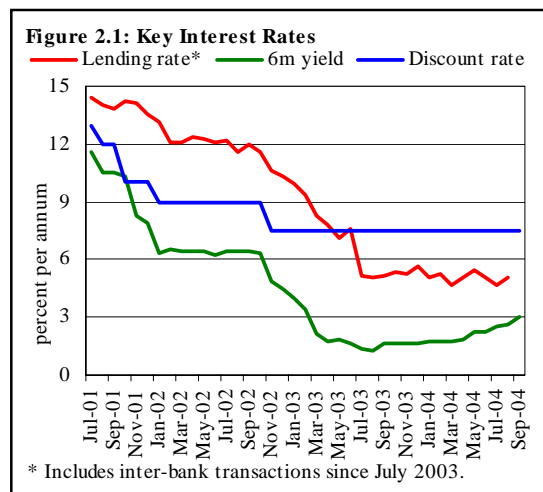


2 Money Market

With the economy finally responding strongly to the monetary stimulus in FY03, the SBP retained its accommodative monetary policy through most of FY04 (see **Figure 2.1**) in order to sustain the growth momentum and drive real GDP growth above the desired long-term growth target of over 6 percent. In doing so, however, the SBP was well aware of the need to strike a balance between supporting growth and the risk of accelerating inflation and therefore sought, as a policy, to stabilize interest rates, as indicated in the Monetary Policy Statement for H1-FY04.



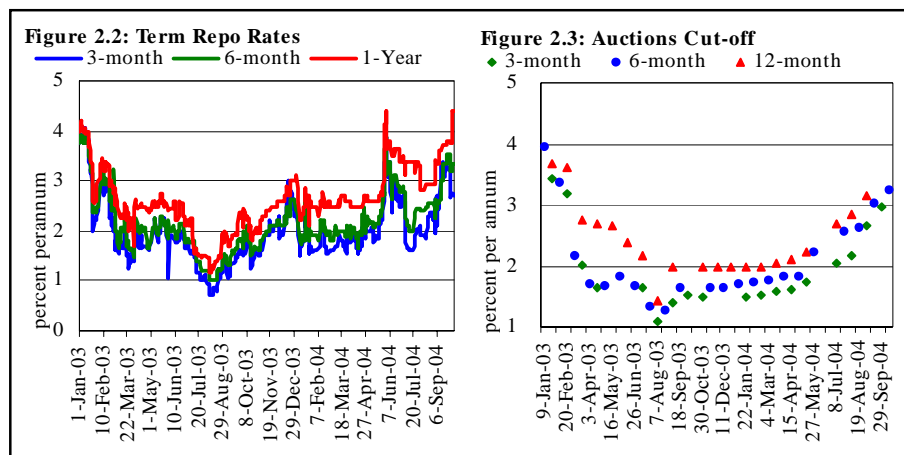
In practice, however, the SBP had to incorporate other considerations as well, including changes in international interest rates, the financing requirements of the government, and subsequently, the narrowing external account surpluses; each of which also had attendant impacts on expectations affecting both, the Rupee and the forex markets, throughout FY04.

2.1 Market Developments

After remaining relatively stable in Q4-FY03, interest rates came under renewed (downward) pressure in the first two months of FY04 amidst a sharp rise in inter-bank liquidity (see **Figure 2.2**).¹ Not only were the targets in T-bill auction high,² and acceptances in the auctions well above targets, the SBP also mopped-up much

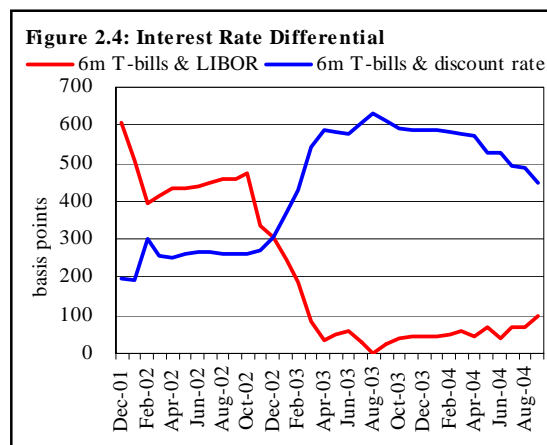
¹ Despite lower Rupee injections against SBP forex purchases and slower deposit mobilization, the liquidity during July-August 2003 was higher compared to preceding two months. This can be explained by the difference in credit demand from private sector and slightly higher maturities of T-bills. In particular, during May-June 2003 private sector credit grew by Rs 56.3 billion while it actually fell by Rs 3.8 billion during July-August 2003.

² The target amount for July and August 2003 were Rs 70 billion and Rs 45 billion respectively. In fact, the target of Rs 70 billion was the largest in the history of T-bill auctions in Pakistan.



more liquidity through OMOs compared to the previous year. Nonetheless, the acceptance cut off fell in every successive auction during the period (see **Figure 2.3**).

By August 2003, domestic interest rates dropped to record lows, wiping out the differential between benchmark Rupee and US Dollar interest rates (see **Figure 2.4**). This raised pressure on the local currency, as traders quickly switched foreign currency (FE25) loans with Rupee funding, effectively draining liquidity from both, the forex and Rupee, inter-bank markets.³ This correction in interest rates was supported by the SBP through (a) curtailing its forex purchases (to contain volatility in the exchange rate),⁴ (b) an increase in the acceptance cut-off in the T-bill auctions (see



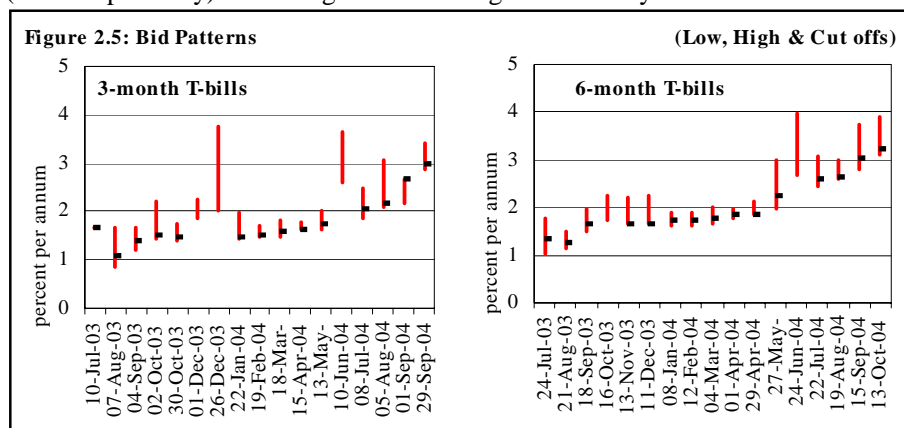
³ Foreign currency loans had increased substantially since January 2002. However, very low Rupee interest rates by August 2003 reduced the attractiveness of forex loans. Since these loans were providing forex liquidity in the inter-bank market, falling net loans in turn reduced forex liquidity, and thereby intensified pressure on the exchange rate (for details, see **Chapter 3**).

⁴ SBP net purchases from the inter-bank market fell sharply from US\$ 285.5 million in July 2003 to US\$ 44.0 million and US\$ 78.0 million in August and September 2003, respectively (see **Chapter 3**).

Figure 2.3),⁵ and (c) the more aggressive use of OMOs during September 2003.⁶ The effectiveness of these SBP signals was helped by a pickup in the private sector credit.

The SBP signals in support of the market correction were unfortunately amplified substantially by the unexpected announcement of a large, extended PIB issue on September 18, 2003, which fueled market expectations of a *steep* rise in interest rates. At Rs 50 billion, this “Jumbo” issue was well above the Rs 15 billion PIB borrowing target set in the FY04 budget. Additionally, in order to extend the yield curve, the government was expected to issue 15- & 20-year PIBs as well. Taken together with the low mobilization of non-bank borrowings through the NSS schemes, the PIB issues led the market to perceive the Jumbo issue as an indicator of a very strong appetite for funds by the government. As a consequence, banks started bidding at substantially higher rates in subsequent T-bills and PIBs auctions (see **Figure 2.5**).

Thus, while the Jumbo PIB issue had significant merits in facilitating development of a secondary market for long-term government papers,⁷ in hindsight, the size and (more importantly) the timing of the offering could clearly have been better



⁵ It might be important to note that the SBP raised the benchmark cut-off rates of 6-month T-bills to end June 2003 level.

⁶ SBP conducted four OMOs in September 2003 (mopping up Rs 76 billion) compared to only one OMO (for only Rs 8 billion) during the preceding month.

⁷ Since the secondary market price of a security for given tenor also varies with time to maturity and attached coupon value, prices quoted for different issues (sold in different auctions) were different. This is often cited as one of the factors hindering the development of a secondary market for PIBs. The Jumbo auction was structured as a single issue that would be issued in successive auctions over a number of months (i.e. maturity date and coupons would be unchanged for each auction of the

managed. Firstly, the timing of the issue at the beginning of Q2-FY04 (which traditionally accounts for the bulk of the annual net credit off-take), put upward pressure on short-term interest rates as well; this could easily have been avoided by bringing the issue to the market in Q1-FY04 when there was enormous liquidity in the market, and interest rates had been declining despite SBP efforts to stem the slide. Secondly, it was probably desirable to prepare the market well ahead of the actual announcement of the large offering. This would help prevent volatility in the interest rate environment and thus ease monetary management.

In the event, the announcement forced the SBP to reject most of the bids in auctions held in early October 2003 to contain expectations of an interest rate hike (see **Table 2.1**). This only *partially* helped aligning market expectations with the SBP stance. The central bank was

Table 2.1: Auction of Government Securities

billion Rupees				
Security	Date	Target	Bid	Accepted
T-bills	2-Oct-04	15.0	25.9	1.5
PIBs	6-Oct-04	25.0	38.0	7.6
T-bills	16-Oct-04	10.0	21.1	0.0
T-bills	30-Oct-04	45.0	54.0	39.1
PIBs	6-Nov-04	15.0	44.1	26.6

able to accept targeted amount in the end-October 2003 T-bill auction at the cut off set in previous auction, but banks continued to bid at higher rates in the T-bill auction during November and December 2003 (see **Figure 2.5**). While short-term interest rates in the secondary market also remained high in the same period (see **Figure 2.2**), this probably owes also to: (a) a fall in inter-bank liquidity; (b) stable interest rate expectations for long term paper;^{8,9} and (c) the expectations that the SBP would be forced to reduce its NDA through open market operations to keep it below the target for the half-year.

Market expectations for long-term rates stabilized after the SBP rejected about two-third of the target in the PIB auction of October 6, 2003. Since SBP generally accepts the targeted amount in PIB auctions, the rejection was a very strong signal that long-term interest rates would not increase sharply. Consequently, in the second offering of the same Jumbo issue in November 2003, Rs 10 billion above

same Jumbo issue). This means a sizable amount (issue) will be quoted at single price in the secondary market.

⁸ With the stable long-term yield expectations, it was in the interest of the banks to invest in PIBs, which naturally gives more carryover interest income than T-bills.

⁹ Surge in accepted yield of PIBs by 99 and 64 basis point for five and ten year respectively in auction held on October 6, 2003 played vital role in building the expectations that short-run rates would increase as well.

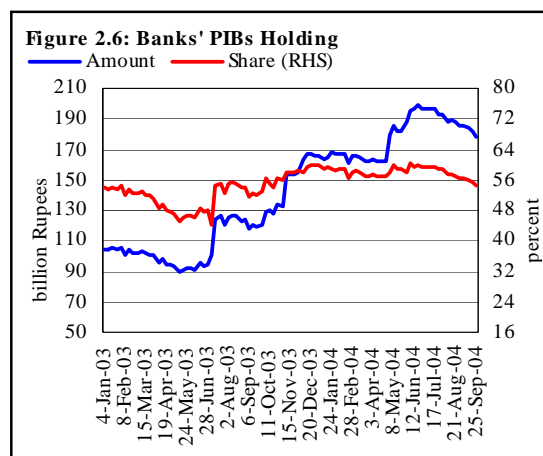
targeted amount was accepted without a significant change in the cutoffs of the preceding auction.

However, an unfortunate consequence of the SBP's efforts to moderate market expectations was a rise in its NDA, as the rejection of bids in T-bill auctions meant that the central bank was funding a part of the government's requirements in this period. This subsequently forced the SBP to conduct OMOs during the last two weeks of December 2003, selling T-bills worth Rs 29.5 billion in order to meet limits on its NDA.¹⁰

The latter was indeed anticipated by the market, and term repo rates weakened only after the SBP had met the end-December 2003 limits on its NDA.

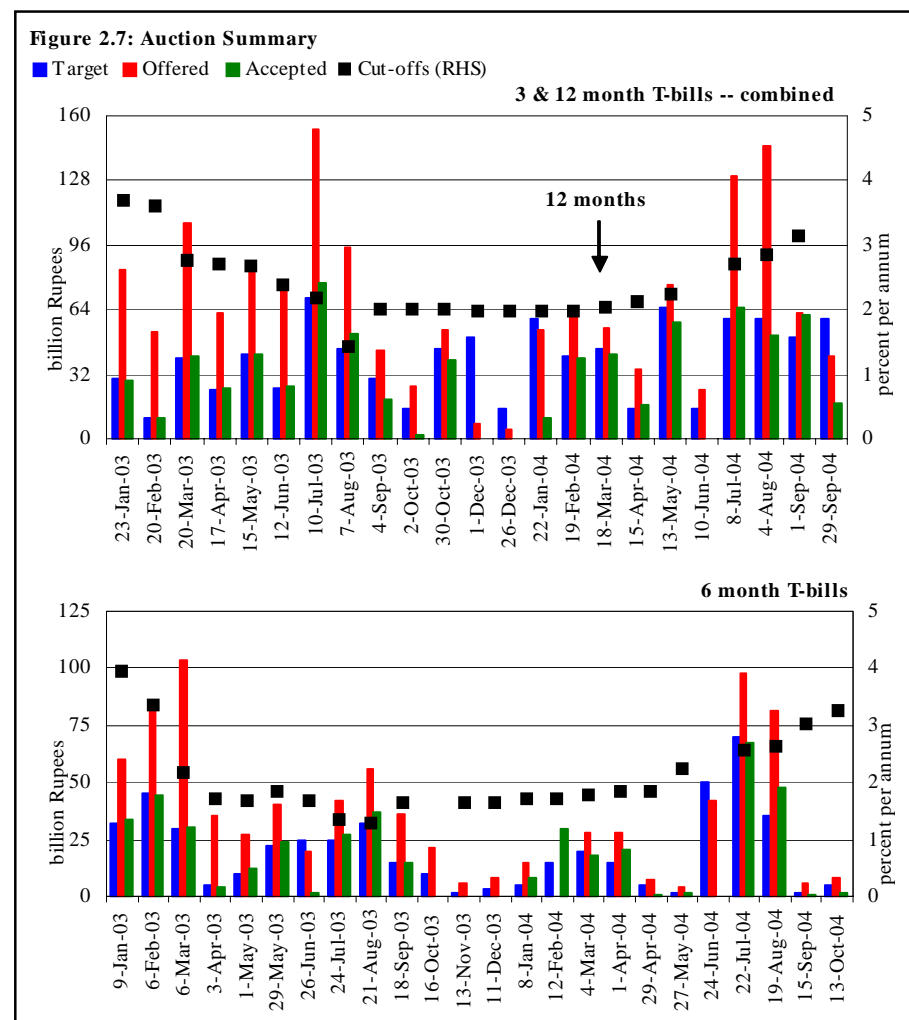
Another negative consequence of SBP's efforts to stabilize short-term rates was the increase in banks' PIB holdings (see **Figure 2.6**), as the banks locked-in liquidity in long-term bonds after the rejection of most bids in T-bills auctions.

Following the reversal of December 2003 upsurge in short-term interest rates, the market entered a phase of relative stability which lasted till mid-May 2004, indicating that the earlier market expectations of a hike in the benchmark rate were probably misplaced. Thus, although the SBP mopped-up substantial liquidity through OMOs and accepted higher than targeted amounts in some of the T-bill auctions during this period, the acceptance cutoff in the benchmark 6-month paper auctions inched up by only 18 basis points and interest rates in the secondary market moved in a narrow band during January 2004 and mid-May 2004 (see **Figure 2.2 & 2.7**).¹¹ The presence of substantial liquidity in the inter-bank market during this period is mainly explained by higher deposit mobilization by banks,



¹⁰ This did not create any panic in the market (no discounting was observed during December 2003) as the central bank was simultaneously injecting Rupee liquidity in the market through forex swaps. During the last two weeks of December 2003, in net terms SBP injected Rupee liquidity of around Rs 26 billion in the market through buy/sell SWAPs.

¹¹ In the same period, cut-off for 3 and 12 months T-bill auction increased by 13 and 12 basis points, respectively.



Rupee injections by SBP against forex purchases from the market, and higher maturities of government papers during this period.

The relative stability was evident even following the introduction of 15- & 20-year PIBs in January 2004 and announcement of yet another Jumbo issue of PIBs in April 2004.¹² In fact, in the PIB auction of April 29, 2004 the central bank was able to mop up Rs 26.3 billion (against a target of Rs 25 billion). The cut off rates

¹² Government announced another Jumbo issue of Rs 40 billion extended over two months period. Target for April 2004 was set at Rs 25 billion while the rest was to be issued in May 2004.

for 3- and 5-years PIBs fell by 16 and 7 basis points respectively, whereas the accepted yield on 10 year PIBs increased by 28 basis points.¹³

The upward pressure on interest rate, however, re-appeared on May 17, 2004 following the announcement of the second auction for 15- & 20-year PIBs (amounting to Rs 30 billion). The market became concerned over the government's growing financing needs and its likely impact on interest rates.¹⁴ Unfortunately, this was reinforced by concurrent reports of rising domestic inflation, re-emergence of a current account deficit and increase in international interest rates; all of which inevitably led to higher bids in succeeding auctions of T-bills and PIBs (see **Figure 2.7**).

The SBP responded to the exchange rate and inflationary pressures by raising the cutoff on 6 month T-bills by 40 basis points on May 27, 2004.¹⁵ However, this was not up to the market expectations, and much higher bids by banks forced SBP to reject both T-bill auctions of June 2004. This was because the SBP did not wish to abruptly increase the interest rates in the belief that such a tightening could choke off the nascent recovery in the economy.¹⁶ However, some rise in interest rates was necessary given the evident pressure on core inflation April 2004 onwards.

The concerns about rising core inflation (as proxied by an increase in non-food non-oil CPI) together with the monetary overhang of preceding years contributed to the tighter monetary policy stance enunciated in the Monetary Policy Statement for H1-FY05. The policy statement envisages that the increase in money supply will be kept below the rise in nominal GDP during FY05. Accordingly, SBP raised the cut-offs of 6-month T-bill rates by 80 basis points and mopped up Rs 133.4 billion through OMOs during July-September 2004. However, the impact of this tightening is not too evident in credit growth, which continues to accelerate.¹⁷ If this credit growth continues in Q2-FY05 and inflationary pressures do not ease, it may be desirable for the SBP to further tighten its monetary stance.

¹³ Out of the total accepted amount, Rs 15 billion were for 10 years paper.

¹⁴ In addition to net retirement under NSS and decision to make early repayment of expensive debt, the borrowing needs were increasing due to suspension of Saudi oil facility.

¹⁵ As mentioned earlier, the same was increased by 18 basis points during January to April 2004.

¹⁶ In particular, a strong contribution to FY04 GDP growth came from the industrial sector, which was perceived to be sensitive to a sharp jump in interest rates.

¹⁷ The private sector credit expansion was Rs 43.6 billion till September 25, 2004, which is significantly higher than Rs 13.8 billion during the corresponding period last year.

2.2 SBP Market Support and Rupee Interventions

During FY04, SBP approach to manage liquidity was quite different from that in previous years. Not only were the interventions more frequent,¹⁸ but these were substantially larger than in FY03 (see **Table 2.2**).¹⁹

In particular, during FY03 SBP deliberately kept the market liquid to push down banks' lending rates.²⁰ However, during FY04 interest rates were already very low and any further fall could add to inflationary pressures and weaken the Rupee,²¹ and therefore the SBP focused more on mopping up excess liquidity from the market. Not surprisingly, the net absorption during FY04 was significantly higher than in the preceding year.

In addition, while interest rates were also falling during FY03, SBP's interventions were aimed at moderating any steep decline in interest rates. On the other hand, during FY04, SBP was keen to stabilize the interest rate which required intervention in both the cases, i.e., when interest rates were increasing or when they dropped below desirable levels.

Table 2.2 : Open Market Operations

billion Rupees

	Injections				Absorptions			
	FY02	FY03	FY04	FY05	FY02	FY03	FY04	FY05
July	1.1	51.7	-	-	22.1	12	41.5	71.5
August	10.7	-	-	-	7.5	-	8	57.9
September	49.3	-	-	-	4	16.9	76	3.95
October	50.1	-	3.5		-	0	13	
November	16.2	-	56.7		-	13	-	
December	11.1	-	16.5		-	-	29.5	
January	0	-	-		17.6	-	54.5	
February	23.9	-	-		5.2	-	22	
March	0	-	-		-	-	16.6	
April	7	-	-		-	-	24	
May	35.3	3.1	-		-	-	4.9	
June	36.9	-	-		-	25	120.9	
Total	241.6	54.8	76.7	0	56.4	66.9	410.9	133.4

¹⁸ SBP conducted 33 open market operations during FY04 as against only 10 in FY03.

¹⁹ Similar to FY03, there was net absorption of liquidity from the market; however the amount was substantially higher during FY04.

²⁰ June 2003 was an exception, when SBP conducted OMOs to mop-up the liquidity from inter-bank market.

²¹ Fall in interest rates could put downward pressure on exchange rates; drag the real interest rates to more negative level and may increase inflation rates in future.

In fact, Q1-FY04 saw the SBP mopping up substantial liquidity from the market, to prop up the Rupee by raising the interest rate. However, in the second quarter, SBP changed gear, injecting liquidity in the market to meet the demand stemming from (1) seasonal requirements of higher liquidity due to Ramadan; (2) a sharp jump in net credit off-take by the private sector; (3) relatively lesser Rupee injections through SBP forex purchase (especially during October and November 2004);²² and (4) liquidity drain through the Jumbo issue of PIBs during the quarter. It also sought to stabilize the short-term interest rates by drastically reducing the auction targets and acceptance levels.²³ The need to achieve the end-December NDA target prompted SBP to reverse the direction of OMOs during last two weeks of December 2003 so that the government securities could be transferred from central banks balance sheet to the books of scheduled bank.²⁴

After these end-year pressures subsided, the market was once again flush with liquidity. Consequently, SBP was focusing on soaking up the excess liquidity in order to stabilize the secondary market interest rates. Finally, towards the end of the fiscal year, while SBP was absorbing the liquidity to meet the NDA target, the rising pressures on inflation and exchange rate were also prompting SBP to drain the excess liquidity. This was facilitating the gradual tightening of monetary policy as reflected by measured increase in benchmark 6-month T-bill rates.²⁵ However, the SBP had to tread carefully - absorbing large amounts from the market could have fueled the already existing expectation for a sharp rise in interest rates, whereas excessive liquidity could lead to further pressures on inflation and the exchange rate.

Despite the greater challenges, SBP was able to reduce the volatility of interest rates compare to FY03.²⁶ Further, FY04 not only witnessed a very few episodes of discounting but also the

Table 2.3: Discount Window

billion Rupees

	No. of visits	Total discounting	Average per day
FY02	132	828.4	6.3
FY03	60	618.7	10.3
FY04	11	46.5	4.2

²² During October and November 2002, net forex purchases were US\$ 579.5 million while these were only US\$ 196.0 million in the respective months of FY04.

²³ Against the maturities of Rs 124.7 billion during Q2-FY04, the target was Rs 95.0 billion and only Rs 41.5 billion were accepted.

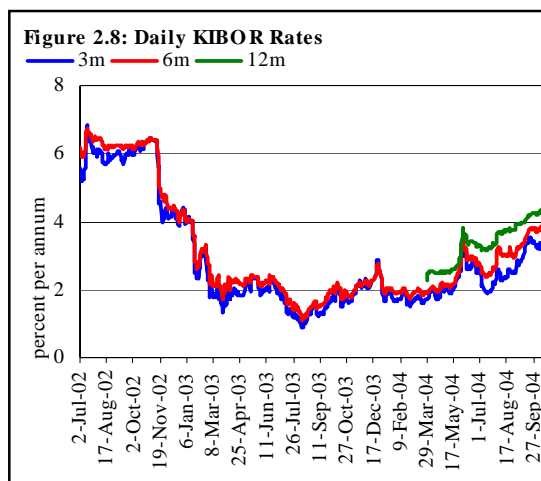
²⁴ As discussed earlier, to smooth out this transaction, SBP provided liquidity through SWAPs window together with forex purchases.

²⁵ In the end-May 2004 auction, SBP increased the cut-off by 40 basis points which was far lower than the market expectations. Even the two auctions held in June 2004 were scrapped as banks were bidding at very high rates.

²⁶ The standard deviation of overnight rates during FY04 was 1.9 against 3.0 for previous year.

average amount per visit was significantly lower than the previous year (see **Table 2.3**).²⁷

It is important to note that while the SBP continued to signal gradual tightening of monetary policy by increasing the T-bill cut off rates after June 2004, the interest rates in the secondary market (including KIBOR) did not increase until end-August 2004 (see **Figure 2.8**). This suggests that liquidity drain from the inter-bank market was insufficient to put upward pressure on interest rates; in other words, the SBP's



monetary tightening was initially not very effective. Since most of the banks' credit to corporate is now linked to KIBOR (for which inter-bank liquidity is a main driving force), the transmission of monetary policy to banks' lending rates remained weak. Hence, increasing the T-bill cutoffs alone, while leaving the market liquid, impaired the effectiveness of monetary policy. However, since end-August 2004 interest rates in the secondary market have started moving up.²⁸

2.3 Primary Market of Government Securities

T-bills Auctions

Looking from the supply side, the overall target (in gross terms) set for T-bill auctions was higher in FY04 compared to the previous year. However, net target (i.e., adjusted for maturities) was actually lower than in FY03 (see **Figure 2.9**). Given the higher banking system borrowing by the government; relatively higher liquidity with banks; and stable (or somewhat tight) monetary policy by SBP during FY04, the lower net targets seem a bit strange. But this can be explained by three factors: (1) with pressures on interest rates particularly during Q2-FY04, SBP could not set higher targets (see **Figure 2.10**);²⁹ (2) as relatively larger amounts were accepted in three-month securities during FY04 compared to a year

²⁷ Even in most of the cases, discounting was mainly because of liquidity shortage with one or two banks.

²⁸ The SBP accepted Rs 47 billion against the target of Rs 35 billion in August 19, 2004 auction.

²⁹ The net targets were in negative zone only in the Q2-FY04.

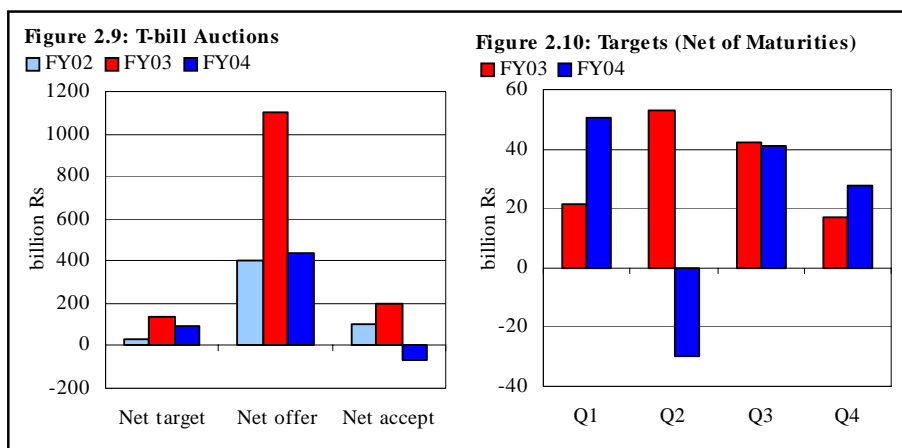


Table 2.4: Treasury Bills Auctions Summary

	Year	No. of Auctions		No. of Bids		Amount (billion Rupees)		Percent accepted
		held	scrap	received	accepted	offered	accepted	
3-months	FY02	26	8	177	61	128.4	72.9	56.8
	FY03	16	7	105	18	109.1	29.2	26.8
	FY04	13	3	204	64	216.6	115.6	53.3
6-months	FY02	26	3	647	285	284.5	160.4	56.4
	FY03	18	1	1095	371	747	349	46.7
	FY04	13	2	530	186	329	158.4	48.2
12-months	FY02	26	1	585	201	202.4	84	41.5
	FY03	16	5	1288	366	694.9	264.4	38.1
	FY04	13	2	668	230	476.7	241	50.6
Combined	FY02	26	12	1409	547	615.3	317.2	51.6
	FY03	26	13	2488	755	1551	642.6	41.4
	FY04	26	7	1402	480	1022.3	515	50.4

earlier, this raised the maturities during the year (forcing more auctions), and (3) large borrowing through PIBs had met most of the government's bank borrowing requirements.

As shown in **Table 2.4**, in contrast to auction targets, the *accepted* amount in T-bills auctions was lower both in gross and net terms during FY04 compared to the preceding year. In fact, adjusting for maturities, FY04 saw a net retirement of T-bills worth Rs 67.9 billion (see **Figure 2.9**). This largely owes to the SBP efforts to contain interest rate expectations by rejecting bids in T-bill auctions (mainly in the second and last quarters of the fiscal year).

PIBs Auctions

During FY04 the government showed greater interest in borrowing through PIBs compared to the previous year (see **Table 2.5**). The combined target set for the seven auctions (including two jumbo issues) held during the year was Rs 126.0 billion. This was almost twice the Rs 66 billion targeted during FY03 (of which Rs 30 billion were from the end June 2003 auction alone).³⁰

The development of the secondary market for PIBs was the main reason for substantially large issues of PIBs during FY04. However, the government's greater interest in mobilizing funds through PIBs can also be explained by: (1) negative net mobilization through NSS instruments; (2) financing requirement for the earlier retirement of external debts; and (3) difference in interest rates scenario between the two years. As interest rates were declining during FY03 (see **Figure 2.11**),³¹ and it was in the interest of government to borrow through short-term instruments (T-bills). However, in FY04 (when rates were already very low) government preferred to borrow through long-term instruments. In fact, for the first time, net of maturities, government borrowings through PIBs were greater than through T-bills during FY04.³²

It is important to recall that market interest in PIB had risen sharply in FY03 when interest rates were trending downwards, as institutions tried to lock-in high yielding assets. However, as PIB issuance was sparse, the instruments traded at

Table 2.5: PIBs Auction Summary
billion Rupees

	Year	Combined target*	Amount offered	Amount accepted
3-year	FY02	93	46.1	24.8
	FY03	66	26.1	9.7
	FY04	90	38.5	14.5
5-year	FY02	93	47.3	24.7
	FY03	66	45.6	14.4
	FY04	90	58.5	27.8
10-year	FY02	93	144.9	58.2
	FY03	66	140.3	50.8
	FY04	90	93	51.6
15-year	FY02	-	-	-
	FY03	-	-	-
	FY04	36	14.3	7
20-year	FY02	-	-	-
	FY03	-	-	-
	FY04	36	16.6	6.8
All	FY02	93	238.4	107.7
	FY03	66	212	74.8
	FY04	126	221	107.7

* Targets combined separately for 3, 5 & 10 years and 15 & 20 years

³⁰ This was in fact to avoid a larger cut in the NSS instruments that were linked to PIB yields (see *SBP Annual Report FY03* for details).

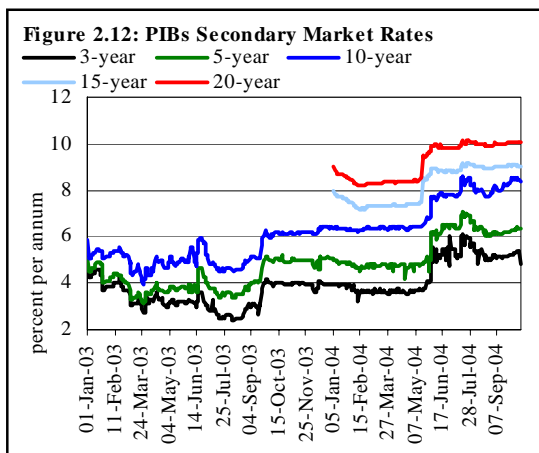
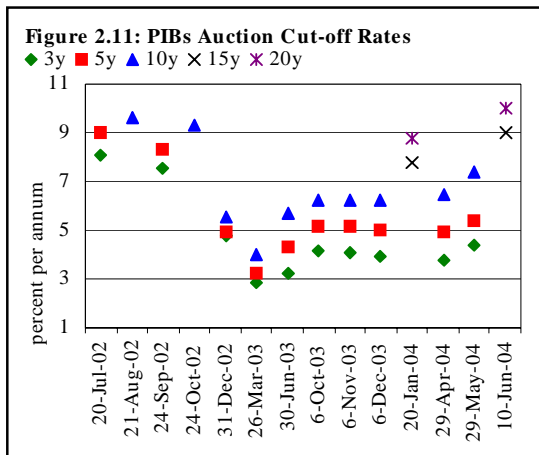
³¹ Only exception was slightly higher cut offs in June 2003 PIB auction. As mentioned earlier, government targeted very hefty amount of Rs 30 billion and accepted Rs 30.6 billion.

³² During FY04, the net amount accepted in T-bills was negative Rs 67.9 billion.

attractive premiums. It is surprising to note that even after the scarcity premium on PIBs was erased by large issues, and short-term rates began a very gradual rise since September 2003 (indicating the possibility of capital losses in future) interest in PIBs remained quite strong up to the April 2004 auction.³³

While higher corporate demand for long-term bonds can possibly be explained by heavy maturities of NSS, it appears that banks were hoping to take advantage of the difference between the PIB yields and the short-term funding costs. Implicit in this analysis was the expectation that a gradual increase in benchmark rates would allow them to earn the positive differential with only small capital losses on their longer term instruments.

However, the central bank was concerned that some small banks were also holding a large amount of PIBs in their books, and a sharp reversal in interest rates could potentially erode the capital base of such banks. Further, as PIBs were primarily designed as non-bank borrowing instrument, large banks holdings were against the objective of this paper. Accordingly, the SBP repeatedly warned banks of these risks, and urged them to lower PIB holdings.



³³ In fact, looking at the auction data, there were only two occasions, in October 2003 (for 3, 5 and 10 years PIBs) and June 2004 (for 15 and 20 years PIBs), when the accepted amount significantly fell short of target. In the former case, the low acceptance was due to the SBP's desire to avoid a sharp jump in interest rates (it rejected most bids); while in latter event, market demand was also very low.

The risk duly materialized after the SBP accelerated the rise in the benchmark T-bill yields by May 2004, since the gains from the positive funding differential were offset by far larger capital losses. As a result, when banks moved to offload these securities, the long-term rates in secondary market jumped sharply in June 2004 (see **Figure 2.12**). This in turn held off corporate demand as buyer preferred to wait for yields to stabilize.

In fact, it was not until after June 2004 ushered in relative stability in the PIBs yield (amidst an absence of fresh supply), and demand increased due to maturing NSS investments, that non-banks re-entered the PIB market. This helped banks in offloading a fraction of their holdings to non-banks. The share of banks in outstanding PIBs stock fell from 58.6 percent at end-June 2004 to 54.6 percent by end-September 2004 (see **Figure 2.6**). In September, the SBP also indicated that the “mark to market” requirement will not be applied on securities that banks would hold till maturity.³⁴

Table 2.6: Secondary Market Trading

billion Rupees

	3-m	6-m	1-y	PIB	All tenors
FY03					
Total	13.1	2,480.6	2,704.7	2,806.20	5,198.4
Average	0.0	8.4	9.1	9.6	17.6
Max	3.6	33.1	48.5	36.9	62.6
Min	-	-	-	-	-
FY04					
Total	228.4	851.8	3,419.5	4,299.6	8,799.4
Average	0.8	2.9	11.7	14.8	30.2
Max	9.2	52.9	39.8	52.7	81.4
Min	-	-	1.4	-	-
Q1-FY04					
Total	366.9	678.4	414.3	1381.0	2840.6
Average	4.8	8.9	5.5	18.2	36.9
Max	17.3	82.0	15.5	34.7	110.5
Min	0.5	-	1.0	-	11.2
Q1-FY05					
Total	383.6	757.1	379.7	1307.4	2827.8
Average	5.1	10.1	5.1	17.2	36.7
Max	17.3	82.0	11.3	34.7	110.5
Min	0.5	-	1.0	-	11.2

A positive impact of the shifting expectations on interest rates through FY04 (and particularly the expectations of a steep rise in interest rates during Q4-FY04) is the increasing market interest in managing interest rate risk. In particular, domestic financial and non-financial corporate have shown increased interest in the use of derivatives in order to manage these risks.

2.4 Secondary Market Trading

In aggregate terms, trading volumes of government securities rose sharply during FY04, with the average daily trading up by 69.3 percent compared to that in FY03 (see **Table 2.6**). However, the rising trading volumes should be interpreted

³⁴ For detail see BSD Circular No. 14 dated September 14, 2004.

carefully especially in case of PIBs,³⁵ as these includes data on both inter-bank Repos and outright transactions.³⁶ Banks were holding over 50 percent of total PIBs issued and a large number of the transactions are simply Repo transactions amongst banks.³⁷

Interestingly, trading volumes in 6-month T-bills fell sharply during FY04, while the trading in PIBs rose sharply. The unusually high secondary market transactions in PIBs can be explained by: (1) higher supply of the long-term bond during the year;³⁸ (2) the fact that throughout FY04, PIBs were traded at premium and as Repo transactions take place at face value, accepting the PIBs as collateral was not very risky; (3) large banks were holding a big share of T-bills outstanding (needed to meet SLR) and did not trade heavily in these securities; and (4) small banks holding PIBs were also obtaining funds by pledging these long-term securities.

³⁵ As T-bills are of short-term maturity and mainly issued for banks, a clear distinction between the outright and Repos might not be very useful. However, PIBs are long-term papers and primarily designed as non-bank borrowing instruments. Thus for PIBs secondary market development, outright transactions are more important, especially among non-bank sector.

³⁶ Further the inter-bank transactions include the both legs, thus overstating the actual volume.

³⁷ According to a rough estimate, the inter-bank Repo transactions are around 70 to 75 percent of total PIBs trading in the secondary market.

³⁸ As mentioned in **Section 2.3**, compared to the previous year government borrowed substantially higher amount through PIBs during FY04. On the other hand, as an outcome of SBP's efforts to avoid sharp increase in interest rates, supply of T-bills, especially of 6 month T-bill fell significantly during the year. Specifically, during FY03 Rs 349.0 billion worth of 6 month T-bills were sold in auction, while this was only Rs 158.4 billion during FY04.