5 Money Market

The market expectations of a sharp jump in interest rates that emerged in September 2003, strengthened and dominated developments in the inter-bank market during Q2-FY04.[1] Arguably, the strongest boost to these market expectations was provided by the unexpectedly large PIB auction target, that suggested a (hitherto unsuspected) strong appetite for funds by the government (particularly as the inaugural issue of 15- and 20- year T-bonds was still expected to be announced).

Not surprisingly, the combination of rising seasonal demand on market liquidity, the prospect of larger PIB issues (eliminating the scarcity premium and offering significantly higher yields relative to T-bills), led to a decline in interest in the T-bill auctions during Q2-FY04, in sharp contrast to the positioning seen during the preceding quarter (see **Table 5.1**). Bid amounts in T-bill auctions declined sharply, and the average bid rates were also higher than in the preceding quarter.

Table 5.1: Auction Analysis (T-bills)

billion Rupees

	Target	Maturity	Offered	Accepted	6m cut-off (%)
Q1-FY03	95.0	73.7	363.0	179.8	6.4
Q2-FY03	144.1	90.8	350.5	139.8	5.5
Q3-FY03	187.0	144.8	490.6	188.7	3.2
Q4-FY03	153.0	136.0	346.9	133.8	1.7
Q1-FY04	217.0	166.3	425.8	224.9	1.4
Average	***159.2***	***122.3***	***395.4***	***173.4***	--
Q2-FY04	95.0	124.7	127.5	41.5	1.7

Bankers were clearly expecting this to be a win-win strategy:

(1) if the higher bids were accepted their returns would rise; else,

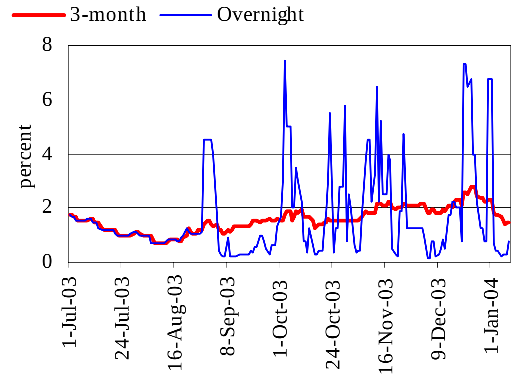
(2) if the bids were rejected the opportunity cost appeared low. To illustrate, term rates in the inter-bank market were distinctly higher than in preceding quarters, and were often generally close to (or higher) than the prevalent cut-off yields in T-bill auctions (see **Figure 5.1**).

However, as the SBP focused firmly on stabilizing rates, and particularly the short-end of the yield curve, the market eventually (and gradually) scaled back its

[1] In particular, the September 2003 PIB auction announcement together with: (1) the negative net mobilization from the NSS after July 2003; (2) short-term external debt payments; (3) expected introduction of the longer tenor PIBs, and (4) expected pre-payment of expensive forex debt, raised expectation of rising demand for liquidity. This was compounded by the visibly lower remittances and lower SBP forex purchases (which suggested a slowdown in the growth of rupee liquidity).

expectations, with rates dropping to stabilize at levels only a little higher than those at the beginning of Q2-FY04.

Figure 5.1: 3-month Repo & Overnight Call



From the perspective of the central bank, inflationary pressures were still too low to cause significant damage to the economy and, in any case, in many instances the price impulse was driven principally by non-monetary shocks that would be better addressed through administrative measures. Thus, with fundamentals pointing to the desirability (and sustainability) of stable interest rates, SBP sought to modify market expectations.

It refused to raise the acceptance cut-offs in T-bill auctions (scrapping the October 2003 T-bill auctions in the process). This meant that during Q2-FY04, the SBP kept its overall T-bill acceptances at a mere Rs 41.5 billion, short by Rs 83.2 billion and Rs 53.5 billion compared with the aggregate maturity and target amounts respectively for the quarter[2] (see **Table 5.1**).

Thus, on the one hand, the SBP left ample liquidity in the market to allay concerns stemming from surge in net private sector credit growth and the large PIB auctions target, while on the other, it attempted signal its expectation of stability in long-term rates by accepted only *part* of the target amount in the October 2003 PIB auction.[3]

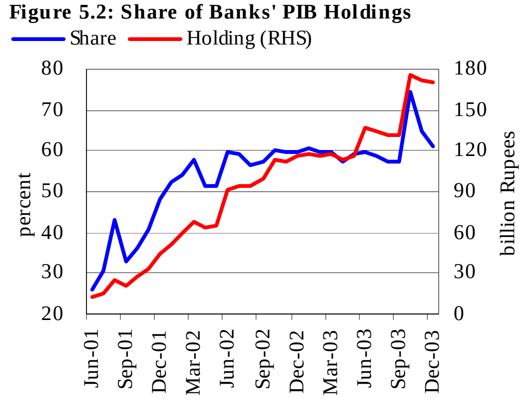
Interestingly, some banks appeared to support the SBP efforts to stabilize PIB yields through secondary market purchases. As evident from **Figure 5.2**, the rise in banks' PIB holdings during October 2003 was greater than the amounts issued through the October 2003 PIB auction, indicating a shift of holdings from non-banks to banks. A possible explanation could be an effort by banks to avoid heavy revaluation losses at end-December 2003.

[2] The slight up-tick in interest rates in December 2003 was due to the tight liquidity conditions at year-end, compounded by the SBP efforts to meet Net Domestic Assets (NDA) targets by sucking more than Rs 28 billion from the inter-bank market.

[3] Thus, putting an end to speculative bidding in remaining two tranches of PIB jumbo issue, by reversing the norm of accepting in line with the auction target in almost all previous PIB auctions.

In any case, as a result of the SBP measures, succeeding PIB auctions in November and December 2003 successfully raised the target amounts at rates very close to the acceptance cut-offs in the preceding auctions.[4] T-bill yields too held steady. Unfortunately, the SBP restraint in T-bill auctions also led directly to a buildup in its NDA stemming from the interim funding provided to the government. Thus, in order to meet the end-Q1-FY04 target NDA levels the SBP was forced to conduct OMOs to off-load a large part of its T-bill holdings, thereby pushing up short-term rates in the inter-bank market in the final weeks of December 2003.

Figure 5.2: Share of Banks' PIB Holdings



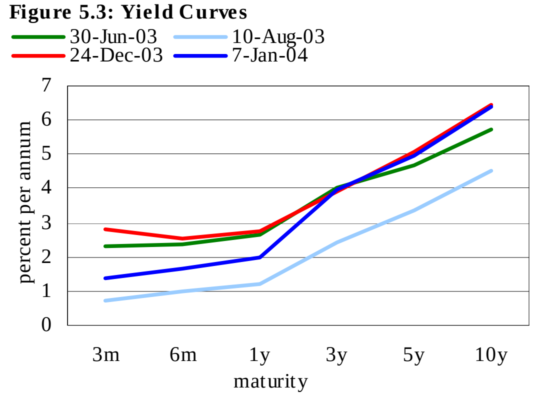
Despite this one-off impact, however, the SBP clearly managed to contain interest rate rise expectations, reinforcing its signals through the SBP Monetary Policy Statement released in January 2004, which clearly spelled out the likelihood of a stable interest rate outlook for January-June 2004 (assuming inflationary pressures did not rise strongly).

5.1 Term Structure of Interest Rates

As shown in **Figure 5.3**, the changing market interest rate expectations are clearly reflected by the movements in the yield curve.

After a period of downward pressure on interest rates in July-August 2003, the yield curve shifted upward due to rising market expectations of

Figure 5.3: Yield Curves

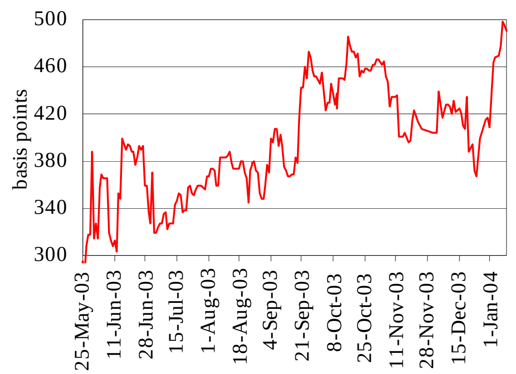


[4] Which mainly went to the non-banks and resulted in a decline in share of banks' PIB holdings, though the holding level remained almost the same.

an interest rate reversal by the latter half of September 2003 (as mentioned earlier). In fact, expectations of a steep rise in the public and private sector demand as well as a relative slowdown in money growth (due to declining remittances) were sustained almost throughout Q2-FY04. Thus, even when expectations of a rise in long-term (PIB) were scotched by lower acceptance in the October 2003 auction, banks remained uninterested in T-bill auctions at then-prevailing yields. As a result, the term premium declined mainly due to a small easing in PIB yields.

Moreover, towards the end of the calendar year, banks were also eyeing the SBP NDA, which was above the December 2003 target. This buoyed short-term interest rates as banks held back liquidity, in anticipation of large OMOs by SBP by end-December 2003 (see **Figure 5.4**). It is only when the OMOs proved to be substantially below market expectations that the short-term rates collapsed, sharply raising the term premium by early January 2004.

Figure 5.4: Daily Term Premium



5.2 Trading Volumes

Despite a slight decrease in trading activity in 3 and 6-month paper, the overall trading volume during Q2-FY04 jumped by Rs 563.9 billion, with the average daily trading volumes rising by Rs 8.7 billion compared with the preceding quarter (see **Table 5.2**).

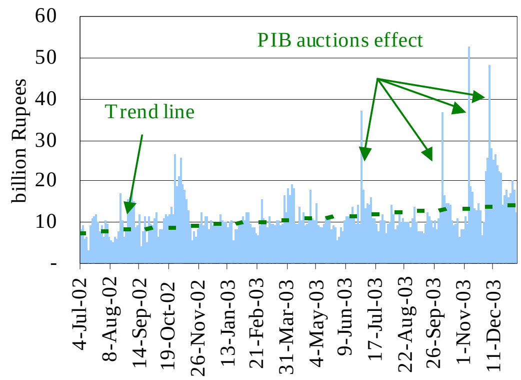
Table 5.2: Secondary Market Trading
billion Rupees

	Q1-FY04				
	3m	6m	12m	PIB	Combined
Total	22.0	256.1	776.9	760.2	1,815.2
Average	0.3	3.4	10.2	10.0	23.9
Max	3.0	34.9	39.8	18.1	64.4
Min	-	-	1.4	4.6	-
	Q2-FY04				
	3m	6m	12m	PIB	Combined
Total	20.8	216.7	989.8	1,151.9	2,379.1
Average	0.3	3.0	13.6	15.8	32.6
Maximum	3.5	8.1	28.1	52.7	52.7
Minimum	-	0.1	3.9	6.0	-

The increased trading was principally evident in long-term paper; probably reflecting portfolio shifts (as banks aligned their holdings in accordance with shifting interest rate expectations) the booking of capital gains on long-term bonds at the end of the calendar year and, most importantly, the increased supply of PIBs following the Rs 50 billion Jumbo issue.

As shown in **Figure 5.5**, the PIB trading volumes rose steadily during Q2-FY04 especially in December 2003. There are spikes at each PIB auction reflecting the primary dealers' sales to the clients.

Figure 5.5: PIB Trading



5.3 SBP Market Support and Rupee Interventions

During Q2-FY04, SBP proactively provided liquidity through OMOs (see **Table 5.3**) to support the market in wake of greater rupee demand stemming from: (1) a sharp jump in net credit off-take by the private sector, (2) lesser rupee injections through SBP forex purchases (during October-November 2003); and, (3) the liquidity drain through the large PIB issue. In addition, the drastic reduction in T-bill auctions acceptances (primarily to stabilize T-bill yields) also added to market liquidity by Rs 83.2 billion.

However, the net injections through OMOs reversed by mid-December 2003, as the SBP

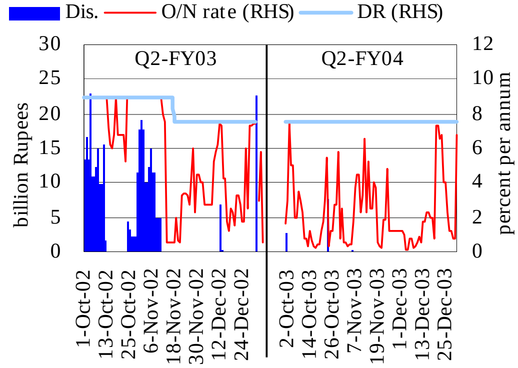
Table 5.3: Open Market Operations

billion Rupees

Date	Mop-up		Injection	
	Offered	Accepted	Bid	Accepted
14-Jul-03	32.5	13.5	-	-
17-Jul-03	21.4	11.0	-	-
28-Jul-03	18.2	17.0	-	-
4-Aug-03	19.5	8.0	-	-
8-Sep-03	25.4	16.3	-	-
15-Sep-03	27.4	16.2	-	-
22-Sep-03	26.8	22.5	-	-
29-Sep-03	22.2	21.0	-	-
Q1-FY04	**193.3**	**125.5**	**-**	**-**
2-Oct-03	11.3	4.6	-	-
16-Oct-03	18.6	8.4	-	-
24-Oct-03	-	-	7.8	3.5
6-Nov-03	-	-	13.7	7.4
10-Nov-03	-	-	21.7	11.3
13-Nov-03	-	-	23.4	13.8
19-Nov-03	-	-	17.5	16.0
25-Nov-03	-	-	9.7	8.3
4-Dec-03	-	-	16.8	16.5
20-Dec-03	12.0	12.0	12.2	-
30-Dec-03	20.5	17.5	0.4	-
Q2-FY04	**62.4**	**42.5**	**123.0**	**76.6**

mopped-up liquidity from inter-bank money market, to ensure that its end-December 2003 target NDA levels were achieved (by shifting SBP T-bill to the commercial banks). Nonetheless, in the meantime, SBP provided liquidity through the SBP swap window together with higher forex purchases.

Figure 5.6: Discounting and Overnight Rates



As shown in **Table 5.4** and **Figure 5.6**, the SBP's proactive liquidity management significantly reduced commercial banks resort to the discount window compared with the corresponding period last year.

Table 5.4: Activities at Discount Window

billion Rupees

	No. of visit to discount window			Total amount of discounting			Average per visit		
	FY02	**FY03**	**FY04**	**FY02**	**FY03**	**FY04**	**FY02**	**FY03**	**FY04**
July	11	8	-	75.2	94.2	-	6.8	11.8	-
August	12	2	-	38.9	9.5	-	3.2	4.7	-
September	16	6	-	47.4	40.5	-	3.0	6.7	-
1st Quarter	**39**	**16**	**-**	**161.5**	**144.2**	**-**	**4.1**	**9.0**	**-**
October	25	20	2	107.4	215.0	10.5	4.3	10.8	5.2
November	26	10	1	211.5	103.2	0.4	8.1	10.3	0.4
December	6	2	-	17.3	7.1	-	2.9	3.6	-
2nd Quarter	**57**	**32**	**3**	**336.2**	**325.3**	**10.9**	**5.9**	**10.2**	**3.6**

5.4 Treasury-bill Auctions

As shown in **Figure 5.7**, there was a significant decline in the commercial banks' participation in the primary T-bill market due to: (1) expectations of interest rate rise, (2) higher prevalent term market rates (that implies a low opportunity cost to unsuccessful bidders), (3) banks expected higher returns at end-December 2003 in case SBP is forced to meet a stiff NDA target through OMOs, (4) in 3 auctions there was no rupee injection from maturing T-bills, and (5) the higher spread between the T-bill yields and the discount rate (implying a higher cost to the commercial banks for going short).

On the other hand, the SBP kept its acceptances to very low levels principally to avoid a steep rise in T-bill yields and to halt market expectations of higher interest rates.

5.5 Pakistan Investment Bond (PIB) Auctions

Q2-FY04 witnessed the auction of PIB *Jumbo issue* – an extended issue of bonds with three distinct opening dates, in October, November and December 2003 respectively. This PIB issue effectively: (1) improved liquidity in long-term government securities resulting in improvement in long-term yields, and (2) solved pricing problems arising from very high scarcity premiums. In addition, it will help further develop the government bond market both in terms of size and liquidity.

Furthermore, to facilitate the retail and small institutional investors, mechanism of non-competitive bids in the primary auctions of the PIB was introduced in September 2003. However, the portion of non-competitive bids remained less than 2 percent of the combined sale during Q2-FY04, but it is expected

Figure 5.7: Auction Summary of T-bills

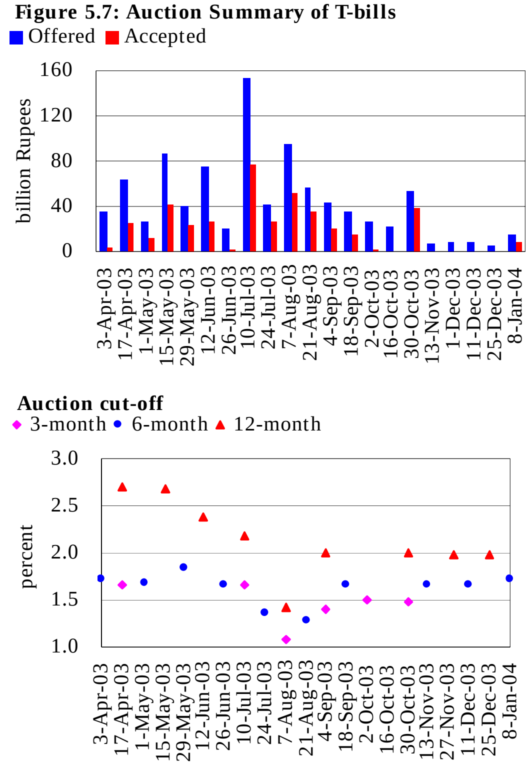
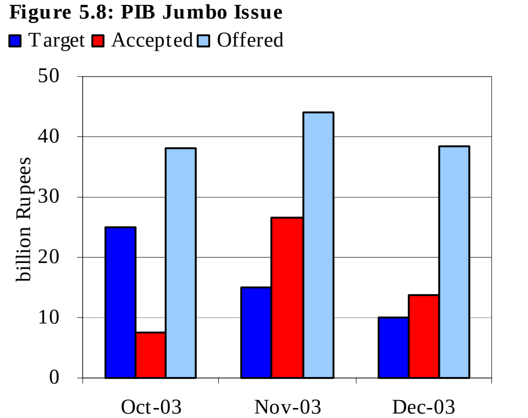


Figure 5.8: PIB Jumbo Issue



that in due course the PDs and other commercial banks would be better able to market non-competitive bids. In addition, the government also made necessary amendments in PIB rules during October 2003 to launch longer maturity PIB (15- and 20-years) in order to extend the yield curve.[5]

The first opening of the jumbo issue in October 2003 generated a lot of interest from the market players, but the quoted yields were too high. The SBP accepted less than one third of the target clearly signaling that market expectations of an interest rate hike were unfounded. As shown in **Figure 5.8**, the acceptances in remaining openings remained higher than the target with the yields remaining stable, and less volatile (see **Table 5.5 & Table 5.6**).

Table 5.5: Volatility in PIB Market Yields (H1-FY04)

Standard deviation (basis points)

	3-year	5-year	10-year
July	18	19	12
August	21	14	15
September	51	49	49
October	6	9	6
November	3	4	2
December	13	17	14

Table 5.6: PIB Jumbo Issue (Q2-FY04)

Acceptance (billion Rupees)	Non competitive	Short selling	Total
October	0.5	0.6	8.7
November	0.2	0.9	27.6
December	0.3	1.8	15.7
Total	**0.9**	**3.2**	**52.0**
	3-year	**5-year**	**10-year**
Cut-off rates (percent)			
October	4.1	5.2	6.3
November	4.1	5.1	6.2
December	3.9	5.0	6.2
Price Range (Rupees)			
October	1.9	4.0	8.6
November	1.3	2.3	2.6
December	0.6	0.9	2.0

[5] The first auction of 15- and 20-year PIBs held in January 2004. The auction resulted in a sale of Rs 2.9 billion for 15-year and Rs 2.6 billion for 20-year PIB at a yield of 7.7 and 8.7 percent respectively.