June 2007
IMF Country Report No. 07/230

Bangladesh: Selected Issues

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International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

BANGLADESH

Selected Issues

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Approved by the Asia and Pacific Department

June 1, 2007

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LIST OF ACRONYMS

ÀDP	Annual Development Program
BB	Bangladesh Bank
BOP	Balance of Payments
CBI	Caribbean Basin Initiative
CBW	Central Bonded Warehouse
CPI	Consumer Price Index
DAC	Development Assistance Committee
DSA	Debt Sustainability Analysis
EBA	Everything But Arms Initiative
EPZs	Export Processing Zones
FBs	Foreign Banks
FDI	Foreign Direct Investment
LIC	Low-Income Countries
MAI	Market Access Initiative
MDGs	Millennium Development Goals
MFA	Multi-fiber Agreement
NCB	Nationalized Commercial Banks
NFPCs	Nonfinancial Public Corporations
ODA	Official Development Assistance
PCB	Private Commercial Bank
PDB	Power Development Board
PFM	Public Financial Management
PRGF	Poverty Reduction and Growth Facility
PRSP	Poverty Reduction Strategy Paper
RMG	Ready-Made Garments
ROO	Rules of Origin
SDB	Specialized Development Banks

I. The Ready-Made Garment Industry in Bangladesh: An Update[1]

A. Introduction

1. **Bangladesh's RMG industry grew out of the quota system associated with the MFA of 1974–94.** The industry was established by foreign investors who set up garment and accessories factories in Bangladesh's EPZs during the mid-1980s to access Bangladesh's abundant supply of low-cost labor and take advantage of its quota share under the MFA. The RMG sector has grown tremendously over the past 20 years, generating associated increases in employment that contribute greatly to poverty reduction and a rise in export earnings. The RMG industry's share in export earnings rose from just over 10 percent in 1984 to almost 76 percent in 2006. Moreover, RMG exports accounted for more than 81 percent of the growth in the value of exports during that period.

2. **The RMG sector itself in Bangladesh accounts for a small proportion of GDP yet serves as an engine of growth.** Taking into account the high import content of garment manufacturing, it is estimated that the RMG industry directly contributes only about 25 percent of value added in manufacturing, which itself now accounts for approximately 17 percent of GDP.[2] The sector, however, generates substantial demand for transportation, distribution, other services, and construction. Moreover, RMG factories account for 40 percent of industrial employment and provide the largest single source of formal employment and wage earnings in the economy. RMG factories and associated businesses (spinning, dyeing, finishing, etc.) are estimated to provide employment for a total of 10 to 12 million people.

3. **While FDI played a major role in establishing the RMG industry in Bangladesh, the industry is now dominated by domestically-owned firms.** Of an estimated 4,330 firms at the end of 2006, just 83 were wholly or partially foreign owned (Table 1). Aggregate FDI in the sector since the industry's inception is estimated at $370 million (Table 2). All FDI was restricted to the EPZs by law until 2005 and there is no evidence of any significant FDI outside of the EPZs since the removal of that restriction. The

Table 1. Bangladesh: Employment in RMG Factories

Fiscal Year	Domestically-Owned Factories	Employees	Average Employees per Factory
1996/97	2,503	1,300,000	519
2001/02	3,618	1,800,000	498
2005/06	4,220	2,200,000	521
Memorandum items (end-2006):			
Total employment in EPZ garment factories			122,098
Of which: In wholly and partially foreign-owned firms			95,559
Number of wholly and partially foreign-owned firms in EPZs			83

Sources: Bangladesh Garment Manufacturers and Exporters Association; Bangladesh Export Processing Zones Authority; and Fund staff calculations.

[1] Prepared by Jonathan Dunn (APD).

[2] Osmani, Mahmud, Sen, Dagdeviren, and Seth (2003).

vast majority of employment in the RMG sector is in domestically-owned firms located outside of the EPZs and the average number of employees in these factories has consistently been around 500. Key differences between firms with FDI and those that are domestically owned are that productivity in the firms with FDI is estimated to be 20 percent greater than in domestic RMG firms and the average number of employees in firms with FDI is substantially higher.[3]

Table 2. Bangladesh: Garment and Textile Investment in the EPZs 1/
(In millions of U.S. dollars; cumulative for 1983–2006)

Investor	Woven Garments and Accessories	Knitwear	Textiles	Total
100% Foreign Owned	247.2	65.6	168.6	481.5
Joint Venture	50.5	5.9	18.6	75.0
100% Domestically Owned	54.1	12.0	42.0	108.1
Total	351.8	83.6	229.2	664.6

Sources: Bangladesh Export Processing Zones Authority; and Fund staff calculations.

1/ For all firms operational as of December 31, 2006.

4. **The remainder of this chapter reviews and analyzes the performance of the RMG industry in Bangladesh since the abolition of quotas at the expiration of the WTO Agreement on Textiles and Clothing on December 31, 2004.**[4] Section B examines RMG export performance in recent years, looks at the changing composition of Bangladesh's garment exports, and puts the recent performance of Bangladesh's garment industry in an international context; Section C discusses various factors that affect the competitiveness of the sector, and opportunities and constraints facing the sector; Section D concludes.

B. RMG Export Performance

5. **Despite expectations to the contrary, Bangladesh's garment industry has exhibited robust growth since the expiration of the ATC and the corresponding elimination of quotas on January 1, 2005.** Following a slowdown in garment export growth early this decade, total garment export value (and volume) growth has recovered in the past three years to annual rates in excess of 20 percent (Table 3).

Table 3. Bangladesh: Growth of RMG Exports, 2000/01–H1 2006/07 1/

	Woven Garments		Knitwear		Total	
	Value	Volume	Value	Volume	Value	Volume
2000/01	9.1%	7.4%	17.8%	15.9%	11.7%	10.8%
2001/02	-7.1%	7.8%	-2.5%	20.8%	-5.7%	13.3%
2002/03	4.3%	7.4%	13.3%	9.1%	7.2%	8.2%
2003/04	8.6%	9.3%	29.9%	32.4%	15.8%	19.8%
2004/05	1.7%	2.0%	31.3%	31.1%	12.9%	16.6%
2005/06	13.5%	17.9%	35.4%	37.4%	23.1%	28.9%
2006/07 H1	24.1%	25.7%	32.00%	31.87%	27.9%	29.4%

Sources: Export Promotion Bureau; and Fund staff calculations.

1/ Fiscal year ending June 30.

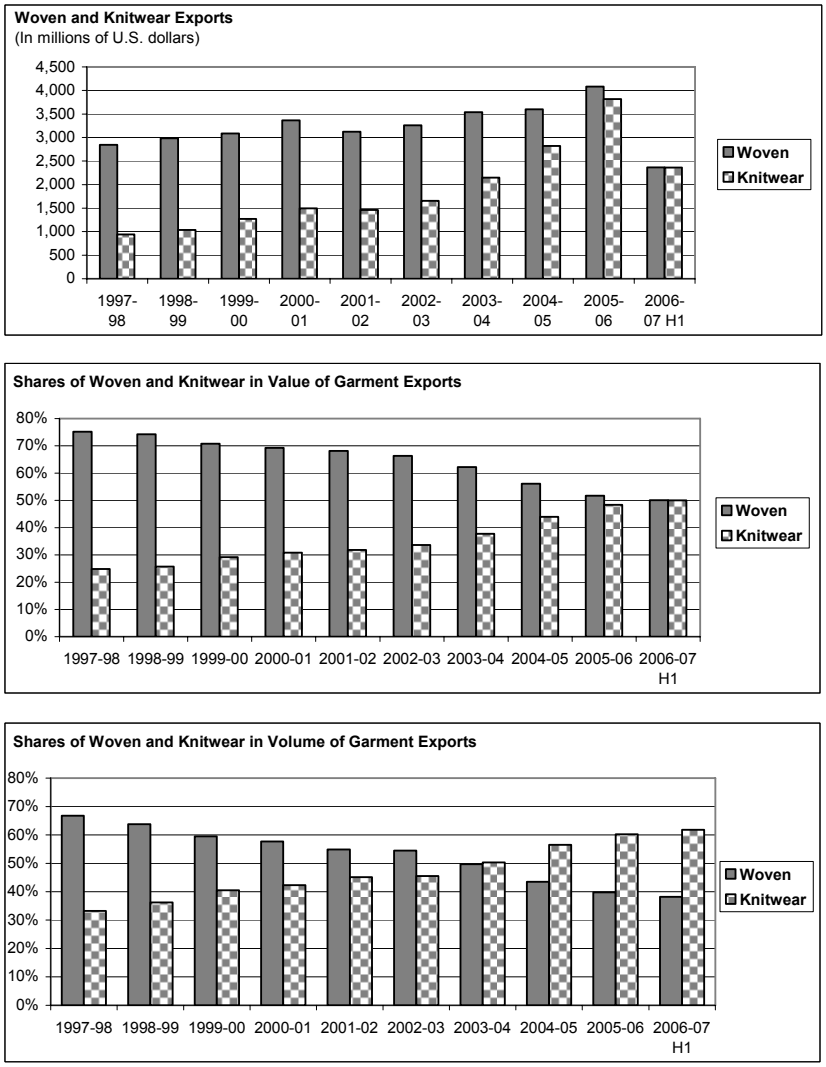
[3] World Bank (2005), p. 24.

[4] The ATC replaced the MFA on January 1, 1995 and textile and clothing quotas were phased out in four steps under the ATC over the following ten years.

Significantly, the growth of exports of woven garments is showing signs of a recovery in the past two years following a deterioration that began in 2001.

6. **The overall export figures for garments mask a significant change in the structure of Bangladesh's RMG industry** that is the result of the very rapid growth of knitwear production and exports.[5] From a total share in garment export earnings of 25 percent in 1997 knitwear exports rose to half of exports in the six months ending in December 2006 (Figure 1). In volume terms, knitwear now accounts for more than 60 percent of Bangladesh's garment exports.

Figure 1. Bangladesh: Changes in the Structure of the RMG Industry



Sources: Export Promotion Bureau; and Fund staff calculations.

7. **Bangladesh has had a mixed experience relative to other Asian LIC garment producers in capturing additional total market share in the world's largest garment markets since the removal of quotas.** In the EU market, which was the largest market in the world for imported garments in 2006, India and Vietnam have outpaced Bangladesh in capturing market share in the past two years (Table 4). In the U.S. market, Bangladesh has captured an additional 1 percent of market share, on par with India and well ahead of other Asian LICs.

[5] Knitwear includes all garments sewn from knitted fabric (e.g., t-shirts, undergarments) and garments, such as sweaters, that are knit from yarn. Woven garments refers to all garments sewn from woven fabric (e.g., dress shirts, shorts, trousers), including all denim products.

Table 4. Bangladesh: Shares of Imports of Garments into the EU and U.S. Markets
(In percent)

	EU				US			
	2003	2004	2005	2006	2003	2004	2005	2006
Bangladesh	6.6	7.5	6.6	7.7	2.8	2.8	3.2	3.8
Cambodia	0.9	1	0.9	0.9	2	2.1	2.4	2.9
India	5	5	6	6.3	3.3	3.4	4.3	4.4
Pakistan	1.7	1.8	1.4	1.5	1.6	1.7	1.8	1.9
Sri Lanka	1.5	1.6	1.5	1.6	2.3	2.3	2.3	2.3
Vietnam	1.1	1.3	1.3	1.7	3.7	3.7	3.8	4.3

Sources: Eurostat; U.S. Department of Commerce; and Fund staff calculations.

8. **Among Asian countries other than China, Bangladesh and other major Asian LIC garment producers are in aggregate capturing an increasing share of Asia's total exports to the EU and U.S. markets.** Detailed data for all major producers of garments show that the aggregate shares of major Asian LIC producers (Bangladesh, Cambodia, India, Pakistan, Sri Lanka, Vietnam) in total Asian garment exports (excluding those of the People's Republic of China) to the EU and U.S. markets have risen from between 34 and 57 percent in 2003 to between 45 and 68 percent in 2006, depending on product and destination. This is evidence that production outside of China but within Asia is shifting rapidly to Asian LIC producers, and indeed the market shares of Malaysia, Philippines, South Korea, Taiwan Province of China and Thailand are eroding across markets and across products (Tables 5–8).

Table 5. Bangladesh: EU25 Imports of Knitwear, 2001–06

	2001	2002	2003	2004	2005	2006
	(In percent of total EU25 imports)					
World	100.0	100.0	100.0	100.0	100.0	100.0
Bangladesh	7.5	7.6	8.6	9.8	9.1	10.6
Cambodia	1.4	1.5	1.5	1.7	1.6	1.7
China	17.5	17.8	17.8	19.2	27.6	26.1
Hong Kong Special Administrative Region	5.1	4.7	4.4	3.6	3.8	5.1
India	5.1	5.1	5.2	5.5	6.3	6.6
Indonesia	3.8	3.4	3.1	3.1	2.5	2.8
Macau Special Administrative Region	1.6	1.2	1.2	1.0	0.7	0.8
Malaysia	1.0	1.0	0.8	0.8	0.7	0.7
Mexico	0.1	0.1	0.1	0.1	0.1	0.1
Pakistan	1.3	1.5	1.7	2.0	1.4	1.4
Philippines	0.8	0.8	0.7	0.8	0.4	0.4
South Korea	2.6	2.2	2.1	2.0	1.0	1.1
Sri Lanka	1.9	1.9	1.8	1.9	1.8	1.8
Taiwan POC	1.6	1.5	1.4	1.1	0.6	0.6
Thailand	2.6	2.6	2.5	2.5	2.0	2.0
Turkey	17.8	20.5	22.0	21.0	20.1	18.5
Vietnam	0.6	0.6	0.5	0.6	0.7	1.1
Moroccco	3.9	3.7	3.5	3.0	2.5	2.3
Romania	4.4	4.9	5.2	4.5	3.9	3.3
Tunisia	3.3	3.7	3.5	3.1	2.7	2.6

Sources: Eurostat; and Fund staff calculations.

Table 6. Bangladesh: EU25 Imports of Woven Garments, 2001–06

	2001	2002	2003	2004	2005	2006
	(In percent of EU25 imports)					
World	100.0	100.0	100.0	100.0	100.0	100.0
Bangladesh	5.2	4.6	5.1	5.6	4.5	5.2
Cambodia	0.4	0.5	0.4	0.5	0.3	0.3
China	18.9	21.7	24.6	26.3	34.5	35.8
Hong Kong Special Administrative Region	6.2	5.3	4.6	4.2	2.6	3.5
India	4.6	4.9	4.9	4.5	5.8	6.1
Indonesia	4.0	3.0	2.7	2.3	2.0	2.1
Macau Special Administrative Region	1.1	0.9	0.8	0.7	0.5	0.5
Malaysia	0.7	0.7	0.5	0.3	0.3	0.3
Mexico	0.1	0.1	0.1	0.1	0.0	0.1
Pakistan	1.5	1.7	1.8	1.7	1.5	1.6
Philippines	0.5	0.6	0.6	0.6	0.4	0.4
South Korea	1.0	0.8	0.7	0.6	0.2	0.2
Sri Lanka	1.5	1.4	1.3	1.4	1.3	1.4
Taiwan Province of China	0.6	0.4	0.4	0.3	0.2	0.2
Thailand	1.4	1.3	1.3	1.2	1.0	1.0
Turkey	9.2	10.7	10.8	10.9	10.6	9.5
Vietnam	2.5	2.2	1.6	1.8	1.7	2.2
Moroccco	7.2	7.0	6.6	6.4	5.6	5.3
Romania	9.7	10.4	10.4	10.3	9.0	8.0
Tunisia	8.6	8.2	7.6	7.0	6.1	5.4

Sources: Eurostat; and Fund staff calculations.

Table 7. Bangladesh: U.S. Imports of Knitwear, 2001–06

	2001	2002	2003	2004	2005	2006
	(In percent of total U.S. imports)					
World	100.0	100.0	100.0	100.0	100.0	100.0
Bangladesh	1.8	1.8	1.7	1.6	1.8	2.1
Cambodia	1.5	1.6	1.7	2.0	2.6	3.7
China	8.5	9.4	10.8	13.0	19.8	22.5
Hong Kong Special Administrative Region	8.2	7.0	6.1	5.9	5.9	4.2
India	1.9	2.1	1.9	2.2	2.8	3.3
Indonesia	3.8	3.2	3.2	3.5	4.0	4.3
Macau Special Administrative Region	2.4	2.6	2.5	2.6	2.2	2.0
Malaysia	1.5	1.5	1.4	1.4	1.3	1.2
Mexico	12.5	11.3	9.9	8.6	7.2	6.2
Pakistan	2.4	2.3	2.6	2.7	2.8	2.9
Philippines	2.6	2.8	2.5	2.1	2.5	2.9
South Korea	3.9	4.1	3.4	3.1	2.2	1.8
Sri Lanka	1.6	1.4	1.4	1.4	1.8	2.0
Taiwan Province of China	4.0	3.6	3.5	3.1	2.2	2.0
Thailand	3.7	3.4	3.0	3.0	2.9	2.9
Turkey	2.1	2.5	2.5	1.9	1.3	1.0
Vietnam	0.1	1.6	3.7	3.4	3.4	3.9
CBI	19.8	20.2	20.0	20.2	19.4	17.6
Sub-Saharan Africa	1.6	1.9	2.5	3.0	2.3	1.8

Sources: U.S. Department of Commerce; and Fund staff calculations.

Table 8. Bangladesh: U.S. Imports of Woven Garments, 2001–06

	2001	2002	2003	2004	2005	2006
	(In percent of total U.S. imports)					
World	100.0	100.0	100.0	100.0	100.0	100.0
Bangladesh	4.6	4.1	3.8	3.9	4.5	5.5
Cambodia	1.6	1.9	2.2	2.2	2.2	2.2
China	13.1	14.5	16.5	18.8	27.3	31.3
Hong Kong Special Administrative Region	6.3	6.3	5.8	5.7	4.2	3.5
India	4.0	4.5	4.5	4.5	5.7	5.5
Indonesia	5.0	4.7	4.7	5.0	5.4	6.0
Macau Special Administrative Region	1.4	1.3	1.6	1.7	1.2	1.2
Malaysia	1.2	1.0	0.9	0.8	0.7	0.7
Mexico	14.7	14.6	12.6	11.7	10.2	8.5
Pakistan	0.9	0.8	0.7	0.8	0.9	1.0
Philippines	3.7	3.4	3.4	3.1	2.6	2.5
South Korea	3.5	3.0	2.3	2.3	1.2	0.7
Sri Lanka	3.4	3.3	3.1	3.1	2.8	2.6
Taiwan Province of Chjina	2.0	1.6	1.5	1.4	0.9	0.7
Thailand	2.7	2.6	2.5	2.5	2.3	2.2
Turkey	1.5	1.6	1.6	1.6	1.4	1.0
Vietnam	0.1	1.4	3.7	4.0	4.1	4.7
CBI	13.0	12.6	11.1	10.3	8.5	7.3
Sub-Saharan Africa	1.6	1.8	2.3	2.3	1.9	1.7

Sources: U.S. Department of Commerce; and Fund staff calculations.

9. **Cambodia and Vietnam are considered by garment manufacturers and buyers in Bangladesh to be Bangladesh's most direct competitors.** Bangladesh has increased substantially its share of the knitwear market in the EU and the woven market in the United States, but its other market shares have been fairly constant in recent years. Cambodia has managed to capture a much greater share of the U.S. knitwear market but its other market shares are either constant or falling. Vietnam's exports, on the other hand, are rising across the board.

10. **A very significant development is that some major garment-producing countries with duty free access to the U.S. are still losing shares in that rapidly growing market.** A number of countries currently benefit from duty-free access to the U.S. market under the NAFTA, the CBI**,** and the African Growth and Opportunities Act. Notwithstanding this fact, CBI and sub-Saharan African countries have lost substantial market share in both knitwear and woven garments in the U.S. since the expiration of the ATC. In addition, Mexico's share in the U.S. market has fallen over the past five years by more than 40 percent for woven garments and by over 50 percent for knitwear, and it is experiencing stagnation in the Canadian market. Similarly, the largest exporters, excluding China, of woven garments to the EU five years ago—namely Turkey, Morocco, Romania and Tunisia—have experienced very significant declines in their shares in that market over the past several years.

C. Competitiveness, Opportunities, and Constraints

11. **The competitiveness of Bangladesh's garment sector in the post-MFA era has been guarded in part by the flexible exchange rate regime.** Competitiveness also continues to be shored up by Bangladesh's labor cost advantage. Even after adjusting for productivity differences across countries, Bangladesh's garment industry retains a significant per unit labor cost advantage.[6] Buyers with representation in dozens of countries consistently rank Bangladesh as their lowest-cost source of supply.[7]

12. **The trade preferences and rules that Bangladesh faces in its major garment export markets have not changed since the expiration of the ATC.** In the EU, Bangladesh continues to benefit from the EBA initiative adopted in 2001. In principle, this means that Bangladesh's exports to the EU benefit from duty free access, but in fact there are strict ROO and value-addition rules.[8] In the U.S., Bangladesh benefits generally from GSP privileges but since 2001 the U.S. has excluded a list of 20 apparel items from the GSP and this list covers most of Bangladesh's garment exports. As a result, Bangladesh faces an average tariff rate of 13 percent on woven garments and tariffs of 14–18 percent on knitwear in the U.S. rather than the more preferential GSP tariffs that typically apply to these goods. In Canada, the MAI for LICs came into effect on December 31, 2002 and Bangladesh benefits from this initiative. The MAI has liberal ROO and value-addition requirements and provides for duty-free access for those LICs that meet them.

13. **Bangladesh's export pattern is evolving based on the mix of ROO and value-addition requirements.** Since Bangladesh's knitwear production has very high domestic content and value added (around 80 percent) it is estimated that 95 percent of its knitwear exports to the EU enter free of duty under the EBA initiative, thereby contributing to the very rapid growth of Bangladesh's exports of knitwear to the EU. Bangladesh's woven garment exports to the EU, which do not meet ROO and value-addition requirements under the EBA initiative, have fared less well. Bangladesh's production cost advantage is allowing its exports to the U.S. to increase rapidly despite the high tariffs it faces. [9] Due to the very liberal ROO and value-addition rules under Canada's MAI, virtually all of Bangladesh's

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[6] World Bank (2005), p. 45. Cross-country survey results from 2002 (latest available) show that productivity-adjusted per unit labor costs for dress shirts and jeans in Bangladesh were $0.23 and $0.24, respectively. Analogous per-unit labor costs were between $0.29 and $0.77 in other major Asian garment producing countries. It should be noted that the contribution of productivity-adjusted costs for overhead, transport, etc. are not included and these data therefore do not necessarily indicate that Bangladesh has the lowest total overall production costs.

[7] The knitwear sector in Bangladesh is generating large efficiencies through the operation of groupings of spinning, fabric knitting, dyeing, finishing, and knitwear firms that are effectively operating as conglomerates, thereby reaping many of the efficiencies of vertical integration in a sector where individual capital shares and firm size remain relatively small.

[8] World Trade Organization (2006).

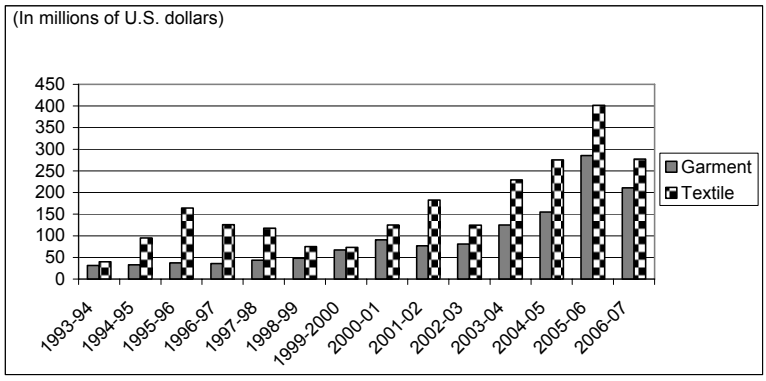
[9] Woven garments account for almost 74 percent of Bangladesh's garment exports to the U.S., a market in which Bangladesh's denim products are highly competitive.

garment exports benefit from duty-free access to the Canadian market. Bangladesh was, after China, the second largest garment exporter to Canada in 2006 and though the Canadian market accounts for under 10 percent of Bangladesh's garment exports it is a rapidly growing market.

14. **Safeguard measures imposed on China through 2008 by the EU and the U.S. have provided opportunities for all garment-producing countries to maintain a larger portion of the global market than they would have otherwise.**[10] Bangladesh is among only six countries other than China that have managed to capture significant market share in one or both markets.[11] This is an indication that the global industry views Bangladesh as a serious contender to remain a major garment producer. The evidence from Canada, however, provides a cautionary note for Bangladesh (and other producers). Despite rapid growth in exports to Canada and its rise to the number two position in the Canadian garment market in 2006, Bangladesh's share of the overall Canadian market has declined from 7.4 to 6.9 percent over the past two years. Canada is Bangladesh's only major market that has not imposed interim safeguard measures on China.

15. **Investment in the garment industry in Bangladesh has risen rapidly over the past several years, as indicated by imports of machinery by the sector** (Figure 2) **and investment by newly-established firms in the EPZs** (Table 9)**.** The figures also suggest that the primary textile sector in Bangladesh is expanding rapidly in response to the strong growth of the RMG industry. This demonstrates that Bangladesh-based producers believe that they will continue to be competitive. Woven garment factories are primarily investing in new technologies to produce somewhat higher value added garments. Knitwear factories, on the other hand, are investing mostly to expand capacity. Producers and buyers report that investment is also directed toward raising safety and environmental standards, factors that now must be taken into account when gauging overall competitiveness.[12] Several important recent developments are

Figure 2. Bangladesh: Letters of Credit Settled for Imports of Machinery 1/



Sources: Bangladesh Bank; and Fund staff calculations.

1/ Data for 2006–07 for July through January.

[10] Rahman and Anwar (2005).

[11] The others are Cambodia (U.S.), India (EU and U.S.), Indonesia (U.S.), Philippines (U.S.), and Vietnam (EU and U.S.).

[12] Producers and buyers say that the garment industry in Bangladesh is improving compliance with respect to labor and safety standards but is making less rapid progress with regard to environmental concerns. Producers express concern about the erosion of their cost advantage if they raise environmental standards more quickly than their major competitors. This should not, though, be a major factor so long as buyers insist on equal compliance improvements across major LIC garment producing countries.

the establishment by major international buyers of a permanent presence in Bangladesh, the opening of Bangladesh's first "brand wear" factories that produce garments exclusively for a single label, and the rapid expansion of the knitwear industry into sweaters. These developments show that major buyers are bolstering already strong long-term relationships with producers and are increasingly prepared to invest their own time and funds in technology and knowledge transfer to Bangladesh's garment industry, and that Bangladesh's knitwear manufacturers are prepared and able to invest quickly in new market opportunities.

Table 9. Bangladesh: Garment and Textile Investment by Newly-Established Firms in the EPZs
(In millions of U.S. dollars)

Investor	Woven Garments and Accessories	Knitwear	Textiles	Total
100% Foreign Owned				
2001–03	14.6	5.5	23.0	43.1
2004–06	13.3	13.8	0.0	27.1
Joint Venture				
2001–03	3.3	1.2	13.2	17.8
2004–06	26.8	2.3	0.0	29.1
100% Locally Owned				
2001–03	5.8	0.0	2.4	8.3
2004–06	6.4	1.7	6.3	14.5
Total				
2001–03	23.7	6.7	38.6	69.1
2004–06	46.6	17.8	6.3	70.7

Sources: Bangladesh Export Processing Zones Authority; and Fund staff calculations.

16. **A number of studies conducted prior to the expiration of textile and clothing quotas identified factors that would likely negatively affect Bangladesh's competitiveness in the post-ATC world.**[13] First among these was the long lead time for Bangladesh's woven garment exports—arising from Bangladesh's location relative to its major markets; restrictions on imports of inputs for RMG that were designed to protect the domestic textile industry; generally inadequate infrastructure and a poorly functioning Chittagong port; and the failure to approve a CBW system. The other major constraints identified were the failure of Bangladesh to take advantage of regional accumulation (South Asian Association for Regional Cooperation accumulation) opportunities to benefit more from duty-free access to the EU woven-garment market and the inadequate standard of training of labor in the garment industry.

17. **There has been limited progress on measures that would reduce the lead time for Bangladesh's garment producers.** The main policy change since the expiration of the ATC has been to allow the import of yarn and raw cotton from India through land ports since December 2005, a policy that primarily benefits the integrated knitwear industry. The market

[13] Centre for Policy Dialogue (2004); Mlachila and Yang (2004); World Bank (2005).

segments that Bangladesh currently serves still allow for relatively long lead times. Buyers also report satisfaction that garment producers in Bangladesh consistently work to produce quality garments on time and exhibit great flexibility in accepting orders. Producers and buyers warn, however, that lead time will become much more critical as Bangladesh moves into higher value-added garments and fashion wear and that this will require ready availability of high-quality fabrics and accessories at competitive prices.

18. **There is general consensus that the major constraint on the garment industry in Bangladesh is the low level of labor skills, followed by generally poor infrastructure, especially as related to moving goods through the ports.** Some initiatives are underway by the manufacturers' associations to provide training for garment workers and to attract general university graduates as management trainees. In addition, buying houses are assisting in some cases with labor training and are maintaining pressure for better working environments. These remain, however, fairly marginal contributions to improving overall labor productivity. More importantly, as some of Bangladesh's main current competitors move further up the value-added chain, or even out of garment production altogether, the labor force constraint will make it more difficult for Bangladesh to capture more market share in the low-end to medium garment market and will prevent the industry from easily moving itself up the value-added chain.

D. Conclusion

19. **Bangladesh has demonstrated that it is highly competitive in the world's major garment markets since the expiration of the ATC.** Its strong performance to date is attributable to significant competitive advantages emanating from its abundant low-cost labor, the flexible exchange rate, and increasingly close ties with major international buyers that are allowing the industry to benefit from the transfer of knowledge and technology. The industry's success has, however, been supported by the transitional safeguards on exports from China. These safeguards are due to expire in 2008 and the erosion of Bangladesh's market share in Canada—its only major market in which there are no safeguard restrictions on China—over the past two years suggests that Bangladesh will face much greater competition in its two largest garment export markets in the relatively near future. Vietnam's accession to the WTO in January 2007 poses a challenge for Bangladesh since Vietnam now has quota-free access to the large markets in which these two countries compete head-to-head. Recent labor unrest in Bangladesh's garment sector is a potential risk to the industry and highlights the need for continued efforts to raise safety standards, to improve general working conditions, and to implement wage agreements.

20. **To maximize the likelihood that Bangladesh's garment industry will continue to thrive the industry and government will need to address a number of issues.** Foremost among these is the development of vocational and other educational programs that will support the industry's need for more highly-skilled domestic labor, including line and production managers. Given the clear constraints imposed on the RMG and other industries by the poor condition of the country's infrastructure, it is critical that the government moves to improve the roads, railways and ports, and to streamline further the customs procedures applied at all points of entry. A general change for the better in the business climate—from better infrastructure and improved governance—may attract more FDI into the garment

sector, including outside the EPZs. This could be particularly important since there is strong evidence that productivity (and employment) is higher in FDI firms and more FDI in the sector would create additional competition, thereby helping to improve the competitiveness of all RMG firms. Aside from addressing these constraints to growth, Bangladesh's garment industry should more actively explore new markets. Even though firms report that they are constantly running at maximum capacity and prefer to deal with known buyers and customers, efforts should be made to develop new business, at least in large Asian countries such as Japan, China and India.[14] This may help Bangladesh to sustain its growth in the increasingly competitive global market, particularly since it is well placed to absorb business in the low-end and medium garment market as other major producers move up the value-added chain.

[14] In January 2006 China granted Bangladesh duty free access for 84 items, including some RMG and textile products. Some Bangladesh-based producers believe that their products are already competitive within China, especially for low-end garments. India has recently agreed to allow Bangladesh to export 6 million pieces of garments duty-free to India, though details on the composition of goods and ROO for the inputs are still being discussed.

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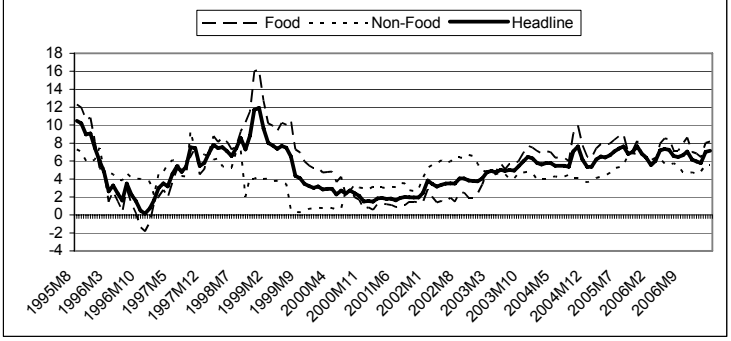
II. Inflation Dynamics in Bangladesh[1]

A. Introduction

1. **Inflation in Bangladesh has been contained at moderate levels during the past eight years, but has been on an increasing trend since 2001.** From the late-1990s, the inflation rate (as defined by y-o-y percentage change in the CPI) has been at single digit levels, reaching a low of 1.5 percent in January 2001. Since then, Bangladesh has experienced an increase in inflationary pressures. The inflation rate increased from 1.9 percent in 2001 to 5.4 percent in 2003 and was 7.2 percent as of March 2007. Since abandoning the peg of the taka to the U.S. dollar and adopting a managed float exchange rate regime in 2003, food prices (which are heavily influenced by international prices and have a weight of 54 percent in the overall CPI in Bangladesh) have increased moderately, and nonfood price inflation has been consistently lower than food price inflation (Figure 1).

Figure 1. Bangladesh: Main Components of Inflation, August 1996–March 2007, (Y-O-Y percentage change in CPI) 1/



Source: Fund staff estimates.
1/ Monthly data

2. **Inflation inertia and monetary factors, as well as the exchange rate, are important determinants of inflation in Bangladesh.** Some observers have emphasized supply-side shocks, such as shortages of domestic food production, and global external shocks (mainly higher oil prices) as the major causes of inflation in Bangladesh. However, this paper will show that monetary factors and inflation inertia have also played important roles. Among supply-side factors, only the exchange rate is found to be significant in explaining inflation in Bangladesh.

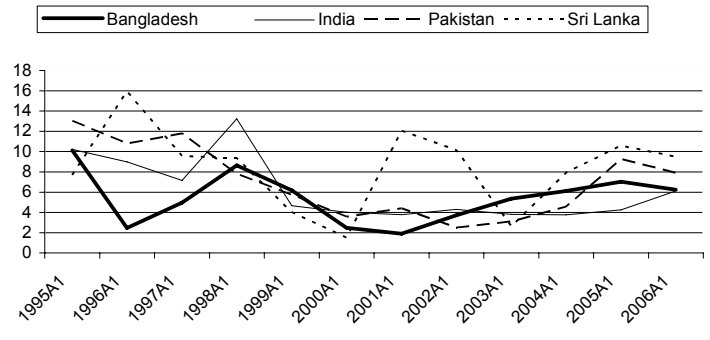
3. **Inflation causes unfavorable effects on poverty and growth.** Inflation is a regressive tax with an adverse impact on the poor since they do not have access to financial assets to hedge against inflation risks. Inflation can also hurt growth once it exceeds a certain threshold. Khan and Senhadji (2001) estimate this threshold to be 7–11 percent for developing countries. This is noteworthy for Bangladesh, where inflation has recently surpassed 7 percent.

[1] Prepared by Ali Alichi (FIN). Definitions and sources of the data are not reported, but are available upon request from the author.

B. Regional/Global Comparisons

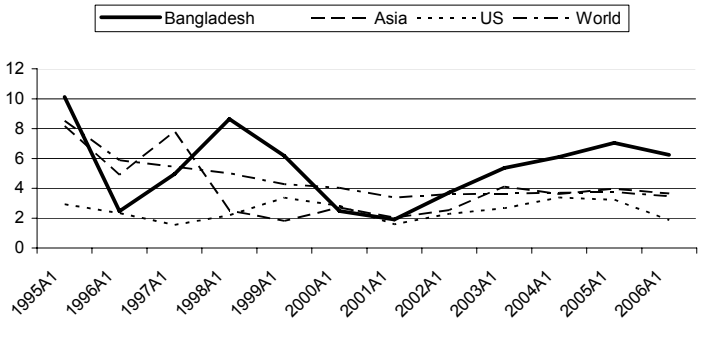
4. **Inflation in Bangladesh in recent years has been higher than its main trading partners (India and the United States), but not so high by overall regional standards** (Figures 2, 3, and Table 1). The average (y-o-y) monthly inflation rate in Bangladesh during 2003–06 has been 5.3 percent. This is higher than inflation rates in India and the United States, almost the same as in Pakistan, but smaller than in Sri Lanka for the same period. Looking more broadly, inflation in Bangladesh has been more than 2 percentage points higher than the averages for the Asian region and the world.

Figure 2. Bangladesh and Neighbors: Inflation, 1995–2006, (In percentage change in CPI) 1/



Source: WEO.
1/ Annual data.

Figure 3. Bangladesh, Asia and United States: Inflation, 1995–2006, (In percentage change in CPI) 1/



Source: WEO.
1/ Annual data.

5. **Volatility and persistence of inflation in Bangladesh have been higher than in India, but lower than in Sri Lanka, while Bangladesh and Pakistan on average have similar inflation dynamics** (Table 1). This is consistent with findings in the literature that as inflation increases, its volatility (standard deviation) also increases.

Table 1. Bangladesh and Neighbors: Inflation Statistics, January 2003–February 2007 1/

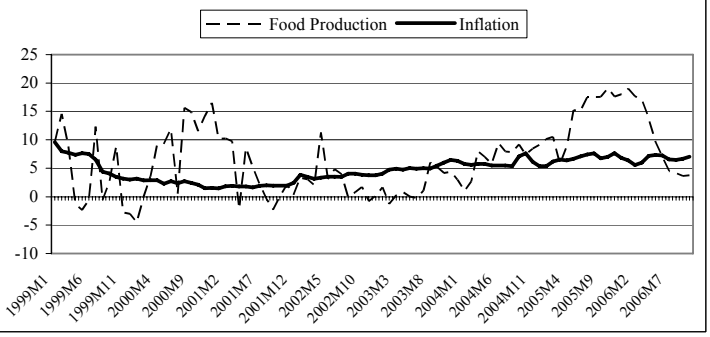
Country	Mean	Median	Maximum	Minimum	Standard Deviation
Bangladesh	5.3	5.6	10.1	1.1	2.5
India	4.4	4.2	7.3	2.2	1.1
Pakistan	5.3	4.7	11.1	1.4	2.8
Sri Lanka	9.5	10.7	19.8	0.5	4.3

Source: *IFS*.
1/ Inflation is calculated as y-o-y monthly percentage change in CPI.

C. Supply Shocks and Inflation

6. **Fluctuations in food production, including those due to natural disasters, have not heavily influenced inflation in Bangladesh** (Figure 4). A likely explanation for this finding is that domestic food production always falls considerably short of demand in Bangladesh. Therefore, food prices are determined mostly by international prices, rather than domestic production.

Figure 4. Bangladesh: Food Prod. and Inflation, January 1999–December 2006, (y-o-y percentage change in food prod. and CPI) 1/



7. **There is a close association between exchange rate fluctuations and inflation, but little short-term impact of changes in oil prices on inflation** (Figures 5–6). Since the adoption of a managed float exchange rate regime in 2003, any depreciation (appreciation) of the exchange rate has been associated with a pickup (decrease) in inflation. However, inflation has changed in line with oil price changes only over the medium term presumably because the government has not always passed through international oil price changes to the domestic economy in a timely fashion, as was the case over the last two years.

Figure 5. Bangladesh: Inflation and International Oil Price, January 1999– January 2007
(y-o-y percentage change in oil price and CPI) 1/

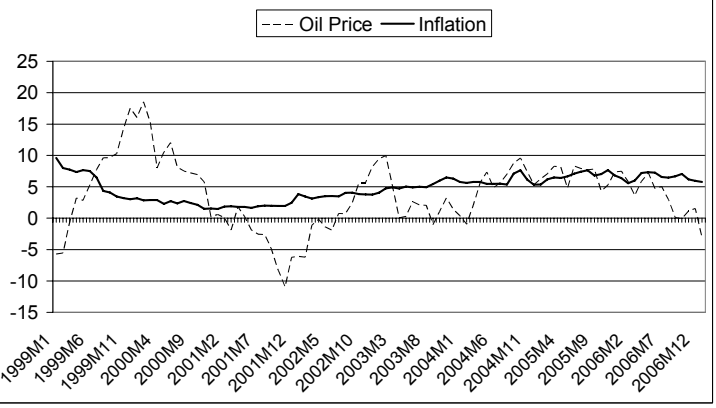
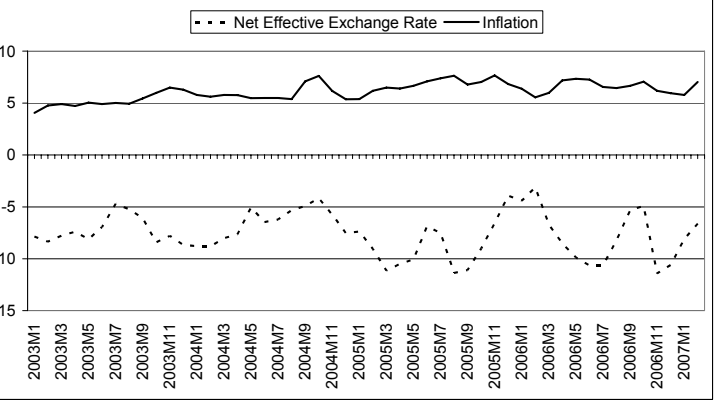
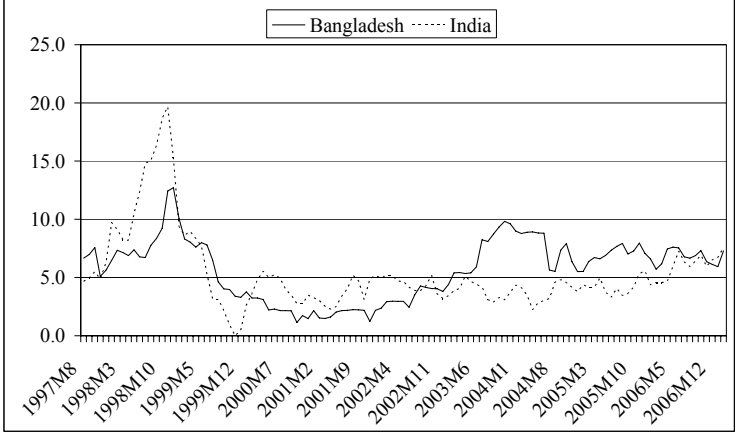


Figure 6. Bangladesh: Exchange Rate and Inflation, January 2003–February 2007, (y-o-y percentage change in NEER and CPI) 1/



8. **India's inflation can influence Bangladesh's inflation through trade and financial transactions.** The past episodes of rising inflation in India have usually been followed by periods of rising inflation in Bangladesh with a lag of one–two months (Figure 7). India had a stable inflation rate of around 4 percent during much of the past few years. However, inflation in India has increased, with the current rate above 6 percent.

Figure 7. Bangladesh and India: Inflation, August 1998–February 2007 (y-o-y percentage change in CPI) 1/



D. Data, Model, and Estimation Methodology

9. **Table 2 shows the correlation matrix for the Bangladesh data used in this paper.** Monthly data are used to capture variations of inflation more accurately. As expected, private sector credit and the oil price are positively, and NEER negatively, correlated with the CPI. However, inflation and broad money growth (surprisingly) appear to be negatively correlated. This negative correlation only occurs prior to 2001 during the fixed exchange rate regime. The January 2001 to December 2006 subsample of inflation and broad money are positively correlated.

Table 2. Bangladesh: Correlation Matrix: Inflation and Selected Variables, January 1999–December 2006 1/

	Inflation (CPI)	Private Sector Credit 1/	Broad Money 1/	NEER	Food Production	Oil Price
Inflation (CPI)	1					
Private sector credit 2/	0.32	1				
Broad money 2/	-0.27	0.12	1			
Broad money 2/ 3/	0.32	0.57	1	-0.11	0.27	0.19
NEER	-0.75	-0.23	0.28	1		
Food production	0.41	-0.22	-0.33	-0.12	1	
Oil price	0.29	-0.11	-0.68	-0.12	0.43	1

Sources: Data sources are explained in the appendix.
1/ All variables are in y-o-y monthly percentage change.
2/ Lagged 12 months.
3/ January 2001–December 2006.

10. **The model estimated is, essentially, the quantity equation of money in differences, assuming constant velocity**, as follows:

$$\dot{P} = \dot{M} - \dot{Y}$$

Where, $\dot{P}$ is the inflation rate, $\dot{M}$ is the growth rate of money, and $\dot{Y}$ is the output growth.[2] Assume output growth is only due to supply and demand shocks in the short run:

$$\dot{Y} = \alpha_1 \dot{M} + \alpha_2 \dot{S}$$

Where, $\dot{S}$ is the growth rate of supply-side factors (including the exchange rate), and α_1 and α_2 are the (vector) coefficients. The model will be derived by plugging output growth into the quantity equation above, and taking lagged-inflation to the right hand side:

$$\dot{P}_t = \beta_1 \dot{M} + \beta_2 \dot{S} + \beta_3 \dot{P}_{t-1}$$

Where, $\dot{P}_{t-1}$ is lagged inflation and β_1, β_2, and β_3 are the coefficients to be estimated.

The estimation method is Ordinary Least Squares (OLS) in differences. The dependent variable is the inflation rate (percentage change in CPI), and explanatory variables include growth rates of monetary factors (broad money and private sector credit), the exchange rate, domestic food production, and international oil prices.

E. Results

11. **Regression results (Table 3) suggest that inertia, demand shocks, and exchange rate changes are determinants of inflation in Bangladesh.**[3] Similar to other countries, inflation inertia is found to be a significant component. Regression coefficients for the other factors (e.g., 0.02 for private sector credit in Model 1) are smaller than those of inertia. However, they have compounded effects on inflation by influencing expectations.

- **Models 1 and 3 represent the best specification.** They show that the current month's inflation rate is the most powerful determinant of the next month's (coefficient = 0.87). A month's inflation contains the influence of all previous months' shocks, which form inertia for the following month. They also show that a depreciation of the exchange rate increases the inflation rate, and that money and credit aggregates are found to be a significant determinant of inflation.

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[2] A variable without time index is a vector, which includes a scalar variable, as well as its relevant lags—for example, $\dot{P}$ is the vector of inflation that includes inflation ($\dot{P}_t$) and lagged inflation ($\dot{P}_{t-1}$).

[3] In the previous section, Pakistan was found to be a close inflation comparator for Bangladesh. Recently, Khan and Schimmelpfennig (2006) have found that monetary factors have been the dominant driving force of inflation in Pakistan.

Table 3. Bangladesh: Inflation Determinants 1/

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Inflation 2/	0.87 *		0.87 *		0.87 *	0.85 *	0.86 *
	-0.04		-0.04		-0.04	-0.04	-0.04
Private sector credit 2/	0.02 *				0.02 *	0.02 *	0.016
	-0.01				-0.01	-0.01	-0.011
Private sector credit 3/		0.15 *					
		-0.02					
Broad money 2/			0.02 *				
			-0.01				
Broad money 3/				0.11 *			
				-0.02			
NEER	-0.06 *	-0.46 *	-0.07 *	-0.53 *	-0.06 *	-0.06 *	-0.06 *
	-0.03	-0.05	-0.03	-0.05	-0.03	-0.03	-0.03
Food production /2						0.02 *	0.02 *
						-0.01	-0.01
Oil price					-0.001		-0.002
					-0.002		-0.002
Adjusted R-squared	0.99	0.94	0.99	0.93	0.99	0.99	0.99
Durbin-Watson Statistic	1.49	0.41	1.49	0.44	1.49	1.52	1.54
Observations	93	82	93	82	93	93	93

1/ The dependent variable is inflation. All variables are in y-o-y monthly percentage change for January 1999 to December 2006. Values under each coefficient are standard deviations. Signifance at 95 percent confidence interval is indicated with *.
2/ Lagged one month.
3/ Lagged 12 months.

- **Models 2 and 4 are provided for comparison with some other contributions in the literature.** Specification of these models has two differences with Models 1 and 3. First, the inflation lag is among the explanatory variables in Models 1 and 3, but not in Models 2 and 4. Second, monetary factors are with a lag of one month in Models 1 and 3, but with a lag of 12 months in Models 1 and 4. As evidenced by the Durbin-Watson statistics, Models 2 and 4 suffer from nonstationarity, and are, therefore, mis-specified.

- **Models 5, 6, and 7 add domestic food production and international oil price shocks to the list of explanatory variables**. However, none of these variables turn out to be explaining inflation. Food production coefficients have the wrong sign (positive). This is perhaps because Bangladesh is an open economy that relies on food imports, which implies food prices in Bangladesh are determined internationally, rather than by domestic demand and supply. Oil price coefficients are not significant.

F. Conclusion

12. **The empirical results presented in this paper show that inflation inertia, monetary factors, and exchange rate fluctuations are the main determinants of inflation in Bangladesh.** Broad money growth and private sector credit growth explain inflation with a lag of up to 12 months. Exchange rate changes also impact inflation. In contrast, domestic food production and international oil price changes are not shown to have a significant impact.

13. **Given that inflation has increased already to above 7 percent, these results point to the need for the central bank to employ a more contractionary monetary policy**. Broad money and private sector credit have grown by more than 16 percent, annually, since 2006. The model's results indicate that tightening broad money or private credit in one month will cause lower inflation starting the next month, and up to 12 months later.

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III. Banking Soundness and Financial Intermediation[1]

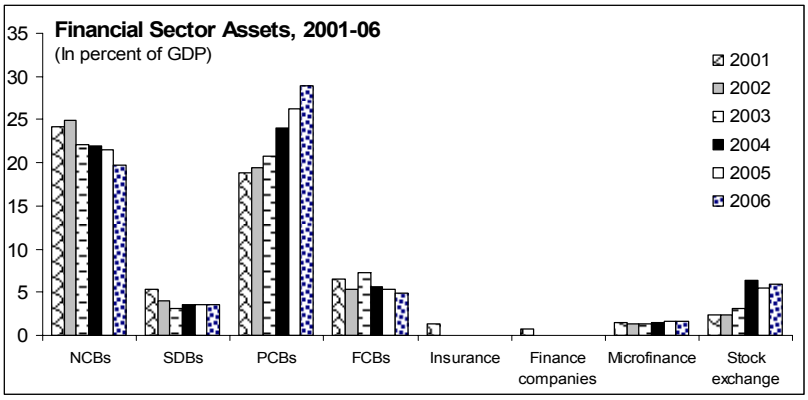
A. Introduction

1. **As financial deepening advances, high financial intermediation costs are holding back the sector's contribution to sustained growth.** Macroeconomic stability, liberalization measures, and regulatory reforms have helped strengthen the financial sector since the mid-1990s and encouraged the entry of private and foreign banks and of nonbank financial entities. However, the predominance of weak, large state banks, even though their market shares are diminishing, has prevented high intermediation costs from declining following increased competition.

2. **This paper reviews recent performance of the financial sector,** focusing on the soundness of the banking system and its ability to cope with a significant pick up in the pace of credit growth. In assessing performance, we look beyond published indicators of banking soundness by making adjustments to the ratios where needed, as well as analyzing variations between firms. The paper also examines the impact of greater market concentration on interest spreads and explores other determinants of bank profitability and interest spreads in a panel regression framework.

B. Size, Structure, and Recent Development

3. **Bangladesh's financial system is relatively shallow.** Total financial sector assets amount to about 69 percent of GDP, with banking sector assets accounting for the bulk of assets or 58 percent of GDP. Capitalization of the securities market amounts to another 6 percent of GDP, and the remainder represents estimated assets of insurance companies, nonbank financial institutions, and microfinance.



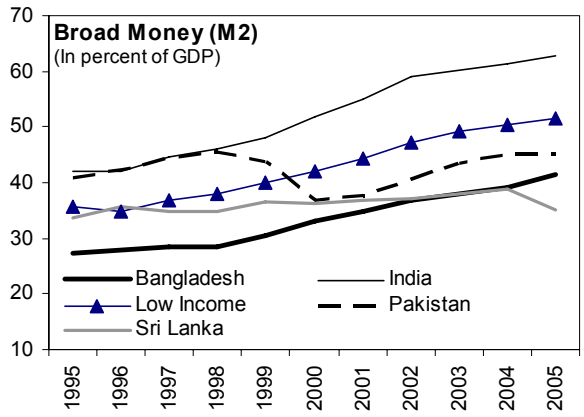
4. **Private commercial banks and the stock exchange have seen the most rapid growth in the last five years.** There are currently four nationalized commercial banks, five special development banks, 30 private commercial banks and 9 foreign commercial banks. Assets of domestic private commercial banks increased from 19 percent of GDP to 29 percent of GDP between 2001 and 2006. The stock exchange more than doubled in size relative to GDP. Although the number of microfinance institutions has nearly doubled, their

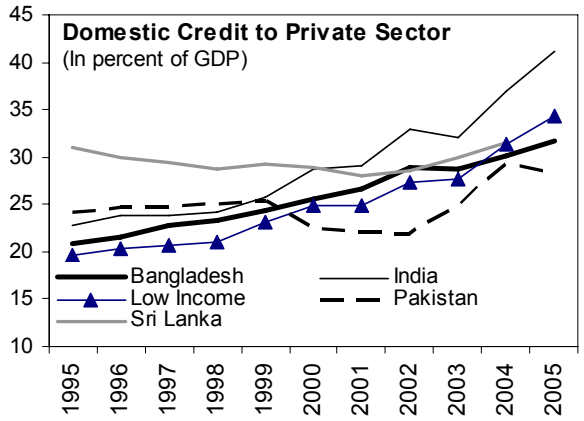
[1] Prepared by Wafa Abdelati (APD).

assets have increased only slightly relative to GDP and remain under 2 percent, but their reach has increased to about 60 percent of households.

5. **The sector remains small in a regional and global perspective.** Broad money and credit to the private sector amount to 38 and 29 percent of GDP, respectively. Nonbank financial institutions are relatively small and short-term treasury bills are the dominant financial asset. Insurance activity is limited and life insurance policies total to less than half the average for low income countries.

6. **Stock market growth has been much slower than in other countries**, and average market capitalization at 6 percent is very low compared to the average of low income countries, which is 55 percent of GDP. Banks, which are required to list on the stock exchange, constitute the bulk of stock market shares.



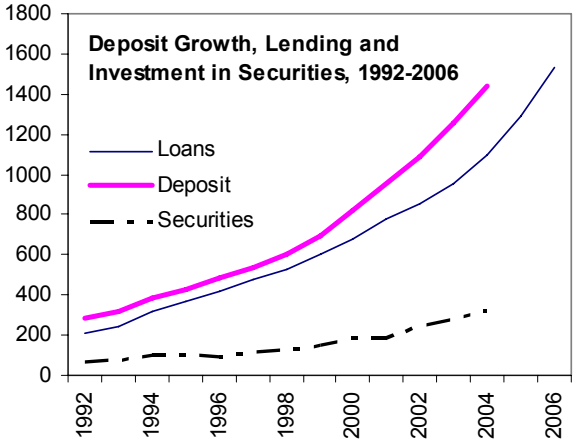


7. **The sector's development benefited from financial liberalization measures in the 1990s.** Key among these were liberalization of interest rates and opening the sector to entry of additional foreign banks and new private banks. A total of 8 foreign banks and 10 new private banks opened in the 1990s, while some banks exited. Macroeconomic stability, aided by fiscal discipline, has had a positive impact in improving confidence in the taka and supporting financial deepening. Alongside market deregulation measures, BB has moved gradually to tighten prudential regulations with a view to bringing them closer to international standards and to strengthen its supervisory procedures and capacities.

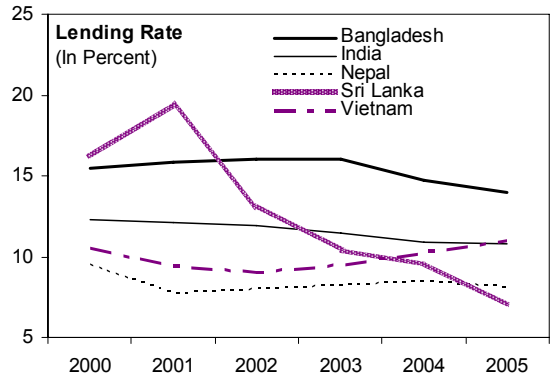
C. Overview of Bank Performance

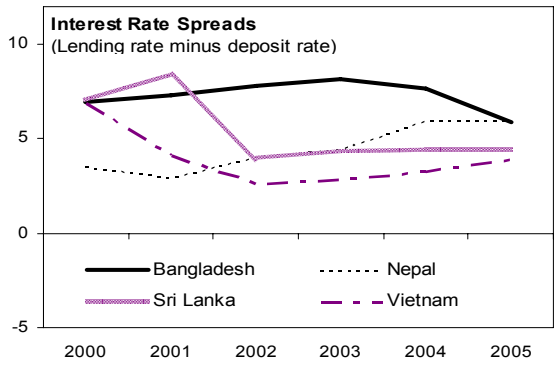
8. **The pace of financial sector growth has recently picked up.** Since 2000, banks' deposits have grown at a more rapid pace than lending. During the same period, banks' cash on hand and holding of government securities have been increasing at a somewhat faster rate. This may be due to banks' inability to find enough viable projects for their increased liquidity.

9. **Relatively high lending rates are a sign of weak financial intermediation**. Bangladesh's bank lending rates are on average around 15 percent with some rates much higher, while rates on lending to agriculture and state-owned enterprises (SOEs) by the state-owned banks are much lower. These rates are relatively high compared to other Asian countries where they are between 8 and 12 percent on average although inflation rates are at similar levels. The higher lending rates could reflect perception of higher risk in Bangladesh.

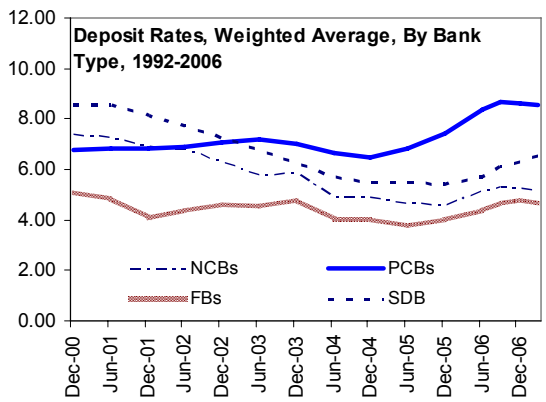


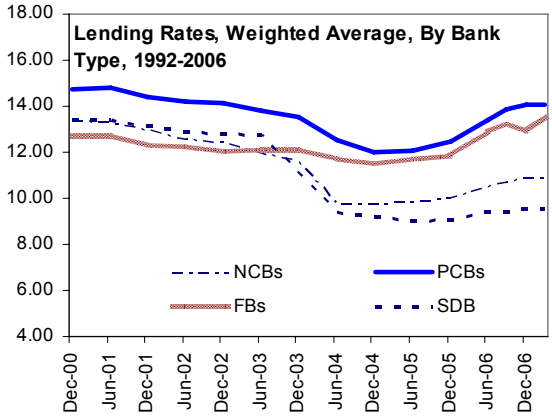
10. **Persistently high interest rate spreads are another sign of inefficiencies in the banking sector**. Interest rate spreads have remained high at between 6 and 8 percent since 1993. Improved economic conditions, the more rapid increase in deposits, greater competition, and measures to strengthen bank performance have not been translated into lower interest rates. Spreads have remained around 6 percent on average as both lending and deposit rates have remained high over the last six years. Consistent with inflation developments, average lending and deposit rates for the sector as a whole declined in 2003, but have been rising over the last two years. Rate trends have, however, varied between groups of banks.



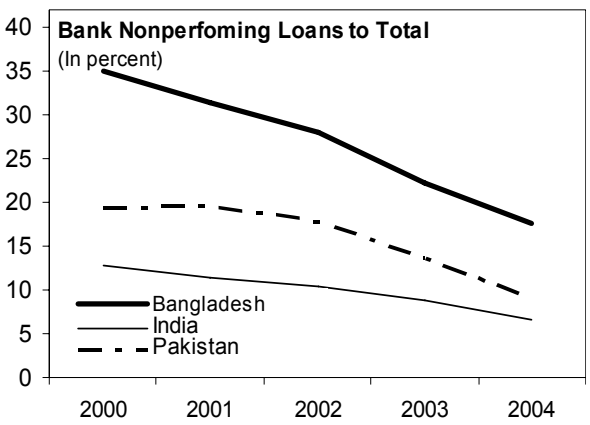


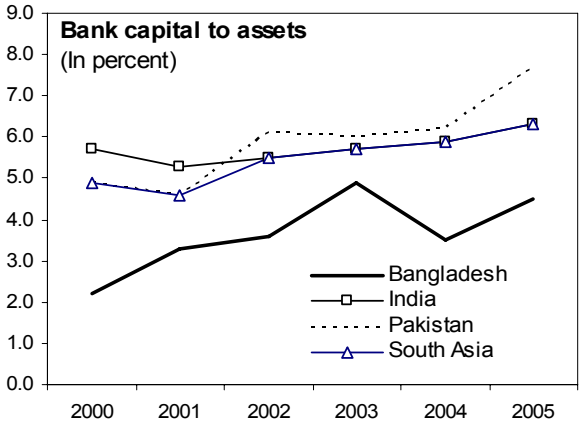
11. **Private banks' deposit rates have risen most sharply, while both deposit and lending rates for NCBs have dropped significantly.** Deposit rates of private banks average 9 percent compared to 5–6 percent for foreign banks. In contrast to the situation three years earlier, deposit rates of private banks now significantly exceed rates offered by state banks. This may reflect banks' efforts to increase their market share in the context of rising competition and deserves further investigation. As part of their restructuring plans, the nationalized commercial banks (NCBs) have been subject to limits on their lending to non-public sector entities. This has driven some of their business away to private banks and may explain the decline in their lending and deposit rates since the NCBs lend at below market rates to the public sector.





12. **The benefits of sector reform can be seen in relative improvements in asset quality and banks' capital positions.** The ratio of nonperforming loans (NPLs) declined from around 35 percent in 2000 to around 14 percent in 2006, but with variations by type of bank. As the capital adequacy requirements were raised, banks' average capital position also strengthened.





13. **Even with these improvements, asset quality and capitalization remains relatively weak.** The NPL ratio is high by international standards (although country comparisons are complicated by varying local definitions of nonperforming loans). Similarly, the ratio of bank capital to total assets is much lower than in neighboring countries, and as noted below, reported ratios overstate banks' capital adequacy. Some of the reasons for these persistent weaknesses are explored in the following section.

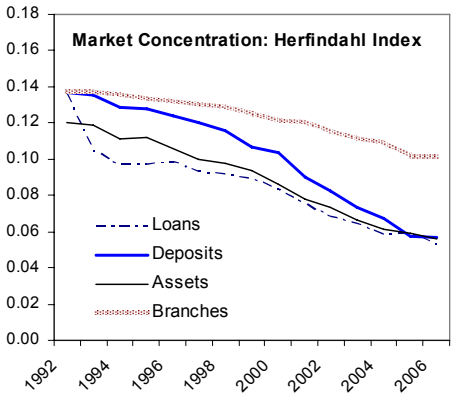
D. Weak Financial Intermediation and Implications for Rapid Credit Growth

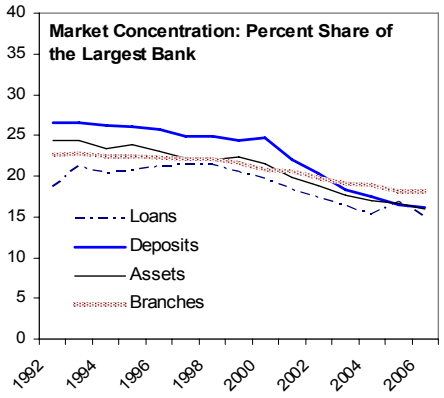
14. **This section investigates the nature of bank inefficiencies and the potential risks in the context of robust credit growth**. First, it reviews the extent to which competition has increased following deregulation by examining various measures of market concentration. Second, it explores the variations between banks' performance (including intermediation

spreads) and the characteristics associated with banks that have higher operating costs and more rapid lending growth. Third, it presents results of some stress testing on the ability of banks to withstand an increase in non-performing loans stemming from an economic shock.

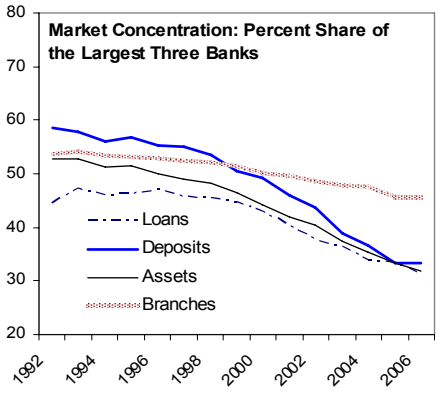
Box 1. Indicators of Market Concentration

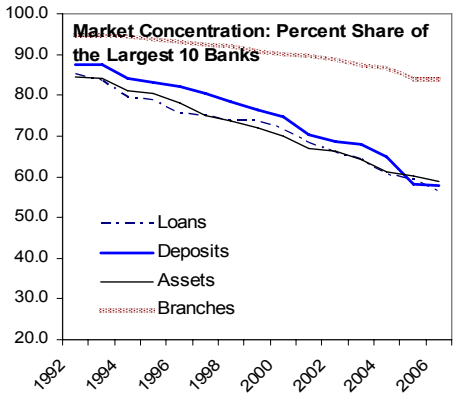
Market concentration has declined significantly since 1992. In terms of loans and deposits, the Herfindahl Index (defined as the sum of squares of the shares of the banks) has declined from around 0.14 to 0.06, which is relatively low by international comparison.





The relative decline in deposit concentration is somewhat greater that that of loan concentration. The largest three banks (all NCBs) now hold 32 percent of total deposits compared to 60 percent of total deposits in 1992. The share of the largest bank, Sonali Bank, declined from 27 percent to about 18 percent of deposits, with a more modest decline in its share of loans, assets, or branch network.





Market Concentration

15. **A variety of indicators show that market concentration has declined following liberalization** (Box 1). However, it is worth noting that among bank types, the largest NCBs and foreign commercial banks (FCBs) enjoy considerable market power. Although there are 9 FCBs, the three largest account for 85 percent of the FCB market share.

Performance indicators and large intermediation spreads

16. **High intermediation costs are a sign of either operating weaknesses and/or rigidities giving rise to rents that reduce the efficient utilization of savings.** As noted above, interest rate spreads have remained stubbornly high in the face of reforms. Based on analysis of pooled bank data for 50 banks from 2000 to 2006, there is considerable variation in net interest margins (the ratio of net interest income to assets), profitability, and cost efficiency of banks. This variation suggests that some banks are unprofitable or inefficient while others are benefiting through high rents.

17. **Low interest margins of problem banks result from the large size of their nonperforming loan portfolio.** By dividing all banks into quintile groups based on NPL ratios, we can see that the banks with the highest NPL ratios (averaging 41 percent of their loan portfolio) have the lowest interest margins, and consequently low profitability and low return on assets.

Average Interest Spreads and Profitability by NPL Quintile

	NPL Ratio	Net Interest Margin	Net Profits	ROA
Lowest Quintile	41.0	2.05	-0.05	0.27
Second Quintile	17.2	3.08	0.65	0.99
Third Quintile	5.1	6.07	1.68	2.06
Fourth Quintile	1.8	3.67	1.65	1.99
Fifth Quintile	0.4	5.18	1.59	2.19

18. **Interest margins vary widely between banks and operating inefficiencies are not evenly distributed.** In the highest quintile, interest margins have averaged 8 percent of assets. This group has the lowest NPL ratio, at under 3 percent. It also has the best operational efficiency indicators as measured by the operating expense ratio to assets and the number of employees per total value of loans, and consequently, the highest profitability. In contrast, the interest margins are less than 1 percent in the least profitable banks.

Bank Performance by Interest Margin Quintile

	Interest Margin	NPL Ratio	ROA	Operating Expense Ratio	Employee Per Total Loans	Net Profits Per Asset
Highest Quintile	8.18	2.7	2.94	1.194	46.96	2.43
Second Quintile	4.54	8.4	1.91	1.236	94.51	1.50
Third Quintile	3.46	14.7	1.19	1.381	81.43	0.77
Fourth Quintile	2.80	11.3	1.25	1.419	82.12	0.92
Fifth Quintile	0.84	30.3	0.05	1.370	145.13	-0.19

19. **While the interest margins vary widely, there is little variation in the interest rate spreads between banks.** The difference between the weighted average lending rate and weighted average deposit rate appears to be uniform across banks with

Characteristics of Banks with High Personnel Cost by Personnel Cost Quintile

	Employee Per Total Loans	Interest Rate Spread	Interest Margin	ROA	Net Profits Per Asset	Personnel Cost	Operating Expense Ratio	NPL Ratio
Highest Quintile	181.9	5.8	2.2	0.4	0.05	7.7	1.6	27.6
Second Quintile	112.2	4.9	3.5	1.2	0.79	3.3	1.3	13.2
Third Quintile	69.4	5.1	4.1	1.6	1.15	2.9	1.1	10.4
Fourth Quintile	46.8	5.4	4.8	1.8	1.40	3.6	1.2	4.3
Fifth Quintile	31.4	5.6	5.5	2.7	2.26	3.3	1.3	10.3

varying degrees of efficiency, all ranging between 5 and 6 percent. The interest margin of the least efficient banks, as proxied by the highest number of employees per loan, does not substantially differ from other banks. The difference in the interest margin appears to reflect the lower share of nonperforming loans and higher share of other interest earning assets in the more profitable banks.

Determinants of high intermediation spreads and profitability

20. **Bank ownership has a significant impact on banks' profitability as does the degree of nonperforming loans**. This can be seen from an exploration of characteristics that are associated with banks' high intermediation costs and profitability provided in the Annex using regression analysis for a longer time period from 1992 to 2006. The analysis also finds no significant decline in intermediation spreads over time and little impact from reduced market concentration, which suggests that the large banks still hold considerable market power that diminish potential efficiency gains.

Characteristics of banks with high credit growth

21. **Rapid credit growth poses particular risks when banking intermediation is inefficient.** Credit to the private sector has increased at an average annual rate of 18 percent over the past three years, even while lending to the private sector by the largest three state banks has been restricted to no more than 5 percent annually. Some private banks saw strong growth in their loan portfolios, averaging over 40 percent annually.

Characteristics of Faster Growing Banks
Asset Quality and Efficiency by Credit Growth Quintile

	Loan Growth	Employee Per Total Loans	NPL Ratio	Share in Deposits	ROA
Lowest Quintile	79.58	102.86	2.4	0.49	1.62
Second Quintile	41.93	42.18	2.0	0.99	2.12
Third Quintile	24.87	75.15	11.3	1.58	1.84
Fourth Quintile	11.36	127.97	24.5	4.45	0.49
Fifth Quintile	-14.58	98.60	26.4	2.17	1.40

22. **At this time, the risks posed by recent credit growth appear to be limited, but they need to be closely monitored.** Newer small banks are experiencing the most rapid growth in their loan portfolio, but they are the smallest banks and together this group accounts for 5 percent of banking system deposits. The second quintile of banks in terms of credit growth is also relatively small with a total share of 10 percent of system assets but whose performance ratios appear sound. However, much stricter monitoring is needed of the middle quintile, representing ten banks whose average loan growth is 25 percent annually and who already have nonperforming loans slightly over 10 percent of their loan portfolio. This group of banks represents about 17 percent of total system deposits.

Banks' capital strength and stress testing

23. **According to published indicators, most banks meet the 9 percent statutory capital-to-risk weighted assets ratio (CAR)**. Each group of banks meets the required ratio, with the exception of NCBs that had a reported CAR of -0.5 percent in June 2006 and around

1 percent for December 2006. Foreign banks maintained capital close to 25 percent of their risk weighted assets. Three smaller private banks were under the close supervision of BB's Problem Bank Unit, but, in aggregate, private commercial banks had a CAR of close to 10 percent.

24. **However, published indicators overstate the capital strength of the banking system.** There are several ways in which the capital adequacy ratio is overstated. First, the published figures do not net out the provisioning shortfall and accumulated losses of the banks. Doing so results in a CAR ratio of -10 percent for NCBs and -11 percent for SDBs and 8 percent for the group of private domestic banks. Second, classification rules are fairly lax for agricultural loans and micro/medium sized loans. Instead of being classified as bad/loss when overdue by more than 12 months, they are classified as such only after 60 months. Similarly, substandard and doubtful classifications are based on 12 and 36 months of default compared to 6 and 9 months for other banks. In addition, these classified loans require provisioning of only 5 percent instead of 20 and 50 percent when classified as substandard and doubtful. Making adjustments for these loans, which are concentrated in the NCBs and SDBs, reduces the CAR further to -11 percent for NCBs and -47 percent for SDBs. With these adjustments, the capital shortfall of the NCBs and SDBs is about 4½ percent of GDP**.** The capital requirement could be greater to the extent that loans are misclassified and losses are underreported.

Capital Adequacy, 2006
(Capital to risk weighted assets)

	All	NCBs	SDBs	PCBs	FCBs
As published	8.3	1.1	9.5	9.8	22.7
Net of provision shortfall and losses	2.3	-9.7	-10.9	8.1	22.7
Higher provsioning requirement for loans to agriculture and micro enterprises	-1.9	-11.3	-47.0	8.1	22.7

Capital Shortfall, 2006
(In percent of GDP)

	All	NCBs	SDBs	PCBs	FCBs
As published	0.34	0.77	0.01	0.12	-0.32
Of which: Banks with shortfall	1.01	0.77	0.08	0.16	...
Net of provision shortfall and losses	2.35	1.81	0.70	0.16	-0.32
Of which: Banks with shortfall	2.96	1.81	0.72	0.44	...
Higher provisioning requirement for loans to agriculture and micro enterprises (banks with shortfall)	4.38	1.97	1.96	0.44	...

25. **Stress testing sheds some light on the resilience of the banking system to adverse economic conditions**. If due to an adverse external shock, the NPL ratio of each bank increased by 20 percent, the number of banks that would not meet the required CAR would increase from 10 to 13 and the capital shortfall would increase from 4½ percent to 5 percent

of GDP. If the NPL ratio increased by 50 percent for each bank, 21 banks would fall below the CAR and the capital shortfall would increase to 6 percent of GDP. These scenarios point to the need for close monitoring of recent credit growth, particularly in the relatively weaker banks.

Impact of an Increase in NPL Ratio on Capital Adequacy

	Capital Shortfall (In percent of GDP)				Number of Banks Not Meeting 9% CAR				
	Total	NCBs	SDBs	PCBs	Total	NCBs	SDBs	PCBs	FCBs
Estimated capital shortfall	4.38	1.97	1.96	0.44	10	4	2	3	0
Impact of an increase in NPLs									
Increase in NPLs by 20 percent	5.02	2.28	2.26	0.49	13	4	3	6	0
Increase in NPLs by 50 percent	6.07	2.74	2.74	0.59	21	4	4	13	0

E. Policy Considerations

26. **Bank soundness has improved with the strengthening of regulation and supervision, but much more needs to be done.** BB has moved steadily toward adopting international best practice in its prudential regulations. BB circulars have facilitated banks' compliance with reporting, prudential regulations, and risk management. However, the upward trend in published bank soundness indicators must not detract from the need to carefully watch bank weaknesses and vulnerabilities. In particular, the medium-sized banks whose credit is growing by 20 to 30 percent and whose NPL ratios are about 10 percent should be more closely watched. BB needs to move more closely in line with best practice standards for banks' accounting, loan classification, and provisioning requirements. The recently mandated increase in the capital adequacy ratio to 10 percent by end-2007 is a welcome step, as is the proposal to amend the Banking Act so that BB can more flexibly adjust classification and other prudential guidelines.

27. **Bangladesh needs a sound financial sector and efficient financial intermediation to support sustained growth.** The financial sector has seen considerable growth, benefiting from the improved macroeconomic environment. Beyond maintenance of macroeconomic stability and stricter prudential regulations, further steps are needed to reduce state control in the banking system in order to improve efficiency, enhance intermediation, and reduce vulnerabilities. The recent liberalization of the banking system and entry of new banks has not yet translated into efficiency gains due to the continued predominance of large weak state banks that are not operating on commercial basis. Corporatization of the remaining three nationalized commercial banks should allow for more stricter enforcement of banking regulations on these banks. The government should also review the role of the SDBs in achieving its policy objectives with a view to separating out their commercial activities and taking measures to improve their performance.

Annex. Determinants of Bank Profitability and Intermediation Spreads

1. Several studies have found that bank performance improves with financial liberalization, leading to lower profits and intermediation spreads. Claessens et al. found a positive effect on lower intermediation spreads using cross-country bank-level data. Koeva (2002) and Sanyal and Shankar (2005) have reported positive results for India, but to our knowledge, this relationship has not been tested with Bangladesh data. It is explored here using bank data from 1992 to 2006, with the number of banks varying in different years.

2. We first look for trends in performance over time, then attempt to attribute variations in bank spreads and profitability to bank specific, industry specific, and economy wide variables. The industry specific variables include two measures of market concentration, the Herfindahl index and the share of the largest ten banks. Economy wide variables are GDP growth and inflation. Regressions used OLS as well as fixed effects which has the advantage of controlling for bank-specific factors that are not explicitly included in the regressions. Three measures of intermediation costs and three measures of profitability were used in the analysis.[2]

3. The main findings expand and lend further support to the analysis in the main text:

- Reduced market concentration has not led to lower spreads. The Herfindahl index has a significant negative effect in only one equation. There is no clear evidence of a decline in interest margins over time (Table 1). Using time dummies only gave similar results.
- Ownership matters. Intermediation spreads and profits are higher in foreign banks and lower in NCBs and SDBs as seen in a significant effect in almost all specifications.
- In terms of bank-specific variables, higher market share of total loans, and lower cash and investment ratio have a significant effect on interest margins.
- Lower inflation also has a significant effect on higher interest margins, suggesting market rigidities that do not allow interest rates to decline as much as inflation. (Table 2)
- Branch network has a significant positive impact on profitability. The coefficient has a significant effect and negative sign in the OLS regression but positive and significant in the fixed effects model, which controls for other unexplained bank specific factors.
- Market share, lower reserve ratio, lower share in cash and securities, lower operating expenses, and low NPL ratios, all have a significant effect on profitability. (Table 3)
- Higher GDP growth has a significant positive effect on profitability of banks, while there is no discernible effect for higher inflation, which as suggested above is likely due to interest rate rigidities.

[2] Several measures of profit and interest margin are used consistent with Brock and Suarez (2002) who argue that the study of determinants of interest rate spreads makes sense in a fully liberalized economy.

Annex Table 1. Panel Regressions for Variations in Interest Margins and Profitability Over Time and Bank Type [1]

	Interest Margin 1		Interest Margin 2		Interest Margin 3		Profitability 1		Profitability 2		Profitability 3	
	Specification 1		Specification 2		Specification 1		Specification 2		Specification 1		Specification 2	
	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE
Year1992	-0.899 *	-1.042 **	-2.599	-2.685 *	-4.961	-5.537 ***	1.102	0.544	-	-	-	-
	(0.52)	(0.49)	(1.64)	(1.63)	(2.03) **	(1.97)	(0.85)	(0.76)	-	-	-	-
Year1993	-0.254	-0.387	-2.364	-2.466	-2.996	-3.539 **	1.849 **	1.317 *	3.971	0.396	1.883 **	1.360
	(0.51)	(0.48)	(1.62)	(1.61)	(2.00)	(1.94)	(0.84)	(0.75)	(8.03)	(6.46)	(0.87)	(0.78)
Year1994	-1.030 **	-1.119 **	-3.692 **	-3.766 **	-2.973	-3.360 **	0.952	0.498	-9.487	-11.599 **	0.950	0.506
	(0.50)	(0.45)	(1.56)	(1.55)	(1.93)	(1.87)	(0.81)	(0.73)	(7.750	(6.22)	(0.83)	(0.74)
Year1995	-1.458 ***	-1.536 ***	-4.618 ***	-4.739 ***	-3.351	-3.637 **	1.494 **	1.075	-2.579	-4.665	1.491 *	1.082
	(0.48)	(0.44)	(1.50)	(1.49)	(1.86) **	(1.79)	(0.78)	(0.70)	(7.45)	(5.96)	(0.80)	(0.71)
Year1997	-0.294	-0.279	-1.393	-1.363	-2.259	-2.257	1.152	1.148 *	-0.290	-0.337	1.154	1.152
	(0.45)	(0.42)	(1.42)	(1.39)	(1.75)	(1.69)	(0.74)	(0.65)	(7.02)	(5.60)	(0.75)	(0.67)
Year1998	-0.274	-0.259	-2.408 *	-2.378 *	-3.266	-2.823 *	1.576 **	1.572 **	2.441	2.395	1.577 **	1.576
	(0.45)	(0.42)	(1.42)	(1.39)	(1.76) **	(1.68)	(0.74)	(0.65)	(7.02)	(5.40)	(0.75)	(0.67)
Year1999	-1.085 ***	-1.083 ***	-3.823 ***	-3.802 ***	-5.948	-5.641 ***	1.001	0.905	-3.892	-5.003	1.001	0.914
	(0.43)	(0.40)	(1.35)	(1.34)	(1.67) ***	(1.62)	(0.70)	(0.63)	(6.72)	(5.40)	(0.72)	(0.64)
Year2000	-0.344	-0.377	-2.858 **	-2.875 **	-5.663	-5.346 ***	1.091	0.889	-4.907	-6.680	1.089	0.898
	(0.43)	(0.40)	(1.36)	(1.34)	(1.68) ***	(1.62)	(0.71)	(0.63)	(6.75)	(5.40)	(0.72)	(0.64)
Year2001	-0.095	-0.120	-2.865 **	-2.891 **	-3.481	-3.105 *	1.651 **	1.490 **	5.470	4.847	1.649 **	1.489
	(0.43)	(0.40)	(1.34)	(1.33)	(1.67) **	(1.61)	(0.70)	(0.62)	(6.69)	(5.35)	(0.71)	(0.64)
Year2002	-0.246	-0.293	-3.088 **	-3.106 **	-2.248	-1.915	1.311 **	1.137 *	-2.346	-3.225	1.308 *	1.135
	(0.43)	(0.40)	(1.34)	(1.34)	(1.67)	(1.61)	(0.70)	(0.63)	(6.72)	(5.38)	(0.72)	(0.64)
Year2003	-0.274	-0.277	-3.136 **	-3.131 **	-2.681	-2.277	1.354 *	1.225 **	-2.460	-2.669	1.349 *	1.219
	(0.43)	(0.40)	(1.36)	(1.34)	(1.68)	(1.62)	(0.71)	(0.63)	(6.76)	(5.41)	(0.72)	(0.64)
Year2004	-0.074	-0.077	-3.207 **	-3.202 **	-2.077	-1.673	1.127	0.998	-1.690	-1.898	1.122	0.992
	(0.43)	(0.40)	(1.36)	(1.34)	(1.68)	(1.62)	(0.71)	(0.63)	(6.76)	(5.41)	(0.72)	(0.64)
Year2005	0.529	0.509	-2.786 **	-2.834 **	-1.068	-0.635	1.537 **	1.466 **	-	-	2.709 ***	2.624
	(0.43)	(0.41)	(1.36)	(1.35)	(1.69)	(1.63)	(0.71)	(0.64)	-	-	(0.72)	(0.65)
Year2006	-0.198	-0.218	-4.132 ***	-4.180 ***	-2.708	-2.275	1.292 *	1.221 *	-	-	2.804 ***	2.719
	(0.43)	(0.41)	(1.36)	(1.35)	(1.69) *	(1.63)	(0.71)	(0.64)	-	-	(0.72)	(0.65)
NCB	-0.853 ***	-	-2.916 ***	-	-0.533	-	-0.994 **	-	-12.293	-	-1.021 **	-
	(0.28)	-	(0.90)	-	(1.11)	-	(0.47)	-	(4.96) ***	-	(0.49)	-
SDB	-0.885	-	0.326	-	-9.246	-	-1.236 ***	-	-28.824	-	-1.260 ***	-
	(0.27)	-	(0.84)	-	(1.05) ***	-	(0.44)	-	(4.66)	-	(0.46)	-
PCBN	0.174	-	1.511 **	-	-0.267	-	0.005	-	-4.140	-	-0.034	-
	(0.25)	-	(0.78)	-	(0.97)	-	(0.44)	-	(4.46) ***	-	(0.41)	-
FB	1.812 ***	-	1.855 ***	-	1.400	-	1.952 ***	-	11.990	-	1.83 ***	-
	(0.24)	-	(0.64)	-	(0.80) *	-	(0.34)	-	(3.50) ***	-	(0.35)	-
Constant	1.818 ***	2.234 ***	6.461 ***	6.941 ***	3.363	2.379 **	-0.492	-0.076	15.961	14.929 ***	-0.45	-0.083
	(0.34)	(0.30)	(1.06)	(1.01)	(1.31) ***	(1.22)	(0.55)	(0.47)	(5.29)	-4.05	(0.56)	(0.48)
R-squared	0.20	-	0.07	-	0.18	-	0.25	-	0.15	-	0.1248	-
No. of Observations	612	612	612	612	610	610	608	612	493	493	588	588

1/ The reference year in the regressions is 1996 and the reference category is banks established pre-1996. The significance levels are denoted by * for 1 percent, ** for 5 percent, and *** for 10 percent.
Interest margin definitions: 1. Net interest margin over assets, 2. Interest income normalized by assets less interest expense normalized by deposits. 3. Similar to 2 but includes other liabilities with deposits.
Profitability definitions: 1. Profits before tax over assets, 2. Return on equity, 3. Return on assets.

Annex Table 2. Panel Regressions for Determinants of Intermediation Spreads

	Interest Margin 1		Interest Margin 1		Interest Margin 2		Interest Margin 2		Interest Margin 3		Interest Margin 3	
	Specification 1		Specification 2		Specification 1		Specification 2		Specification 1		Specification 2	
	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE
Share in Loans	0.111 **	-0.034	0.119 ***	0.147	0.368 **	0.030	0.502 ***	0.523	-0.687 ***	-1.40 ***	-0.380 *	-0.681
	(0.57)	(0.09)	(0.06)	(0.11)	(0.18)	(0.30)	(0.19)	(0.37)	(.22)	(0.36)	(.22)	(0.44)
Branches	-0.003 ***	0.159 ***	-0.003 ***	0.009	-0.011 ***	0.018	-0.012 ***	0.003	0.010 ***	0.07 ***	0.009 ***	0.541 **
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.18)	(0.00)	(0.02)	(0.01)	(0.2)	(.00)	(0.12)
Reserve ratio	-0.001	-0.007	0.003	-0.005	0.004	-0.089	0.009	-0.180	-0.016	-0.01	0.008	-0.002
	(.01)	(0.01)	(0.00)	(0.01)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(.03)	(0.04)
Investments	-0.005	-0.028 ***	-0.001	-0.023 **	-0.170	-0.024	-0.005	-0.176	0.026	-0.01	0.043	0.007
	(0.01)	(0.10)	(0.00)	(0.01)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.3)	(0.04)
Operating expense ratio	3.691	3.746	3.078	0.610	12.890	17.160	15.720	31.952	-21.121	26.26	-21.882	33.745
	(13.84)	(10.35)	(13.53)	(10.50)	(43.45)	(34.82)	(43.47)	(35.60)	(54.46)	(41.85)	(51.72)	(42.41)
Employee per Loan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000	0.000
	(0.00)	(0.00)	(0.00	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(3.33)
Nonperforming Loans	-	-	-2.163 ***	-3.150 ***	-	-	-0.992	-2.280	-	-	-12.184 ***	8.938 ***
	-	-	(0.50)	(0.83)	-	-	(1.6)	(2.80)	-	-	(1.91)	(0.076)
Herfindahl Index	-0.002	0.000	-	-	0.000	0.003	-	-	-0.013 **	0.00	-	-
	(0.00)	(0.00)	-	-	(0.00)	(0.00)	-	-	(.01)	(0.00)	-	-
Share largest 10 deposit holders	-	-	0.017	-0.003	-	-	0.200 **	0.128	-	-	0.149	0.133
	-	-	(0.03)	(0.12)	-	-	(0.10)	(0.06)	-	-	(0.12)	-0.076
NCB	0.490 ***	-	0.035	-	2.400	-	1.703	-	-2.072	-	-3.290 *	-
	(0.51)	-	(0.51)	-	(1.61)	-	(1.65)	-	(2.02)	-	(1.96)	-
SDB	0.320	-	1.012 ***	-	1.884 **	-	2.693 ***	-	-10.222 ***	-	-5.968 ***	-
	(0.29)	-	(0.32)	-	(0.91)	-	(1.03)	-	(10.22)	-	(1.23)	-
PCBN	0.156	-	-0.009	-	1.340 *	-	1.362 *	-	-0.399	-	-1.397	-
	(.25)	-	(0.25)	-	(.79)	-	(0.81)	-	(1.00)	-	(0.97)	-
FCB	1.820 ***	-	1.495 ***	-	1.644 **	-	1.542 **	-	1.475 **	-	-0.494	-
	(0.23)	-	(0.24)	-	(0.73)	-	(0.78)	-	(0.91)	-	(0.93)	-
GDP growth	-0.335	-0.259	0.367	-0.105	-2.912 *	0.085	1.640	0.640	-3.507 *	-0.75	1.094	0.723
	(0.51)	(0.18)	(0.35)	(0.21)	(1.59)	(0.61)	(1.12)	(0.73)	(1.99)	(0.73)	(1.34)	(0.87)
Inflation	-0.220 ***	-0.976 ***	-0.188 ***	-0.888 **	-0.749 ***	-0.246 **	-0.616 ***	-0.300	-0.598 **	0.05	-0.376 *	0.041
	(0.7)	(0.04)	(0.058)	(0.36)	(.215)	(0.12)	(0.19)	(0.12)	(0.27)	(0.14)	(0.22)	(0.14)
Constant	6.580	0.868	-0.406	2.216	30.756 **	-0.254	-16.214	-8.280	35.746 **	-3.01	-11.066	-2.559
	(4.17)	(1.54)	(3.97)	(2.45)	(13.08)	(5.19)	(12.77)	(8.29)	(16.39)	(6.25)	(15.19)	(9.90)
R-squared	0.23	-	0.2565	-	0.11	-	0.12	-	0.19	-	0.22	-
No. of Observations	608	608	602	602	608	608	602	602	606	606	600	600

1/ The significance levels are denoted by * for 1 percent, ** for 5 percent, and *** for 10 percent.
Interest margin definitions: 1. Net interest margin over assets, 2. Interest income normalized by assets less interest expense normalized by deposits. 3. Similar to 2 but includes other liabilities with deposits.
Profitability definitions: 1. Profits before tax over assets, 2. Return on equity, 3. Return on assets.

Annex Table 3. Panel Regressions for Determinants of Profitability

	Profitability 1		Profitability 1		Profitability 2		Profitability 2		Profitability 3		Profitability 3	
	Specification 1		Specification 2		Specification 1		Specification 2		Specification 1		Specification 2	
	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE
Share in Loans	0.157 ***	-0.119	0.212 ***	-0.148	3.302 ***	-5.827 ***	3.686 ***	-7.689 ***	0.192 ***	-0.086	0.217 ***	-0.088
	(0.06)	(0.082)	(0.06)	(0.10)	(1.00)	(1.71)	(1.00)	(01.81)	(.06)	(0.10)	(0.63)	(0.11)
Branches	-0.004 ***	0.200 ***	-0.004 ***	0.023 ***	-0.813 ***	0.388 ***	-0.792 ***	0.515 ***	-0.005	0.020 ***	-0.004 ***	0.023 ***
	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.09)	(0.01)	(0.098)	(0.00)	(0.01)	(0.00)	(0.01)
Reserve ratio	-0.020 **	-0.014 *	-0.015 *	-0.122	-0.750 **	-0.485 ***	-0.693 ***	-0.449 ***	-0.019	-0.028 ***	-0.015 *	-0.238 ***
	(0.00)	(0.01)	(0.01)	(0.01)	(.13)	(0.14)	(0.13)	(0.139)	(0.04)	(0.01)	(0.01)	(0.01)
Investments	0.000	-0.275 ***	-0.002	-0.297 ***	0.267 **	-0.310 **	0.241 *	-4.403 ***	0.000	-0.033 ***	-0.005	-0.035 ***
	(0.00)	(0.01) *	(0.01)	(0.01)	(0.14)	(0.15)	(0.14)	0.144)	(-0.01)	(0.01)	(0.01)	(0.01)
Operating expense ratio	-17.678	-17.530	-18.629	-20.833 **	-316.310	-360.927 **	-309.060	-385.426 ***	-12.680	-15.580	-13.619	-27.729 ***
	(14.47)	(9.56)	(14.06)	(9.67)	(226.82)	(163.72)	(223.56)	(145.28)	(0.00)	(11.46)	(14.34)	(10.17)
Employee per loan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Nonperforming loans	-	-	-2.966 ***	-3.043 ***	-	-	-31.656 ***	-35.408 ***	-	-	-3.606 ***	-2.798 ***
	-	-	(0.52)	(0.76)	-	-	(8.01)	(12.79)	-	-	(0.55)	(0.84)
Herfindahl Index	-0.002	0.000	-	-	-0.009	-0.010	-	-	0.000	0.000	-	-
	(0.00)	(0.00)	-	-	(0.2)	(0.15)	-	-	(0.00)	(0.00)	-	-
Share largest 10 deposit holders	-	-	0.122	0.000	-	-	-0.071	0.008	-	-	0.133	-0.019
	-	-	(0.03)	(0.2)	-	-	(0.50)	(0.29)	-	-	(0.03)	(0.84)
NCB	0.796	-	0.480	-	17.137	-	14.692 *	(0.29)	0.796	-	0.713	-
	(0.54)	-	(0.53)	-	(8.57)	-	(8.55)	(0.29)	(0.57)	-	(0.56)	-
SDB	-0.686 **	-	0.219	-	-17.662	-	-8.248	(0.29)	-0.626	-	0.235	-
	(.0.30)	-	(0.33)	-	(4.71)	-	(5.19)	(0.29)	(0.32)	-	(0.35)	-
PCBN	0.144	-	-0.110	-	-1.587	-	-5.041	(0.29)	0.127	-	-0.151	-
	(0.26)	-	(0.26)	-	(4.28)	-	(4.32)	(0.29)	(0.27)	-	(0.27)	-
FCB	2.633 ***	-	2.156 ***	-	23.021	-	-17.182 ***	(0.29)	2.541	-	2.038 ***	-
	(.24)	-	(0.25)	-	(3.84)	-	(4.07)	(0.29)	(0.25)	-	(0.26)	-
GDP growth	-0.648	-0.438 ***	-0.123	-0.543 ***	5.756	-4.464	4.046	-5.927 **	0.725	0.036	0.637 *	-0.252
	(.53)	(0.17)	(0.36)	(0.20)	(5.50)	(2.91)	(5.43)	(2.94)	(0.32)	(0.19)	(0.37)	(0.019)
Inflation	-0.050	0.011	-0.126	0.295	-0.722	-0.010	-0.546	-0.222	-0.026	0.024	0.013	0.052
	(0.07)	(0.03)	(0.06)	(0.03)	(0.86)	(0.483)	(0.87)	(0.48)	(0.06)	(0.4)	(0.06)	(0.21)
Constant	6.764	1.718	1.413	1.970	0.801	12.096	12.441	4.646	-2.509	1.840	-2.400	2.124
	(4.36)	(1.43)	(4.13)	(2.25)	(0.00)	(27.01)	(54.64)	(35.01)	(2.78)	(1.84)	(4.21)	(2.44)
R-squared	0.33	-	0.36	-	0.28	-	0.30	-	0.34	-	0.38	-
No. of observations	608	608		602	489	489	486	486	584	584	581	581

1/ The significance levels are denoted by * for 1 percent, ** for 5 percent, and *** for 10 percent.
Interest margin definitions: 1. Net interest margin over assets, 2. Interest income normalized by assets less interest expense normalized by deposits. 3. Similar to 2 but includes other liabilities with deposits.
Profitability definitions: 1. Profits before tax over assets, 2. Return on equity, 3. Return on assets.

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IV. GOVERNMENT REVENUE PERFORMANCE AND REFORM POTENTIAL[1]

A. Introduction

1. **In Bangladesh, improving government revenue performance has been one of the key objectives of the country's poverty reduction and growth strategy.** Having targeted a significant improvement in the revenue-to-GDP ratio, the government has implemented a number of reform measures in the past several years—mainly focusing on the administration side. Owing to these efforts, the revenue-to-GDP ratio increased modestly, but the improvement has fallen short of the initial target. The lack of buoyancy in revenues could be attributable to fundamental structural problems in the tax system, including pervasive tax incentives and exemptions that have eroded the tax base. Both the authorities' recent tax expenditure study and regression analysis indicate that there is a significant potential gain from comprehensive tax reforms.

B. The Macro-Fiscal Context

2. **Bangladesh needs to significantly scale up government revenue if it is to ensure fiscal sustainability while supporting growth and poverty reduction.** Fiscal policy has generally been managed prudently with the overall deficit and domestic borrowing being contained at modest levels and with external financing largely limited to concessional terms. However, there is a pressing need for a higher level of spending to promote growth and accelerate poverty reduction. In this context, the most recent DSA conducted by the IMF and World Bank indicates that there is only a moderate risk of debt distress for public debt, but also that efforts to mobilize domestic revenues are the key to ensure improvement in the main debt indicators.[2] In recognition of the fact that the availability of concessionary external financing is insufficient to finance needed spending, a significant increase in revenue—½ percentage point of GDP annually—was targeted under the PRGF-supported program. In the end, the target was not met, with only modest improvement in revenue taking place.

C. Assessing Revenue Performance

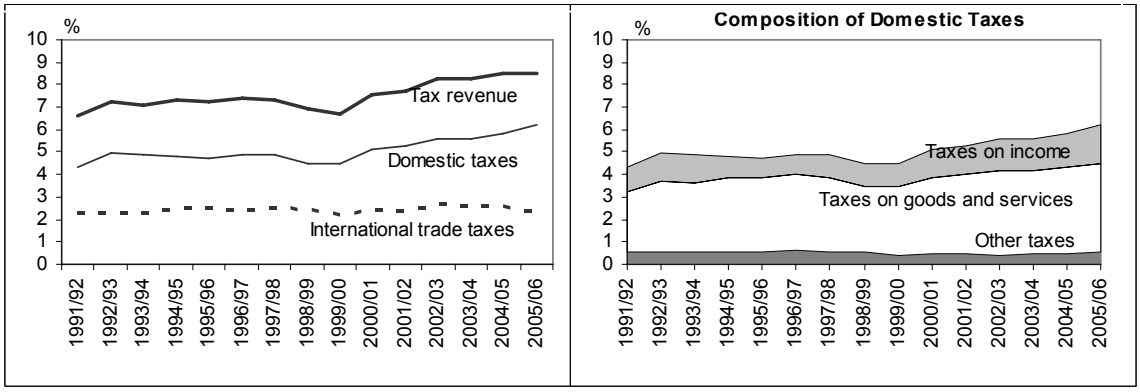
3. **Tax revenue in Bangladesh has recorded a gradual modest increase, and the tax-to-GDP ratio has shown a small improvement over the last decade** (Figure 1). Only in recent years has the tax revenue ratio exhibited some buoyancy owing mainly to administrative efforts (most notably, an introduction of the large taxpayers unit for income tax in 2004). One of the major tax policy changes in recent years has been to limit tax holidays to 18 industries starting from the FY2005/06 budget and to eliminate them entirely by end-June 2008, but its revenue impact has not yet realized. The collection of international

[1] Prepared by Noriaki Kinoshita (FAD).

[2] IMF Country Report, No. 06/406, November 2006, Annex I.

trade taxes has been largely unchanged relative to GDP since the beginning of the 1990s, and it is expected to remain at present levels or decline as the move toward trade liberalization continues.

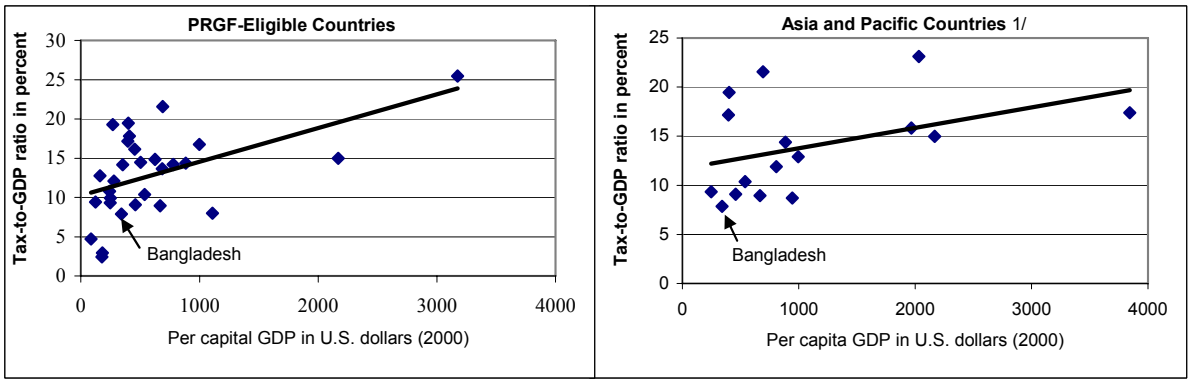
Figure 1. Bangladesh: Central Government Tax Revenue
(In percent of GDP)



Sources: Bangladesh authorities; and IMF staff estimates.

4. **A cross-country comparison shows that when the level of development, as measured by per capita GDP is taken into account, Bangladesh's tax revenue ratio is significantly lower than the average for low-income countries.** Figure 2 plots the tax-to-GDP ratios (average for 2000–04) for 30 PRGF-eligible countries and 16 Asia and Pacific countries against their per capita GDP in 2000. The regression line indicates that there is a positive correlation between per capita income and the tax-to-GDP ratio, a relation that could be used to gauge a country's overall revenue position relative to that of other countries at a similar level of development (see Section C).

Figure 2. Bangladesh: Per Capita GDP and Tax-to-GDP Ratio



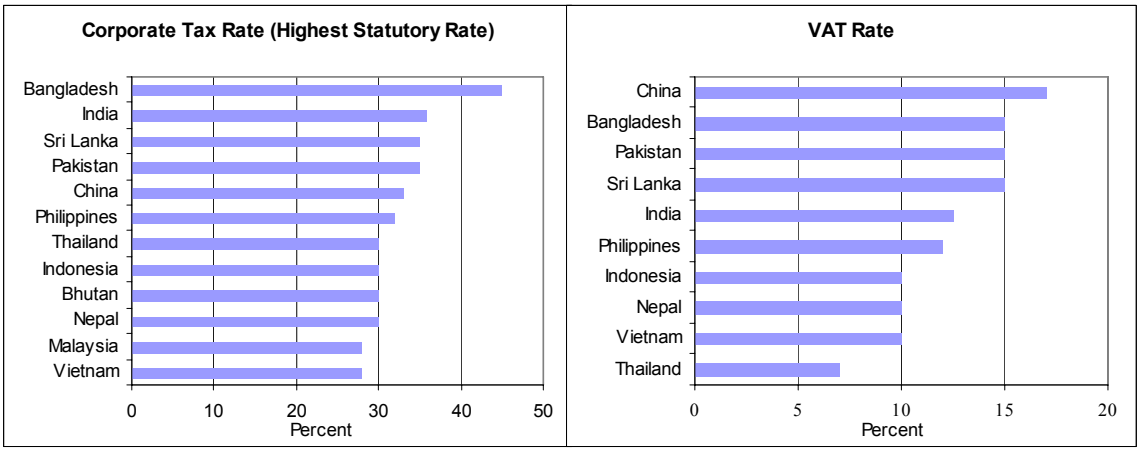
Sources: IMF, *Government Finance Statistics* IIMF, *International Financial Statistics*; and IMF staff estimates.
1/ The sample includes Bangladesh, Bhutan, China, Fiji, India, Indonesia, Malaysia, Maldives, Mongolia, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Thailand, and Vietnam.

5. **Bangladesh's revenue level and its recent trend generally compare unfavorably with other Asian and Sub-Sahara African countries** (Table 1). Revenue trends in Asian countries during the early 2000s were mixed, with some countries (Bhutan, Philippines) experiencing declines. However, on average, these countries maintained their revenue-to-GDP ratio at a significantly higher level than Bangladesh, and the majority managed to increase the ratio. Similarly, the trends among selected Sub-Saharan African countries are also mixed, but the average ratio is generally higher than in Bangladesh.

6. **Bangladesh's relatively low tax-to-GDP ratio reflects mainly a low level of domestic taxes** (Table 2). The collection of both direct and indirect taxes relative to GDP in Bangladesh is significantly lower than in the comparators, while the collection of international trade taxes relative to GDP exceeds that of most comparators in the Asian region. The reliance on international trade taxes is also very pronounced in terms of the composition of tax revenue (Table 3): international trade taxes accounts for more than 30 percent of the total tax revenue in Bangladesh, higher than in most of the comparator countries and significantly above the average for the Asian countries.

7. **While the level of tax collection is low, statutory nominal tax rates in Bangladesh are generally high relative to the comparators** (Figure 3). The corporate income tax rates applied to unlisted companies (40 percent) and financial institutions (45 percent) in Bangladesh are significantly above those in the comparator countries.[3] Among the Asia and Pacific comparators, China is the only country that has a higher VAT rate than Bangladesh.

Figure 3. Selected Asian Countries: Corporate Income Tax and VAT Rates

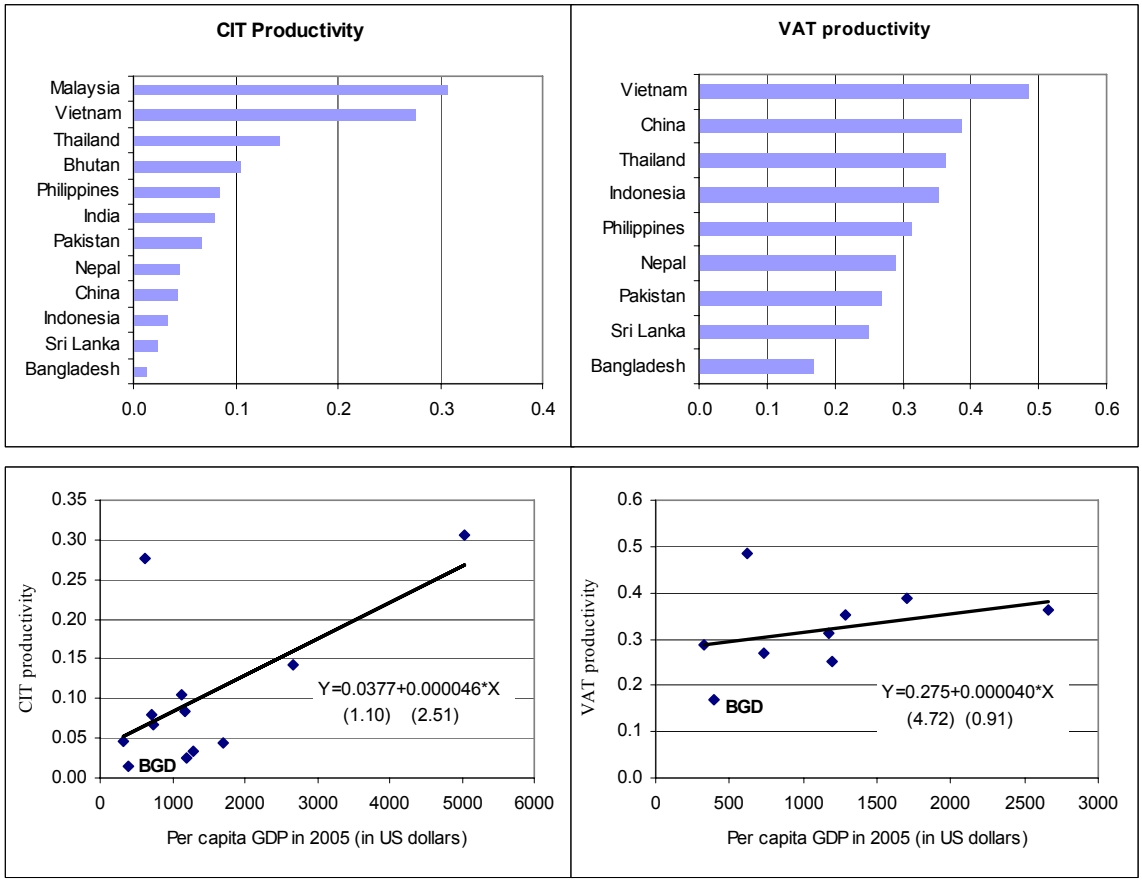


Sources: International Bureau of Fiscal Documentation (IBFD); Worldwide Summaries (PricewaterhouseCoopers); and IMF country documents.

[3] Using the data from the LTU, the implied weighted average of CIT rates is estimated at 44 percent.

8. **With comparatively high nominal tax rates but low revenue yields, Bangladesh's revenue productivity for CIT and VAT is far behind the comparators** (Table 4 and Figure 4).[4] Relative productivity vis-à-vis comparators are much lower for CIT than for VAT.

Figure 4. Bangladesh: Selected Asian and Pacific Countries—CIT and VAT Revenue Productivity



Sources: International Monetary Fund, Fiscal Affairs Department, VAT Productivity Database; and the author's estimates.

9. **The low level of revenue collection in Bangladesh is also reflected in the low level of average effective tax rates (AETRs)**—especially on capital and consumption—compared to other Asian countries (Figure 5). AETRs are standard indicators of the effective tax burden on categories of income or consumption and are measured as the ratios of tax collections to

[4] The revenue productivity refers to the tax-to-GDP ratio divided by the applicable nominal tax rate. It should be noted that low tax productivity can follow from a low share in GDP of the tax base in question, before account is made of tax relief (for example, business profits or consumption as a share of GDP). But not all tax bases can have a low share of GDP, and it is noteworthy that tax productivity is relatively low for all types of taxes in Bangladesh compared to the sample countries.

notional tax bases derived from national accounts (e.g., taxes on labor as percentage of labor income; indirect taxes as percentage of consumption). Because of data limitations, the calculated AETRs for Bangladesh are not fully comparable to those of the comparators, but this is believed not to significantly affect the outcome of this analysis.[5] While the limited availability of time series data from the sample countries precludes a more systematic analysis, it is evident that the tax burden in Bangladesh according to these measures is also low relative to the comparator countries.

10. **Three interrelated factors provide a highly plausible explanation for low tax productivity:**

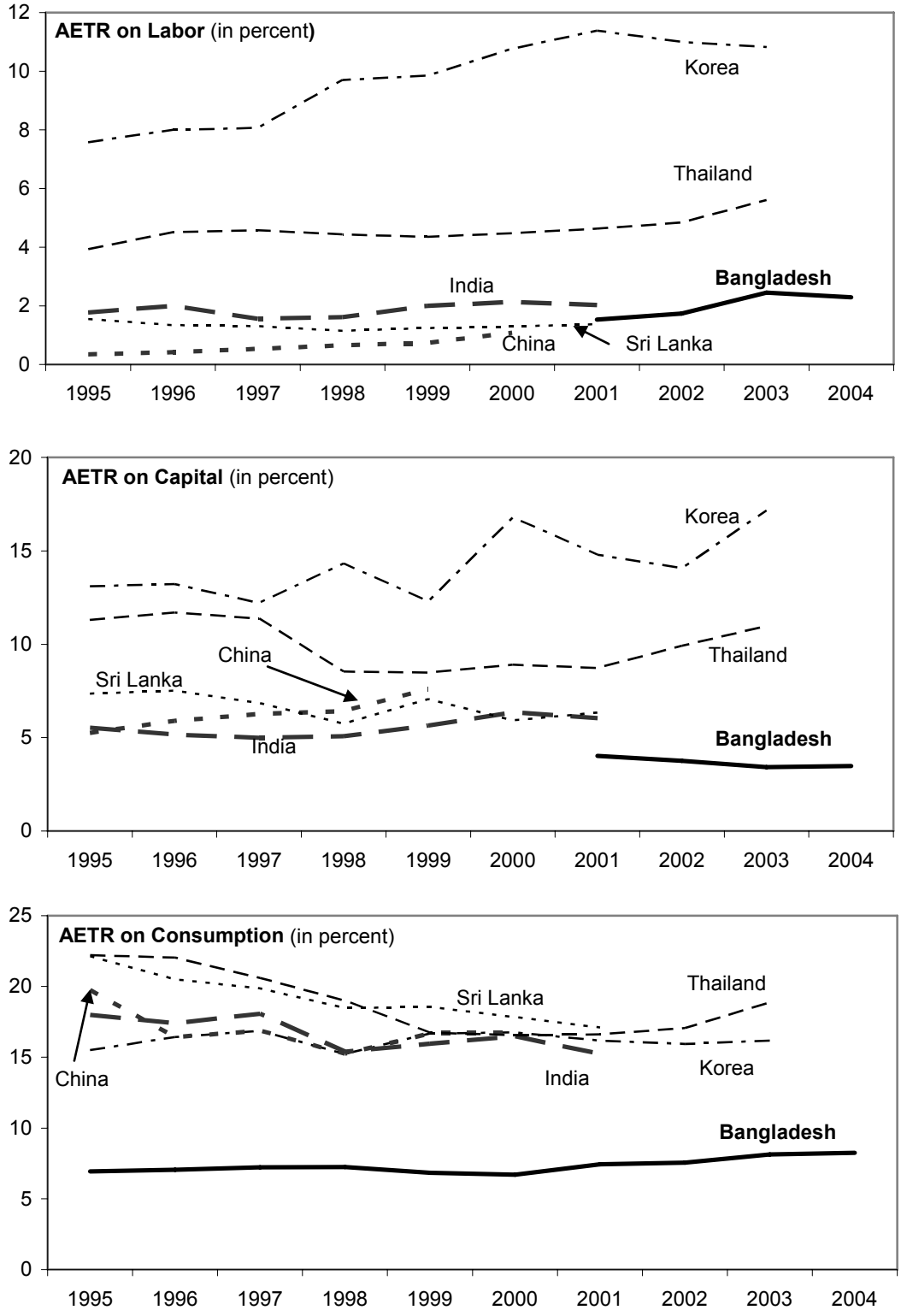
- Continued excessive use of a variety of *tax incentives* erodes the tax base, and strains an already heavily challenged tax administration. Incentives of all sorts are provided in the tax acts, combined with a high degree of discretion to produce nontransparency with regard to exactly who benefits, by how much, and at what cost to the budget. A culture of negotiated tax payments has developed.

- There are *structural flaws* in the main taxes, which—even in the absence of tax incentives—would seriously impede their revenue raising capabilities. The current VAT represents a pervasive excise-cum-turnover tax system with over 6,500 product definitions, tax-relevant distinctions between manufacturers, wholesalers and retailers, separate definitions and treatment of goods and services, and presumptive valuation methods. Numerous amendments to the Income Tax Ordinance over the past two decades have made it complicated and hard to administer.

- While some progress has been achieved in recent years, *tax administration* remains quite weak and in need of modernization.

[5] The methodology applied for comparator countries is described in IMF Working Paper No. 06/93. For Bangladesh, the ratio of individual income tax to compensation of employees is used as an indicator for the AETR on labor, the ratio of corporate income tax to the net operating surplus of the whole economy for the AETR on capital, and the ratio of taxes on domestic goods and services and international trade taxes to final consumption (excluding government wage consumption) as a proxy for the AETR on consumption.

Figure 5. Bangladesh: Selected Asian Countries—AETRs on Labor, Capital, and Consumption



Sources: Poirson (2006); and the author's estimates.

D. Scope for Increasing Revenue

11. **The preceding analysis clearly indicates a significant scope for Bangladesh to increase the total tax-to-GDP ratio in general and the domestic tax-to-GDP ratio in particular.** In this section, we attempt to quantify the room to increase revenue. First, we briefly review the authorities' estimates of tax expenditure contained in a recent study.[6] We then conduct regression analysis of various tax ratios and use the results to measure the potential revenue impact of comprehensive tax reforms.

Estimates of tax expenditure

12. **In their tax expenditure study, the authorities reviewed existing tax incentives, exemptions, and their associated revenue losses**, with a view to identifying the scope for broadening the tax base. Tax expenditure consists of revenues foregone due to provision of tax holidays, exemptions and deductions, rate reduction, deferrals, and tax credits. Effects of eliminating tax expenditure have been identified using data for FY2005/06 (Table 5). According to the study, tax expenditures amounts to 0.28 percent of GDP for direct taxes, 1.60 percent of GDP for domestic VAT, and 0.65 percent of GDP for other indirect taxes. Among direct taxes—for which the total estimate is about twice as large as in the April preliminary report—tax holidays account for a quarter of the revenue losses. Exemptions and deductions of import VAT (mostly for capital machinery) account for the bulk of the revenue losses in indirect taxes. As for domestic VAT, exemptions on services (in particular, mechanized road transport and bank credit) account for a larger share of revenue losses than exemptions on goods. It should be noted that the potential revenue gain could be larger in the case of direct taxes due to pervasive income tax incentives, and smaller for indirect taxes since the estimate includes VAT exemption on bank interest (that are normally not subject to VAT in other countries) and on intermediate inputs (that are creditable at a later stage).

Potential impact of comprehensive tax reforms

13. **Bangladesh needs to undertake comprehensive and far-reaching reforms of the domestic tax system to broaden the tax base and enhance revenue productivity.** To gauge the full impact of such wide-ranging reforms, item-by-item estimates would not be available or appropriate. Therefore, we use an aggregative approach taking the revenue level of comparator countries as a reference point. The results suggest, albeit in a highly aggregative manner, the revenue raising potential of comprehensive tax reforms in Bangladesh over the medium term, after these reforms have been fully implemented. Our analysis indicates, furthermore, that the scope for base broadening is potentially much larger than estimated in the authorities' tax expenditure study.

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[6] Bangladesh Bank (2006).

Total tax revenue

14. **The simple correlation between income levels and the tax-to-GDP ratios as shown in Figure 2 suggests that Bangladesh's revenue ratio would be significantly higher if brought to the level implied by the regression lines.** Expanding the framework to conduct a more elaborate regression analysis we use panel data for the 16 low-income countries that are listed in Tables 1–4. As explanatory variables, we take not only per capita income, but also the share of agriculture in GDP, the share of imports in GDP, and the share of broad money supply in GDP. We estimated a panel regression with fixed country effects. Agriculture is considered to be a difficult sector to tax, so we would expect the coefficients to be negative. On the other hand, we would expect that the higher is the share of imports in GDP, the higher the tax-to-GDP ratio because imports are generally easier to tax than domestic goods. We also expect that the higher the share of broad money supply in GDP, the higher the tax-to-GDP ratio because monetization would make collection of domestic taxes easier. The results are presented in Table 6. Equation (1) includes all four variables; in Equation (2), we dropped the share of agriculture in GDP because its sign is opposite to what was expected; in Equation (3), we further dropped the share of imports in GDP because the estimated coefficient was not statistically significant. We should note that the coefficients on per capita income are quite robust to alternative specifications. Using Equation (3), it is predicted that Bangladesh could increase its tax revenue ratio by 3½ percentage points of GDP.

VAT and corporate income tax

15. **An alternative regression analysis based on revenue productivity suggests that the collection of VAT and CIT relative to GDP could both rise by 1.8 percentage points.** Regressing VAT and CIT productivity on per capita income shows the level of VAT and CIT productivity on average given an income level (see Figure 4). In other words, the estimates indicate the achievable revenue level assuming tax rates constant. One interpretation would be that the estimates show the potential impact from base broadening and improved compliance.

E. Conclusion

16. **Despite adoption of numerous tax policy measures during the past few years, policies implemented by the Bangladesh authorities have not been fully successful in lifting the revenue ratio to a level warranted by developmental objectives.** The tax ratio in Bangladesh appears stuck at one of the lowest levels among developing countries and has improved only marginally over this period. The limited revenue improvement most likely results from the combined effects of serious base erosion, deficient tax design, weak tax administration, and low compliance. To realize the potential for revenue improvement suggested by various estimates, widening the tax base through the phasing–out of tax incentives, improving structural tax characteristics, and improving administration and compliance including through simplification of the tax system are all important. To succeed, this strategy requires strong and continuous political commitment, in the context of countervailing political lobbies and vested interests.

Table 1. Bangladesh: Government Revenue—Selected Asia-Pacific and African Countries, 2000–06 1/

(In percent of GDP)

	GDP per capita (US$)	2000	2001	2002	2003	2004	2005	2006 Est.
Selected Asian and Pacific Countries								
Bangladesh 2/	**400**	**8.4**	**9.0**	**10.1**	**10.3**	**10.2**	***10.5***	***10.7***
Nepal	322	10.6	11.2	11.4	11.8	12.1	*12.9*	*12.2*
Cambodia 3/	430	...	...	*10.5*	*9.7*	*10.4*	*10.5*	*12.0*
Lao People's Democratic Republic 3/	485	...	*13.2*	*13.1*	*10.9*	*11.0*	*10.9*	*11.6*
Vietnam 4/	618	19.9	21.0	22.1	23.6	24.8	*25.7*	*26.6*
India	705	11.9	11.2	11.8	11.9	12.5	...	...
Pakistan	728	13.9	12.9	14.1	14.5	13.5	*13.7*	*14.0*
Bhutan 3/	1,126	22.5	21.3	19.7	16.7	15.6	*17.6*	...
Philippines 4/	1,168	15.2	15.4	14.3	14.5	14.4	*15.0*	...
Sri Lanka 4/	1,200	16.8	16.6	16.4	*15.7*	*15.3*	*16.1*	...
Indonesia	1,283	...	18.3	17.1	17.1	18.6	*18.1*	...
China,P.R.: Mainland 5/	1,709	...	*15.1*	*15.9*	*16.2*	*16.6*	*17.5*	...
Thailand 3/	2,659	17.2	18.9	18.6	21.0	21.2	...	...
Malaysia	5,042	19.2	25.3	24.4	23.7	*22.1*	*21.5*	...
Unweighted average 6/		16.4	16.7	16.1	16.0	16.0	16.3	
Selected sub-Saharan Africa Countries								
Uganda	303	10.7	10.6	11.5	11.2	*12.6*	*12.8*	*13.2*
Ghana	512	...	18.1	17.9	20.8	23.8	*23.9*	...
Kenya	560	20.1	22.2	18.2	*19.7*	*21.2*	...	...
Côte d'Ivoire	900	16.4	17.0	17.7	16.7	*17.5*	...	...
Unweighted average 6/		15.7	17.0	16.3	17.1	18.8	18.4	

Sources: Bangladesh authorities; IMF *Government Finance Statistics;* IMF *International Financial Statistics*; IMF *World Economic Outlook*; and various IMF country reports.

1/ Excluding grants. Italics indicate figures taken from IMF country reports. GDP per capita is estimates for 2005.
2/ Fiscal year.
3/ General government.
4/ Budgetary central government.
5/ Central government, provinces, municipalities, and countries.
6/ For each revenue classification, only countries for which data are available are included in the calculation.

Table 2. Bangladesh: Tax Levels for Selected Asia-Pacific and African Countries, 2004

(In percent of GDP)

	Tax Revenue	Taxes on Income, Profits, and Capital Gains			Taxes on Payroll and Workforce	Property Taxes	Domestic Taxes on Goods and Services			International Trade Taxes		
		Total	*of which:* Individual	*of which:* Corporations and Other Enterprises			Total	*of which:* General sales, Turnover or VAT	*of which:* Excises	Total	*of which:* Customs and Import Duties	*of which:* Export Duties
Selected Asian and Pacific Countries												
Bangladesh 1/	**8.2**	**1.4**	**0.8**	**0.6**	**0.0**	**0.5**	**3.7**	**2.6**	**1.1**	**2.6**	**2.6**	**0.0**
Nepal	9.7	1.6	0.0	1.4	0.3	0.3	4.3	2.9	1.3	3.1	3.0	0.1
Vietnam 2/	21.5	8.2	0.5	7.8	0.0	0.5	9.7	5.8	2.0	3.0	...	...
India	10.2	4.5	1.6	2.8	0.0	0.0	4.0	0.0	3.5	1.7	1.7	0.0
Pakistan	10.3	2.9	0.4	2.3	0.0	0.0	4.6	3.9	0.8	1.5	1.5	0.0
Bhutan 3/	7.6	4.4	1.3	3.2	0.4	0.0	2.3	1.5	0.4	0.5	0.5	0.0
Philippines 4/	12.3	5.7	2.1	2.7	0.0	0.0	3.6	1.7	1.8	2.5	2.5	0.0
Sri Lanka 2/	14.0	2.4	0.8	0.9	0.0	0.2	9.5	6.1	3.3	2.0	1.8	0.0
Indonesia	12.5	5.3	4.2	1.0	0.0	0.6	6.0	4.4	1.3	0.6	0.6	0.0
China (mainland) 2/	9.5	2.1	0.7	1.4	0.0	0.1	8.2	7.2	1.0	...	...	...
Thailand 3/	17.4	6.3	2.0	4.3	0.0	0.4	8.9	3.9	4.7	1.6	1.6	0.1
Malaysia	17.6	11.2	2.6	8.6	0.0	0.1	5.1	2.2	1.8	1.3	1.0	0.3
Unweighted average (excluding Bangladesh) 4/	13.0	5.0	1.5	3.3	0.1	0.2	6.0	3.6	2.0	1.8	1.6	0.1
Selected sub-Saharan African Countries												
Uganda	11.0	2.5	0.1	2.4	0.0	0.0	5.1	3.6	1.2	3.4	3.4	0.0
Ghana	22.4	6.7	2.4	3.3	0.0	0.0	10.3	5.6	4.7	4.8	3.2	1.2
Kenya	17.2	6.8	3.3	0.0	0.0	0.0	9.8	5.4	4.3	0.6	0.6	0.0
Côte d'Ivoire	14.6	1.3	0.0	1.1	1.7	0.5	3.2	1.7	1.2	7.9	4.4	3.5
Unweighted average 4/	16.3	4.3	1.5	1.7	0.4	0.1	7.1	4.1	2.8	4.2	2.9	1.2

Sources: Bangladesh authorities; IMF *Government Finance Statistics;* IMF *International Financial Statistics*; IMF *World Economic Outlook*.

1/ Fiscal year.

2/ Budgetary central government.

3/ General government.

4/ For each revenue classification, only countries for which data are available are included in the calculation.

Table 3. Bangladesh: Tax Structure for Selected Asian and African Countries, 2004

(In percent of tax revenue)

		Taxes on Income, Profits, and Capital Gains			Taxes on Payroll and Workforce	Property Taxes	Domestic Taxes on Goods and Services			International Trade Taxes		
			of which:					*of which:*			*of which:*	
	Tax Revenue	Total	Individual	Corporations and Other Enterprises			Total	General sales, Turnover or VAT	Excises	Total	Customs and Import Duties	Export Duties
Selected Asian and Pacific Countries												
Bangladesh 1/	**100.0**	**17.2**	**9.6**	**7.5**	**0.0**	**5.6**	**45.3**	**31.8**	**13.5**	**32.0**	**32.0**	**0.0**
Nepal	100.0	16.9	0.0	14.2	2.9	3.5	44.4	30.1	7.0	32.3	31.0	1.1
Vietnam 2/	100.0	39.6	2.3	37.3	0.0	2.0	41.4	26.1	12.9	16.9	...	...
India	100.0	43.9	16.0	27.8	0.0	0.1	39.0	0.1	10.5	17.1	17.0	0.1
Pakistan	100.0	30.8	4.7	25.1	0.0	0.2	46.6	36.3	10.3	10.4	10.4	0.0
Bhutan 3/	100.0	58.0	16.5	41.5	4.6	0.1	30.7	20.3	14.4	6.3	6.3	0.0
Philippines 2/	100.0	46.5	16.9	21.9	0.0	0.1	29.2	13.4	23.5	20.6	20.5	0.0
Sri Lanka 2/	100.0	17.0	5.5	6.3	0.0	1.1	67.6	43.2	5.6	14.3	12.8	0.0
Indonesia	100.0	42.0	33.8	8.2	0.0	5.2	47.7	34.9	26.8	4.5	4.4	0.1
China (mainland) 2/	100.0	22.3	7.3	15.0	0.0	1.1	85.7	75.2	34.4	...	...	...
Thailand 3/	100.0	36.1	11.4	24.7	0.0	2.6	51.3	22.6	10.5	9.5	9.1	0.3
Malaysia	100.0	63.9	14.9	48.9	0.0	0.3	28.9	12.3	10.3	7.5	5.6	1.9
Unweighted average (excluding Bangladesh) 4/	100.0	37.9	11.8	24.6	0.7	1.5	46.6	28.6	15.1	13.9	13.0	0.4
Selected sub-Saharan African Countries												
Uganda	100.0	22.7	0.0	21.4	0.0	0.0	46.2	32.7	10.6	30.7	30.7	0.0
Ghana	100.0	29.9	10.7	14.7	0.0	0.0	46.1	25.2	20.9	21.4	14.2	5.5
Kenya	100.0	39.3	19.3	0.0	0.0	0.0	56.9	31.5	24.9	3.3	3.3	0.0
Côte d'Ivoire	100.0	9.1	1.4	7.3	11.6	3.4	21.7	11.5	8.5	54.1	30.2	23.9
Unweighted average 4/	100.0	25.3	7.8	10.8	2.9	0.9	42.7	25.2	16.2	27.4	19.6	7.4

Sources: Bangladesh authorities; IMF *Government Finance Statistics;* IMF *International Financial Statistics*; IMF *World Economic Outlook.*

1/ Including taxes on specific services.
2/ Budgetary central government.
3/ General government.
4/ For each revenue classification, only countries for which data are available are included in the calculation.

Table 4. Bangladesh: Revenue Productivity for Selected Asia-Pacific and African Countries

	Revenue Productivity		
	Corporate Income Tax Based on GDP 2/	VAT 3/ Based on GDP	VAT 3/ Based on Consumption
Selected Asian and Pacific Countries			
Bangladesh	**0.01**	**0.17**	**0.21**
Nepal	0.05	0.29	0.32
Vietnam	0.28	0.49	0.65
India	0.08	NA	NA
Pakistan	0.07	0.27	0.39
Bhutan	0.11	NA	NA
Philippines	0.08	0.31	0.40
Sri Lanka	0.03	0.25	0.26
Indonesia	0.03	0.35	0.45
China (mainland)	0.04	0.39	0.65
Thailand	0.14	0.36	0.54
Malaysia	0.31	NA	NA
Unweighted average (excluding Bangladesh) 1/			
Selected sub-Saharan African Countries			
Uganda	0.07	0.21	0.23
Ghana	0.10	0.38	0.41
Kenya	0.00	0.35	0.38
Côte d'Ivoire	0.04	0.22	0.27
Unweighted average	0.05	0.29	0.32

Sources: International Monetary Fund, Fiscal Affairs Department, VAT productivity database, and Fund staff estimates.

1/ Only countries for which data are available are included in the calculation.

2/ For 2004. Calculated by dividing revenue as percent of GDP by the highest statutory CIT rate.

3/ For the most recent year between 2001-2003 for which data are available. Calculated by dividing revenue as percent of GDP or consumption by the standard VAT rate.

Table 5. Bangladesh: Tax Expenditure, FY 2005/06

(In percent of GDP)

Total	2.52
Direct tax	0.28
Corporate income tax	0.22
Personal income tax	0.05
Indirect tax	
VAT	2.07
Imports	0.48
Domestic	1.59
Supplementary duties	0.07
Customs duty	0.10

Source: Bangladesh authorities.

Table 6. Determinants of Tax-to-GDP Ratio 1/ 2/

	Estimation methods		
	Fixed effects		
Dependent variable: Tax-to-GDP ratio 3/	(1)	(2)	(3)
Constant	5.3	9.1	9.8
	(2.7) *	(1.1) ***	(0.8) ***
Per capita GNI 4/	0.0020	0.0017	0.0017
	(0.0007) ***	(0.0007) **	(0.0007) **
Agriculture share in GDP 4/	0.11		
	(0.07)		
Import share in GDP 4/	0.030	0.025	
	(0.028)	(0.028)	
M2 share in GDP 4/	0.037	0.022	0.028
	(0.018) **	(0.015) **	(0.013) **
Number of observations	174	174	174
Adjusted R-squared	0.87	0.87	0.87
Standard error of estimated equation	1.7	1.7	1.7

1/ Samples include Bangladesh, Bhutan, China, Côte d'Ivoire, Ghana, India, Indonesia, Kenya, Malaysia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Uganda, and Vietnam.

2/ Standard errors in parentheses. *, **, and *** indicate that the estimated coefficients are statistically significant at 10, 5, and 1 percent level respectively.

3/ For Bangladesh, authorities data on fiscal year basis; for all the other countries, data are taken from IMF *Government Finance Statistics* and IMF *International Financial Statistics*.

4/ Data are taken from World Bank *World Development Indicators*.

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V. Assessing Performance of Nonfinancial Public Corporations[1]

A. Introduction

1. **In Bangladesh, nonfinancial public corporations (NFPCs) engage in an extensive range of commercial and quasi-fiscal activities.** Currently, there are 47 nonfinancial corporations operating in seven broad industrial sectors: manufacturing, utility, energy, transportation, communication, commerce, agriculture, fisheries, construction, and services (Table 1).

2. **Most of these enterprises operate under government regulations and are subject to interventions in pricing and other areas.** In turn, some of these enterprises receive significant support from the government budget, thus directly affecting the government's fiscal position. Even when there is no direct budgetary support, foregone revenues due to the underpricing of products and services and other noncommercial operations based on government's administrative decisions are not recorded in the budget. Therefore, appropriate fiscal management would require monitoring of the NFPCs' operations and transparent treatment of all quasi-fiscal activities.

3. This paper aims to assess performance of NFPCs by using various financial performance indicators. The paper also discusses the need for improved monitoring and reporting of NFPC operations to assess the combined financial position of the nonfinancial public sector (i.e., the central government and NFPCs).

B. A Framework for Performance Assessment

Existing approach

4. **Annual financial data are available for 47 nonfinancial public corporations.** The Ministry of Finance's monitoring cell collects the data including both flow and stock variables and estimates expenditure requirements for these corporations as part of the budget formulation process: these estimates provide the basis for budget allocations to NFPCs through subsidy, loans, and equity with the bulk of the allocation being made through the ADP. The data are annual frequency and updated several times a year. The focus of monitoring has been on profitability (net profit after tax) and the cash flows of each corporation. Detailed analyses of various stock indicators have not yet been conducted.

5. **Several limitations constrain the application of the statistical framework** described in the *Government Finance Statistics Manual* 2001. The limitations of the available financial information include: data based on cash and accrual accounting are mixed; depreciation and other noncash items (including foreign exchange gains and losses) are not

[1] Prepared by Noriaki Kinoshita (FAD).

separated; stock and flow variables are not treated consistently; and the valuation of assets is not up-to-date.[2] Importantly, transactions and cross-holdings of assets and liabilities between the central government and the NFPCs are not recorded separately, precluding a proper consolidation of the government and the NFPCs to derive fiscal accounts for the nonfinancial public sector. Implementing the GFSM2001 framework in Bangladesh will likely take many years.

Proposed interim framework

6. **An interim framework for assessing the NFPC sector is proposed** (Table 2). The framework recognizes the data limitations and focuses mostly on cash-based accounting data. The table summarizes the NFPCs' financial data to enable a consistent assessment together with the central government operations. Balance sheet information is also presented although, as mentioned above, it is known that asset valuations are not up-to-date.

7. **Current and overall balances are the main summary indicators to analyze NFPC performance.** Current balance is the difference between revenue and operating and interest expenditure and reflects NFPCs' profitability before taking into account depreciation costs. The overall balance is measured on a cash basis and includes all revenue and expenditure items; it indicates the NFPCs' ability to generate enough resources internally to finance their own capital expenditure and determines the financing need to cover current losses and capital investment.

8. **Total financing is broken down into long-term and short-term financing.** Long-term financing is further broken down into equity financing and net lending. Equity financing is entirely from the government budget, and net lending includes funds from the government, international financial institutions, and commercial banks.

9. **The table also includes several balance sheet indicators.** On the asset side, the size of fixed assets could be examined to assess the adequacy of the level of capital stocks. On the liability side, the size of NFPC debt could affect the assessment of public debt sustainability: it should be noted here that the total public sector debt would be considerably less than the sum of the government debt and the NFPC debt because a large part of the NFPC debt is owed to the government. Properly consolidated public sector debt data are available only for outstanding borrowings from the banking sector.

[2] Assets are recorded at book values except for cases where an entity undergoes capital restructuring and revaluation. An important recent example of the latter cases includes the two companies in the electricity sector (PDB and DESA).

C. NFPC Performance and Fiscal Implications

An overview of recent developments

10. **NFPCs' contribution to the economy in terms of value added is small**: their contribution to total value added was 0.8 percent on average during 1999/00 through 2005/06. However, a number of NFPCs operate in key infrastructure areas, as well as provide essential inputs for agricultural and industrial production. Therefore, their efficiency could significantly affect the productivity of the rest of the economy.

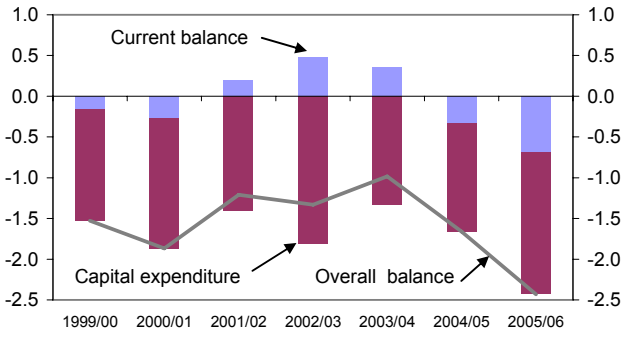
11. **The NFPCs' contribution to government revenue is also limited while a number of NFPCs receive modest current transfers and substantial investment financing from the budget.** Only a limited number of NFPCs currently pay taxes or dividends. Subsidies are recorded only for two corporations and these current transfers between the government and NFPCs are modest—less than 0.1 percent of GDP for most of the years. In contrast, equity financing and net lending—mostly through the ADP—account for the main part of the resource transfers from the government to the NFPCs. It is estimated that about one-fifth of ADP spending (which ranges between 4–5 percent of GDP over the last several years) goes to utility companies to cover their infrastructure investment.

12. **Quasi-fiscal activities by several large NFPCs and the associated losses have become a significant source of fiscal risk.** Net losses after tax (after depreciation costs) averaged 0.6 percent of GDP during 1999/00 through 2005/06. Large losses were recently recorded by the petroleum company (BPC), a power company (PDB), a chemical company (BCIC), and the national airline company (BIMAN). Most of the losses stem from administratively determined underpricing of products (fuel, electricity, and fertilizer). In addition, domestically produced natural gas is sold substantially below international prices, implying significant foregone revenue for the company (BOGMC) and the government.[3]

Trends of key indicators

13. **The overall balance (after operations with the budget) of the NFPC sector has ranged from a deficit of 1–2½ percent of GDP** (Figure 1 and Table 2). The deficit reflects the lack of funds generated from current operations to cover capital expenditure. More recently, the deterioration of the current balance

Figure 1. Bangladesh: Nonfinancial Public Corporations
In percent of GDP



[3] The average domestic sales price is less than a half of the international price, and the foregone revenue is estimated to be 2–3 percent of GDP.

contributed to the increase in the overall deficit. The current balance-to-GDP ratio shifted from a surplus of ½ percent in 2002/03 to a deficit of ¾ percent in 2005/06.

14. **Short-term financing accounts for a larger part of the deficit financing in recent years.** While long-term financing as a share of GDP remained around the same level during the period from 2003/04 to 2005/06, short-term financing as a share of GDP increased sharply, reflecting more than doubling of net bank financing as a share of GDP.

15. **Turning to the sectoral performance** (Table 3), the current balance for the electricity, gas, and water sector (which includes electricity producers, but not distributors) and the service sector (which includes water and electricity distributors) deteriorated in recent years, but remained in the positive territory. However, the overall balance of these sectors recorded large deficits due to the need for capital expenditure. In contrast, for the commerce sector (which includes the petroleum company), the main source of large overall deficits are current deficits due to the underpricing of products.

16. **On the balance sheets, both liabilities and assets declined relative to GDP in recent years**, particularly for the manufacturing and utility (electricity, gas, and water) sectors (Table 4). The recent decline in liabilities-to-GDP ratio mainly reflects the trend in long-term liabilities while there is no noticeable trend for current liabilities. The commerce sector records a negative equity position because of accumulated losses and building up of liabilities by BPC, indicating the need for financial restructuring. Although lower liabilities may be desirable for public debt sustainability, the declining trends in assets could be indicating the need for higher levels of investment, especially for the utility sector. Among the different types of assets, the ratio of net fixed assets to GDP has been declining steadily, likely reflecting inadequate capital spending (Table 5).

Fiscal implications of NFPC operations

17. When assessing the implications of NFPC operations for fiscal policy in general and public debt sustainability in particular, it would be important to take into account the scope for policy adjustments and the need for scaling up public investment:

- **There is clearly scope for significantly improving the current balance of NFPCs through price and tariff adjustments**—particularly for electricity, gas, and petroleum sectors. As mentioned earlier, petroleum and domestically produced natural gas are significantly underpriced. An upward adjustment in natural gas would have a second round effect through prices for electricity and fertilizers. Although the government would be required to undertake fiscal measures to mitigate the social impact if such broad price adjustments had to be implemented, there would be significant net gains to the overall public sector. The additional fiscal resources thus generated could be used for increasing poverty-related expenditure as well as infrastructure spending.

- **The current level of public investment is likely insufficient to maintain adequate infrastructure**. Additional resources should be generated through strengthening the current balance of NFPCs in the energy sectors, as well as scaling up government revenues. Addressing underpricing of key inputs such as natural gas and petroleum products (and perhaps the use of public assets as well) is also important in this respect.

D. Need for Improved Monitoring and Reporting

18. **As mentioned earlier, a number of data limitations constrain the analysis of the nonfinancial public sector on a consolidated basis.** However, even in the absence of complete data, the analysis could be further extended by including reasonable projections for the NFPC sector and by providing direct estimates of the quasi-fiscal activities. The following steps would be useful to include as part of regular budget reporting.

- Current and capital transfers between the government and the NFPCs (flow data) are essential to assess the fiscal indicators for the consolidated public sector. In addition, the outstanding stock of lending and borrowing between the government and the NFPCs would be necessary to capture the true indebtedness of the nonfinancial public sector.

- Summary information on NFPC operations (including balance sheets) for both actual data and projections should be prepared more frequently. Table 2 offers a prototype for such reporting. Individual NFPC reporting should be more frequent and provide projections.

- A direct estimate of quasi-fiscal activities could be added. Currently, net losses after tax or the level of the current balance are used as a broad indicator to measure the size of quasi-fiscal operations. These are only indicative and more direct measures of quasi-fiscal activities using both price and quantity data should be considered (Chivakul and York, 2006, and Mackenzie and Stella, 1996).

- Contingent liabilities could be added to the monitoring framework. Starting from the FY2006/07 budget, the government includes all explicit and counter guarantees in the budget documents. Although this could be the basis for estimating contingent liabilities, a large amount of borrowing from state banks by the NFPCs should be counted as a potential quasi-fiscal liability even if they are not explicitly guaranteed.

- Improved monitoring of NFPCs' financial position would allow more specific scenarios to be incorporated in the DSA. Currently the DSA includes a possible case where contingent liabilities (10 percent of GDP) arise in one of the standard bound tests. In the case of Bangladesh, this is consistent with the estimated amount of contingent liabilities, including BPC's accumulated losses (about 2½ percent of

GDP), public financial institutions' undercapitalization and nonperforming loans (about 4½ percent of GDP), and an allowance for various other potential liabilities that the government may need to assume from the NFPCs (about 3 percent of GDP).

E. Conclusion

19. **The paper proposes an interim framework—in line with the existing framework used for the central government, and based on readily available data—to assess performance of NFPCs on an aggregated basis as well as to analyze sectoral developments.** Given the significant fiscal risks involved in operations of nonfinancial public corporations in Bangladesh, there is a case for expanding the coverage of fiscal indicators to include NFPCs, particularly the large and vulnerable ones. However, due to data limitations, deriving a fully consolidated position of the nonfinancial public sector (i.e., the central government and NFPCs) based on an internationally accepted statistical framework would unlikely be a feasible option for many years. To further enhance the monitoring of NFPCs and transparency of fiscal decision making, the budget documents and fiscal reporting should include: budget provisions for NFPCs (a large part of which is through the ADP); the outstanding balance of lending and borrowings between the government and the NFPCs; summary information on NFPC operations (including balance sheets) for both actual data and projections; and explicit and direct estimates of the size of the quasi-fiscal activities and contingent liabilities.

Table 1. Bangladesh: Nonfinancial Public Corporations (as of July 2006)

	Manufacturing	
1	BTMC	Bangladesh Textile Mills Corporation
2	BJMC	Bangladesh Jute Mills Corporation
3	BSEC	Banlgadesh Steel and Engineering Corporation
4	BSFIC	Bangladesh Sugar and Food Industries Corporation
5	BCIC	Bangladesh Chemical Industries Corporation
6	BFIDC	Bangladesh Forest Industry Development Corporation
	Electricity, Water, and Gas	
7	PDB	Power Development Board
8	DESA	Dhaka Electricity Supply Authority
9	CWASA	Chittagong Water and Sewerage Authority
10	DWASA	Dhaka Water and Sewerage Authority
11	BOGMC	Bangladesh Oil Gas and Mineral Corporation
	Transportation and Communication	
12	BSC	Bangladesh Shipping Corporation
13	BIWTC	Bangladesh Inland Water Transport Corporation
14	CPA	Chittagong Port Authority
15	CDWMB	Chittagong Dock Workers' Management Board
16	MPA	Mongla Port Authority
17	MDWMB	Mongla Dock Workers' Management Board
18	BLPA	Bangladesh Land Port Authority
19	BIMAN	Bangladesh Biman Corporation
20	BRTC	Bangladesh Road Transport Corporation
21	JMBA	Jamuna Multi Purpose Bridge Authority
	Commerce	
22	BPC	Bangladesh Petroleum Corporation
23	BJC	Bangladesh Jute Corporation
24	TCB	Trading Corporation of Bangladesh
	Agriculture and Fisheries	
25	BFDC	Bangladesh Fisheries Development Corporation
26	BADC	Bangladesh Agriculture Development Corporation
	Construction	
27	CDA	Chittagong Development Authority
28	RAJUK	Rajdhani Unnayan Kartripakhya
29	KDA	Khulna Development Authority
30	RDA	Rajshahi Development Authority
	Service	
31	BFDC	Bangladesh Film Development Corporation
32	BFFWT	Bangladesh Freedom Fighters' Welfare Trust
33	BTB	Bangladesh Tea Board
34	BIWTA	Bangladesh Inland Water Transport Authority
35	BPRC	Bangladesh Parjatan Corporation
36	BWDB	Bangladesh Water Development Board
37	DD	Dredging Department (under BWDB)
38	ME	Mechanical Engineering Department (under BWDB)
39	REB	Rural Electrification Board
40	PBS	Palli Biddut Societies (under REB)
41	BSCIC	Bangladesh Small and Cottage Industries Corporation
42	EPZA	Export Processing Zone Authority
43	CAAB	Civil Aviation Authority of Bangladesh
44	BHB	Bangladesh Handloom Board
45	BSB	Bangladesh Sericulture Board
46	EPB	Export Promotion Board
47	BTRC	Bangladesh Telecommunications Regulatory Commissior

Source: Ministory of Finance, Monitoring Cell.

Table 2. Bangladesh: Nonfinancial Public Corporation Operations, FY2000–06

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06 Est.
	(In percent of GDP)						
Revenue	9.3	10.3	10.2	10.5	10.0	9.9	11.0
Operating revenue	9.1	10.1	10.1	10.1	9.8	9.8	10.8
Others	0.2	0.2	0.2	0.4	0.2	0.2	0.2
Expenditure	10.7	12.1	11.3	11.7	10.8	11.6	13.4
Operating expenditure	8.9	10.0	9.5	9.5	9.2	10.0	11.4
Purchase of goods and services	8.2	9.2	8.8	8.9	8.6	9.5	10.9
Workers' compensation	0.7	0.7	0.7	0.6	0.5	0.5	0.5
Interest payments	0.4	0.5	0.4	0.4	0.3	0.2	0.3
Capital expenditure	1.4	1.6	1.4	1.8	1.3	1.3	1.7
Overall balance before operations with the budget	-1.4	-1.7	-1.1	-1.2	-0.8	-1.6	-2.4
Direct tax	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Dividends	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Subsidy	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance after operations with the budget	-1.5	-1.9	-1.2	-1.3	-1.0	-1.7	-2.4
Total financing	1.5	1.9	1.2	1.3	1.0	1.7	2.4
Long-term financing 1/	1.0	1.3	0.8	1.6	1.0	1.0	0.9
Equity financing	0.5	1.0	0.4	0.6	0.8	0.5	0.5
Net lending	0.6	0.4	0.4	1.1	0.2	0.4	0.4
Loans received	1.4	1.1	1.4	1.7	1.0	0.9	0.8
Repayments	0.8	0.7	1.0	0.7	0.7	0.4	0.4
Short-term financing 2/	0.5	0.5	0.5	-0.3	0.0	0.7	1.5
Balance sheet							
Equity	9.9	8.9	9.2	11.1	15.3	9.8	8.0
Liabilities	24.6	26.6	26.3	26.5	23.6	23.7	24.1
Long-term liabilities	13.5	13.7	13.2	14.8	12.3	12.2	11.5
Current liabilities	11.1	12.9	13.0	11.7	11.3	11.5	12.6
Assets	34.5	35.5	35.4	37.6	38.9	33.5	32.1
Net fixed assets	13.9	13.3	13.1	13.1	11.5	10.7	9.8
Other assets	20.6	22.2	22.4	24.5	27.3	22.8	22.3
Memorandum items:							
Current balance after operations with the budget	-0.2	-0.3	0.2	0.5	0.4	-0.3	-0.7
Net profits after tax	-0.8	-1.0	-0.5	0.0	-0.2	-0.8	-1.1
Of which: Depreciation costs	-0.7	-0.8	-0.8	-0.5	-0.6	-0.5	-0.4
Net fixed investment 3/	0.6	0.8	0.6	1.3	0.7	0.9	1.3
Stock of banking sector credit to NFPCs (end of period)	1.9	2.2	2.1	1.8	2.1	2.3	3.0
Contribution of NFPCs' value added to GDP	1.0	0.9	1.3	1.2	1.2	0.3	0.0

Sources: Ministry of Finance, Monitoring Cell; Bangladesh Bank; and Fund staff estimates.

1/ Includes capital transfers from the central government budget.

2/ Includes net amount of payables less receivables.

3/ Capital expenditure less depreciation; includes investment financed by capital transfers from the central government that are provided under the Annual Development Program.

Table 3. Bangladesh: Current and Overall Balance of Nonfinancial Public Corporations by Sector, FY2000–06

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06 Est.
				(In percent of GDP)			
Current balance	-0.2	-0.3	0.2	0.5	0.4	-0.3	-0.7
Manufacturing	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0
Electricity, water, and gas	0.2	0.1	0.2	0.2	0.3	0.0	0.0
Transportation and communication	0.1	0.1	0.1	0.1	0.2	0.1	0.0
Commerce	-0.6	-0.6	-0.2	0.0	-0.3	-0.8	-0.9
Agriculture and fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service	0.1	0.1	0.2	0.2	0.2	0.3	0.3
Capital expenditure	1.4	1.6	1.4	1.8	1.3	1.3	1.7
Manufacturing	0.0	0.1	0.1	0.0	0.2	0.1	0.0
Electricity, water, and gas	0.6	0.7	0.6	0.6	0.7	0.5	0.6
Transportation and communication	0.1	0.1	0.1	0.0	0.2	0.1	0.4
Commerce	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture and fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.1	0.1	0.0	0.1	0.0	0.1	0.1
Service	0.5	0.6	0.6	1.0	0.2	0.5	0.6
Overall balance	-1.5	-1.9	-1.2	-1.3	-1.0	-1.7	-2.4
Manufacturing	-0.1	-0.2	-0.1	0.0	-0.3	-0.1	0.0
Electricity, water, and gas	-0.4	-0.5	-0.4	-0.4	-0.4	-0.5	-0.6
Transportation and communication	0.0	0.0	0.0	0.1	0.0	0.0	-0.4
Commerce	-0.6	-0.6	-0.2	0.0	-0.3	-0.8	-0.9
Agriculture and fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	-0.1	-0.1	0.0	-0.1	0.0	-0.1	-0.1
Service	-0.4	-0.5	-0.4	-0.8	0.1	-0.2	-0.3

Sources: Ministry of Finance, Monitoring Cell; and Fund staff estimates.

Table 4. Bangladesh: Balance Sheets of Nonfinancial Public Corporations by Sector, FY2000–06

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06 Est.
	(In percent of GDP)						
Equity	10	9	9	11	15	10	8
Manufacturing	2	1	1	1	1	1	1
Electricity, water, and gas	4	4	4	4	3	2	2
Transportation and communication	1	1	2	2	2	1	1
Commerce	0	-1	-1	-1	-1	-1	-2
Agriculture and fisheries	0	0	0	0	0	0	0
Construction	1	1	1	1	1	1	1
Service	2	2	2	5	10	6	5
Liabilities	25	27	26	27	24	24	24
Manufacturing	9	9	7	7	6	6	5
Electricity, water, and gas	9	9	9	7	5	6	6
Transportation and communication	1	1	2	2	1	2	2
Commerce	2	4	4	3	4	3	4
Agriculture and fisheries	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Service	4	4	4	7	7	7	7
Assets	35	35	35	38	39	34	32
Manufacturing	10	10	8	8	7	7	6
Electricity, water, and gas	13	13	13	11	8	8	8
Transportation and communication	2	2	4	3	3	3	3
Commerce	2	3	3	2	3	2	2
Agriculture and fisheries	0	0	0	0	0	0	0
Construction	1	1	1	1	1	1	1
Service	6	6	6	12	17	12	12
Of which:							
Net fixed assets	14	13	13	13	12	11	10
Manufacturing	3	3	2	2	2	2	2
Electricity, water, and gas	7	7	6	4	3	3	2
Transportation and communication	1	1	2	2	2	2	2
Commerce	0	0	0	0	0	0	0
Agriculture and fisheries	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Service	2	2	2	5	5	4	4

Sources: Ministry of Finance, Monitoring Cell; and Fund staff estimates.

Table 5. Bangladesh: Gross and Net Fixed Investment of Nonfinancial Public Corporations by Sector, FY2000–06

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06 Est.
	(In percent of GDP)						
Capital expenditure	1.4	1.6	1.4	1.8	1.3	1.3	1.7
Manufacturing	0.0	0.1	0.1	0.0	0.2	0.1	0.0
Electricity, water, and gas	0.6	0.7	0.6	0.6	0.7	0.5	0.6
Transportation and communication	0.1	0.1	0.1	0.0	0.2	0.1	0.4
Commerce	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture and fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.1	0.1	0.0	0.1	0.0	0.1	0.1
Service	0.5	0.6	0.6	1.0	0.2	0.5	0.6
Depreciation	0.7	0.8	0.8	0.5	0.6	0.5	0.4
Manufacturing	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electricity, water, and gas	0.4	0.4	0.5	0.2	0.3	0.2	0.2
Transportation and communication	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Commerce	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture and fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Service	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Net fixed investment	0.6	0.8	0.6	1.3	0.7	0.9	1.3
Manufacturing	-0.1	-0.1	-0.1	-0.1	0.1	0.0	0.0
Electricity, water, and gas	0.2	0.2	0.1	0.5	0.4	0.3	0.4
Transportation and communication	0.0	0.0	0.0	-0.1	0.1	0.0	0.3
Commerce	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture and fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.1	0.1	0.0	0.1	0.0	0.1	0.1
Service	0.4	0.5	0.5	0.9	0.1	0.4	0.5

Sources: Ministry of Finance, Monitoring Cell; and Fund staff estimates.

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VI. The Cyclical Properties of Workers' Remittances[1]

A. Introduction

1. **The spectacular rise of workers remittances has sparked a wide interest in their macroeconomic properties.** Remittances receipts in Bangladesh increased by 17 percent, on average, in each of the last 30 years and meanwhile constitute the largest source of foreign exchange after exports. Remittances are a particularly attractive source of foreign financing, because they are usually more stable over time than other capital flows. In addition, they are unrequited transfers, which unlike other capital flows, do not create obligations in the future.

2. **Many believe—and some evidence has emerged—that remittances serve as an insurance against economic shocks.** This would be good news for Bangladesh which is prone and vulnerable to a number of shocks: The export base is very narrow with 75 percent of exports concentrated in the ready-made garment sector; as an oil importer Bangladesh is vulnerable to swings in the international price; and since almost half of its territory is only inches above, or even below, sea level the country is prone to natural disasters.

3. **This chapter explores to what extent remittances absorb shocks and reduce volatility in Bangladesh.** It concludes that remittances are a welcome source of foreign financing and should be promoted, including through financial deepening. It also finds that remittances do respond to swings in the international oil price and help cushion its impact on the Bangladesh economy. However, there is little evidence that remittances respond to adverse domestic shocks and would come to the rescue if exports dwindled. On the contrary, remittances are found to be pro-cyclical and to increase volatility in the economy. The pitfalls of pro-cyclical capital flows such as inflationary pressures, asset bubbles, or an overvalued exchange rate, though, are largely absent.

4. **This chapter is organized as follows:** The following section presents some facts on remittance receipts in Bangladesh. Section C explores the link between oil prices and remittances, investigates whether remittances respond to shocks in domestic output, and shows how remittances fuel domestic demand. Section D offers some policy implications.

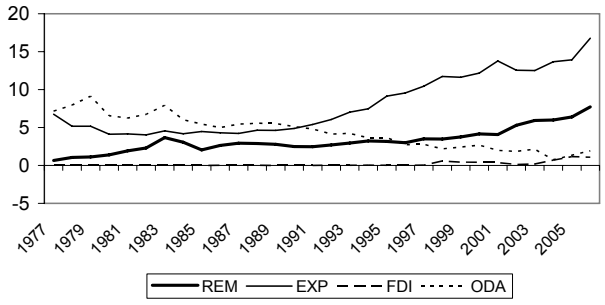
B. Some Facts

5. **Reported workers remittances increased at an average annual rate of 17 percent over the last 30 years.** Since the mid-1990s, they constitute the largest source of foreign

[1] Prepared by Erik Lueth (APD).

exchange after exports (Figure 1). In 2006, workers remittances amounted to 7.7 percent of GDP, compared to 16.8 percent of GDP for merchandize exports, 1.9 percent of GDP for ODA, and 1.1 percent of GDP for FDI. Remittances through informal channels or the so-called 'hundi' system are estimated at about 75 percent of reported remittances.

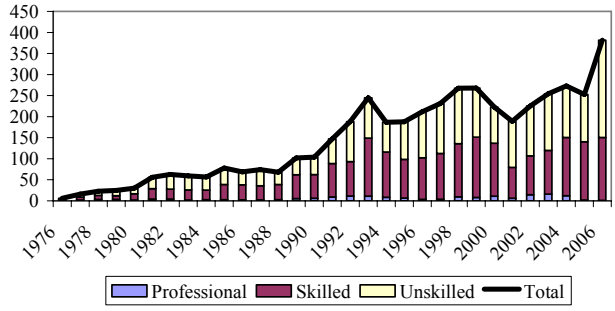
Figure 1. Sources of Foreign Exchange, 1977–2006 1/
(In percent of GDP)



1/ Fiscal years, starting July 1.

6. **The rise in remittances is mirrored by a steady increase in emigrant numbers.** Gross emigration of overseas workers increased from 6,000 in 1976 to 382,000 in 2006 with a quantum leap in the early nineties (Figure 2). The current stock of overseas workers is estimated at 3.9 million (2.8 percent of the population) translating into an average annual remittance of $1,230 per worker. Some 50 percent of overseas workers reside in Saudi Arabia and approximately 95 percent stay in oil exporting countries, suggesting a link between remittance flows and the oil price. The composition of emigrant workers changed little over time, ruling out a shift towards higher-end employment as a possible cause for rising remittance flows.

Figure 2. Annual Number of Emigrants, 1976–2006 1/
(In thousands)

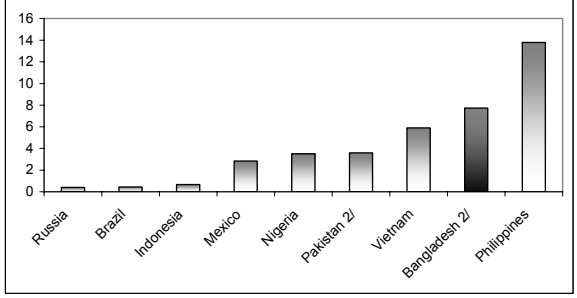


1/ Fiscal years, starting July 1.

7. **The evolution of Bangladesh's remittance receipts is broadly in line with the trend observed in global remittance flows**. As a global aggregate, workers' remittances have become the largest source of foreign exchange after exports and FDI, exceeding both ODA and portfolio investment by a wide margin. Some of the surge in workers remittances may be attributable to better recording and a shift from informal to formal channels owing to falling transaction costs and increased scrutiny after September 11. However, underpinned by population aging in the industrialized world, remittance flows are unlikely to abate soon. In the case of Bangladesh, persistent rural poverty and increasing population density will continue to drive emigration and remittances in the medium term.

8. **Remittance receipts are large relative to the Bangladesh economy.** Among nine countries of broadly equal population size, Bangladesh exhibits the largest remittances-to-GDP ratio after the Philippines (Figure 3) . In Asia, the region with the largest remittance receipts, Bangladesh is surpassed only by the Philippines (13.8 percent of GDP), Nepal (12.2 percent of GDP), and Sri Lanka (8.9 percent of GDP).

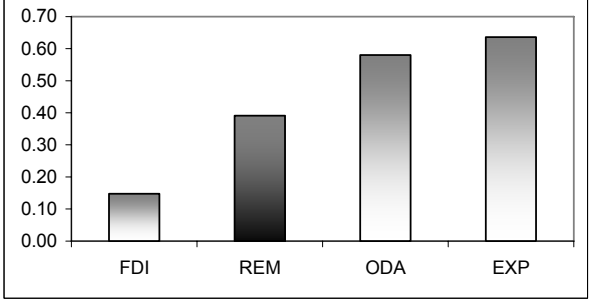
Figure 3. Workers' Remittances for Selected Countries, 2005 1/ (In percent of GDP)



1/ Countries have broadly similar population sizes.
2/ Fiscal year, starting July 1, 2005.

9. **Bangladesh remittance receipts are less volatile than export receipts and ODA**, confirming a pattern observed for global aggregates (IMF, 2005). The standard deviation of remittances around the trend amounts to 0.39 percentage points of GDP, compared with 0.64 percentage points of GDP for export receipts, and 0.58 percentage points of GDP for ODA receipts (Figure 4). FDI, on the other hand, is less volatile than remittances, deviating only 0.15 percentage points of GDP from the trend, on average.

Figure 4. Volatility of Foreign Exchange Flows, 1977–2006 1/ (In percentage points of GDP)



1/ Fiscal years, starting July 1. Volatility is measured as the standard deviation of detrended flows-to-GDP, in percent.

C. The Macroeconomic Properties of Remittances

Oil price shocks

10. **There is a presumption that remittance receipts in Bangladesh cushion against oil price shocks.** For an oil importer like Bangladesh, an increase in the oil price means a real resource transfer to oil exporting nations. If the oil price hike is transitory, the oil importer usually runs down reserves or borrows abroad to avoid a contraction in consumption and investment. However, if the oil price hike is permanent, the oil importing nation eventually has to adjust to the real resource transfer and consume and invest less. In the case of Bangladesh, 95 percent of its overseas workforce is located in oil exporting countries and will likely earn and send home more when the oil price rises. This increase in foreign financing would help cushion consumption and investment against permanent increases in the oil price. In the case of transitory shocks it would be a cheap alternative to borrowing abroad or running down reserves.

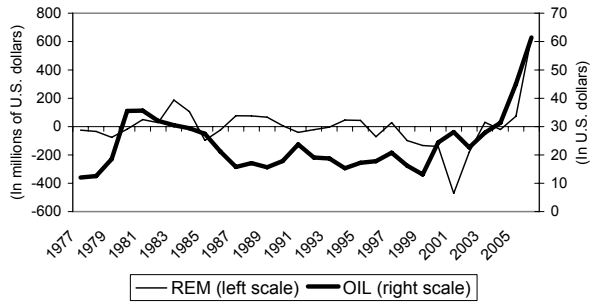
11. **The budget constraint of an open economy helps illustrate this point.** In an open economy, real domestic demand or absorption can be written as the difference between real output and net exports:[2]

$$A = Y - (EX - IM) \qquad (1)$$

Hence, any real demand that exceeds output generated (and sold) at home needs to be met by imports, which in turn need to be financed by borrowing, reserve depletion, grants, or workers' remittances. If the price of imports increases and borrowing is not an option, say, because the price increase is permanent, real imports need to decline, and so does real absorption.[3] However, if remittances increase with oil prices, the needed contraction in consumption and investment would be smaller.

12. **There is strong evidence that remittances receipts in Bangladesh are positively correlated with oil prices.** The correlation coefficient of detrended remittances and oil prices is 52 percent (Figure 5). In a regression, the coefficient of oil turns out highly significant and suggests that a one dollar increase in the oil price leads to $8 million in additional remittance receipts. The result is also significant in economic terms. In FY2005, oil prices increased by about 50 percent or $15. In the absence of additional foreign financing, and with oil imports accounting for 2.5 percent of domestic demand, this would have required a contraction of real demand by 1.25 percent. However, the same price increase also generated additional remittance receipts of $120 million, or 0.2 percent of domestic demand, offsetting about one sixth of the oil price effect on demand. Sure enough, Bangladesh did have access to other forms of foreign financing which helped smooth consumption, but those funds, to the extent that they were borrowed, have to be repaid in the future.

Figure 5. Remittances and Oil Prices, 1977–2006 1/



1/ Fiscal years, starting July 1. The oil price is calculated as the average of Dubai Fateh, U.K. Brent, and West Texas Intermediate crude oil prices. Remittances have been detrended with the Hodrick-Prescott filter.

Shocks to domestic output

13. **Remittance receipts may also respond positively to adverse output shocks.** It is widely believed that remittances are motivated by altruism or based on some sort of

[2] Domestic demand or absorption is the sum of domestic (private and public) consumption and investment.

[3] The mechanism that brings this about is usually a devaluation of the currency, which reduces the purchasing power of households and discourages imports by making them more expensive. Steep devaluations can also negatively affect GDP.

insurance arrangement within the extended family (see Lucas and Stark, 1985; Rapoport and Docquier, 2005). Under these circumstances, families would attempt to smooth family consumption and increase remittances in response to country-specific shocks. Two recent cross-country studies have indeed found that remittance receipts increase following natural disasters (e.g., Yang, 2006, and Bluedorn, 2005; for the opposite finding, see Lueth and Ruiz Arranz, 2006).

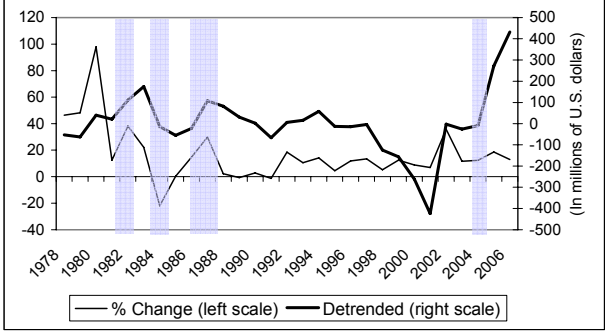
14. **Once more, the budget constraint of the open economy helps to frame this argument.** Net exports in Equation (1), can be written as $EX - IM = -NI - NT - KA + \Delta R$, where NI is net income from abroad, NT is net transfers from abroad, KA is the capital account and ΔR is the change in reserves.[4] Replacing this in Equation (1) and assuming that net income from abroad is negligible, gives:

$$A = Y + NT + KA - \Delta R \qquad (2)$$

Hence, any demand that exceeds income generated at home needs to be financed by transfers from abroad, including workers remittances, or borrowing from abroad.[5] If domestic output Y falters, remittances would boost NT according to the altruism/insurance hypothesis and, in this way, smooth consumption and investment.

15. **There is little evidence that remittances respond to domestic shocks in Bangladesh.** Figure 6 shows detrended remittances and the percentage change of remittances in years where natural disasters have occurred (shaded gray). To be considered in the graph, disasters needed to have affected at least 20 million people. Natural disasters are particularly suited to test the altruism/insurance hypotheses for a number of reasons. They are usually local events that would trigger offsetting transfers from a geographically dispersed and, hence, unaffected Diaspora. Moreover, since they are truly exogenous shocks, moral hazard is unlikely to undermine the remitters' willingness to give, nor is there any danger that causality is running from remittances to domestic output. Out of the five disaster years, detrended remittances spiked only in one, the flood of 1988. The growth rate of remittances peaked in

Figure 6. Remittance Receipts During Natural Disasters, 1978–2006



1/ Years of natural disasters are shaded gray.

[4] This is derived from the balance of payments equation $CA + KA = \Delta R$, where $CA = EX - IM + NI + NT$ is the current account balance.

[5] Borrowing in this context means a falling net investment position and includes FDI inflows, portfolio inflows, and the running down of reserves.

two of the disaster periods—1982 and 1988—but then remittances fell sharply during the flood of 1984.

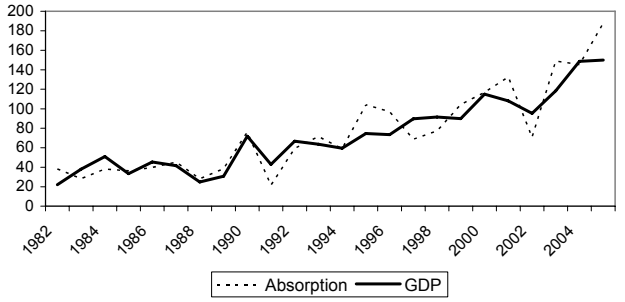
16. **By the same token, remittances are unlikely to cushion shocks to the country's exports.** A drop in the demand for Bangladesh exports would not only force an adjustment to imports, but would also depress domestic output. As suggested by the example of natural disasters, remittances are unlikely to come to the rescue. In addition, the main risks for Bangladesh's exports—the loss of market share or a general price decline in the ready-made garment sector after transitory MFA safeguards expire—is a permanent shock, which insurance-type remittances would not cover anyway.

Do remittances increase volatility?

17. **Remittances may actually increase volatility in Bangladesh.** Another school of thought sees remittances as mainly profit driven, where the overseas worker allocates his earnings between home and host country depending on the marginal rate of return in either place. Here, the rate of return can be understood broadly to also include services rendered by the extended family in return for remittances. Instead of smoothing consumption, profit-driven remittances could actually increase economic volatility by fueling boom and bust cycles. In terms of Equation (2), workers' remittances—which account for 90 percent of net transfers (*NT)*—would be positively correlated with output *Y*, thereby amplifying the effect of economic swings on absorption.

18. **Real consumption and investment are, in fact, much more volatile than real output in Bangladesh** (Figure 7). This pattern is much easier to reconcile with profit-driven remittances than with altruistic remittances. However, the swings in domestic demand could also be driven by other foreign financing flows, a possibility that is dismissed in the following few paragraphs.

Figure 7. Real Absorption and Output, 1982–2005 1/
(First difference, in billions of FY96 taka)



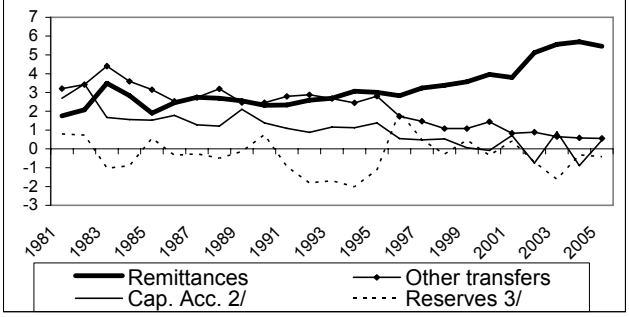
1/ Fiscal years, starting July 1.

19. **Remittances are the largest component financing domestic demand after output.**[6] Domestic output is obviously the main source of financing, accounting for 90–95 percent of real domestic demand during 1981–2006. The remaining sources of financing are shown in

[6] The national accounts data are taken from the CEIC database and the balance of payments (BOP) data stem from the IMF Balance of Payments Statistics Yearbook. BOP data was converted into taka using the nominal exchange rate. Nominal data were converted into real data using the GDP deflator.

Figure 8. Reserve depletion is zero on average, as expected, but at times accounts for 1–2 percent of domestic demand. The share of foreign borrowing, at around 3 percent in 1981, has fallen steadily and is zero since the late 1990s. Similarly, other transfers (grants) haven fallen gradually from around 3 percent of domestic demand to ½ percent more recently. In contrast, workers remittances have been on an upward trend and since 1994 exceed other sources of foreign financing. Also note that the increase in volatility of domestic demand in Figure 7 coincides with the increasing importance of remittances.

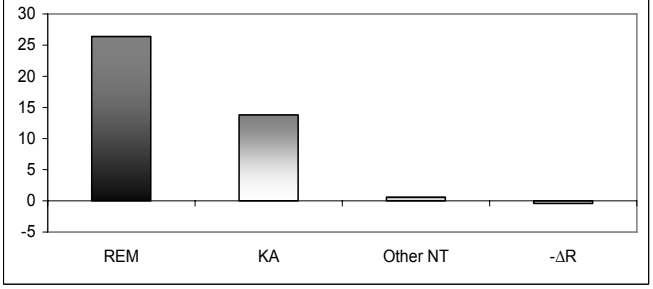
Figure 8. Foreign Financing of Domestic Demand, 1981–2005 1/ (In percent of demand)



1/ Fiscal years, starting July 1.
2/ Capital account, errors and omissions, and net income from abroad.
3/ Reserve depletion is defined as balance of payments deficit.

20. **Remittances exhibit the highest cyclicality among foreign financing flows.** As shown in Figure 9, remittance move with GDP in about a quarter of all years between 1981 and 2005. In contrast, the capital account is procyclical in only 13 percent of cases. Other transfers (grants) and reserves exhibit no significant cyclicality, but the coefficient of reserve depletion has the expected sign.[7]

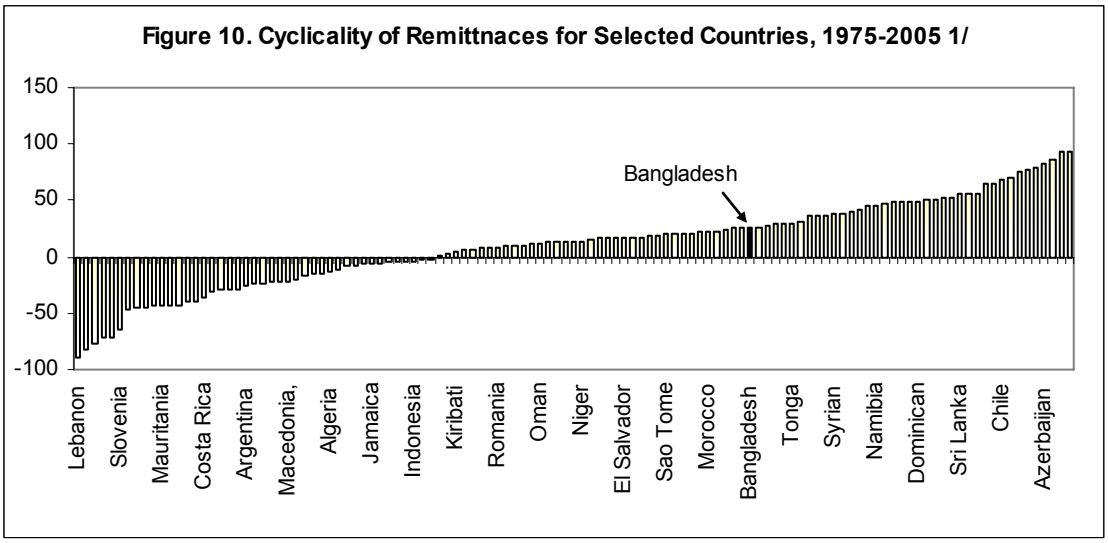
Figure 9. Cyclicality of Foreign Financing Flows, 1981–2005 1/



1/ Fiscal years, starting July 1. Cyclicality is defined as the correlation coefficient, in percent, between the foreign financing inflow and GDP, both detrended with the Hodrick-Prescott filter.

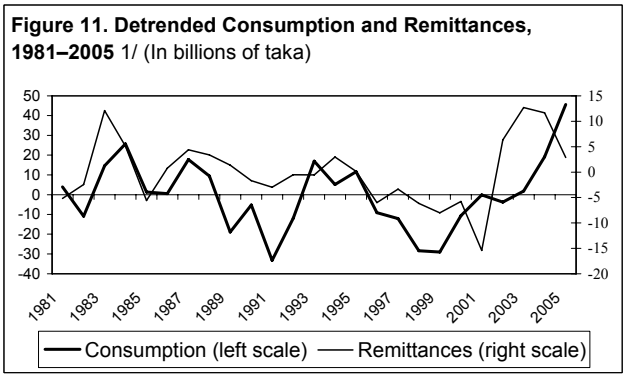
21. **The cyclicality of remittance receipts in Bangladesh is also high by international standards.** Figure 10 shows the cyclical properties of remittances for a group of 119 countries. About two-thirds of countries exhibit less cyclicality in their remittance receipts than Bangladesh. In about half of those countries' remittances are actually countercyclical and help offset the effect of negative output shocks on consumption and investment.

[7] It is worth noting that ODA is more procyclical than remittances with a correlation coefficient of 45 percent. Since the capital account as a whole is less procyclical errors and omissions, the other major line item under the capital account, must be counter-cyclical.



1/ Cyclicality is defined as the correlation coefficient, in percent, between the foreign financing inflow and GDP, both detrended with the Hodrick-Prescott filter.

22. **Remittances seem to boost consumption rather than investment.** After having established the impact of remittances on domestic demand, it is interesting to know which component of demand is most affected by remittances. A large strand of mostly microeconomic literature tries to establish whether remittances are used for consumption or investment (see Rapoport and Docquier, 2005). In the former case, remittances would have at most short-term effects on growth, but could still go a long way in poverty reduction. In the latter case, remittances, by easing liquidity constraints, could move the country to a higher growth path. Figure 11 depicts the cyclical component of remittances and consumption in Bangladesh. The two series are closely correlated as evidenced by a correlation coefficient of 50 percent (significant at the 5 percent level). The correlation coefficient of remittances and investment, on the other hand, is not significant and negative.[8]



1/ Fiscal years, starting July 1. Both series have been detrended by the Hodrick-Prescott filter.

23. **There is no evidence so far that remittances fuel inflation or lead to Dutch disease in Bangladesh .** If remittances are procyclical, there is a higher likelihood that they cause consumer price inflation, asset price bubbles, or overvalued exchange rates. The real

[8] The notions that remittances are motivated by rate of return considerations and fuel consumption are no contradiction, since the rate of return can be understood broadly to also include services rendered by the extended family in return for remittances.

effective exchange rate has been depreciating since 1980 (the earliest data point available) against continuously rising remittances, prima facie evidence against the Dutch disease phenomenon. However, the lack of a positive relationship between remittance flows and price indicators, including the exchange rate, the CPI, and the building construction cost index, is also confirmed using stationary series and econometric analysis.[9]

D. Policy Implications

24. **Remittances are a welcome source of foreign financing and should be promoted.** They are larger and less volatile than ODA, they are unrequited transfers which do not create debt service in the future, and they help cushion the economy against oil price shocks. According to various cross-country studies, countries can promote remittances through official channels by abstaining from dual exchange rate practices and current account restrictions, by reducing transaction costs through increased competition in the banking sector, and by fostering financial sector development more generally.

25. **Remittances are no universal remedy and can not substitute for good policies at home.** Remittances do not rise in response to economic shocks other than oil price shocks. On the contrary, remittances dwindle when the economy slows and amplify the economic downturn. Cross-country research also found remittances to be strongly correlated with the political and investment climate in the home country.

26. **Financial deepening should leverage the impact of remittances on growth.** Currently, a large part of remittances seems to be used for consumption. This increases welfare–and more so the poorer the recipient of remittances—and should not be discouraged. At the same time, government policies should support financial deepening to provide savings instruments for those who do want to save out of their remittance receipts. Abstaining from financial repression, fostering competition in the financial sector, and providing a strong regulatory environment would help in putting more remittances to productive use.

27. **If remittances have not significantly aggravated economic cycles so far, it does not mean that they will not in the future.** Presently, BB is experiencing upward pressure on the exchange rate owing in large parts to strong remittance inflows. This is a welcome opportunity to build up reserves to more comfortable levels, but should be accompanied by sterilization to prevent excessive money and credit growth, nonperforming loans, and inflationary pressures down the road.

[9] On the contrary, one finds a negative relationship between the strength of the taka and remittance flows, suggesting that causality runs from the exchange rate to remittance flows (see Rajan and Subramanian, 2005).

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VII. AID FLOWS TO BANGLADESH[1]

A. Introduction

1. **In recent years Bangladesh has made significant gains across a range of social indicators.** Good progress has been made toward achieving the MDGs. Still, it remains among the poorest countries in the world and much remains to be done to improve living conditions given that more than half of the population subsists on less than $2 per day. This paper will explore external aid flows and offer some ideas on the relationship of these flows to Bangladesh's efforts to reduce poverty. It will describe recent trends in external aid disbursements (ODA) and compare them with other LICs and explore: (i) the linkage between these flows and the execution of the ADP; (ii) the relationship between the government and donors in light of the 2005 Paris Declaration on government/donor harmonization; (iii) the relationship of these developments with Bangladesh's progress in achieving the MDGs; and (iv) discuss some issues related to improving the provision and use of aid.

B. Trends in ODA FY1991–2005[2]

2. **A striking fact about net ODA inflows to Bangladesh is that they have not kept pace with GDP growth.** Total net aid inflows declined in terms of GDP from almost 6½ percent to around 2 percent between FY 1991 and FY 2005. Technical assistance and food aid have also declined in recent years while emergency aid reached a peak of 4 percent of GDP in FY2005.

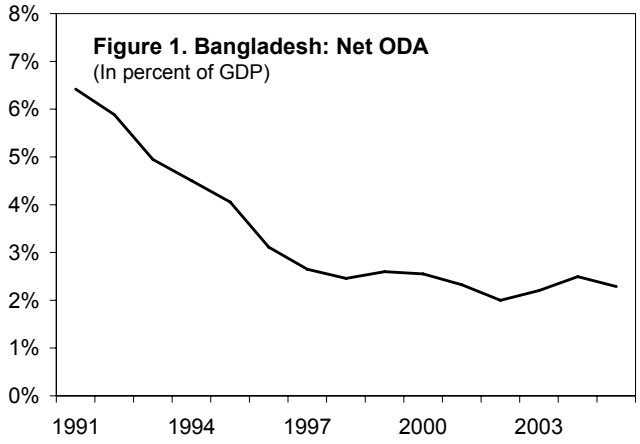


Figure 1. Bangladesh: Net ODA
(In percent of GDP)

[1] Prepared by Perry Perone (PDR).

[2] The aid flow data used in this chapter is from the OECD Development Assistance Committee online database. There are significant differences between this data and the data reported by the authorities in the BOP. Such discrepancies are common to all LICs and the DAC database was used because it provides the most detailed breakdown by creditor and type of aid. The Statistics Department of the IMF is involved in ongoing work with the donors and member governments to improve data reporting in this area, but this is likely to be a long process requiring in the first instance that donors report aid flows categorized in a way to facilitate comparison to BOP flows.

Table 1. Bangladesh: Net ODA Aid Inflows 1991–2005 1/

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
							(In millions of U.S. dollars)								
Total aid (ODA, net)	1,986	1,848	1,593	1,556	1,512	1,255	1,119	1,084	1,186	1,191	1,096	967	1,151	1,403	1,367
Multilateral	964	947	820	783	728	573	518	488	556	552	474	404	532	721	740
IDA	344	273	292	329	267	192	237	268	315	307	247	206	295	435	437
IMF	154	184	113	-55	-58	-73	-100	-110	-101	-94	-86	-52	21	106	123
AsDF	286	294	269	288	303	256	206	166	199	206	162	110	95	46	32
Other	180	196	202	194	215	199	175	164	144	133	152	140	121	134	148
Bilateral	1,022	901	774	773	784	681	601	596	630	639	622	563	620	683	626
Denmark	56	47	33	31	33	35	38	43	44	38	38	40	41	45	48
European Union	59	55	61	63	84	112	97	84	76	66	71	49	39	55	68
France	34	27	31	32	28	27	22	15	14	18	17	10	7	4	7
Germany	87	88	77	90	83	73	66	56	56	42	33	30	31	29	36
Japan	244	139	174	206	241	214	152	160	156	163	164	124	119	77	19
Netherlands	64	65	63	54	56	62	65	61	47	34	38	44	51	61	63
United Kingdom	98	100	87	69	71	74	71	85	107	109	114	113	181	257	228
United States	149	130	112	123	104	49	36	17	59	88	75	80	64	60	56
Other	231	250	136	104	83	35	55	76	72	82	72	73	86	95	102
							(In percent of GDP)								
Total aid (ODA, net)	6.4	5.9	5.9	4.5	4.1	3.1	2.6	2.5	2.6	2.6	2.3	2.0	2.2	2.5	2.3
Multilateral	3.1	3.0	3.0	2.3	2.0	1.4	1.2	1.1	1.2	1.2	1.0	0.8	1.0	1.3	1.2
IDA	1.1	0.9	0.9	1.0	0.7	0.5	0.6	0.6	0.7	0.7	0.5	0.4	0.6	0.8	0.7
IMF	0.5	0.6	0.6	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	0.0	0.2	0.2
AsDF	0.9	0.9	0.9	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1
Other	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Bilateral	3.3	2.9	2.9	2.2	2.1	1.7	1.4	1.4	1.4	1.4	1.3	1.2	1.2	1.2	1.0
Denmark	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
European Union	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1
France	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Germany	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Japan	0.8	0.4	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.0
Netherlands	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
United Kingdom	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.4
United States	0.5	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1
Other	0.7	0.8	0.8	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2

Source: OECD DAC.
1/ Fiscal year (June–July).

3. **The share of grants in total ODA to Bangladesh has increased** from about 60 percent to 70 percent. Project-related grants have consistently comprised about 60 percent of total grants while technical assistance has averaged around 25 percent. Food aid and emergency aid account for the remainder in varying proportions over the period.

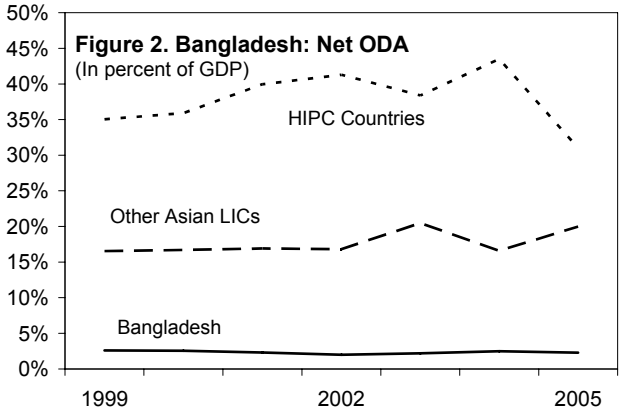
Table 2. Bangladesh: Composition of Net Aid Inflows 1991–2005 1/

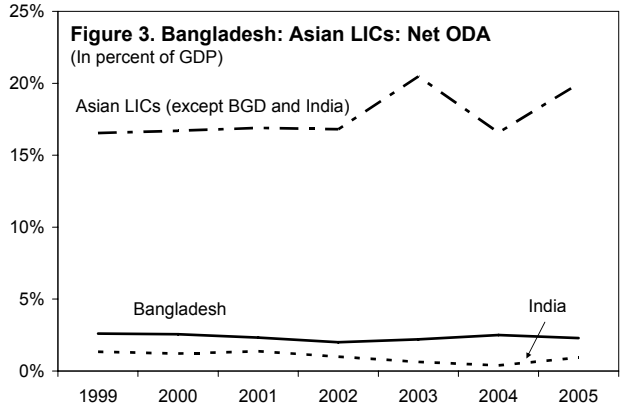
	1991	1996	2001	2005
	(In millions of U.S. dollars)			
Total aid (ODA, net)	1,986	1,255	1,096	1,367
Loans	782	335	291	408
Grants	1,204	920	806	959
Projects (residual)	804	533	495	642
Of which: TA	242	275	208	203
Of which: Food aid	158	99	91	60
Of which: Emergency aid	...	12	11	54
	(In percent of total aid)			
Loans	39	27	27	30
Grants	61	73	73	70
Of which: TA	12	22	19	15
Of which: Food aid	8	8	8	4
Of which: Emergency aid	...	1	1	4

Source: OECD DAC.
1/ Fiscal year (June–July).

4. **The source of the aid has been relatively evenly split between multilateral institutions and bilateral donors**, although in recent years the relative contribution of bilateral donors has declined.

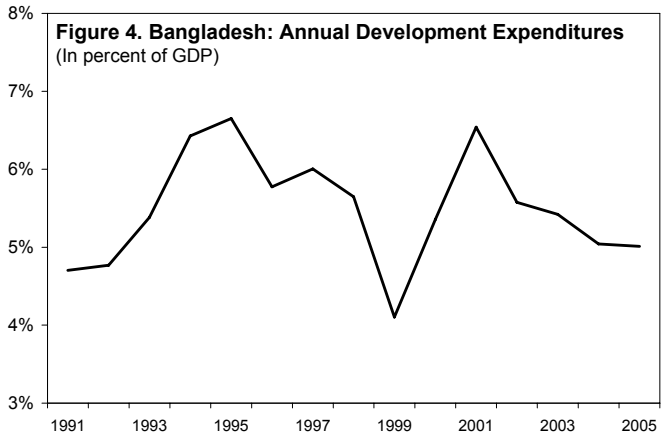
5. **In the latter part of this period, net ODA inflows to Bangladesh were significantly lower than to HIPC countries.** Inflows to all HIPC countries at Decision or Completion point averaged about 40 percent of GDP in 1999–2005. Even compared to other Asian LICs, Bangladesh received relatively few ODA inflows. A closer look shows that net ODA inflows to Bangladesh in terms of GDP were lower than any other Asian LICs, with the exception of India.





C. Development Spending

6. **Even though net aid flows have diminished, total expenditures on the Annual Development Plan (ADP) have been relatively stable at about 5½ percent of GDP.** While there is no discernable trend, there is a significant amount of variance from year to year that may reflect the fact that ADP spending was, in part, a residual that was adjusted to reflect the availability of external and domestic financing.



7. **The trends in aid and development spending could be viewed as a desirable reduction in aid dependency**, as it is clear that an increasingly larger share of revenues have been channeled toward development spending to replace external aid.

8. **It could be argued, however, that this reduction in aid dependence is premature, given the still enormous development challenges that remain.** A recent study argued that Bangladesh needs "to generate structural breaks in the trend lines of its principal social indicators" if it is to meet the MDGs.[3] While the report focuses on domestic institutional

[3] See *"To the MDGs and Beyond"*; Bangladesh Development Series Paper No. 14. World Bank Office, Dhaka 2007.

constraints and the efficient utilization of resources, it is also likely that more development spending is needed. Given that there has only been modest success at increasing domestically available resources, more external aid could be helpful under the right domestic conditions.

9. **The government may also be devoting fewer resources to poverty reduction than other LICs.** Poverty reducing expenditures, a broader measure of development spending than the ADP, have only been reported in Bangladesh since 2003, but they are potentially a better indicator to use when performing cross-country comparisons because they include relevant current as well as capital expenditures. There are, however, important limitations to be kept in mind when making cross-country comparisons. There are no universally accepted definitions of such expenditures or accepted ways to evaluate their productivity. Still, the available data may be indicative and it implies that Bangladesh has scope to increase poverty reducing spending. Poverty reducing expenditures in Bangladesh averaged 6.2 percent of GDP during 2003–05. In the HIPC countries, such expenditures averaged almost 9 percent of GDP in the same period.

Table 3. Bangladesh: Poverty Reducing Expenditure
(In percent of GDP)

	2003	2004	2005
Bangladesh	5.5	6.4	6.7
Decision Point HIPC Countries	7.9	8.6	8.4
Africa	7.2	7.3	8.2
Latin America	10.6	11.0	11.2

10. **This is not surprising, however, because the HIPC countries had more resources available.** The additional resources were not only the result of higher net ODA inflows, but also because they are more effective at collecting revenues, which averaged 16 percent of GDP during the same period, compared to about 10 percent of GDP in Bangladesh.

Table 4. Bangladesh: Resource Envelope
(In percent of GDP)

	1999	2000	2001	2002	2003	2004	2005
Bangladesh							
Total resources	11	11	11	12	13	13	13
Net ODA	3	3	2	2	2	2	2
Revenues	8	8	9	10	10	10	10
HIPC Countries							
Total resources	50	50	55	57	54	61	49
Net ODA	35	36	40	41	38	43	31
Revenues	15	14	15	15	16	17	18

D. MDGs, Nongovernmental Organizations, and Donor Harmonization

11. **In spite of spending less, however, Bangladesh has made significant progress in improving social indicators in the last 15 years**. One MDG has already been achieved (gender parity in primary and secondary schooling) and Bangladesh is on track to achieve several more by 2015, including halving the share of the population living under $1/day. There have also been significant gains in reducing infant mortality and maternal mortality.

12. **Some observers have attributed this progress to the NGOs that have provided diverse services in areas where the government has not been able to do so.** It is difficult to obtain reliable and comprehensive information on NGO financing and expenditures, partly

because expenditures related to supporting NGOs are not fully recorded in the budget. A recent study, however, estimated that the share of aid to NGOs as a portion of total aid to Bangladesh rose from 14.4 percent in the first half of the 1990s to 24.6 percent since then.[4]

13. **Recent work, however, highlights many challenges that still need to be confronted.** In particular, concerns have been raised about transparency and accountability in the NGO sector.[5] Similarly, the forthcoming DAC review on implementation of the Paris Declaration notes, among other things, that more progress needs to be made in the area of improving PFM.[6] In particular, the DAC report notes problems with the independence of the Office of the Comptroller and Auditor and also notes that the procurement system has been a major source of corruption.

14. **Improvements in donor-government harmonization and PFM could also help in the struggle to reduce poverty.** The DAC report concludes that some progress has been made towards meeting the standards of aid effectiveness set out in the Paris Declaration, but that significant challenges remain. Among other things the report notes that: (i) ownership has improved, but changes to the budget process need to continue as Bangladesh is still in the early stages of linking the budget process with national priorities through a medium-term budget framework developed as part of the PRSP; (ii) alignment has improved as the government is playing an increasingly active role in managing its aid and the PRSP has facilitated more government-led dialog with donors; (the report estimates, however, that only about 88 percent of aid is reported in the national budget); and (iii) little progress has been made in harmonization, as there is a continued predominance of uncoordinated project approaches by donors.

15. **A further strengthening of national policies may be the important priority.** The World Bank MDG report concludes that Bangladesh could meet all the MDG outcomes—including difficult ones like maternal mortality and child malnutrition—provided that it improves accountability and transparency of public services, that growth is sustained by removing key constraints, and that successful existing programs such as female secondary scholarship are maintained and expanded into urban areas. Without such a new strategic approach to the growing problems in urban areas, however, the MDG outcomes in those areas risk bringing down the national outcomes.

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[4] See "Economics and Governance of Nongovernmental Organizations in Bangladesh," PREM Sector Unit South Asia Region, April 2006.

[5] Ibid.

[6] See DAC: 2006 Baseline Survey on Paris Declaration (forthcoming).

E. Improving the Provision and Use of Aid

16. **Higher aid flows—in combination with the improvements in transparency and accountability of public services—could be an important contributor to sustained development.** This seems especially so, given the relatively low net inflows in terms of GDP in recent years, but what effects would an increase have on the macroeconomy? Concerns about the macroeconomic effects of an increase in aid flows center on external competitiveness and debt sustainability. First, to what extent would higher flows cause the real exchange rate to appreciate thereby creating problems for export sectors? Second, what would be the impact on the external debt profile in the event that increased flows come in the form of concessional loans rather than grants?

17. **The effects on the real exchange rate will depend on the nature of the increase in expenditure resulting form the increase in aid**. Little can be said about the effects on competitiveness without knowing the specific medium-term expenditure framework that should underpin such an increase. In general, however, to the extent that the related expenditures are on imports the effect on the real exchange rate will be minimized. Similarly, to the extent that the expenditures are focused on increasing productive capacity (thereby augmenting domestic supply) the pressure for real appreciation will be reduced.

18. **It is clear from the recent DSA presented in 2006 that there is space for Bangladesh to receive more loans from the donor community.**[7] Based on this analysis, Bangladesh is significantly below the indicative thresholds for NPV of debt in terms of GDP, exports, and revenues. While the report concluded that there is little risk of debt distress based on the external debt profile, the public sector DSA indicated there would be some risk in the event that contingent liabilities related to the banking sector were realized. These risks should be minimized by addressing the causes of contingent liabilities directly.

19. **At the microeconomic level, the key concerns have to do with absorptive capacity and the level of governance and transparency in the public expenditure system.** In this regard, it appears that some progress will need to be made to ensure that any increased aid would be used effectively to combat poverty and it might be necessary to encourage donors to commit to such a strategy. Another point regarding the mobilization of resources: if the government prepared a well-designed proposal for scaling up poverty expenditures it would likely make it easier for donors to garner support from their headquarters.

[7] EBS/06/130 Annex I.

F. Conclusion

20. **At least three questions arise from the above discussion:** (i) Why has donor aid to Bangladesh decreased in terms of GDP in the last 15 years while in most other LICs (even non-HIPC Asian LICs) it has increased? (ii) To what extent can the "NGO model" (i.e., using NGOs to provide important services to the poor) be expanded and generalized?; and (iii) Under what conditions would more aid help to achieve the MDGs?

21. **Donors in Bangladesh provided two answers to the first question.** First, several donors noted that at the global level there was an emphasis on providing aid for HIPC countries and African LICs. Second, specifically with regard to domestic factors, individual donors, as well as the DAC report, noted that there has not been sufficient progress in public financial management. As noted above, increasingly donors have channeled aid to NGOs and, to some extent, this has been an effective strategy as a way to continue to support poverty reduction efforts notwithstanding concerns about the transparency and efficiency of PFM systems.

22. **It seems unlikely, however, that this "NGO model" can be expanded and generalized and it might not even be desirable.** First, as noted in the recent work, there are significant problems with accountability and transparency regarding the finances of the NGO sector; there are a few well-run and effective NGOs but a large part of the sector is less effective and efficient. It is unlikely that donors will be willing to channel even more aid to the sector without significant reform and it is unlikely that most NGOs will be able to absorb and use effectively increases in funding. Second, while NGOs might be able to provide services in areas that the government is unable to reach, they cannot undertake sorely needed large infrastructure projects. Finally, to the extent that donor aid bypasses the PFM system, it undermines the modernization of these systems and such modernization is a crucial part of the economic development process.

23. **Regarding the third question, given the relatively low levels of development spending in Bangladesh, it is likely that more aid could help, provided that national capacity is developed and PFM systems are improved so that the aid is used effectively.** In this regard donor coordination and harmonization could help to the extent that they reduce transactions costs thereby making it easier for the government, with its limited resources, to execute development projects.

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