5 Money Market

5.1 Overview

As shown in **Figure 5.1**, Q1-FY04 witnessed a decisive reversal in the market's interest rate expectations, after a period of relative stability in Q4-FY03. Contributions to this change in market expectations were already visible in Q4-FY03, in the form of the vanishing differential between US dollar and rupee interest rates (see **Figure 5.2**), a fall in the forex market surpluses (implying lower rupee injections through SBP interventions), as well as the unexpected announcement of a large[1] PIB auction in June 2003 (that further drained liquidity from the interbank market).

Figure 5.1: Daily Money Market Rates

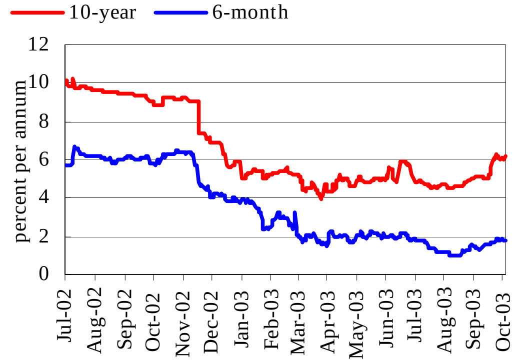
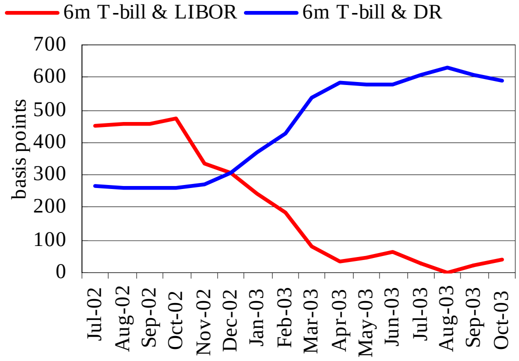


Figure 5.2: Interest Rate Differential



However, initially during Q1-FY04, interest rates remained under pressure amidst a sharp rise in interbank liquidity. In fact, during July and August 2003, the SBP actively sought to support the interbank rates through OMOs and higher targets in some T-bill auctions.[2] The SBP's aggressive interventions in the interbank market as well as the slight rise in the September 18, 2003 T-bill auction acceptance cut off

[1] The Rs 25 billion target announced for the June 2003 PIB auction represented a major departure from the PIB targets since April 2002, which rarely exceeded Rs 5 billion.
[2] In particular, the July 24, 2003 (Rs 25 billion) and September 18, 2003 (Rs 15 billion) auctions were not against any matching maturity.

(reversing a nearly two year-old trend of reductions) were important signals that interest rates had bottomed out.

However, their impact was amplified considerably by the September 18, 2003 announcement of another unexpected (very large and, extended) PIB issue. This "jumbo" issue sought to mop-up a cumulative Rs 50 billion over Q2-FY04, well above the Rs 15 billion PIB issuance indicated in the FY04 budget documents.

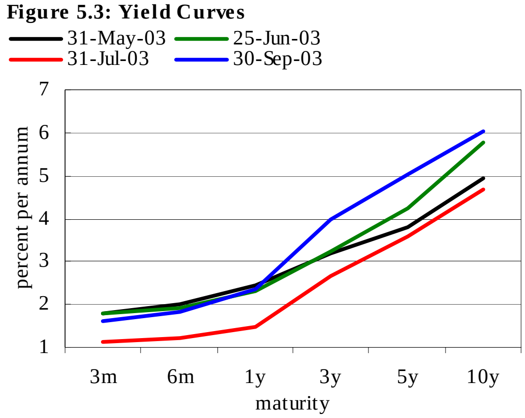
While the PIB is not an instrument for the conduct of the monetary policy, the large issuance nonetheless does impact the interbank market by draining liquidity, and more importantly, through the implicit fiscal policy impact. In particular, the September 2003 announcement together with: (1) the negative 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 expectations of rising demand for liquidity. The impact on interest rate expectations was compounded by the visibly lower remittances and lower SBP forex purchases (which suggested a lower growth in rupee liquidity).

Not surprisingly banks bid substantially higher in succeeding T-bill and PIB auctions, forcing the SBP to dampen the expectations of a sharp rise in interest rates by rejecting higher bids in the primary T-bill market.[3]

5.2 Term Structure of Interest Rates

The changing market dynamics are clearly captured in the movement of the yield curve (**Figure 5.3**). While the unexpected June 2003 PIB auction pushed up long-term yields temporarily, the short-term rates saw little change, resulting in a steeper yield curve. However, the market clearly considered this large PIB auction a one-off event, and therefore, as market liquidity increased the

Figure 5.3: Yield Curves

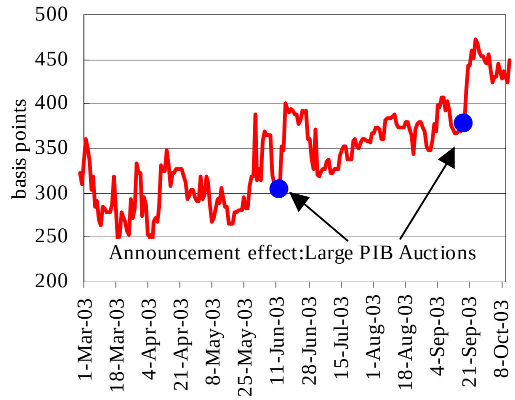


[3] The market view of an increase in interest rates seems to have died out in the beginning of November 2003 (SBP accepted almost Rs 10 billion more than the target at the previous cut-off in the PIB auction) after more than a month in which SBP scrapped a 6-month auction, accepted less than targeted amount in the first tranche of the PIB Jumbo issue.

entire yield curve shifted downwards by July 2003. Significantly, the slope of the yield curve in this period remained higher than in May 2003, probably indicating that the scarcity premium attached to PIB had effectively been eliminated by the large June 2003 PIB issue.

The September 2003 jump in the yield curve is more interesting as it appears to reflect: (1) expectations of a *further* rise in the PIB yields; (2) a stronger jump in the short-term yields; and (3) the rising term premium was not quickly reversed in October 2003. In other words, expectations of higher future interest rates were persisting (**Figure 5.4**).

Figure 5.4: Daily Term Premium



5.3 Trading Volumes

The Q1-FY04 saw an increase in trading activity in all tenors except 6-month T-bill (see **Table 5.1**).

Table 5.1: Secondary Market Trading during Q1

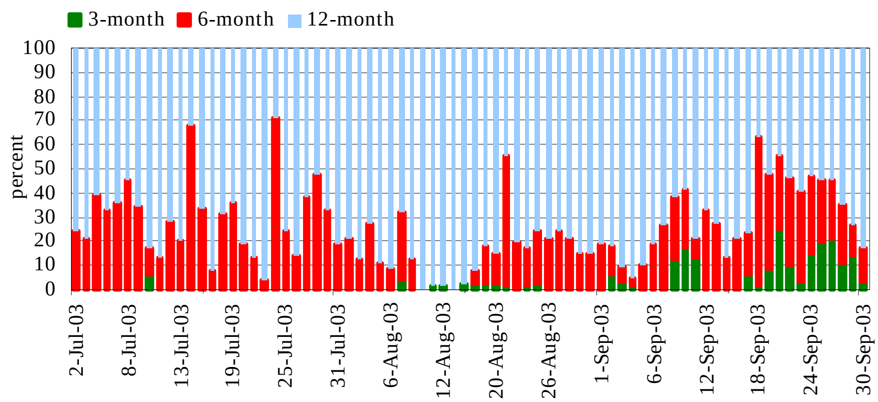
billion Rupees

	3m	6m	12m	PIB	Combined
			FY03		
Total	9.6	817.5	417.9	611.9	1,856.9
Average	0.1	10.6	5.4	8.2	6.1
Max	3.6	33.1	25.4	17.5	33.1
Min	-	2.1	1.3	1.6	-
			FY04		
Total	22.0	256.1	776.9	760.2	1,815.2
Average	0.3	3.4	10.2	10.0	6.0
Max	3.0	34.9	39.8	18.1	39.8
Min	-	-	1.4	4.6	-

As shown in **Figure 5.5**, the increased activity in 3-month T-bills, in particular, simply reflects the renewed issuance in this tenor.[4] On the other hand, the increased trading in 12-month T-bill as well as the lower activity 6-month T-bills during Q1-FY04 relative to the corresponding period of FY03 is largely explained by the change in SBP auction procedure in October 2002, whereby 3- and 12-month auctions held separate from the 6-month paper.

[4] During FY03, the outstanding stock of 3-month T-bills declined almost to zero because, (1) the participation in the 3-month paper was extremely low due to interest rate decline scenario in which market players went for longer-tenor securities to lock in higher returns, and (2) many auctions for 3-month were scrapped by the SBP due to out of the market (speculative) bids.

Figure 5.5: Tenor-wise Shares of Trading Volume



Trading activity in PIBs also increased by Rs 148.3 billion during Q1-FY04 compared with Q1-FY03. This is probably a function of the large end-June 2003 auction as well as the general expectations of the rise in interest rates. The former was considered a one-off event, and some banks therefore took advantage of the temporary jump in yields to book trading gains. This activity again gained pace as interest rates firmed up in September 2003.

5.4 SBP Market Support and Rupee Interventions

During Q1-FY04, OMOs were frequently conducted in order to manage the money market liquidity, in sharp contrast to the situation in FY03.

In fact, in preceding quarters, SBP had deliberately kept the market liquid in order to pressure bank lending rates. However, after these had declined to historic lows, SBP sought to stabilize these rates at (slightly higher) sustainable low levels during Q1-FY04.

Table 5.2: Open Market Operations

billion Rupees

	Injection			Absorption		
	FY02	**FY03**	**FY04**	**FY02**	**FY03**	**FY04**
July	1.1	51.7	-	22.1	12.0	41.5
August	10.7	-	-	7.5	-	8.0
September	49.3	-	-	4.0	16.9	76.0
Total	**61.0**	**51.7**	-	**33.6**	**28.9**	**125.5**

Thus, in the face of strong market liquidity during the initial months of the quarter, the SBP increased its OMOs to mop-up the excess liquidity (see **Table 5.2**). In addition, the OMOs were supplemented by the absorption of Rs 29.9 billion through the swap window during Q1-FY04.

The liquidity comfort is evident from **Table 5.3**, which shows that the market didn't need the lender of the last resort facility throughout Q1-FY04, compared with relatively heavy reliance witnessed in the *first quarters* of the previous fiscal years.

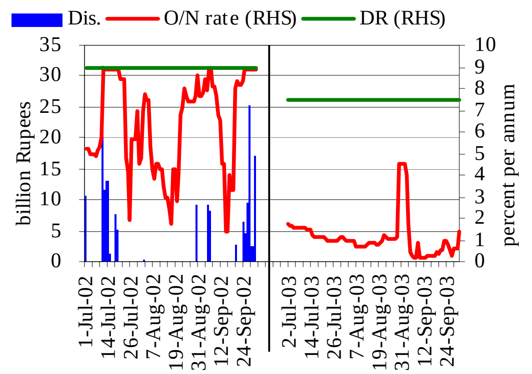
Table 5.3: Activities at Discount Window

billion Rupees

	No. of visit			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	87.5	-	3.0	14.6	-
Quarterly	**39**	**16**	**-**	**161.5**	**191.2**	**-**	**4.1**	**11.9**	**-**

As shown in **Figure 5.6**, the level of overnight rates remained significantly low during Q1-FY04, rarely rising above the 2 percent levels. This is in sharp contrast to the comparable period of FY03 when overnight rates rarely dropped below the 4 percent level, and had also witnessed episodes of discounting.

Figure 5.6: Discounting and Overnight Rates



5.5 Treasury-Bill Auctions

Interest in primary auctions of T-bills has witnessed a substantial surge since FY02. The rise in auction bids mainly reflected unprecedented market liquidity amidst an exceptional growth in banking sector deposits, while acceptances also rose sharply (largely because the SBP sought to sterilize reserve money growth by shifting its holdings of government paper to the commercial banks). This trend continued into Q1-FY04; the amounts accepted during the quarter were higher than in Q1-FY03, which in turn was three times the figure for Q1-FY02 (see **Table 5.4**).

Within Q1-FY04, however, there is a visible decline in the bid amounts in every successive month (see **Figure 5.7**), clearly reflecting the declining market liquidity due to market developments as well as higher OMO absorptions (and possibly a shift of funds towards the longer-term securities).

Figure 5.7: Auction Summary of T-bills

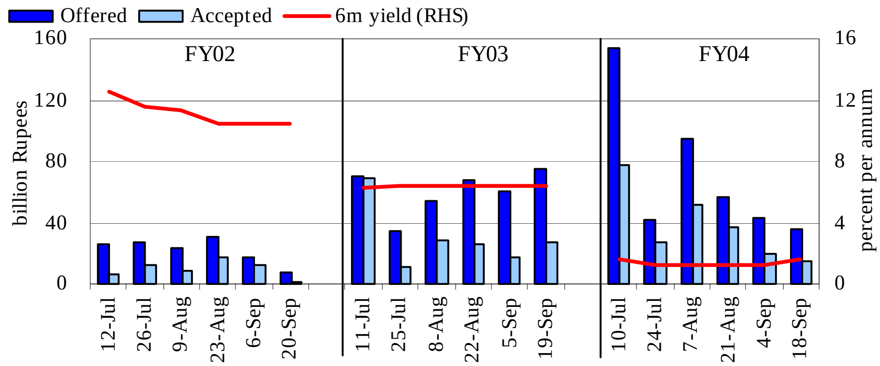


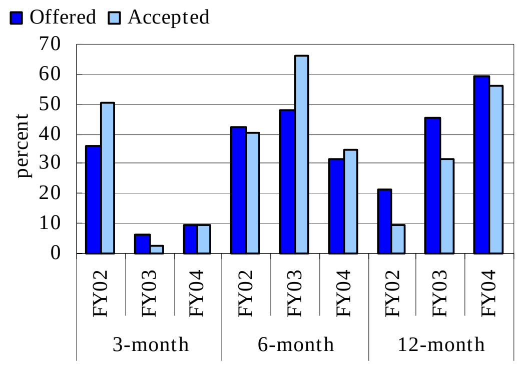
Table 5.4: Treasury bill Auctions Summary

Instrument	Q1	**Amount** (billion Rupees)		Percent	**Spread** (in percent)		W.A.
		Offered	**Accepted**	**accepted**	**Simple**	**% of Yield**	**yield**
	FY02	48.0	30.8	64.1	0.83	0.08	10.9
Three-month	FY03	24.0	4.3	17.9	0.09	0.02	5.8
	FY04	41.1	22.0	53.5	0.61	0.46	1.3
	FY02	56.8	24.3	42.8	0.36	0.03	11.0
Six-month	FY03	174.8	118.7	67.9	0.20	0.03	6.4
	FY04	133.7	78.4	58.6	0.26	0.19	1.3
	FY02	28.8	5.6	19.4	0.31	0.03	11.2
Twelve-month	FY03	164.3	56.8	34.5	0.27	0.04	6.9
	FY04	251.1	127.0	50.6	0.34	0.19	1.8
	FY02	133.6	60.7	45.4	-	-	-
Combined	FY03	363.1	179.8	49.5	-	-	-
	FY04	425.9	227.3	53.4	-	-	-

A view of the T-bill auctions by maturity tenor also offers interesting insights on the market expectations. Specifically, **Figure 5.8** depicts the considerable fluctuations in interest in various tenors of T-bills during the *first quarters* of three years.

The share of bids (and acceptance) in 3-month paper dropped significantly in Q1-FY03, which appears to be consistent with the stronger decline in interest rates in that year, which would have to raise longer-tenor instruments. Correspondingly, the small rise visible in the share of 3-month T-bills during Q1-FY04, appears to reflect the expectations of a rise in interest rates. In theory, the latter would also have been expected to lead to lower interest in 1-year T-bills, but this is not evident in Q1-FY04.[5]

Figure 5.8: Tenor-wiswe Share of T-bills (Q1)



5.6 Pakistan Investment Bond (PIB) Auctions

During Q1-FY04, there was no fresh issuance in the primary market of PIB. However, there were certain developments during Q1-FY04, relating to these bonds that had significant impact on the primary and secondary markets.

As discussed in earlier SBP reports, the secondary market development for PIBs was not satisfactory. Therefore, in a bid to resolve these problems, the SBP revised the PD rules in July 2003.

Table 5.5: List of Primary Dealers for FY04

S. No.	Name of Institution
1	ABN Amro Bank N.V
2	American Express Bank Limited
3	Bank Alfalah Limited
4	Citibank N.A.
5	Habib Bank Limited
6	Jahangir Siddiqui & Co Limited
7	National Bank of Pakistan
8	Pak Oman Investment Company Limited
9	Standard Chartered Bank
10	Union Bank limited
11	United Bank Limited

The major changes made in the rules were: (1) brokerage houses are also allowed to become PD, in hopes of increasing competitive pressures and to aid the development of the secondary market for PIBs, (2) retail investors were allowed to buy PIBs through non-competitive bids,[6] and (3) pass-through bids have been disallowed by asking PDs to take PIBs on their books before any subsequent secondary market sale, in order to encourage

[5] One possible explanation is the fewer auctions for 6-month paper held during Q1-FY04.

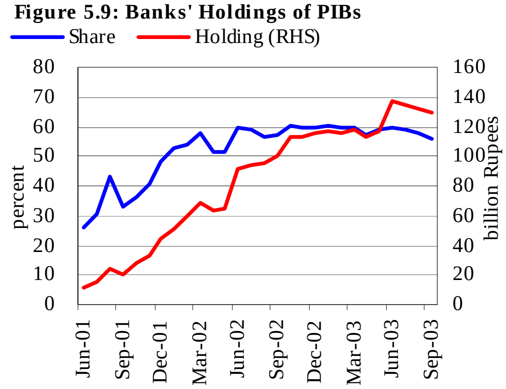
[6] Furthermore, the SBP has also tried to facilitate the retail and small institutional investors by introducing non-competitive bids in the primary auctions of the PIB in September 2003. The following modus operandi has been laid down for tender/acceptance of non-competitive bids:

1. The non-competitive bids will be sent to SBP separately from the normal bids before auction time with the name and amount of investors without quoting price through primary dealers.
2. Investors will be allowed to submit one bid in a single tenor.
3. The non-competitive bid(s) will be accepted at weighted average yield in each tenor.

an improvement in marketing efforts. Following the revisions of rules, new PDs were appointed in August 2003 (see **Table 5.5**).

Furthermore, in September 2003, the government announced a Jumbo issue of PIBs worth Rs 50 billion. The issue gave the following schedule of auctions; Rs 25 billion in October, Rs 15 billion in November and Rs 10 billion in December. In addition, the coupon rates were also adjusted downward in order to facilitate pricing. Specifically, a one-percentage point cut was announced in each tenor.

Figure 5.9: Banks' Holdings of PIBs



The respective coupon rates for 3-, 5-, and 10-year were set at 6, 7 and 8 percent respectively.[7] The prospects of an ample supply of PIBs helped reduce the scarcity premium attached with the instrument. However, more interesting development was the change in banks' interest in these instruments. As expectations of an interest rate hike took hold, banks' holdings in PIBs also declined during Q1-FY04 (see **Figure 5.9**). This is a long awaited and welcome change and is likely to improve the commercial banks' risk profile.[8]

4. In case of over-subscription, non-competitive bids will be accepted in order of lowest to highest amount. For each non-competitive bid there will be a ceiling of Rs 10 million.

[7] The government has also made necessary amendments in PIB rules during October 2003 in order to launch PIB of longer maturities of 15- and 20-years.

[8] SBP repeatedly used moral suasion for the last two years, in order to persuade banks to lower their respective holdings of PIBs to reduce risk of capital losses in the event of a reversal in long-term interest rates.