or 3 million per year. The trade credit given was Taka 425,000 suggesting about 50 days credit is provided. The median cost of materials was Taka 120,000 per month so the length of credit extended is about three months. There is usually no explicit interest rate in these transactions and comparisons with cash purchases are very difficult to make.

The typical profit and loss statement of the firms is as follows:

Table 6

Profit and Loss of Typical SME
(thousand Taka/month)

	Median	Mean
Sales	250	837
Raw materials	120	499
Other costs	7	30
Labor	25	50
Surplus	98	258
Investment	1,200	2,830
Return	98%	109%

Rate of return including the labor costs of the owner is about 100%. While these estimates are very approximate this illustrates that the returns to capital are very high.

Flood 1998

Flood Damage

First, 18% of the establishment reported having insurance; however, there is confusion as to whether this insurance covered flood damage.

Flood damage was divided into production loss and asset loss. The production loss information could be checked to some extent with other data provided by the respondents and is consistent for the sample as a whole. The asset loss information is more difficult to assess but the conclusion is that the amounts given are not unreasonable. There is certainly a bias on the high side but there is no estimate of how large such a bias might be.

Production loss: Production loss is defined as the loss of sales due to the flood. The mean loss was reported at Taka 1.3 million; the median loss at 0.45 million Taka (Table 7). However, sales value is not the true loss to the firm; we take the incurred costs at 20% of the sales value; this represents the labor cost and 10+% for other costs actually incurred (interest payments, utilities, rent etc.). The production losses represent about 1.5 months of production, which is a reasonable estimate of the impact of the flood. Thus we estimate the average loss to the business at 0.26 million. This estimate is accurate to plus or minus 20%.

Table 7 indicates both the fact that the number of shifts declined but that the length of the shift also begun to decline. The loss by month is indicated, both the mean and the median are reported.

Table 7

Value of lost Production

	Normal Shift				Actual Shift				Value of lost Production*	
Month	Number		Length		Number		Length			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
May	1.57	2.00	8.89	8.00	1.57	2.00	8.81	8.00	0.00	0.00
June	1.54	1.00	8.64	8.00	1.57	1.00	8.22	8.00	0.00	0.00
July	1.54	1.00	8.90	8.00	0.86	1.00	4.80	8.00	31.54	0.00
August	1.54	1.00	8.39	8.00	0.09	0.00	0.34	0.00	418.22	0.00
September (Upto 15th)	1.54	1.00	8.73	8.00	0.03	0.00	0.17	0.00	851.50	280.00
Total									1301.26	450.00**

* Thousand Taka
** Medians do not add

Source: DID Survey

Asset losses: Asset losses are divided into fixed capital and inventories. Most of the reported losses are in inventories. The average loss of the fixed assets was reported at Taka 89,000. Inventory losses for inputs were estimated at Taka 86,000; we estimate that the stock of inputs is Taka 125,000 so the reported losses are reasonable. The average loss of finished goods is estimated at Taka 45,000, compared to an average stock of Taka 100,000. Again the loss level is reasonable. Total loss of assets is estimated Taka 220,000 per establishment. (Table 8)

Table 8

Value of lost Assets
(Thousand Taka)

	Destroyed		Damaged but Repairable	
	Mean	Median	Mean	Median
Land	0.02	0.00	5.28	0.00
Plant and Machinery	16.26	0.00	50.70	12.00
Building	0.03	0.00	14.94	0.00
Raw material inventories	71.35	12.50	15.24	0.00
Finished product inventories	27.91	0.00	17.50	0.00
Other	0.04	0.00	1.36	0.00
Total	115.61	25.00	105.02	25.00

Source: DID Survey

Total loss from the flood is estimated at Taka 480,000 per establishment.

In the areas covered we estimate that there were 6,000 establishments so that the total losses come to Taka 2.88 billion. The estimate of the loss per establishment is within plus or minus 20% [two standard deviations]. The number of establishments is less certain. There were 3900 establishments listed in 91/92 and we have assumed that these have increased by 50% over the past few years – a rate of 7% per year which is close to the increase of value added by small enterprises (7.8%).

The conclusion is that in the areas studied the flood adversely effected all firms. The loss of fixed assets was not very great and represents no serious problem for most firms [these are averages being reported so there are certainly some firms that have experienced considerable loss in fixed assets.] The estimate of the size of the losses provides an estimate of the level of losses that the rehabilitation program should seek to compensate.

Action programs

In this section action programs are suggested. There are five programs for implementation and one guideline for overall economic policy. Of the five programs three are for immediate implementation and two are long run in nature. However, there is a close relationship between the immediate and the long-run action programs. In defining action programs one must combine an appreciation for the real situation with the objective to be obtained. The real situation is partly covered in the above discussion of the nature of SMEs, the financing of such organizations, and finally the damage that arises from the flood of 1998. The second part of the real situation is to understand the capabilities of various organizations operating in the area of small enterprise support and the role that they can play. This aspect of the institutional strengths and weaknesses is covered below. This is followed by a brief review of the objectives that are to be reached both short term and long term.

Before developing these arguments it is important to describe what is likely to happen to the small enterprises strongly affected by the flood. Many of these enterprises have been badly damaged by the flood and experienced substantial losses. These losses are of the order of 34% of the total investment in the business.[1] However the asset loss is about 14% of investment, and costs of foregone production 20%. These are serious losses but not fatal. Of course many establishments have experienced much greater losses but, on the average, the situation is difficult, but not impossible. <u>Without a major interventions program what can we expect</u>? First, since the fixed asset loss is not very great most firms will experience little difficulty in getting into operation if they are able to obtain working capital to go back into production. Second, the companies will generally be successful in obtaining working capital as trade credit from their suppliers. The degree of difficulty is linked to credit availability. Third, the workers will be willing to accept some temporary reduction in salary to help the owners get started again. A large number of firms will be able to get started again in the next few months without assistance. The owners and workers are very resilient and have long understood that they must work and function without assistance from the Government. In design of programs to overcome the flood impact we are seeking to assist firms to recover more rapidly, to spread the losses in a more equitable way over the population, and to put in place mechanisms and approaches which will increase the profitability of the SMEs. The rehabilitation programs can make a great difference in increasing equity and speeding up recovery; but most of these firms will be rebuild and get back into production.

There are four phenomena that assist the companies to overcome this crisis: First, the value of machinery is not very large and the damage is slight for most firms. Second, the inventory levels of raw material are small---we estimate 1-2 weeks of requirements are the maximum so that on the average less than one week of inventory was on hand. This limited inventory losses. Third, the flexibility of the trade credit system will allow these historical relationships to reopen quickly. Finally, the attitude of workers is supportive rather than confrontational with the establishments---all recognize the common interest in getting back into production and earning income. In an environment of a large amount of surplus labor the workers are likely to be cooperative with the owners in bearing some of the loss.

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[1] We have deliberately used the mean of the flood loss with the median level of investment. If we use the mean investment then the losses are 15% of investment.

In Bangladesh the main issues of public policy tend to be questions of implementation rather than the objective of policy. For management of the post-flood rehabilitation of SMEs one of the central issues is how does one actually achieve any results? What institutions are going to act? Realistically, it is impossible to expect institutions that do not have proven strength to respond rapidly to administrative actions. The actual operations for the rehabilitation that must be undertaken involve a great deal of continuing contact with a large number of SMEs. Proven capacity to operate in the field with large number of connections to private enterprises in a disciplined fashion is a limited skill of institutions. While there are many organizations that discuss critical issues and represent their members effectively towards government, the administrative skill to mange contact of hundreds or thousands of businesses, maintain a clear record of what is happening, and exercise judgment on a case by case basis is very limited. Our review of possibilities indicates that there are only three organizations that have this capability: The army, the banks, and the larger NGOs. Each of these organizations has a large staff, proven administrative systems, as well as infrastructure support for transport, facilities, communications, record keeping etc. Business associations and Chambers have the skills to represent their members effectively with the Government and other organizations but do not have staff able to operate in the field dealing with large number of enterprises.

The survey responses of the small enterprise owners indicated trust for the NGOs, distrust for the public sector banks, and no confidence in the government's administrative services. Lack of trust by the businesspersons does not imply that the organization cannot be effective, but it does suggest which organizations can be effective in the short run. Thus our conclusion is that the main instruments for implementation of SME rehabilitation over the next few months must be the banks, hopefully including the private banks, and the NGOs. This is not really an appropriate area for army involvement.

In designing programs we have three principles to follow: (1) To accelerate the rehabilitation of the SMEs damaged in the floods. (2) To distribute the burden of the flood more evenly among the population. (3) To act in ways that promote the development of the SMEs in the long run; both in the general area of their financing, but also in their ability to mange future natural disasters. The recommendations are not meant to address all the difficulties of SME financing.

The long run objectives to be sought from these programs are:

1. Increased involvement of the formal banking sector with the SMEs, delivering more effective service in both working capital and term lending.

2. Enhanced systematic procedures for the management of natural disasters.

3. Improved integration of financial markets and greater arbitrage among market components.

Guidelines for economic policy

The key guideline for economic policy is to maintain an easy monetary policy for the next 6-12 months. Small enterprises are dependent on trade credit for their operations. Trade credit availability is determined from the monetary policy. This was indicated during the survey when many respondents reported that the tight monetary conditions during the first half of this calendar year had tended to restrict their operations. In such conditions inventory levels for inputs and outputs which are a maximum of two to three weeks become even lower as trade credit is restricted. Now the firm must replenish inventories more frequently. This raises transports costs, requires that supplies be obtained at more frequent intervals or results in a cut back of production. The firm will experience more cases of production halting due to insufficient inventories. Similarly the firm under pressure to provide credit to customers is forced to restrict such credit reducing sales.

When the large suppliers are able to obtain credit easily then trade credits are passed along the chain of suppliers, sub-contractors etc. The tighter the credit policies of the banks the more restrictive the impact on the SMEs. The operation of monetary policy in Bangladesh through the trade credit channel is swift and powerful. A necessary condition for the successful recovery of the SMEs is that monetary policy must be significantly easier than in the pre-flood environment. There are many reasons to be concerned on this point; but this whole sector of economic activity is strongly dependent on the availability of credit for the suppliers. Without easier monetary policy recovery of SMEs will be slowed down.

Immediate implementation programs

1. **Establish a flood loan insurance program** charging a premium on all new loans to the SMEs. This increases the effective interest rate. The SMEs that deal with the banks should be required to have insurance for the loan value to protect the bank against loan losses from floods damaging enterprises and to enable the enterprise to restart its business by immediately borrowing again from the bank. In effect the bank agrees that if the business is damaged by flood or other natural disasters that the loan will be paid off from the receipts of the insurance premiums and the bank will relend to the flood damaged establishment. This is not money that goes directly to the business, rather it clear the bank account and enables a fresh loan to be made. In this approach the obligation to relend is part of the program. Of course the business must be current in its payment of the premium for the loan insurance.

   This is a simple program to put in place. It is best implemented with a front-end segregation or payment of the premium for the first year and charging interest on the full amount as if the premium had not been paid. Usually we are dealing with continuing credits so the accounting is straightforward.[2]

   The motivation of this insurance program is to provide protection to the borrower and the bank to protect against natural disasters. Although this has been described in terms of a flood policy it can cover other defined natural disasters. Small enterprise suffers from loss of assets due to the such disasters and generally there is no protection available. Thus business establishments end up with bad loans and are cut off from the formal credit system.

   The rate estimated as appropriate is 6% per annum. The impact of this premium has an immediate effect on the charges that the borrower must pay. The charges currently paid by the borrower are too low for the lending bank to cover its costs. The central bank maintains a band for term lending to small enterprises. This is meant to encourage

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[2] Thus the enterprise has a borrowing limit say W; the insurance premium is πW where π is the percent of the premium. If the actual drawings are $V<W$ then the interest is $r(V+\lambda W)$ where r is the loan rate [of course this is worked out on a daily basis].

investment by small business. The band is currently 9-12%, with a subsidy paid from the Government to the lending bank of 3%. Working capital loan lending rates are not controlled by the central bank. The definition of small industry has been made broad: the current definition is that total investment is to be Taka 30 million or less. Thus the banks are earning about 15-16% for loans both term or working capital to SMEs.

However, this interest rate is too low to provide reasonable coverage of the components of costs facing the banks: The high cost of administration of such credit is not recognized; the loan loss costs are high for small industrial term loans.[3] Realistic rates for loans to small industry are 20%+. The supply of funds to the market is currently constrained by the unwillingness of the banks to lend at existing rates. The insurance premium will increase the effective rate of interest and make such SME lending more attractive to the commercial banks. This is particularly important to attract private banks to the market.

Is the rate too high for the borrowers? The survey results indicated that the credit problems reported by entrepreneurs are with the lack of timeliness of credit, the high indirect costs through bribes, and the awkwardness of getting the paperwork together to obtain a loan. In fact the borrowers are paying much higher rates appropriate to the market. The effective interest rates indicated from the surveys and the rates paid in the informal markets are much higher than the nominal rate. Our contention is that if the banks make loans on time, without bribes, then the borrowers will have no objection to paying 20-25%. The rates of return on investment are high enough to support these interest rates. The objection to suggestions of higher interest rates nominally charged by the banks is that the SME owners expect that these increases will be passed through the existing high effective rates. Indeed in the survey we found substantial resistance to using the banks because of the high costs of the funds! But what the entrepreneurs were talking about was the cost after the pay-off.

The operation of the insurance fund will be covered in more detail in the long-term recommendations on this point. But in the short run it is recommended that this premium of 6% be put in place immediately.

To implement this the Bangladesh Bank needs to issue a circular setting out the particulars. This can be accomplished very quickly.

2. Expand bank lending in the SME area in response to the flood situation

This second recommendation deals with steps to achieve a rapid increase of bank lending to the SMEs in the flood-effected areas. The critical step recommended is to provide to the bank a 10% fee for all fresh disbursements made to new customers in the next three months [period Oct-Jan]. The purpose of this fee is to pay for the considerable effort needed to draw more of the SMEs into the formal banking system. To access a significant number of the establishments not now in the banking system and make loans to them requires the application of a great deal of staff time. The proposed fee would raise the effective earnings of the bank above 30% and would provide significant incentive for the expansion of credit operations to this target audience. The 30% gross earnings arises from the 15-16% interest rate, plus 6% insurance fee, plus the 10% fee. Of course there are many expenses which the banks incur.

[3] The failure rate we estimate at 7-9% per annum.

One objective here is to attract the private banks into the SME arena. It is not reasonable to expect that there will be an improvement in the lending practices of the public sector banks, so a special effort is needed to encourage private bank participation.

The underlying administrative model that we have in mind is one loan officer responsible for 16 loans of an average of Taka 300,000. This portfolio yields a fee of Taka 480,000 from the 10%. Assuming a 50% overhead rate for the bank assessed on the loan officers' salary this should allow two years of expenses and salary for the loan officer if the salary is Taka 10,000 per month. Thus the loan officer would visit every company at least once every two weeks and maintain a careful watch over what is happening. This intensity of supervision will improve loan recovery. This is a level of intensity of supervision much greater than is now used by the NCBs where there is very lax interaction between loan officer and borrower. The model we suggest here is the loan officer is in the field to visit with the borrowers, to see with his own eyes the problems, to assess the financial problems that they face, and to advise the borrower on financial matters. This approach to lending is what works, as can be seen from the approach of the NGO credit operations and the small town banks in the United States. Some may think that this is too small a workload; our suggestion is that it is better to start with a low load and see how it works. If this is successful then one can consider increasing the workload.

The provision of small loans to enterprises is a very expensive process; the traditional cost structure of the commercial bank is not at all appropriate for this type of lending. In dealing with organizations working in a highly competitive, risky business environment the financial institution must work constantly with the enterprise to insure that the loan is well used. The financial institution and the SME have a common interest in the success of the business and cooperative approach is needed. The corporate climate in the financial institutions working with the small enterprises is far from this; most small businessmen fear the financial institutions. Officers of the bank are reported as arrogant and non-cooperative. Thus the suggested program is directed at expanding the SME lending needed because of the flood but also using this opportunity to change the approach of the banks to managing the financing of the SMEs.

Based on the flood damage estimates the average rehabilitation loan we suggest is Taka 300,000. These loans require prompt disbursement and repayment periods adjusted to the needs of the company but ranging from 1-3 years. Collateral requirements must be kept to a minimum. There is currently no central bank requirement for the lending bank to have collateral for a loan. The collateral requirement depends on the lending policies of the individual bank. To expand loans to these small enterprises one must be realistic about the collateral requirements; indeed in Bangladesh the collateral is of little meaning since the legal system has effectively blocked the ability of the bank to take control of the assets of the borrower. Collateral requirements have therefore become a device for rationing credit that can be used by bank staff to extract side payments rather than real support for the quality of the loan. The insistence on collateral is a ritual dance of the commercial banks that has no meaning as collateral assets can only very rarely be accessed by the lending bank.

3. Temporary support for the labor costs of affected industries

This recommendation calls for the Government to initiate a program whereby the labor costs of affected SMEs would be paid for three months or in some cases, as discussed below, six months. The objective here is to provide income to the workers immediately to insure that their purchasing power is maintained during the immediate post flood period. In this sense it is similar to the public works programs. The owners of the plant do not receive any funds; rather the workers have their salaries paid. The owners benefit if they get their factory working since they have a free labor force for a short period. If the firm fails to get its production started then the owners do not receive the real benefits of this.

The average wage bill is Taka 50,000 for an SME as estimated in the survey. Three months of this wage bill provides a grant of Taka 150,000 for a factory that recovers. This subsidy covers about one third of the loss from the flood and covers 70% of the asset loss of Taka 220,000. Of course this works for the average firm and there may be some firms where the coverage is higher or lower than the loss of fixed assets. Nevertheless, the direct grant of the labor cost results in a way to assist the owners if and only if the owners get back into production.

The administrative procedures for dealing with this are covered below. We believe that this could be administered with limited leakage. It represents the only mechanism for real, prompt support to the SMEs. Recall that only one third of the SMEs deal with banks. Although there is reasonable concern about making grants to the private sector this must be viewed as smoothing out the costs of the flood among Bangladeshis.

These funds would come directly from the budget. The financing mechanism that we recommend is to allow the Bangladesh Bank to disperse directly to the banks or the NGOs. [We suggest below NGOs be enlisted to disburse such funds to SMEs not involved with a bank] For the banks this is simple to achieve. For the NGOs special arrangements need to be made say through Sonali Bank for the money to be drawn and then compensated to Sonali by the central bank. These are, however, not difficult arrangements to make once the policy to act has been settled.

Program Impact

These four programs fit together in the following ways for different types of SMEs. In each case we endeavor to describe a program for the average establishment and a level of support that covers a substantial amount of the loss.

Establishments with banking relationship with performing loans

For these cases we would expect the bank to increase its lending to the establishment by an additional Taka 300,000. This it will do using normal rescheduling procedures and determine a loan length consistent with the capacity of the establishment to repay. The fresh loan would carry the 6% insurance premium. The banks should be able to reach agreements with such borrowers very rapidly. Prompt disbursement is essential here.

In addition there is labor grant of Taka 150,000. Together these will cover the losses incurred by the establishment that averaged Taka 480,000.

Of the one third of the establishments that have bank loans no information is available on how many of these loans are performing. A reasonable assumption is that 60% are performing. Thus within the areas covered in our survey, where we are using 6000 establishments the lending requirements would be 367 million Taka. The national total for lending to flood effected SMEs may be twice or about 700 million Taka.

The lending bank would administer the labor grant. For each of the borrowers the bank would issue funds for the amount of the labor costs for a three months period to insure that the factory had the opportunity to get into production. The bank would determine the labor force and insure that the payments were made to those workers. While there is room for abuse here, so long as funds are given to people it promotes the objective of providing resources to families. We anticipate that the banks would manage to direct 80% of the funds in the right direction. The labor grant would only be available if the bank agreed to lend the additional funds and reschedule the existing loans. It is the responsibility of the bank to work out the losses of the business and to assist them to return to production. The total cost of the labor grants is Taka 183.6 million for a universe of 6,000 establishments.

To administer this program the central bank may issue appropriate instructions as to how to proceed, the central bank would advance the labor grant component as the banks reported their disbursements and settle with the government later. It is quite simple to get this program started; one or two circulars from the central bank are required laying out the program and the reporting procedures.

Establishments with bank loans that are non-performing

In this case the bank would decide if the SME were to be rehabilitated or not. If the bank decides to do so then the same program as for performing loans would be carried out. If the bank declines to lend further funds then there is nothing more that can be done for this factory. The losses in the flood should not be used as cover for defaulting companies to obtain more resources.

Of the borrowers with non-performing loans we assume the banks are ready to work with 40%. This implies about 5% of all establishments would be included in the bank support. The cost of loans for a universe of 6,000 establishments is Taka 97.2 million and labor grants of Taka 48.6 million.

Some 8.2% of the SME establishments would receive no support. These are establishments currently bank clients with non-performing loans which the banks are not prepared to further support. No assistance is provided to this group.

Establishments without bank loans that are able to become bank customers

For this group the program of encouraging expansion of the credits by paying the banks 10% of disbursements to cover the additional costs of rapid work to lend to new customers would come into effect. The banks would carry out their administrative processes to disburse new loans and also administer the labor grant. When the loans were disbursed the banks would claim the 10% fee from the central bank.

The defining conditions would be: The program only operates in flood affected areas, the loan must be to a new customer currently without a bank loan, and that the bank staff would be applied to the task at approximately the ratio of one loan officer for 15-20 loans. Private banks would be encouraged to participate. Finally, the insurance premium of 6% would be charged. Taken together these elements create a profitable opportunity for the private banks and we hope that there would be a powerful response by such institutions to lend money to SMEs in the flood affected areas.

This program is simple to initiate. The central bank may issue the appropriate directions and pay the banks the 10% fee and the labor grant settling with the government later.

We estimate that a vigorous effort by banks could increase the number of establishments covered by about ↓; in our universe of 6,000 SME establishments this corresponds to 420 new loans. This would involve disbursement of Taka 126 million, labor grants of Taka 63 million and fees to bank of Taka 12.6 million.

Establishment's without bank loans that are not able to become bank customers

These SMEs would represent we estimate about 60% of the cases that have no opportunity to borrow from the formal financial sector. The only credit that they will receive is through the trade channels. This has been discussed above and the point made that only an expansionary credit policy will provide the resources to restart this trade credit. To provide further assistance to these establishments the labor grant would be administered through NGOs or other organizations with demonstrated administrative skills.

The strongly affected areas would be identified and an appropriate organization appointed as the agent of government to implement the labor grant. The organization would register the eligible companies---defined here as SMEs, that is employment is between 5 to 50persons who are not family members and must be in manufacturing. After registration the labor force would be determined for each enterprise and the wages paid. Once this list of firms was identified the administrator would pay the wages monthly to the workers. The length of time this grant would continue would be up to six months.

Government would pay the administrator a fee of 10% of the amount disbursed for this work.

The labor grants would total Taka 1,062 million with fees of Taka 106 million paid to the administrative.

To get such a program started requires prompt decision making and assignment of responsibility for the different tasks. The key is the appointment of the administrators in different areas. If the NGOs would undertake such a task they would be most suitable.

Whoever undertakes the task as an administrator would have one further function: To review the business establishment's position and determine if the business is in a condition to obtain credit from the formal financial institution. In this way the basis for further expansion of bank lending may be established.

The total costs of these programs are set out in Table 9 for 6,000 establishment: The total costs are estimated at Taka 590.4 million in fresh bank lending; Taka 1,357.2 million in the labor grant program; and Taka 118.6 million in fees to banks and administrators of the programs. For national coverage if 12,000 SMEs are affected then the costs are double these given in Table 9.

Table 9

Program Cost Estimates for 6,000 Establishments

	Share(%)	Loans	Labor Grant	Fees	Total
Establishments with performing loans	20.4	367.2	183.6	0	550.8
Establishments with non-performing loans					
Supported	5.4	97.2	48.6	0	145.8
Non-supported	8.2	0	0	0	0
Establishments without current loans					
New loans made	7.0	126.0	63.0	12.6	201.6
Non lending	59.0	0	1,062.0	106.0	1,168.0
Total	100.0	590.4	1,357.2	118.6	2,066.2

Thus under this larger program lending would come to Taka 1,200 million and budgetary funds to Taka 3,000 million.

Long Run Programs

Two long run programs are discussed that arise naturally out of the short term programs.

1. **Building a fund for rehabilitation from natural disaster**. The 1998 flood will not be the last that Bangladesh experiences. It is now appropriate to begin to build a fund available to support the rehabilitation of victims of natural disasters. The coverage of the fund is for SMEs; others may be included but the focus here is on small enterprises. These enterprises are particularly prone to flood risk. Evaluation of their losses is relatively straightforward.

   The fund would insure the banks against the loss of their loans to SMEs. When an enterprise is damaged by a flood the loans that it had are written off and the bank draws the resources from the fund. The borrower is now free of debt. This enables the bank to lend again to this enterprise. There is little actuarial information available on these losses. The proposed fee of 6% and available interest rates implies that the company will be damaged about every 10 years to balance the fees and the costs.

   The participation of the SMEs in the insurance program would be compulsory. The coverage of the loan insurance over different types of natural disasters would be worked out.

The compulsory coverage is recommended for three reasons:

(a) Most areas of Bangladesh are exposed to different types of natural disasters which would be covered by the insurance. Hence it is reasonable to require all to participate.

(b) If social policy is aimed at increasing equity, then the losses of one individual establishment should be spread out over those not effected. The compulsory insurance approach contributes to this outcome. Since the direct tax system in Bangladesh is inefficient at transferring losses the compulsory insurance this is a reasonable expedient.

(c) The usual argument against compulsory insurance is this unfairly places a burden on low risk establishments. This encourages location in high risk areas since the cost of the insurance is partly shifted to others. Generally SMEs have grouped in certain areas; it is not clear that many SMEs locate in high risk areas and should such moral hazard emerge it would be limited. Finally, if optional high risk locations may choose not to participate on the basis that the bank could not collect the loan anyway and it is likely Government would step in to assist.

To mange this fund we propose that half of the amounts collected be put into a central fund and the remainder held by the disbursing bank. The central amount would be available to all banks to provide the funds for write off of loans made to enterprises that experienced flood losses [or other natural disasters if these are to be included]. Criteria need to be developed to cover eligibility. For example the Government would declare a thana a disaster area; then the banks would review the enterprises in that thana and if any had been seriously damaged by the flood the bank would write off the loan and relend a fresh amount to enable the enterprise to get started again. Of course the loan would be made only if the business wanted to rehabilitate. Otherwise there would be no fresh loan but the owner would have his loans written off.

When a loan is written off the bank obtains the funds from the central fund; thus, on the balance sheet of the bank the asset—loans are reduced and the asset—cash is increased. Liabilities are not affected.

There are many aspects of such a disaster management fund for small enterprises that need to be worked out in detail. The Government, for example, may match the amounts collected and contribute to the central fund. These matching amounts would be available for the rehabilitation of damaged businesses. The lending bank would determine the damage incurred and the amount needed by the company to recover; this is the amount that would be lent to the firm and the amount that would be written off the existing loans. However, the write off is capped by the size of the existing loan.

2. Interest rate adjustments

Long term adjustment of interest rates is needed to draw banks into participation in financing the SMEs. At present the banks have only limited participation in this sector. In the survey only 34% of the firms had working capital loans and 7% term loans; this is consistent with other data. Furthermore, many firms, both in the formal and informal markets so that even where there is bank participation the total financing needs of the firm are not being covered. There is very little term lending. It is of course well understood most of the SMEs do not deal with the formal financial institutions. Resistance of the banks to activity in this field arises from the perception by the bank management that it is not profitable. Therefore only the minimum effort will be made in response to government pressure. Private banks now have very little interest in SME loans. Thus not only is there limited participation but the main players are the NCBs. The survey resulted in frequent arguments that these banks were too expensive due to the large transaction fees that had to be paid. This is of course also an old story. At present the only real hope for good banking services to the small enterprises is to encourage the private banks to take a greater interest in this area. That depends upon the profitability. To be profitable the lending rates must be 20-25%.

High costs arise from the need for expensive loan identification and supervision, the considerable risks and associated difficulties of obtaining the collateral in the event of default, and the cost of funds and the liqiduity requirements. As a result of the short-term programs recommended here the evidence should emerge that borrowers do not resist interest rates at this level, and that the increased effort at loan administration will result in lower default rates.

The cost of lending is as follows:

Administration	10%
Cost of funds	6%
Loan loss	7%
Profit	2%
Total	25%

The administration cost is based on the loan/loan officer ratio of 15-20; the cost of funds we take at current rate of 6%. Loan losses are estimated from the estimate that new establishments are formed at the rate of 15% per year and the net rate of 8% leaving a death rate of firms of 7% per year. While these figures are very approximate the point of high loan loss and high administration cost is clear.

The argument is that raising interest rates for SMEs is essential if the financing is to shift to the formal sector. To show this is true one must tackle three points--- first that there is demonstrated ability of the banks to raise staff inputs allocated to identification, monitoring, and collection of these loans. Second, that the borrowers are willing to use loans at the higher interest rates. Third, the private banks are willing to devote the resources to this type of lending.

Conclusion

The flood has had a severe impact on the SME manufacturing sector in the Dhaka area. The average establishment incurred losses corresponding to about 30% of the total investment of the company. To assist the SMEs in recovery prompt action programs are required.

The critical actions are:

1. Maintain growth of private credit.

2. Encourage the banks to support existing clients and rapidly develop new clients.

3. Provide direct support for a limited time period to workers.

Without such program much of the recovery of SMEs will be slow and take 2-3 years to recover from the losses.

It is important to recognize that most SMEs do not deal with the banking system. The response to the flood crisis calls for using available organizations to deliver support. In the longer run there may be developed a stronger facility to support SMEs in natural disaster through establishment of an insurance fund. Equally important is to expend lending by banks to SMEs. The combination of bank lending and a flood relief fund will provide a greatly enhance capacity to manage the impact of natural disasters on SMEs.

While immediate action is needed, it is also important to review the success or otherwise of such efforts and design approaches to meet future disasters.