

# 5 Money and Credit

## 5.1 Monetary Policy

### 5.1.1 Overview

While monetary policy continued to be dominated by ongoing growth in Net Foreign Assets (NFA) due to the external account surpluses, FY03 also saw important changes from the trends in the preceding year. During FY02, even the cumulative 500 basis point discount rate cuts had garnered only a 185 basis point reduction in the weighted average lending rate, and net private sector credit growth remained weak. Therefore, during FY03, in response to the continuing weakness in net private sector credit, the SBP chose instead to increase market liquidity by substantially reducing the sterilization of its rising forex market purchases (see **Table 5.1**), and then reinforced the resulting interest rate decline through its November 2002 discount rate cut.

**Table 5.1: Sterilization**

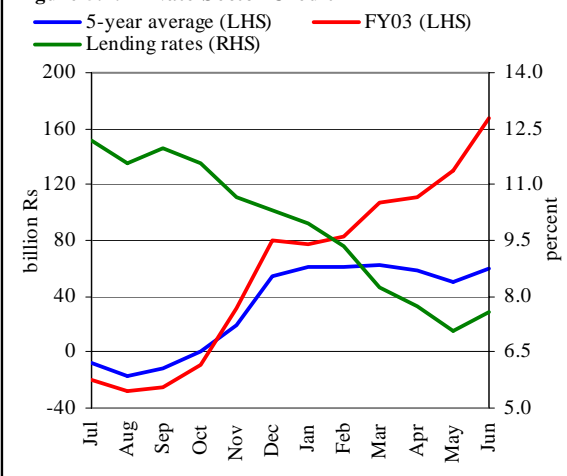
billion Rupees	FY02	FY03
SBP foreign currency transactions	236.6	291.1
Sterilization (overall)	185.2	206.3
Change in reserve money	51.4	84.9

As a result of the increased market liquidity and the SBP policy signals, domestic interest rates plunged to all-time lows. This supported a revival in economic activity and eventually contributed to the stunning Rs 167.7 billion net private sector credit expansion during FY03 (see **Figure 5.1**), which underpinned the 18.0 percent monetary expansion during the year, against the relatively lower 15.4 percent increase in FY02.

Specifically, the FY03 growth in net private sector credit is unusual not only because of its magnitude, but also in its composition:

- (1) Approximately one-third of the net credit growth stemmed from a sharp rise in trade related forex (FE-25) loans (see **Section 5.1.4** for details);
- (2) The consumer finance rose sharply from Rs 10.7 billion in FY02 to Rs 45.1 billion in FY03 (see **Box 6.2** for details); and,
- (3) Less importantly, the exceptionally strong acceleration in credit during Mar-Jun 2003 probably incorporates the surge in lending against NSS instruments, as investors sought to take advantage of interest rates differential.

**Figure 5.1: Private Sector Credit**



Interestingly, given that the increased FY03 market liquidity stemmed primarily from the SBP's efforts to moderate the ascent of the rupee (in order to support exports), it can be argued that it was the exchange rate which effectively constituted the nominal anchor for monetary policy during the year, in contrast to FY02, when this role was served by the discount rate.

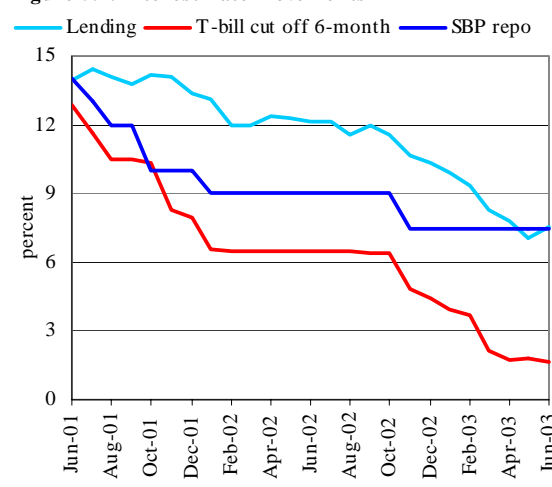
In fact, after bringing down the discount rate to a record low of 7.5 percent in November 2002, the SBP thereafter kept it unchanged despite an increasing spread to the benchmark 6-month T-bill rates (see **Figure 5.2**). There were essentially two reasons for this policy:

- (1) Initially, the SBP aimed to discourage speculative investments in government papers; and
- (2) Subsequently, this stance was supported by a desire to avoid further pressure on the already-sliding market rates.

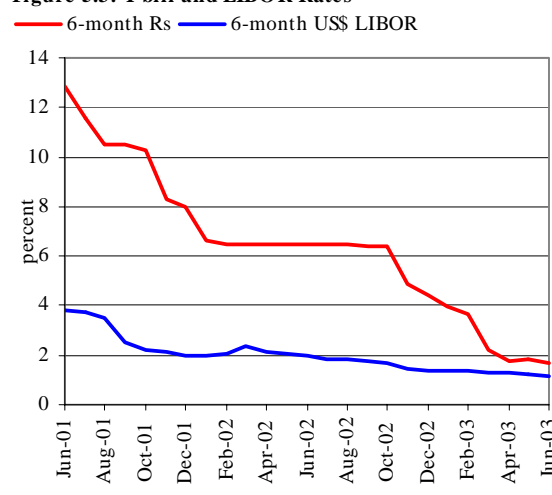
Unfortunately, the exceptionally liquid market and expectation of a continued pressure on interest rates effectively meant market interest in government securities continued to grow, and ultimately rendered the discount rate ineffective as an instrument of monetary policy, leaving it simply as an indicator of the SBP's monetary stance.

The interest rate expectations driving the increasing investment in government papers and consequent decline in benchmark interest rates, in turn, it was supported by an apparent misinterpretation of the SBP policy. Despite clear and repeated assertions to the contrary, the market felt that the rising market liquidity stemmed not from SBP policy decision, but from its inability (and unwillingness) to sterilize the flows due to a sharp reduction in SBP T-bill holdings<sup>1</sup>. As a result, T-bill yields dropped very close to the yields on comparable dollar interest rates (see **Figure 5.3**), offering negative real rupee returns.

**Figure 5.2: Interest Rate Movements**



**Figure 5.3: T-bill and LIBOR Rates**



It is important to note here that the strategy of partial sterilization, while quite successful in drawing down the interest rates during FY03, is not sustainable in the long term. In particular, historical evidence strongly suggests that an exceptional growth in money supply does indeed eventually engender inflationary pressures. Thus, in light of the fact that interest rates are already at historical lows, FY04 will likely witness a re-focusing of SBP policy on the pre-payments of expensive external debt in order to sterilize the impact of future external account surpluses to head off inflationary pressures.

### 5.1.2 Monetary Survey

As in the preceding year, FY03 witnessed extremely strong growth in monetary assets (M2) due to exceptional increases in the net foreign assets of the banking sector; as a result, M2 rose 18.0 percent

<sup>1</sup> In fact, the SBP was finally forced, in August 2003, to squelch these expectations by announcing its intention to issue SBP Certificates of Deposits (CDs).

during the year, even on the high base due to the exceptional 15.4 percent M2 growth during FY02 (see **Table 5.2**). Moreover, all of the NFA increase is attributable to a rise in the SBP NFA, while the NFA of scheduled banks fell by Rs 19.4 billion (reflecting the impact of their foreign currency lending out of their FE-25 deposits).

**Table 5.2: Monetary Survey of the Banking System (Flows)**  
billion Rupees

	FY02	FY03	
	Actual	IMF Proj.	Actual
<b>Monetary assets (M2)</b>	<b>235.3</b>	<b>281.5</b>	<b>317.4</b>
<i>percent change</i>	<i>15.4</i>	<i>16.0</i>	<i>18.0</i>
<b>I. Net foreign assets</b>	<b>206.2</b>	<b>271.0</b>	<b>308.9</b>
SBP	154.3	259.9	328.3
Scheduled banks	51.9	11.1	-19.4
<b>II. Net domestic assets</b>	<b>29.2</b>	<b>10.5</b>	<b>8.4</b>
<i>percent change</i>	<i>2.0</i>	<i>0.7</i>	<i>0.6</i>
SBP	-100.7	-181.2	-228.2
Scheduled banks	129.9	191.7	236.7
A. Government sector	22.2	-43.8	-78.4
a) Net bank borrowing for budgetary support	14.3	-29.2	-56.0
SBP	-112.0	-184.9	-249.2
Scheduled banks	126.3	155.7	193.3
b) Commodity operations	5.3	-16.0	-26.6
c) Others	2.5	1.4	4.2
B. Non-government sector	19.0	70.2	148.5
a) Credit to private sector	53.0	55.3	167.7
i) Commercial banks	44.9		163.2
<i>of which EFS</i>	-13.3		-1.6
ii) Specialized banks	8.1		4.4
b) Credit to PSEs	-19.4	20.0	-11.6
i) Autonomous bodies	-15.1		-4.8
ii) Others	-1.4		-3.2
iii) PSEs special debt-repayment account with SBP	-2.9		-3.6
c) Other financial institutions	-14.4	-5.1	-7.6
C. Other items (net)	-12.0	-15.8	-61.7
SBP	26.1	39.4	28.1
Scheduled banks	-38.1	-55.2	-89.8

Source: Economic Policy Department, SBP.

In contrast to the NFA picture, growth in the Net Domestic Assets (NDA) of the banking system was subdued in FY03, since both ‘*government borrowings for budgetary support*’ and ‘*commodity operation loans*’ witnessed heavy net retirements, offsetting much of the phenomenal rise in *net credit to the private sector*. The *government borrowings for budgetary support* resulted from the government’s improved fiscal position because of higher revenues, greater availability of cheap external financing, larger non-bank borrowings, and all of which helped the government *retire* Rs 56.0 billion in net credit, in contrast to the net borrowing of Rs 14.3 billion in FY02. The fall in *commodity operation loans*, on the other hand, also mirrored the rising wheat exports and increasing availability of bank credit to the private sector for wheat purchases.

Another notable feature of the budgetary borrowings is the continuing *decline* in borrowings from SBP that partially offset a *rise* in borrowings from scheduled banks. This switching mainly represents

the SBP monetary sterilization, as SBP continued retiring its T-bill holdings to neutralize the impact of its forex purchases.

*Other items net* (OIN) of the banking system continued to shrink but the adjustment in FY03 was greater than in FY02 (see **Section 5.1.9** for details).

Finally, the Reserve Money (RM) growth was curtailed to 14.5 percent, lower than monetary expansion of 18.0 percent during FY03, which marginally increased the money multiplier to 3.1 from 3.0. This owed principally to the SBPs monetary sterilization efforts; RM expansion would otherwise have ballooned by a massive Rs 291.1 billion during FY03.

### 5.1.3 Credit Plan FY03

The FY03 Credit Plan initially targeted a Rs 190.0 billion monetary expansion, of which Rs 91.5 billion was envisaged to be through money creation due to external sector developments and the rest was through domestic credit creation (see **Table 5.3**). However a few developments in first few months of FY03 led to the adoption of a revised credit plan in the mid-year National Credit Consultative Council meeting. These developments included:

- 1) A better than expected fiscal position of the government;
- 2) Unexpectedly large retirement of commodity operation loans; and
- 3) The greater than anticipated growth in NFA.

**Table 5.3: Credit Plan for FY03**

billion Rupees

	Original	Revised	Actual
<b>Monetary assets (M2)</b>	<b>190.0</b>	<b>281.5</b>	<b>317.4</b>
percent change	10.8	16.0	18.0
Net foreign assets	91.5	271.0	308.9
Net domestic assets	98.5	10.5	8.4
percent change	6.5	0.7	0.6
Government sector	-16.2	-44.2	-78.4
Net bank borrowing for budgetary support	-14.2	-29.2	-56.0
Commodity operations	-3.0	-16.0	-26.6
Others	1.0	1.0	4.2
Non-government sector	114.7	70.2	148.5
Credit to PSEs	20.0	20.0	-11.6
Credit to private sector	94.7	50.2	167.7
Other items (net)	0.0	-15.5	-61.7

Source: Economic Policy Department, SBP.

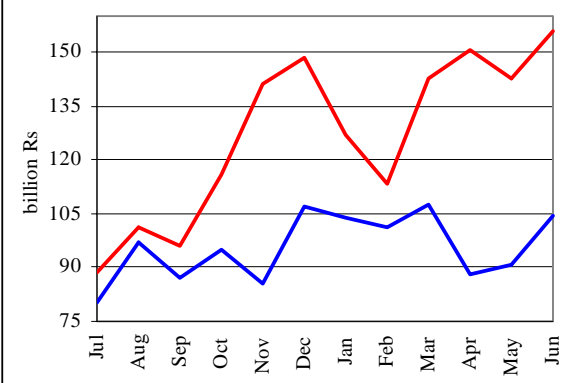
The revised credit plan saw the monetary expansion target inflated to 16.0 percent, largely to accommodate the revised NFA growth estimates; the new NFA estimate was thrice that envisaged in the initial plan. It is important to note here that the reduction in the projected private sector net credit is not very meaningful as this is, in effect, only an indicative figure used to reconcile aggregate annual M2 growth. In practice the binding figures are really the limits on government spending, as the monetary authorities are generally quite willing to permit M2 growth beyond the plan target if driven by private sector demand. The actual outcome shows significant variations in both government sector, retiring large amounts; and private sector demand, almost tripling in relation to the credit plan assumption. The monetary expansion target was exceeded by 2 percentage points.

### 5.1.4 Credit to the Private Sector

During the first four months of FY03, the growth in net private sector credit remained below the corresponding FY02 as well as the seasonal (5-year average) figures. However, evidence suggests that this weakness probably resulted from expectations of a sharp decline

**Figure 5.4a: Gross Monthly Disbursements to the Private Sector**

— FY02 — FY03



in interest rates, rather than a fall in credit requirements of the economy. This view is supported by the sharp rise in loans disbursements post-September 2002, even though the net credit growth remained weak (see **Figures 5.4a and 5.4b**), which suggests that the businesses were re-pricing loans and (likely) deferring their borrowings.

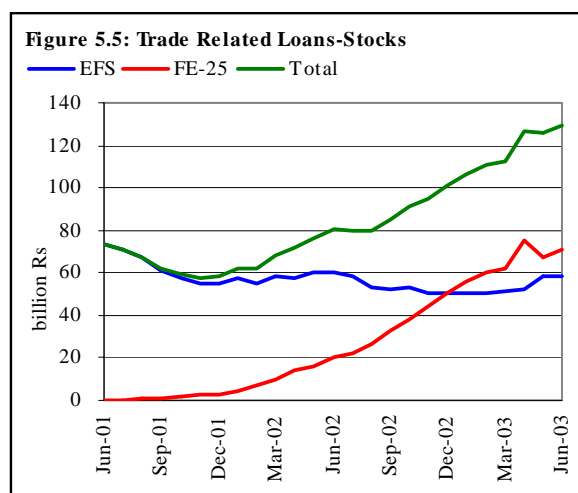
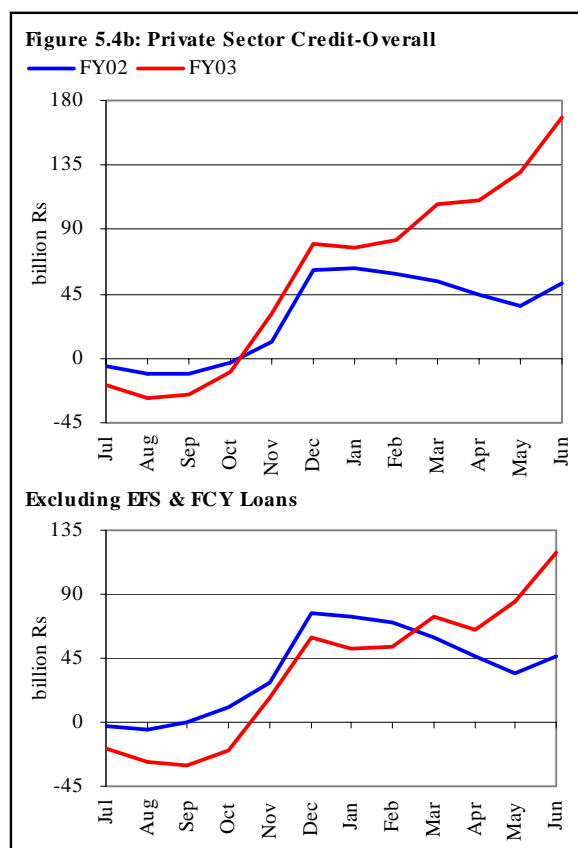
Not surprisingly therefore, once the interest rates decline materialized (and gathered momentum), especially around the November 2002 discount rate cut, the latent credit demand became visible, driving the net credit growth to its peak of approximately Rs 80.6 billion by end-December 2002. It is instructive to note that even during the November-December 2002 period, the monthly disbursements far outstripped the increase in net credit, suggesting that borrowers were still seeking to take advantage of falling lending rates by (1) continuing to re-pricing loans; as well as (2) focusing on short-term credit.

All in all, however, the structure of net credit to the private sector during H1-FY03 was roughly in-line with that in the corresponding seasonal pattern visible in FY02. This structure changed dramatically in H2-FY03, with March 2003 witnessing a spectacular up trend in net credit growth that accounted for most of the difference in net credit extended during FY02 and FY03.

As evident from a comparison in **Figure 5.4b**, at least a part of the unusual rise in net credit March 2003 onwards is accounted for by a sharp jump in trade-related loans, higher working capital requirements and increased consumer credit. However, a significant portion of the residual (unexplained) net credit during the period also appears to reflect the increased lending against National Savings Schemes (NSS) instruments.

Another important feature of the net private sector credit growth during FY03 was the substantial increase in foreign currency (FCY) loans; these were primarily for trade related activities, and constituted approximately 29.9 percent of the net private sector credit extended during the period.

As discussed above, the demand for these loans, which typically cost 3-4 percent, increased steadily through FY03, as long as the cost of *export finance scheme* (EFS) loans remained higher, and expectation of a rupee appreciation persisted. Thereafter, there is a



visible substitution of this credit with EFS loans (see **Figure 5.5**).

Finally, the sectoral distribution of FY03 credit shows most sectors participated in the growth. However, led by textile, accounted for most of the net credit growth (see **Table 5.4**). This pattern is consistent with the general increase in economic activity, and rising exports.

Similarly, on the back of higher agricultural production, credit for this sector also increased. In commerce, increasing activities in the wholesale and retail trade are reflected in significant amount of credit expansion. In addition, the banks consumer financing gathered some momentum and the personal loans extended by banks increased by a net Rs 32.7 billion during FY03.

#### 5.1.5 Other Sources of Funds for Private Sector

It is important to note that even the exceptional net credit extended to the private sector by the scheduled banks probably underestimates the true financing requirements of the economy. This is indicated by a number of factors such as rising profitability of domestic corporate sector (raising the possibility of internal financing by the businesses), the sharp jump in remittances (a portion of which could, at least, potentially, be available to the businesses), and increased net credit extended by NBFIs (that would substitute for bank credit). In fact, credit to the private sector by NBFIs showed a net *expansion* of Rs 31.9 billion during FY03 compared to a net *retirement* of Rs 21.2 billion during FY02<sup>2</sup> (see **Section 7.6** for details).

#### 5.1.6 Monetary Growth

During the last two years, the main source of growth in RM has been the escalating foreign assets of the SBP, as it absorbed the surpluses in the interbank forex market. The resulting increase in RM was, however, partially sterilized by the SBP by off loading its T-bill holdings throughout the period (see **Figure 5.6**).

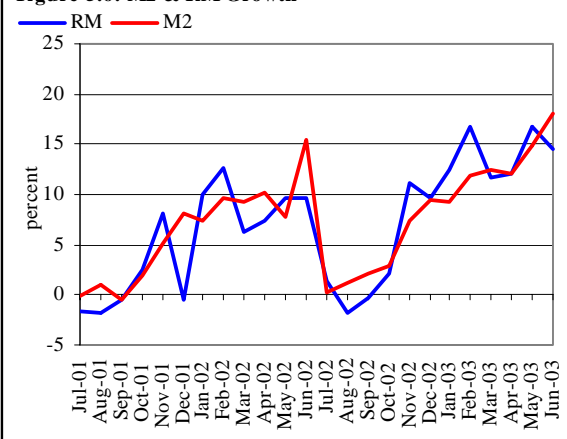
The relatively heavy sterilization policy was followed through most of FY02 and persisted until Q1-FY03. Thereafter, until June 2003, RM growth accelerated, reflecting the SBP policy of reducing its sterilization to force down the interest rates. The relatively low

**Table 5.4: Private Sector Credit - Sectoral Distribution (flows)\***

billion Rupees	FY03
<b>Overall advances</b>	<b>183.1</b>
<b>I. Private sector business</b>	<b>149.1</b>
A. Agriculture	27.5
B. Mining and quarrying	-0.5
C. Manufacturing	102.0
Food	13.7
Textiles & products	51.7
Chemical & products	3.0
Fertilizer	16.2
Machinery	-4.0
Miscellaneous	21.5
D. Ship breaking & waste	-1.7
E. Construction	1.1
F. Power, gas, water & sanitary purposes	2.9
G. Commerce	20.8
H. Transport, storage and communication	1.6
I. Services	-0.5
J. Other private business	-4.3
<b>II. Trusts and non-profit organizations</b>	<b>1.3</b>
<b>III. Personal loans</b>	<b>32.7</b>

\*Because of revision in the data format for June 2002 and June 2003, figures for FY02 are not comparable

**Figure 5.6: M2 & RM Growth**



<sup>2</sup> After adjusting credit of NDFC, RDFC and BEL of Rs 30.7 billion, FY03 figures over FY02 are still larger by Rs 22.4 billion, which is quite significant.



forex purchases and proportionally greater sterilization during FY02 meant, the 9.6 percent RM growth during the period was substantially lower than the 15.4 percent rise in M2.

By contrast, FY03 not only saw RM growth accelerate not only due to higher SBP forex purchases, but also the proportionally lower sterilization of these purchases. Consequently, both M2 and RM growth accelerated in FY03 to 18.0 and 14.5 percent respectively.

### 5.1.7 Government Borrowings for Budgetary Support

In aggregate, the government retired Rs 56.0 billion of its borrowings for budgetary support during FY03, in contrast to the net borrowings of Rs 14.3 billion during FY02. This was because not only were the government's FY03 financing requirements lower than in FY02, also a greater proportion of it was financed through net external receipts and non-bank borrowings (see **Table 5.5**).

In fact, the higher external financing, derived from increased defense receipts (mainly payments for logistics support), and non-bank borrowings (through the NSS and PIB sales) were substantially higher than requirements, forcing the government to retire its banking system (or T-bill) debt.

While the external financing was largely either in the form of non-debt creating flows or of concessional flows, the NSS inflows were relatively expensive. Thus, by substituting the T-bill debt with NSS receipts, the government effectively failed to gain the full benefit of the sharp fall in T-bill yields in FY03.

Importantly, net retirement of the T-bills during FY03 was from SBP T-bill holdings. In fact, the government's borrowings from the scheduled banks *increased* during FY03, but this was more than offset by the higher retirement of SBP T-bill holdings (see **Figure 5.7**).

While the net difference between the two represented the government's need to retire T-bill debt of the banking system, the retirement of SBP T-bill holdings represented SBP's efforts to contain the growth in reserve money.

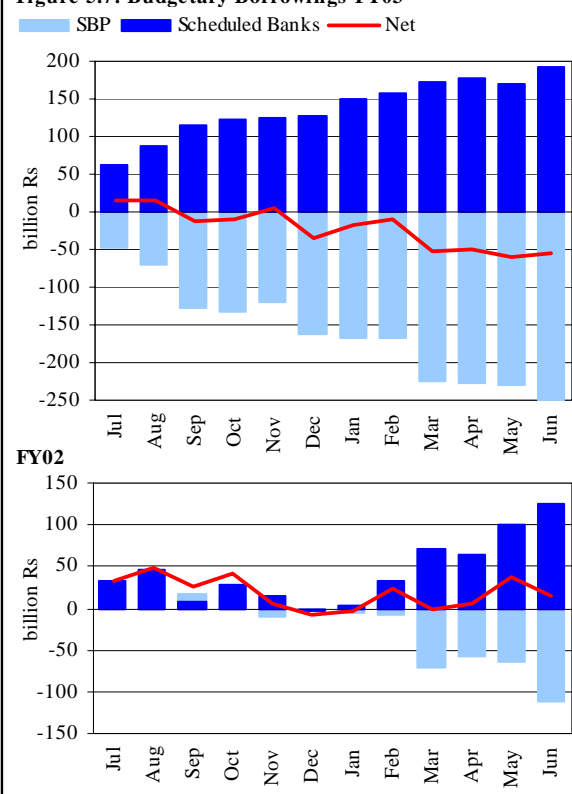
**Table 5.5: Deficit Financing \***  
billion Rupees

	FY02	FY03
External	82.8	88.3
Non-bank	85.0	146.8
Privatization proceeds	8.4	11.3
<i>Sub-total</i>	<i>176.2</i>	<i>246.4</i>
<b>Total financing requirement</b>	<b>189.1</b>	<b>177.3</b>
Banking system	12.9	-69.1

Source: Ministry of Finance

\* The MoF and SBP numbers may slightly differ due to differences in timings and definitions

**Figure 5.7: Budgetary Borrowings-FY03**



### 5.1.8 Commodity Operations

A very positive development during FY03 was the quite unusual *retirement* of commodity operation loans; there was a net contraction of Rs 26.6 billion in these loans during the year, compared to an increase of Rs 5.3 billion in FY02.

While increasing wheat exports and higher private sector participation in the wholesale wheat market would explain a decline in the fresh borrowings requirements for commodity operations loans by the government, the net retirement of these loans is a function of the governments improved fiscal position.<sup>3</sup>

It is encouraging to note that the aggregate stock of commodity financing loans has declined from its peak of Rs 107.4 billion in June 2000 to Rs 74.0 billion at the end-June 2003 (see **Figure 5.8**).

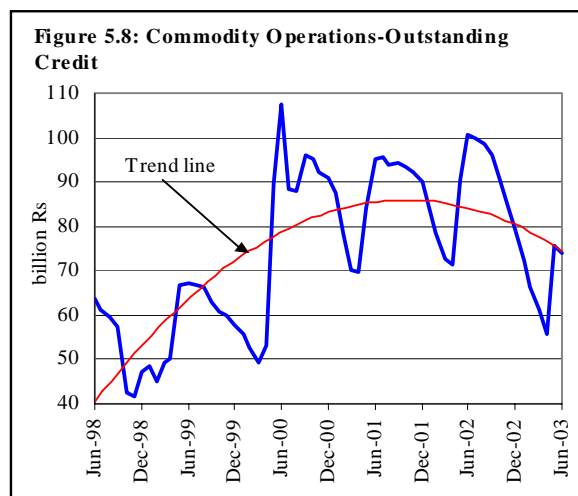
### 5.1.9 Other Items

The contraction in *other items* of the banking system helped in reducing domestic credit growth during FY03 (see **Table 5.6**).

The increase in the OIN of the SBP was due to the adoption of international accounting standard with effect from July 1, 2002. This resulted in a fall in *other liabilities*, as the capital requirements of foreign banks (FBs) were transferred to *banks deposit with SBP*.

The larger decline in the OIN of scheduled banks was mainly caused by:

- (1) Increase in their capital paid up and reserves in order to meet the new minimum capital requirement of Rs one billion;
- (2) SBP's disinvestments in the shares of UBL (as it was privatized during FY03);
- (3) Increase in long-term foreign borrowings by ZTBL and IDBP;
- (4) Increase in balances with banks abroad under the head of capital requirements of Pakistani banks working abroad;
- (5) Discrepancy between the data sets of SBP and scheduled banks, which occurred mainly because of shifting of capital requirement of foreign banks<sup>4</sup> and;
- (6) Large changes in other assets and other liabilities of four scheduled banks. On the NBP account, this was mainly due to transit entries and advance tax paid, whereas on accounts of ZTBL and ABL, increased provisions were the main factor. On the HBL account, there were several factors including interest in suspense account, income receivable and deferred taxes.



**Table 5.6: Major Changes in Other Items-FY03 \***

billion Rupees	
<b>On SBP accounts</b>	<b>28.1</b>
Net change in other assets and other liabilities	28.5
<i>of which capital requirement of FBs</i>	21.0
<b>On scheduled banks accounts</b>	<b>-89.8</b>
Capital paid up & reserves	-26.6
Investment in shares of scheduled banks	-13.1
Long term foreign borrowings	-5.0
Balances with banks abroad	6.1
Discrepancy	-23.7
<i>of which capital requirement of FBs</i>	-21.0
Net change in other assets and other liabilities	-31.0
<i>of which on account of NBP</i>	-18.7
ZTBL	-11.7
ABL	-9.1
HBL	-2.6
<b>Banking system</b>	<b>-61.7</b>

\* The signs indicate monetary impact.

<sup>3</sup> Intriguingly, the retirement of commodity financing could also simply represent better financial management by the government. In other words, it is possible that the government simply substituted its stock of older (and quite expensive) commodity operation loans with relatively cheap funding through other sources.

<sup>4</sup> This is a negative entry in the scheduled banks' accounts as the OIN of SBP expanded by the same amount. As such it had no impact on the OIN of the banking system.



### 5.1.10 Monetary Indicators

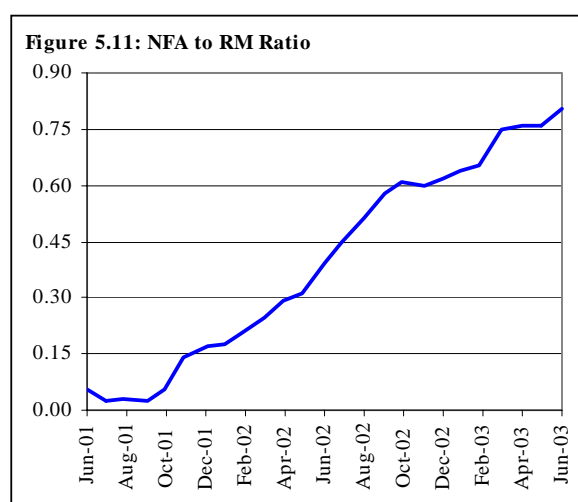
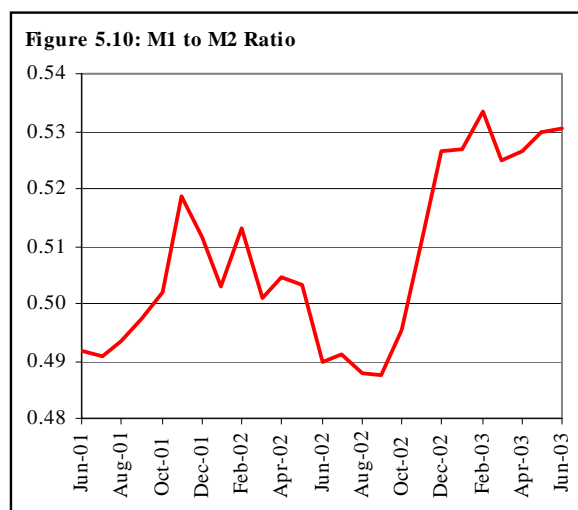
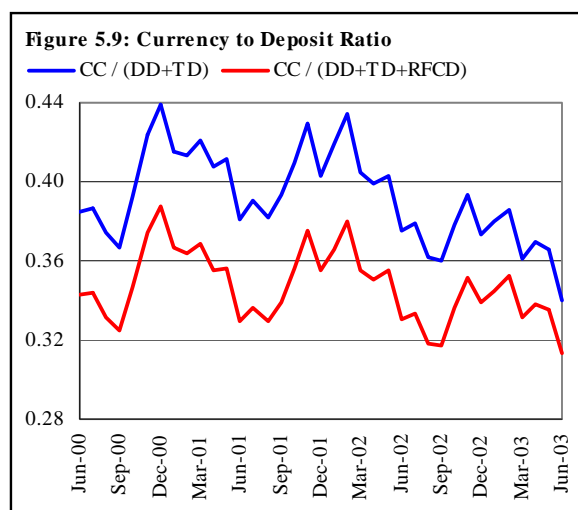
A striking development evident over the last three years is the gradual decline in the *cash to deposit* ratio (CDR), which suggests the growing intermediation of the banking system. The decline in the CDR appears to reflect the rising deposit growth since FY01, largely due to increasing remittances (see **Figure 5.9**).

Another contribution to this trend could potentially be from financial innovations such as ATM, credit cards, online banking etc. which reduced the need for cash holdings. It will be noted that usage of 'plastic money' has increased in recent years (see **Special Section 6.1**).

The liquidity preference, as measured by the *M1 to M2* ratio, also *appears* to rise sharply in FY03 (see **Figure 5.10**). However, a closer look at the data reveals that this jump in the ratio is essentially because of the increasing retirement of forex deposits, the proceeds of which were placed in rupee demand deposits. Thus, as the retirement of forex deposits eased by March 2003, the M1 to M2 ratio stabilized again.

An important trend visible over the last two years has been the increasing share of NFA in RM. On the one hand, the SBP is increasing its forex purchases while on the other its holdings of rupee assets is declining because of the continuing sterilization of the forex purchases. Both of these boosted the NFA to RM ratio, which therefore rose steeply over the past 2 years. As a result, by end-FY03, over 80 percent of the high-powered rupee stock is now backed by hard currency assets (see **Figure 5.11**).

As evident from **Figure 5.12**, the monetization of the economy (as measured by M2 to GDP ratio) has gained strength since FY01. Given that this is principally driven by the acceleration in remittances, it seems likely to continue, and underlines the trend to closely monitor inflationary pressures in the economy.



## 5.2 Money Market

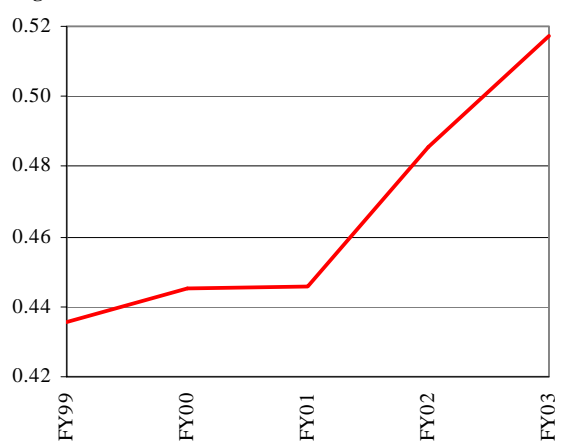
### 5.2.1 Overview

A substantial increase in the annual external account surplus, and the easier monetary stance of the SBP left the money market awash with liquidity during FY03, despite a strong 28.9 percent growth in net *government borrowings for budgetary support from scheduled banks* and a stunning 284.9 percent rise in *private sector credit*. As a result, interest rates remained under pressure for the second successive year – the weighted average auction yield for the benchmark 6-month T-bills fell 463 basis points during FY03, taking the cumulative decline for the two years to a massive 1090 basis points.

Interestingly, while the FY03 decline in the benchmark rate is lower than the corresponding decline during FY02, a striking difference between the two periods is the role of the discount rate. As clearly evident from **Table 5.7**, while most of the FY02 fall in the T-bill yields appears explainable by periodic cuts in the discount rate, the quarterly FY03 movement in the T-bill yields is largely unsupported by a proportionate discount rate adjustment.

As discussed earlier (see **Section 5.1.1**), the unusual FY03 interest movements are explainable entirely through SBP policy. Not only was the SBP injecting more liquidity into the interbank market through its forex market operations during FY03, its sterilization of these interventions were also smaller.<sup>5</sup> Therefore, despite the relative stability of the discount rate, interest rates weakened considerably until (1) the net injections into the interbank market due to SBP Forex operations fell sharply in the final quarter of the fiscal year, (2) sustained negative real primary yields on all short tenor gilts and (3) the narrowing spread between rupee and US dollar rates raised expectations of a rebound in domestic rates (see **Figure 5.13**).

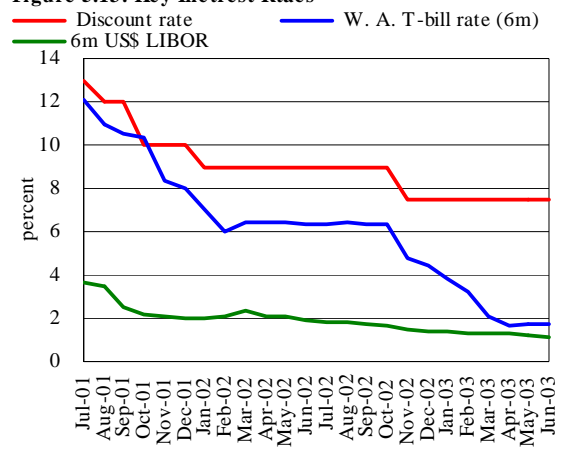
**Figure 5.12: M2 to GDP Ratio**



**Table 5.7: Interest Rates and FX Interventions**

Period	Decline in T-bill rate (6m) (bps)	Net impact of SBP FX interventions (billion Rs)	Discount rate cut (bps)
FY02	Q1	206	-13
	Q2	257	48
	Q3	148	48
	Q4	16	47
Cumulative	<b>627</b>	<b>130</b>	<b>500</b>
FY03	Q1	-8	98
	Q2	192	101
	Q3	236	75
	Q4	44	5
Cumulative	<b>463</b>	<b>279</b>	<b>150</b>

**Figure 5.13: Key Interest Rates**



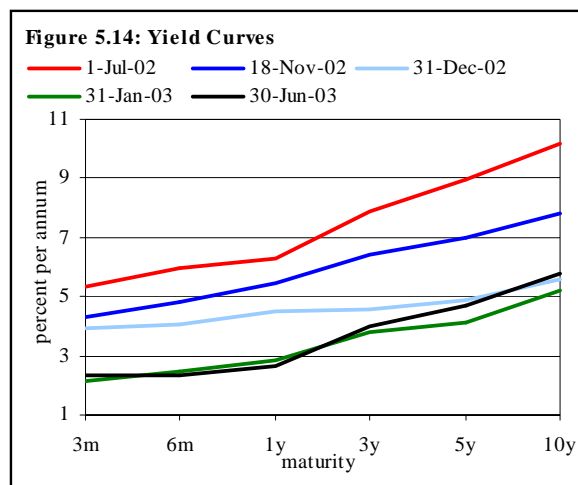
<sup>5</sup> In fact, during the period January 2002 and November 2002 the SBP net acceptances closely matched net purchases made through buying foreign currency. In specific terms, net acceptances were Rs 231.2 billion compared with the net purchases of equivalent to Rs 215.6 billion. This implied that SBP did not let additional liquidity in the money market; consequently interest rates remained fairly stable.

The exceptional liquidity injections, and the trend decline in interest rates also explain the surge in market interest for government paper as commercial banks sought to lock-in relatively high yielding assets ahead of an anticipated decline in interest rates. This was particularly evident in the rising speculative interest, particularly on longer tenor instruments (which offer greater capital gains as interest rates decline) that forced a flattening of the yield curve as PIB yields dropped to record lows.

### 5.2.2 Term Structure of Interest Rates

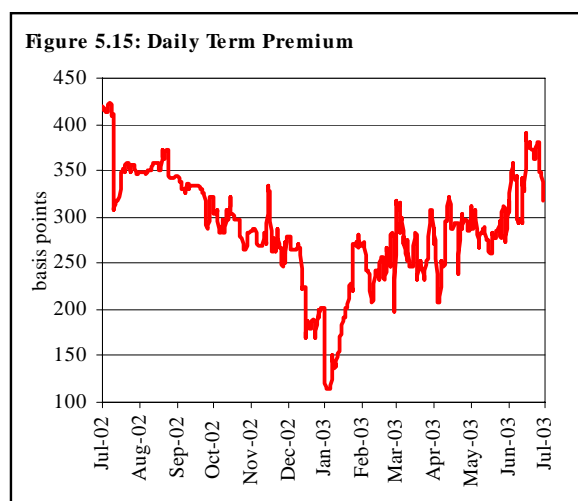
In summary, the yield curve at the close of FY03 depicts a roughly parallel downward shift from the one at the beginning of the period (see **Figure 5.14**), reflecting the broad decline in interest rates in the economy.

But, a closer look at the intervening period reveals more complex market dynamics at play. In particular, while interest rates were clearly under some pressure throughout FY03, until the November 2002 discount rate cut, this pressure was noticeably weaker, and the yield curve too had flattened only a little (i.e., expectations of a long term decline in interest rate were not very strong).



Market expectations visibly changed thereafter, but it is interesting to note that the flattening of the yield curve until December 2002 was led primarily by the relatively sharper fall in PIB yields, probably marking: (1) a rising scarcity premium on PIBs, as there were fewer auctions and smaller issuances; (2) stronger expectations of weakening interest rates; and possibly, (3) banks booking capital gains on PIB holdings at the end of their financial year (see **Figure 5.15**).

Subsequently, during H2-FY03, the term premium rose once again, primarily because of the relatively sharp fall in T-bill yields even as PIB yields stabilized after dropping around 100 basis points in early January 2003 (see **Figure 5.16**).



This relative stability of the PIB suggests that many institutional investors were quite uncomfortable with the sharp decline in long term yields. Not surprisingly therefore, a bottoming-out of long-term interest rates was visible by March 2003.

Finally, the accelerated rise during later half of June 2003 is the result of the PIB auction in which the government offered a surprisingly heavy target, which aimed at staving off a politically difficult sharp reduction in the popular NSS instruments.

### 5.2.3 Interest Rate Volatility

Although, the volatility in terms of standard deviation of the overnight rates has decreased during last two years, when seen in relation to the average level of the overnight rates, i.e., in terms of coefficient of variation, the volatility has actually increased slightly (see **Figure 5.17**).

The volatility in overnight rates is a matter of concern both for the central bank and the other money market players. For commercial banks, it increases the risk related to cash management and for the central bank it makes it hard to assess the changes in short-term rates in response to a shock through liquidity management tools.

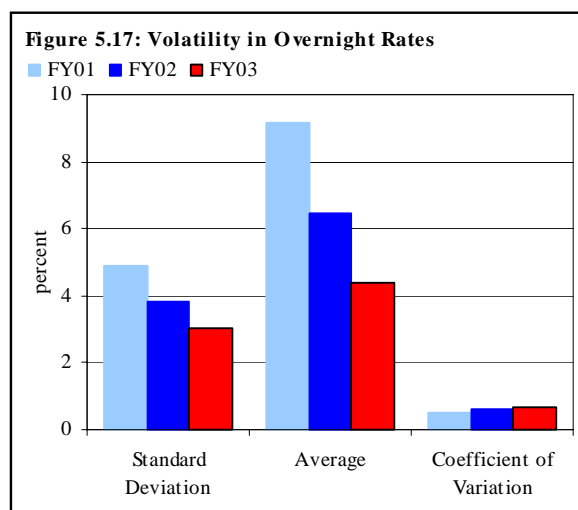
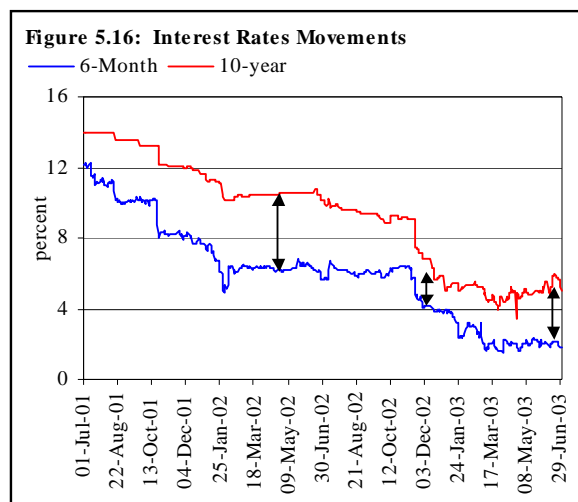
The SBP is therefore trying to reduce interest rate volatility by strengthening the process of liquidity estimation as well as improving the intervention in open market operations.

### 5.2.4 Trading Volumes

Secondary market activity in T-bills witnessed a substantial increase during FY03 with the trading volume rising by 20.8 percent compared to the corresponding FY02 figure (see **Table 5.8**).

The major factors contributing to this increased activity were: (a) a significant increase in the sale of T-bills, and (b) the declining trend in interest rate that gave the commercial banks an opportunity to make capital gains; in particular, successful bidders in the primary auctions had ample opportunity for trading gains, as the market prices for government papers typically remained higher than the auction prices during most of FY03. Interestingly, the increase in the secondary market trading volume during FY03 is not proportional to the rise in T-bill issuances through auctions, which were 137.5 percent higher than in FY02.

Not surprisingly, tenor-wise breakup of the trading volume reveals that the secondary market activity in the 6 and 12-month paper has increased during FY03 compared with the preceding year. This simply reflects the fact that the longer tenor T-bill comprised the bulk of the aggregate T-bill stock in the market (see **Figure 5.18**).



**Table 5.8: Trading Volume of T-bills**

billion Rupees

	3-month	6-month	1-year	Combined
<b>FY02</b>				
<b>Total</b>	593.5	2,299.7	1,410.8	4,304.1
<b>Average</b>	2.0	7.9	4.8	14.7
<b>FY03</b>				
<b>Total</b>	13.1	2,480.6	2,704.7	5,198.4
<b>Average</b>	0.04	8.4	9.1	17.6

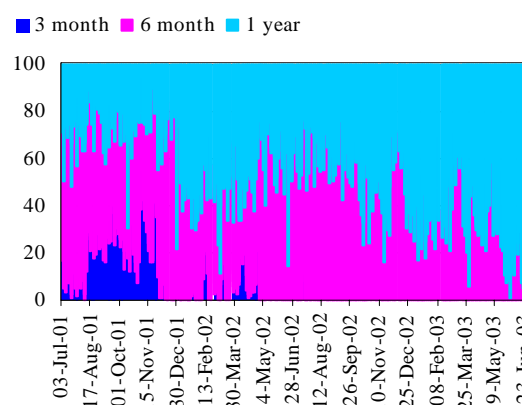
The average trading activity in PIB was around Rs 9.6 billion during FY03, slightly higher than the average trading in either 6 or 12-month T-bills. At least in part, this rise may reflect the trading by institutions looking to book capital gains in the longer tenured securities.

### 5.2.5 SBP Market Support and Rupee Interventions

During FY03, the frequency of OMOs was significantly lower compared with FY02 (see **Table 5.9**). As discussed earlier, typically through FY03, the SBP was seeking to put pressure on interest rates by the partial sterilization of its rising forex purchase.

Also, in the rare cases that the rupee market was short of liquidity, this usually resulted through overbidding by commercial banks in the primary auctions for government securities, which the SBP, on its part, wished to discourage. In effect, therefore, there were few opportunities for the SBP to intervene through OMOs in support of its objectives. The substantial increase in market liquidity is evident from **Table 5.10**, which shows a sharp reduction in the frequency of banks' resort to the SBP discount window.

**Figure 5.18: T-bill Trading**



**Table 5.9: Open Market Operations**

	Injection			Absorption		
	FY01	FY02	FY03	FY01	FY02	FY03
July		1.1	51.7	7.7	22.1	12.0
August		10.7	-	17.2	7.5	-
September		49.3	-	13.9	4.0	16.9
October		50.1	-	-	-	-
November	9.4	16.2	-	-	-	13.0
December	22.4	11.1	-	-	-	-
January	13.6	-	-	-	17.6	-
February	-	23.9	-	27.9	5.2	-
March	-	-	-	22.4	-	-
April	-	7.0	-	4.9	-	-
May	-	35.3	3.1	9.1	-	-
June	-	36.9	-	-	-	25.0
<b>Total</b>	<b>45.4</b>	<b>241.5</b>	<b>54.8</b>	<b>103.0</b>	<b>56.4</b>	<b>66.9</b>

**Table 5.10: Activities at Discount Window**

billion Rupees

	No. of visits to discount window (No. of days)			Total amount of discounting			Average per visit		
	FY01	FY02	FY03	FY01	FY02	FY03	FY01	FY02	FY03
July	3	11	8	29.8	75.2	94.2	9.9	6.8	11.8
August	8	12	2	44.0	38.9	9.5	5.5	3.2	4.7
September	9	16	6	64.9	47.4	40.5	7.2	3.0	6.7
October	28	25	20	438.2	107.4	215.0	15.6	4.3	10.8
November	30	26	10	282.7	211.5	103.2	9.4	8.1	10.3
December	22	6	2	138.9	17.3	7.1	6.3	2.9	3.5
January	19	5	10	309.4	17.4	140.2	16.3	3.5	14.0
February	8	8	1	16.2	102.0	2.5	2.0	12.7	2.5
March	9	1	0	33.9	10.4	0.0	3.8	10.4	0
April	19	8	1	114.1	45.8	6.6	6.0	5.7	6.6
May	11	11	0	41.1	130.4	0.0	3.7	11.9	0
June	8	3	0	43.5	24.97	0.0	5.4	8.3	0
<b>Annual</b>	<b>174</b>	<b>132</b>	<b>60</b>	<b>1,556.7</b>	<b>828.4</b>	<b>618.7</b>	<b>8.9</b>	<b>6.3</b>	<b>10.3</b>

In September 2002, SBP introduced a 'swap window' as an additional tool to manage market liquidity both in rupee and forex markets.<sup>6</sup> Since then swap window has been actively used to intervene in the market (see **Figure 5.19**).<sup>7</sup> In specific terms a net injection of Rs 21.7 billion has been made in September 2002 to June 2003 period.

### 5.2.6 Treasury-Bill Auctions

Interest in T-bill auctions witnessed enormous surge during FY03, with aggregate bids increasing by a staggering 152 percent (Rs 935.7 billion) compared to the corresponding figure for FY02.<sup>8</sup> Not surprisingly, despite a sharp jump in aggregate auction acceptances during the year, interest rates remained under pressure for much of FY03, as clearly represented in the auction profile of the 6-month T-bill auctions during the period (see **Figure 5.20**).

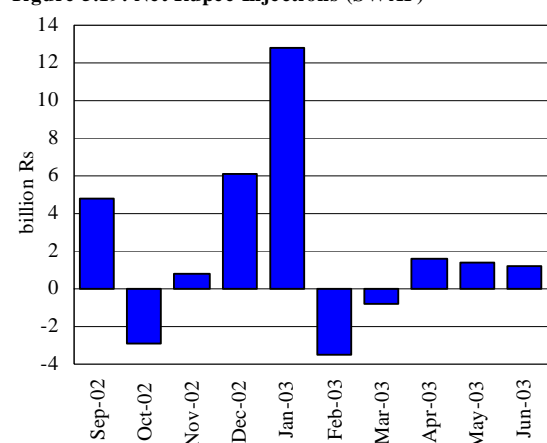
The large increase in acceptances during period, essentially corresponds to the on-going partial sterilization of the SBP forex purchases rather than an increased demand for budgetary support borrowings by the government.

The partial sterilization also impacted the bid spreads in the T-bill auctions, as the bid spread as a percent of the cut-off yield has also increased (see **Table 5.11**). The widening spread suggests the uncertainty of market participants in pricing their bids and the presence of speculative bidding in primary auctions during last two fiscal years.

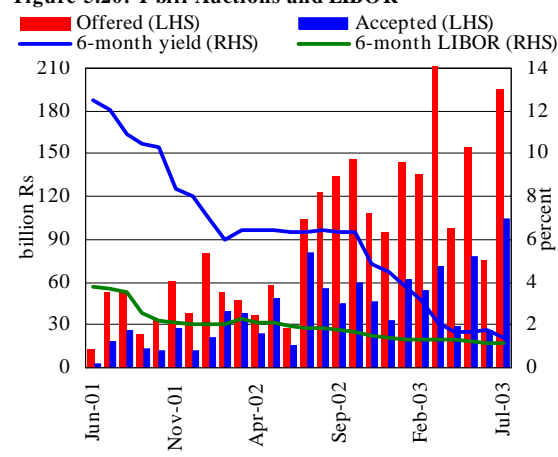
### 5.2.7 Pakistan Investment Bond (PIB) Auctions

The PIB remained attractive for the commercial banks through out FY03 primarily due to (1) maturing institutional investment in the NSS and (2) expectation of an interest rate decline. However, on its part, the government appeared reluctant to mobilize funds through

**Figure 5.19: Net Rupee Injections (SWAP)**



**Figure 5.20: T-bill Auctions and LIBOR**



**Table 5.11: Auction Analysis**

Instrument	Year	Percent Accepted	Spread (in percent)		W.A. Yield
			Simple	% of Yield	
Three-month	FY01	67.5	0.69	6.77	10.3
	FY02	56.8	0.60	7.22	8.3
	FY03	26.8	0.36	9.83	3.6
Six-month	FY01	59.0	0.92	8.94	10.3
	FY02	56.4	0.58	7.13	8.2
	FY03	46.7	0.59	13.00	4.1
Twelve-month	FY01	71.9	0.67	6.16	10.8
	FY02	41.5	0.69	8.12	8.6
	FY03	38.1	0.63	14.80	4.2

<sup>6</sup> In OMO government securities are used to mop up rupee liquidity, while in the case of swaps, foreign exchange reserves could be used to for liquidity management both in money and forex markets. Additionally, the swap window could help in sterilizing of SBP forex market interventions.

<sup>7</sup> The SBP is also thinking in lines of introducing a SBP Certificate of Deposit of very short-term for liquidity management.

<sup>8</sup> To put this in perspective, the FY03 T-bill auction bids were larger than the cumulative bids in all T-bill auctions for the past 2 years.



PIBs as (1) its appetite for long-term debt was glutted by the heavy mobilization through NSS instruments and (2) higher cost of PIBs relative to T-bills.

Thus, the bids accepted in PIB auctions declined sharply during FY03, falling to approximately a third of the total accepted in FY02, despite a higher demand (see **Table 5.12**). The resulting squeeze on the availability of PIBs added a scarcity premium to the PIB yields, distorting its role as the benchmark for long term lending.

**Table 5.12: Pakistan Investment Bonds-Auction Summary**

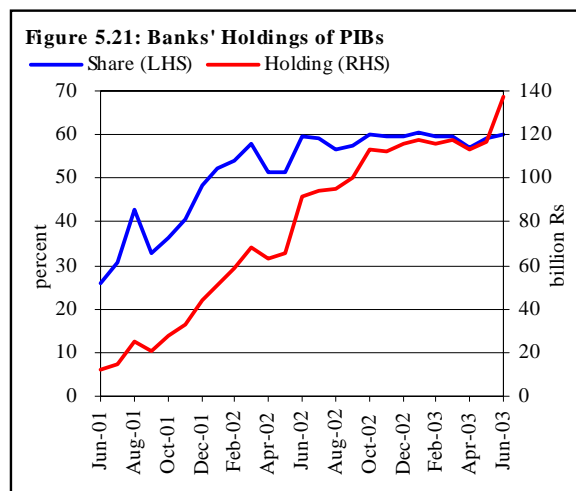
billion Rupees

Instrument	Year	Combined target	Amount offered	Amount accepted	Percent accepted	Average yield (%)	Average coupon (%)
Three-year	FY01	49.0	8.5	4.7	54.8	12.5	12.5
	FY02	93.0	46.1	24.8	53.8	9.8	10.4
	FY03	66.0	26.1	9.7	40.3	5.5	8.0
Five-year	FY01	49.0	6.7	5.3	79.7	13.0	13.0
	FY02	93.0	47.3	24.7	52.1	10.6	10.9
	FY03	66.0	45.6	14.4	34.6	6.5	9.1
Ten-year	FY01	49.0	43.6	36.1	82.9	14.0	14.0
	FY02	93.0	144.9	58.2	40.2	11.6	12.0
	FY03	66.0	139.8	50.8	72.3	6.8	10.0
Combined	FY01	49.0	58.8	46.1	78.4		
	FY02	93.0	238.4	107.7	45.2		
	FY03	66.0	211.5	74.8	55.2		

In fact the aggregate accepted bids in PIB auctions during FY03 would have been even smaller if not for the final PIB auction of the year, in which the government offered PIBs worth Rs 30 billion. This was, in fact a move to avoid a larger cut in the NSS instruments that are anchored to the PIB yields.<sup>9</sup>

A matter of some concern during FY03, is the increased holding of PIBs in bank portfolios. As shown in **Figure 5.21**, the banks holding of PIBs have increased from 25.8 percent of the total outstanding stock of PIBs in July 2001 to 59.0 percent in June 2003.

It may be recalled that the PIB was primarily envisaged as a long-term instrument for non-bank institutions such as pension funds, insurance companies, etc. Keeping in mind the rationale of issue of PIBs, the increased appetite from the banking sector is not a healthy development. This impacts negatively on risk management of banks and the government's limits on borrowings from the banking system.<sup>10</sup>



<sup>9</sup> It also reflected badly on SBP's credibility as the central bank mentioned an unchanged monetary policy stance in its Monetary Policy Statement. In addition, the market would expect this to happen again on the reset dates of NSS instruments, i.e., end-June and end-December.

An important development for the PIB market was the issuance of the revised PD rules on July 5, 2003. The major changes are (1) brokerage houses are also allowed to become PD, (2) retail investors are allowed to buy PIBs through non-competitive bids, and (3) pass-through bids have been disallowed by asking PDs to take PIBs on their books before any subsequent secondary market sale.<sup>11</sup>

All in all however, the performance of PIBs in terms of auctions held and scrapped, and number of bids received and accepted, etc. clearly reflects the success of these instruments (see **Table 5.13**). This has encouraged the government to take advantage of the prevailing market liquidity to lengthen the yield curve through the introduction of the new 15 and 20-year PIBs.

<b>Table 5.13: PIB Auction Performance</b>				
	<b>No. of Auctions</b>		<b>No. of Bids</b>	
	<b>Held</b>	<b>Scrap.</b>	<b>Received</b>	<b>Accepted</b>
<b>FY01</b>	6	0	261	182
<b>FY02</b>	13	1	1,358	522
<b>FY03</b>	7	0	1,234	342

<sup>10</sup> The short-term nature of commercial banks' liabilities should ideally be matched with short-term investment portfolio. Large long-term paper holdings are a potential risk for banks in case the coupon rates in future increases and/or the term premium diminishes. The problem is compounded if the long-term holdings are funded through a potentially volatile short-term market as indicated earlier. From the government's perspective PIB is essentially a part of non-bank borrowing. Funds generated from these would give space on government borrowing from the banking system and also are a major source of long term funds for development expenditures (that often have long gestations periods). Excessive bank holdings of PIB will tend to undermine the non-bank sources besides resulting in breaching the limits set for the government for borrowing from the banks.

<sup>11</sup> EDMD Circular No. 8, July 5 2003.