

7 STABILITY ASSESSMENT OF FINANCIAL MARKETS

Efficient, deep and liquid financial markets are inextricably linked to the stability of the financial system, in their role as conduits of monetary policy signals and facilitators of liquidity management and risk positions. An illiquid and shallow money market can lead to the inability of a financial institution to fund even short-term liquidity requirements, an occurrence most recently witnessed in the ongoing global financial crisis, when inter-bank markets literally froze and market liquidity dried up (**Box 7.1**), thus creating threats to the stability of the financial system when potential risks were actually realized.

In contrast to developments in the global financial markets, financial markets in Pakistan continue to provide requisite support to stakeholders and market participants, and contribute to the stability of the financial system. This chapter discusses the functioning and stability of the money market, the foreign exchange market, the derivatives market and capital markets during FY08 and the first few months of FY09, as key components of the financial sector.

To give an overall perspective, FY08 represented a marked difference from FY07 in terms of the composition of the funds driving both the money and foreign exchange markets. Whereas FY07 had substantial inflows of both domestic and foreign liquidity, i.e. high Net Foreign Assets (NFA) with a reasonable level of Net Domestic Assets (NDA), posing the need for sterilization, FY08 had a heavier component of NDA due to the substantially higher government borrowings from the central bank, and rapidly declining NFA (**Table 7.1**) which caused liquidity strains in both the money and foreign exchange market, in particular from November FY08 onwards. The ensuing operating environment proved to be a challenge for the central bank and market participants.

7.1 Money Market

The Money Market – conventionally defined as the market for short term debt funding for financial and non-financial corporations – performs some vital economic functions, the thrust of which is defined by the central banks’ monetary policy stance. It represents the first stage of the monetary transmission channels,

Box 7.1 : A Black Swan in the Money Market

Stress and strain in the inter-bank market, which effectively started on August 9, 2007,¹ continued to persist in the subsequent months. While there was some easing off in the early part of 2008, the events of September 2008 in global financial markets exacerbated the process even more.¹ This remarkably unusual tumultuous period was termed as a “Black Swan” event by Taleb (2007). This chain of events took place despite continued efforts by the Federal Reserve and other leading central banks to provide continued liquidity support to financial institutions and markets which included the provision of unorthodox lender of last resort facilities in case of Bear Stearns and AIG, in addition to measures such as the announced conservatorship for Fannie and Freddie Mac, and recapitalization efforts by banks around the globe.

The unfolding of the sub-prime crisis which first led to bewilderment among market participants, was followed by the swift realization that the markets for structured debt instruments could substantially fall in value, which led investors to quickly shed these investments, and the ABCP (Asset-backed Commercial Paper) market started to dry up. As valuations became uncertain, banks started to hoard liquidity, and no longer trusted the participants in the inter-bank market to honor their obligations, thus leading to *counterparty* risk. Two concerns emerged : (a) about the financial health of counterparties in the inter-bank market, particularly banks, as marked to market losses eroded capital, and (b) banks were reluctant to lend to each other due to the fear and uncertainty about the location of the newly disclosed losses on subprime mortgages. Another related concern was that in future, the process of securitization would proceed at a much slower pace than in the past, thus requiring re-intermediation that would result in a more rapid expansion of banks’ balance sheets and an associated need for capital. These two concerns led to a significant increase in interest rate spreads and to a decline in the liquidity of short-term bank funding markets in many countries.

Source : A Black Swan in the Money Market (2008), Taylor and Williams, NBER Working Paper 13943

where monetary policy actions first come in contact with the rest of the financial system and the entire economy.

SBP has been in a monetary tightening mode since FY05. Tight monetary conditions since then at first had a fair degree of success in arresting the non-food-non-energy component of inflation more effectively, besides anchoring inflation expectations. However the downturn in inflation seen up to May FY07 saw a reversal in subsequent months, and inflation surged to record high levels in FY08 and the initial months of FY09. Consequently, monetary tightening was more aggressively implemented, as SBP made use of both the discount rate and reserve requirements (Table 7.2) to drain excess liquidity from the market, in addition to daily liquidity management by conducting OMOs. As opposed to FY07 when the policy rate was raised only once by 50 bps to 9.5 percent, persistently rising and unrelenting inflationary pressures led SBP to raise the policy discount rate on 3 occasions in FY08, by a total of 250 bps to 12.0 percent, in addition to draining liquidity from the market with an increase in the CRR and SLR of 200 bps and 100 bps respectively.¹

Table 7.1: Monetary Indicators

	billion Rupees		
	Flows		
	FY07	FY08	FY09*
M2	658.2	623.9	-94.0
NDA	383.7	941.3	252.4
Government borrowing	92.8	583.8	211.5
For budgetary support	102.0	554.6	206.7
SBP	-58.6	688.7	376.3
Scheduled banks	160.6	-134.1	-169.6
Commodity operations	-9.21	28.65	6.6
Non-Government Sector	385.7	441.7	188.1
Private sector	365.7	408.4	136.6
Credit to PSEs	19.7	33.0	51.6
OIN	-94.8	-84.1	-147.2
NFA	274.5	-317.4	-346.4
SBP	222.7	-308.0	-320.0
Scheduled banks	51.85	-9.4	-26.4

*Upto November 15
Source: SBP Database

Table 7.2: Phases of Monetary Tightening

	Policy Rate		Cash Reserve Requirements				Statutory Liquidity Requirements			
	Rate	Change (bps)	Time Liabilities	Change (bps)	Demand Liabilities	Change (bps)	Time Liabilities	Change (bps)	Demand Liabilities	Change (bps)
FY05- w.e.f. 11-Apr-05	7.5		5		5		15		15	
	9	+150								
FY07- w.e.f. 22-Jul-06	9.5	+50	3**	-200	7*	+200	18	+300	18	+300
			0	-300						
FY08- w.e.f. 1-Aug-08	10	+50								
					8	+100				
2-Feb-08	10.5	+50								
23-May-08	12	+150								
24-May-08					9	+100	19	+100	19	+100
30-Jul-08	13	+100								
FY09- w.e.f. 18-Oct-08					6	-300	0	-1900		
					5	-100				
1-Nov-08										
15-Nov-08	15	+200								

Note : CRR is on weekly average basis, subject to a daily minimum requirement

*including Time deposits with tenor less than 6 months, revised to 1 year w.e.f. October 4, 2007

**Time deposits with tenors of 6 months and above

In FY09 so far,² there have been two rounds of increase in the discount rate, by 100 bps, and 200 bps respectively to 15.0 percent, whereas CRR and SLR requirements were eased off to help

¹ These measures also included a revised definition of TDL (time and demand liabilities) on which the reserve requirements are based, such that time liabilities for 1 year tenor were exempted from CRR requirements. This step was aimed at incentivizing banks to mobilize long-term deposits.

² i.e. Upto November 12, 2008.

banks in overcoming a temporary liquidity crunch in October FY09.³ These measures were complemented by an additional step which requires banks to ensure that their Advances to Deposit Ratio (ADR) does not exceed 70 percent.⁴

Dynamics of liquidity during the year were driven by various factors which changed course as the year progressed. Monetary tightening measures implemented in August FY08 were due to the overhang of foreign inflows in the last two weeks of FY07.⁵ This helped in curbing monetary pressures during Q1-FY08 as it led to an increase in real interest rates and a deceleration in monetary growth. Until that time, government borrowing was largely on track, and various indicators showed that the monetary transmission mechanism was working.

However, government borrowing increased substantially in Q2-FY08, which led to a softening of interest rates while pushing up M2 growth. This led the central bank to increase the discount rate by 50 bps in January FY08 to contain the persistent demand pressures in the economy. However, a simultaneously occurring chain of events which included rising food and oil prices, heavy reliance on the central bank for budgetary financing and widening macroeconomic imbalances, rendered this policy measure insufficient. Still more aggressive measures were taken in May FY08, which were primarily targeted at restoring macroeconomic stability in response to unprecedented pressures in the economy, dilution of the monetary stance due to excessive government borrowing, and the rapid depreciation of the exchange rate against the US\$ due a consistent decline in the NFA of the banking system.

Table 7.3 : Net outflows through OMOs and Auctions

billion Rupees

	Auctions		OMOs		Total outflow
	Maturity	Net Acceptances	No.	Net Absorption	
H1	268.4	76.5	39	594.1	670.6
H2	519.2	-211.5	48	420.2	208.7
FY08	787.6	-135.0	87	1,014.3	879.3
FY09*	523.0	-110.2	45	30.1	-80.1

Source: SBP Database

*upto October, 2008

SBP's active intervention in the inter-bank market during FY08 supported the process of liquidity management for the market participants. As shown in **Table 7.3**, there was excess liquidity in the system in H1-FY08, when SBP accepted amounts in auctions over and above the MTB maturities, in addition to higher net absorptions in OMOs. Liquidity strains appeared more markedly from February FY08, and subsequently net acceptances (over and above maturing T-bills) were negative in H2-FY08, as for the whole year in aggregate. This trend continued in the first few months of FY09.

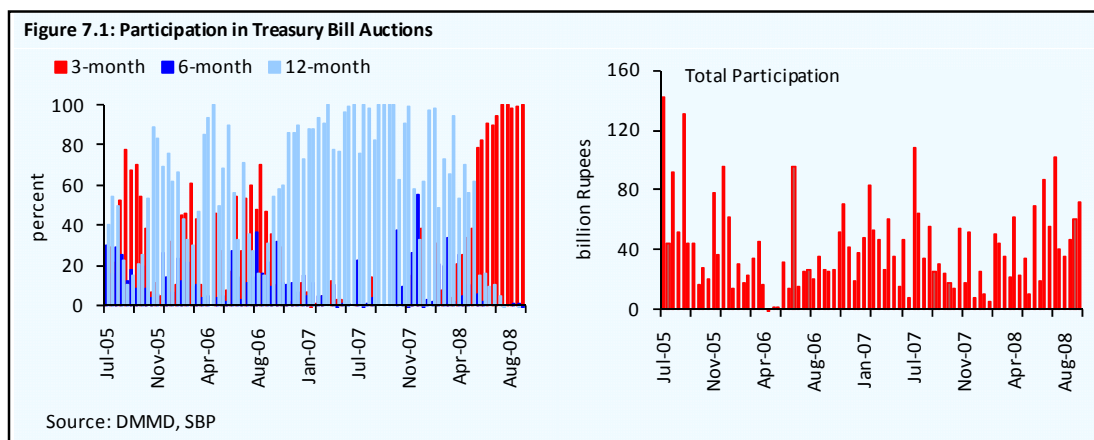
The inability to roll over MTB maturities also reflects varying perceptions and expectations of the market participants. In the first half of FY08, banks generally had the view that interest rates had peaked and in order to lock-in higher rates, they offered more funds in longer-tenor papers in the MTB auctions (**Figure 7.1**). However SBP's continued monetary tightening to check rising inflation led to a situation where banks started to take short term views of the market, in anticipation of further increase in interest rates, and showed less interest in long term paper. This view changed more markedly subsequent to the tightening measures implemented in May FY08, though there was some interest shown in shorter-tenor paper on sporadic occasions during the year. Auctions in Q1-FY09 and subsequent months show the complete concentration of bids in 3-months MTBs.

³ BSD Circulars No. 25 and 27, dated October 17, 2008.

⁴ BSD Circulars No. 27 dated October 17 and No. 28 dated October 26, 2008.

⁵ Monetary Policy Statement, July-December FY09, State Bank of Pakistan.

Moreover, the fact that banks started to experience liquidity shortages is evident from the declining pattern in the level of CRR and SLR (Figure 7.2) maintained in excess of the required amount, such that the gap between the level required by SBP and that maintained by banks almost converged in October FY09. Difficulties in liquidity management were also reflected in the rising volumes in the call money market, as banks ran short of securities used to conduct repo transactions for liquidity management, and also resorted more frequently to the discount window.



Given the subdued response to the MTB auctions as shown by the total participation in FY08 in comparison with the previous year, the central bank concentrated on liquidity management through OMOs as the main tool of monetary management, conducting both mop-ups and injections as detailed in Table 7.4, which shows that the number and amount of mop-ups far exceeded the frequency and amount of injections, due to the need to sterilize liquidity generated by excessive government borrowing, and the leftover amount from auctions.

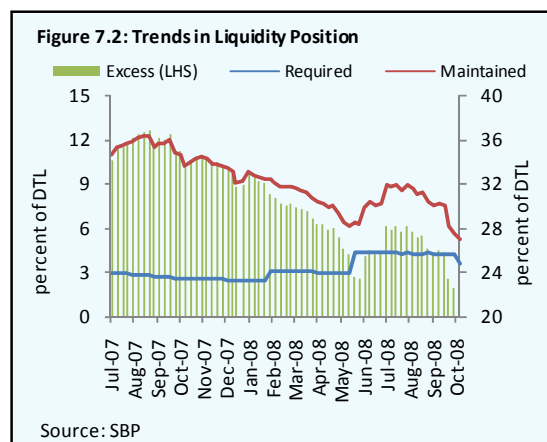


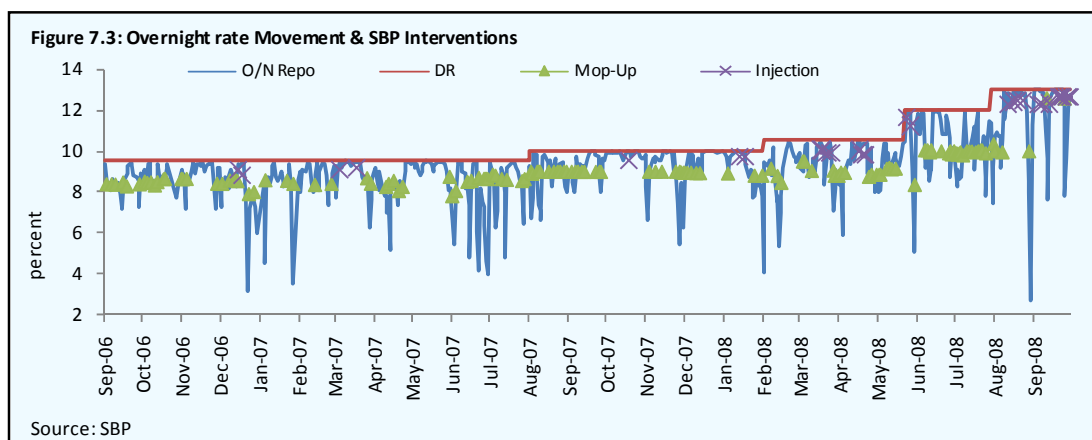
Table 7.4 : OMOs Conducted
billion Rupees

		H1-FY07	H2-FY07	H1-FY08	H2-FY08	Q1-FY09	Q2-FY09*
Mop-Ups	Frequency	40	24	38	33	19	2
	Volume	566.7	329.3	633.0	508.6	348.8	36.0
Injections	Frequency	4	2	1	11	12	8
	Volume	47.0	25.0	40.9	191.4	254.6	187.3
Outright	Frequency	7	6	2	6	4	0
	Volume	19.7	20.2	2	42.0	87.2	0

Source: SBP, * Upto October 2008

Notwithstanding, there was a variability in the OMO pattern during FY08, which witnessed a higher frequency of interventions in H2-FY08, coupled with higher amounts per intervention, in comparison with both H1-FY08 and FY07. The liquidity position started to tighten more visibly from Q2-FY08. In the first half of FY08, mop-ups dominated SBP interventions on account of surplus liquidity, while in the second half, frequency of injections increased, from only a single

injection in H1-FY08 to 11 in H2-FY08, as the market remained short of liquidity on various occasions. Injections have also been more frequently made so far in FY09. To mop up excess liquidity, outright OMOs have also been conducted since FY07, which has helped in transferring government borrowing from SBP to the banking system.



Liquidity management through OMOs mainly focused on the short-end of the yield curve by mopping up surplus liquidity to keep the O/N rate range-bound. Improvements in SBP liquidity forecasting and operational framework have reduced the volatility of short-term rates, in comparison with previous years (**Table 7.5** and **Figure 7.3**).

While prudent liquidity management in FY07 had enabled SBP to reduce the volume of discounting by banks and curtail the number of visits to the discount window, a different picture emerged in FY08, wherein the volume of discounting almost tripled as compared to FY07, due to the liquidity strains referred to earlier (**Table 7.6**). Incidentally, most of the discounting took place during Q2-FY08 with banks availing around 57.0 percent of the total discounting in the year. This phenomenon is attributed to the maturity mismatches in the short term cash flows of banks, mainly due to their heavy investments in longer tenor government securities. Increase in the frequency of discounting also indicates lack of adequate liquidity in the inter-bank market.

7.1.1 Interest Rate Dynamics

Major financial market participants with a temporary surplus or shortage of funds use the overnight market to lend or borrow amongst themselves until the next business day. The interest rate at which these transactions occur is referred to as the overnight rate and it is through its influence on the level of this rate that SBP implements its monetary stance. As part of the transmission mechanism for monetary policy, changes in SBP's policy discount rate influence other interest rates and the exchange rate, leading to changes in asset prices, aggregate demand,

Table 7.5 : OMOs and Volatility in Overnight rates

	billion Rupees			
	OMOs		Overnight Rates	
	No.	Net Absorption	Average	Coeff. Of Variation
FY05	51	567	3.76	0.65
FY06	94	214	7.87	0.14
FY07	69	864	8.55	0.13
FY08	87	1014.3	9.48	0.11
FY09*	45	30.09	10.93	0.15

Source: SBP

*upto October 17 2008

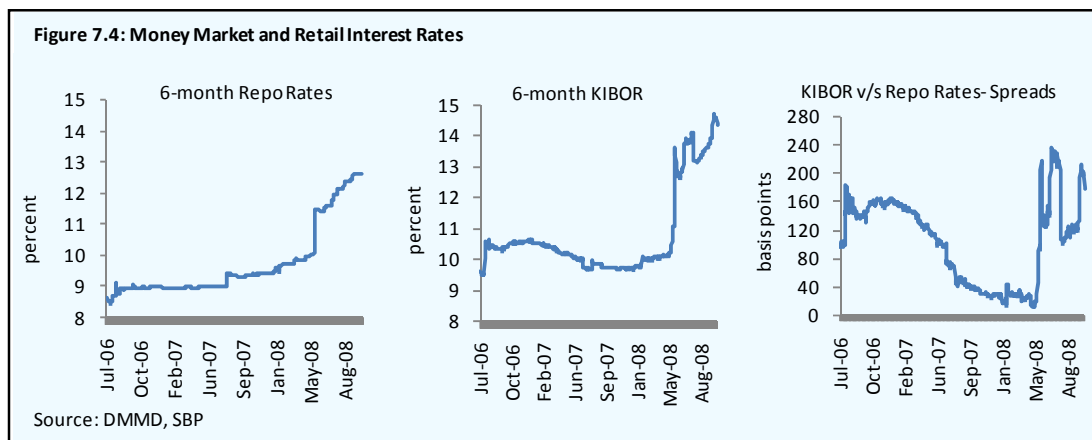
Table 7.6: Discount Window Facility

	billion Rupees			
	FY06	FY07	FY08	FY09*
Local Banks	517	609	1,925	299
Foreign Banks	183	57	33	2
Others	62	21	14	3
Total Volume	762	687	1,973	305
Frequency (in Days)	125	74	137	23

Source: SBP

*Upto October 2008

the output gap and eventually inflation. As a result, the efficiency of the overnight market is of particular interest in assessing the effectiveness of the monetary transmission mechanism.⁶



Monetary tightening in FY08, the impact of which was largely diluted by the excessive liquidity in the market resulting from government borrowing from the central bank, had a varying degree of impact on KIBOR, the benchmark rate on which lending decisions are based. These trends to a large extent signified a weakening of the monetary transmission mechanism as KIBOR actually showed softening up to Q3-FY08 (**Figure 7.4**), and then started to inflate subsequent to the tightening measures implemented in May FY08 (**Box 7.2**). This is particularly obvious from the erratic pattern in the spread between 6-month KIBOR and the repo rate from May FY08 onwards.

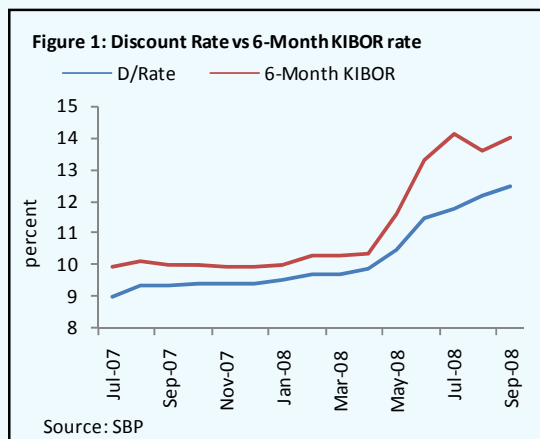
Box 7.2: Trends in KIBOR

The Karachi interbank offered rate (KIBOR), the daily rate setting process of which is based on the lending among banks, serves as a benchmark for a broad spectrum of borrowers. Movements in KIBOR are driven largely by the risk premium associated with credit availability, liquidity position in the market and changes in the discount rate.

The average spread between the 6-month KIBOR and the discount rate showed a disconnect from market fundamentals in the last quarter of FY08, reaching a historic level of 169 bps compared with 21 bps for FY06, and 90 bps for FY07. SBP made several attempts to assuage conditions in the money market, which included moral suasion and liquidity management in the interbank market. These efforts resulted in narrowing the spread to a greater extent, especially subsequent to the 100 bps increase in the discount rate w.e.f. July 30, FY09, after which the average spread reduced to 47 bps.

Despite the increase in the discount rate by 100 bps since July FY09 and the increase in the MTB cut-off rates in subsequent auctions, the declining trend in KIBOR depicts a correction of the already inflated rates

which was mainly caused by the liquidity strains prevalent in the money market during Q4-FY08, coupled with market expectations of another increase of 150-200 bps in discount rate in the Monetary Policy Statement (MPS) for H1-FY09. However, after the announcement of the MPS and increase in DR of only 100 bps, the market corrected its earlier stance and the spread between KIBOR and the discount rate converged to traditionally sustainable trends.



Having given this overview of the dynamics of the money market, the next two sections discuss the functioning of the primary and secondary market for government securities.

⁶ Based on the discussion in “The Canadian Overnight Market: Recent Evolution and Structural Changes”, Bank of Canada Review 2007.

7.1.2 Primary market for Government Securities

The Government has two primary instruments of raising funds in the wholesale market: Market Treasury Bills (MTBs) with tenors of 3, 6 and 12 months, and Pakistan Investment Bonds (PIBs) with tenors of 3, 5, 10, 15, 20 and 30 years. This section discusses the primary market of government securities, auctions of which are held by SBP in its capacity as the Government's agent for debt management. Incidentally, the government also has recourse to direct borrowing from the central bank in the form of special 6-month treasury-bills (MRTBs) that are created on demand.

Table 7.7: Market Treasury Bills Auctions Profile

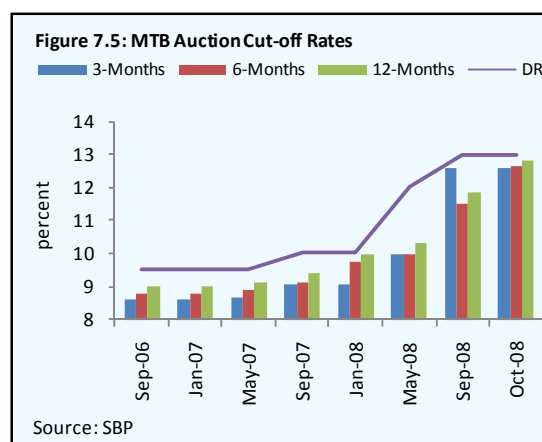
billion Rupees

		FY07			FY08			FY09*		
Type	Maturity	Accepted	Variance	Maturity	Accepted	Variance	Maturity	Accepted	Variance	
3-M	135.3	136.1	0.8	48.2	136.7	88.5	259.8	405.4	145.6	
6-M	51.6	90.4	38.9	77.7	76.0	-1.7	37.3	0.8	-36.5	
12-M	458.7	661.8	203.1	661.8	440.0	-221.8	225.9	6.6	-219.3	
Total	645.6	888.3	242.7	787.6	652.6	-135.0	523.0	412.8	-110.2	

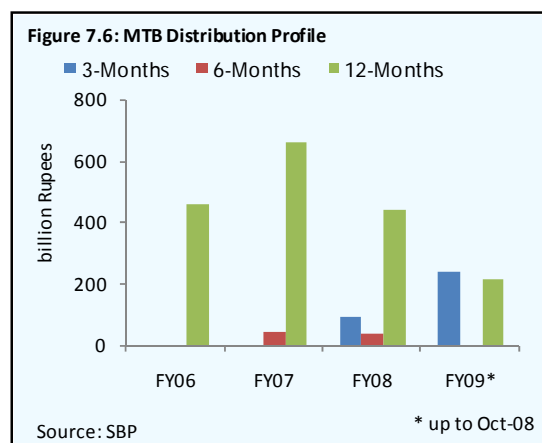
Source: SBP

*upto October 2008

Participation in MTBs auctions was largely lackluster during FY08, in comparison with FY07. Banks were reluctant in offering heavy amounts in the auctions conducted, especially since Q2-FY08, given their perceptions of further increase in interest rates and liquidity constraints caused by FX related outflows, increase in reserve requirements, and slower growth in their deposit base. SBP, on the other hand was focused on curtailing inflationary pressures by increasing the policy discount rate three times during the year, followed by increased cut-off rates in subsequent auctions. This did not, however, induce the market to bid aggressively in auctions, especially in longer tenor instruments. As a result, the amount accepted net of maturities remained negative as shown in **Table 7.7**.



Cut-off rates in the past one and one half year have seen a major shift in line with market conditions. As a result of the increases in the discount rate, the cut-off rates for various tenors of MTBs were also raised by 232 bps, 235 bps and 233 bps for 3-months, 6-months and 12-months MTBs respectively, since August FY08. However, most of the increase was observed after the third hike in the discount rate in May FY08: of 144 bps, 154 bps and 140 bps for 3, 6 and 12 months respectively (**Figure 7.5**).



The trend in the MTB distribution profile also changed in line with market conditions, as discussed earlier, as a result of the shift in interest rate perceptions from *stable* in FY07 to *rising* in FY08, which led to an increase in investments in short-tenor instruments (**Figure 7.6**).

In the earlier estimates for FY08, the Government had planned to raise part of its financing requirements through MTBs, along with rolling over all the maturities during the year. This was intended to decelerate the alarming growth in the reserve money. However, since Q2-FY08, government's borrowing needs increased due to increase in oil and food prices, and there were rising liquidity constraints in the system due to NFA outflows. The bulk of government's financing requirements – arising mainly from subsidies provided for various sectors – were financed through borrowing from SBP, as reflected in the record high stock of MRTBs (**Table 7.8**).

Incidentally, GoP's borrowing stance had changed considerably in FY07, as a healthy part of its financing needs were met by raising funds through PIBs, the issuance of which was resumed in FY06 after a long pause. However in the 7 PIB auctions conducted in FY08, Rs. 73.6 billion was raised against the target of Rs. 100.0 billion. Despite the shortfall, banks did show interest in all the tenors offered, with high concentration in 5, 10 and 30 years. Not only were there new issues, but previous issues were also re-opened in these auctions, which helped in increasing the average size of the issuances while supplementing liquidity in the secondary market for PIBs, which remained illiquid during FY04-FY06, making the yield curve non-representative. Borrowing through PIBs also helped the government in diversifying its debt portfolio and increase its duration. However, due to liquidity constraints, market participants remained reluctant in offering higher amounts in PIB auctions. On the other hand, various types of trust funds and corporate entities invested in all the tenors offered by the government with high concentration in 10-year PIBs, which remained the most preferred instrument of the market with 62.0 percent share in the total outstanding portfolio. Other longer tenor PIBs (15, 20 and 30 years) also attracted handsome amounts in FY07 and FY08 (**Table 7.9**).

Table 7.8: MTB Replenishment Data

billion Rupees			
Date	Amount	Increase/Decrease in MRTB Stock	Excess Borrowing from the market
FY05	325	128	115
FY06	508	183	3
FY07	452	-56	242
FY08	1,052	600	-135
FY09*	1,291	239	-110

Source: SBP * up to October 18, 2008

Table 7.9: PIB Auctions

billion Rupees		3-Years	5-Years	7-Years	10-Years	15-Years	20-Years	30-Years	Total
FY06	Matured	9.7	5.3						15.0
	Accepted	3.2	4.6		3.4				11.2
	Variance	-6.4	-0.7		3.4				-3.7
FY07	Matured	14.5	24.7						39.2
	Accepted	10.9	10.2		30.2	9.3	11.3	16.1	87.9
	Variance	-3.7	-14.5		30.2	9.3	11.3	16.1	48.7
FY08	Matured	0.1	14.4						14.5
	Accepted	5.2	10.8		23.9	8.6	9.1	16.1	73.6
	Variance	5.1	-3.6		23.9	8.6	9.1	16.1	59.1
FY09*	Matured		16.2						16.2
	Accepted	0.2		0.2	0.7	0.1		2.5	3.6
	Variance	0.2	-16.2	0.2	0.7	0.1		2.5	-12.5

Source: SBP

* upto October 27, 2008

The outstanding stock of PIBs increased from PKR 352.52 billion as of end-June FY07 to PKR 411.63 billion by end-June FY08. This healthy trend in the PIB primary market, if continued, will not only improve liquidity in the secondary market and make the rates more representative of market conditions, but will also help SBP in reducing the stock of MRTBs to ease the pressure on reserve money growth (**Figure 7.7**).

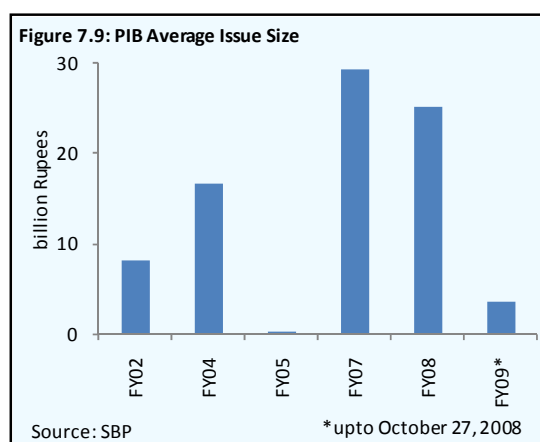
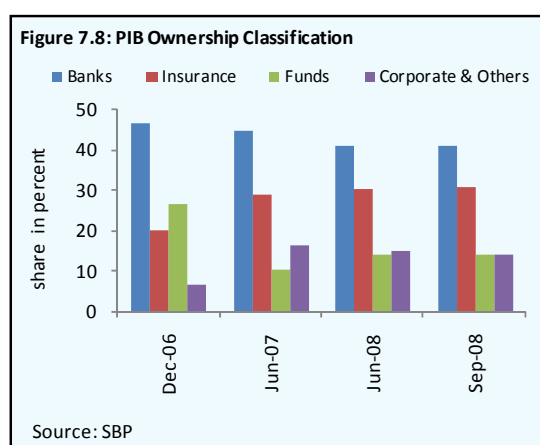
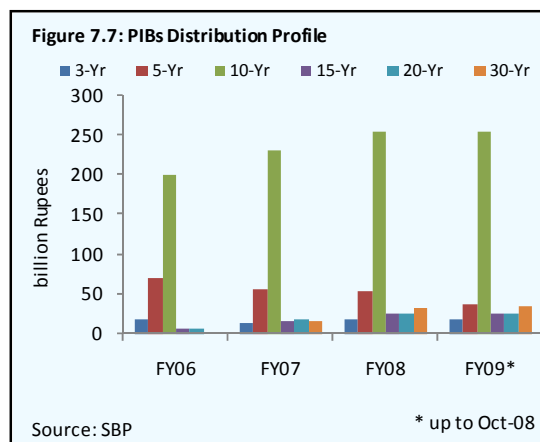
An encouraging trend in the ownership classification of the outstanding PIB portfolio is the growing interest of the non-banking sector in the PIB market. Classification of PIBs' investor base suggests that the share of the banking sector is declining gradually, whereas the share of the non-banking sector is rising (**Figure 7.8**). PIB holdings of the banking sector declined to 40.0 percent by end-August FY09, from 57.0 percent at the end of FY04. Funds and insurance companies maintained their interest in PIBs of 15, 20 and 30 years maturities while banks mainly invested in shorter tenors, which reflect their awareness of the associated interest rate risk. The growing interest of the corporate sector in PIB primary issuance, along with increasing outstanding PIB portfolio, not only ensures healthy secondary market activity in the instrument, but also indicates a diversification in its investor base.

Another healthy trend in the PIB market, as mentioned earlier, is the growing size (**Figure 7.9**) of its issues, which was below Rs 10.0 billion per issue during FY00-FY02. With the flotation of jumbo issues in May FY06, the government bond market has become relatively more liquid. Re-opening of previous issues which started in FY07 has also helped in increasing the average size of the issues. As a result of the enhanced size of issues, the secondary market trading has improved while the yield curve has become more representative of market conditions (**Figure 7.10**). Aggressive participation of investors in the last few PIB auctions held in Q4-FY08 and Q1-FY09 gives an indication of the appetite for investments in PIBs in the coming months.

7.1.3 Secondary Market Trading

Secondary market transactions in the money market bring together financial market participants with temporary surplus funds and those that are potential borrowers. Participants include a broad array of financial entities, such as banks, DFIs, non-bank finance companies and institutional investors such as insurance companies etc.

The Repo market is by far the largest component of trading in the secondary market, though its share is persistently declining. Banks and other financial institutions use repo transactions for their short term liquidity management. The growth in securitized lending transactions such as repo agreements, represent a substantial portion of the daily settlement value and play an



important role in facilitating market liquidity. As is the case in most countries, the most popular tenor for repos is the O/N one, with 77.0 percent of total transactions.⁷

Trading volumes in the secondary market indicate that the market is gradually acquiring depth, as it reached a record high level during FY08 (Table 7.10). Increased interest in the primary market contributed to the rising volumes in the repo and outright transactions. While the availability of ample funds as a result of a surge in market liquidity was the source of the increase in volumes of non-collateralized transactions in FY07, limited availability of securities in the latter part of FY08 was responsible for the increase in such transactions during the year. Secondary market yields remained high, in line with the policy measures taken by SBP to curtail inflation.

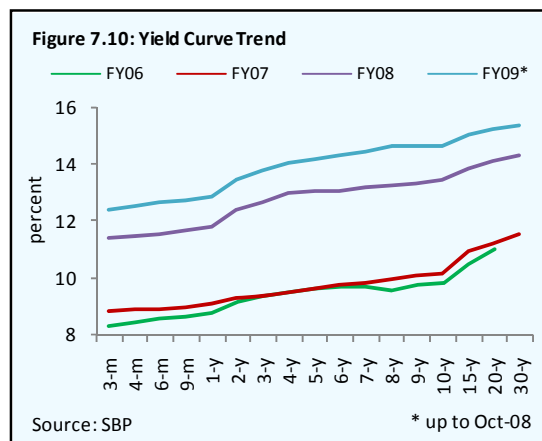
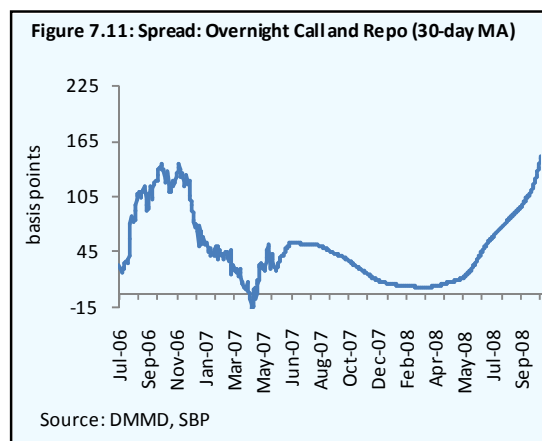


Table 7.10: Secondary Market Trading

Type	Volume (PKR in billions)			% of Total		
	FY06	FY07	FY08	FY06	FY07	FY08
Outright	488	753	1,402	5.0	6.0	8.0
Call	1,173	1,999	2,782	13.0	16.0	16.0
Repo	6,842	8,590	11,926	74.0	68.0	67.0
Clean	702	1,286	1,794	8.0	10.0	10.0
Total	9,205	12,628	17,904	-	-	-

Source: SBP

In Pakistan, the call market has played a significant role in interbank dealings in recent years. The liquidity situation during FY08 increased activities in the call money market especially during H2-FY08 and Q1-FY09, when market participants faced shortage of securities to manage their overnight liquidity. This shortage did not only improve the volumes in the call market but also increased the weighted average rates during FY08 as compared to the preceding years. However, part of the increase in yields was due to SBP monetary policy stance (Figure 7.11).



7.1.4 Conclusion

While the functioning of the money market continues to gain depth and aid the effective implementation of the monetary policy stance, it is still faced with some issues and challenges. The foremost issue is that in both the MTB and PIB auctions, the bid acceptance is yield driven and not volume driven, due to which market participants tend to anchor their perceptions of interest rates on the cut-off yield, rather than the discount rate as the main policy instrument.

⁷ More than 77.0 percent of the transactions fall under this tenor.

Secondly, the investor base in government securities is not well developed. Banks dominate the holdings of MTBs and short and medium tenor PIBs. There are few investors at the long-end of the yield curve, with virtually only a single institutional investor holding 15, 20 and 30 years PIBs.

The secondary market continues to be thin and illiquid, and the investors exhibit a strong buy-and-hold behavior. Conducting more frequent, but smaller-volume (as opposed to less frequent, but larger volume) auctions could improve price discovery and reduce inventory risk for primary dealers. Until the investor base at the long end of the curve is developed, it will be difficult to move to volume-based acceptance of bids in auctions.

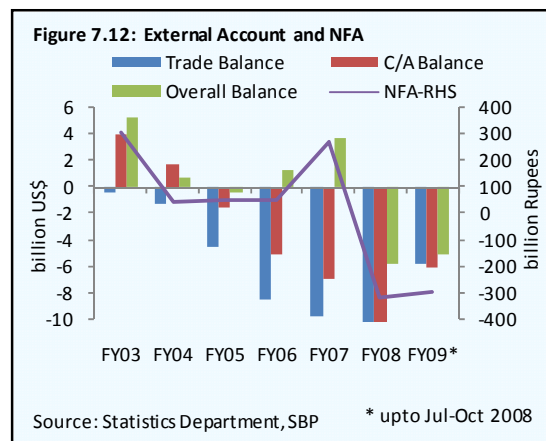
Notably, re-opening NSS instruments to institutional investors in FY07 and three announcements of increase in the rate of return on these schemes, in quick succession,⁸ are likely to impact the volume of deposits in commercial banks, with a consequent contraction in their loan books. Another consequence may be a reduction in institutional investors' holdings of treasury bills and PIBs, potentially offsetting the aim of mobilizing additional funding for the government.

A smoothly functioning government securities market is a crucial prerequisite for the development of the corporate bond market, and housing and infrastructure finance, as it serves to provide a reference yield curve.

7.2 Foreign Exchange Market

The foreign exchange market in Pakistan faced a challenging environment in FY08. While FY07 was characterized by record foreign inflows in the form of FDI, GDR floatations, foreign portfolio flows, privatization proceeds, workers' remittances etc., which helped finance the current account deficit, FY08, in particular from November onwards, saw a slowdown, and even reversal, of some of these inflows. These developments were driven by a host of factors in the global and domestic markets, such as rising commodity prices which added pressure to the import bill, an unstable political environment which carried with it a certain degree of uncertainty and consequently a negative impact on both domestic and foreign investor sentiment, and a more challenging global financial environment, which made access to international financial markets for raising funds more difficult. As a result, the trade deficit widened, foreign equity flows dried up, the privatization process was deferred and access to international markets was severely impacted, both due to the ongoing financial crisis, as well as the downgrading of Pakistan's sovereign rating by Moody's and S&P due to the weakening macroeconomic environment. Consistent flows of workers' remittances and still strong FDI flows (marginally higher in FY08 over FY07) constituted the bulk of forex inflows during the year. These developments exerted great pressure on the external current account deficit (**Figure 7.12**) and the rupee-dollar parity, which depreciated by 11.5 percent during FY08, in marked contrast with relative exchange rate stability seen in the last few years.

These developments and the unexpected reversal of flows led to a deterioration of the overall external balance, and a rapid depletion in the NFA of the banking system, amounting to Rs 317.4



⁸ The increases in NSS rate of return were announced w.e.f. July 1, October 1 and December 1, 2008.

billion in all of FY08, and Rs. 346.4 billion in the first few months of FY09.⁹ This contraction in NFA, particularly since Q2-FY08, is in contrast with the trends in recent years which witnessed substantial foreign exchange inflows which financed the current account deficit.

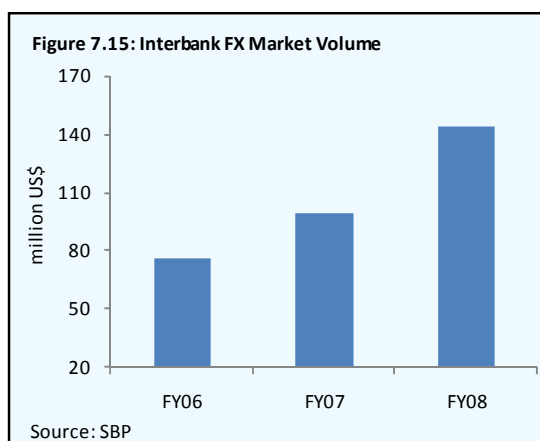
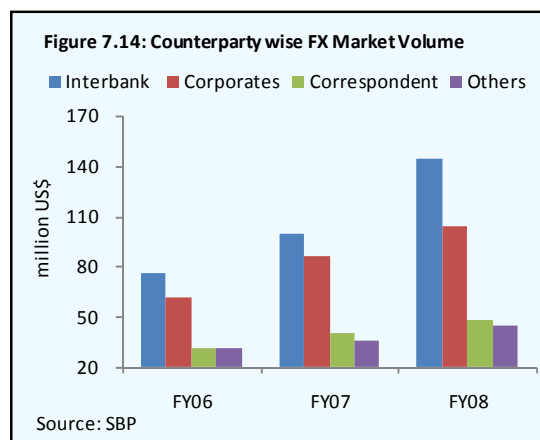
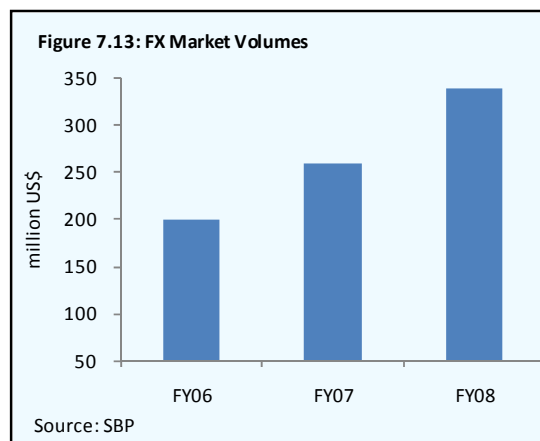
In this backdrop, this section discusses the functioning of the market in FY08 (and the first few months of FY09) in comparison with FY07.

7.2.1 Interbank volumes and transactions

Factors influencing foreign exchange liquidity were reflected in SBP's management of the forex market during the year. To give some background, the volume of transactions in the foreign exchange market has grown substantially in the last few years. Traditionally, the primary drivers of liquidity in

the foreign exchange inter-bank market are export receipts, remittances and foreign investment flows. Despite the challenges presented by the depleting NFA during the year, the volumes in the forex market grew at a gradual but steady pace in FY08, with increased transactional volumes in comparison with FY07. As shown in **Figure 7.13**, market volumes¹⁰ increased by around 31.0 percent to US\$ 340 billion in FY08, in comparison with US\$ 260.0 billion in FY07. Daily average volume reached the level of US\$ 1,158 million during FY08 as compared to US\$ 884 million in FY07. Overall market volumes in terms of customer type is shown in **Figure 7.14** which indicates that transactions in the inter-bank market had the highest share in total forex market transactions in FY08, the absolute volumes of which are shown in **Figure 7.15**.

Pressure on forex liquidity and consequently on the exchange rate, led SBP to intervene in the market on several occasions. As shown in **Figure 7.16**, the frequency of interventions increased in H2-FY08 when SBP was a net seller in the market. It should also be noted that the market was fairly liquid in the earlier part of FY08, as reflected in the fact that SBP was able to purchase forex from the inter-bank market. Expecting this situation to continue, and with the objective of gradually liberalizing the forex market, SBP even shifted

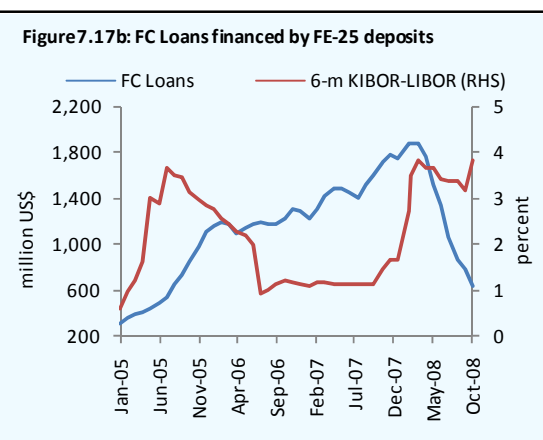
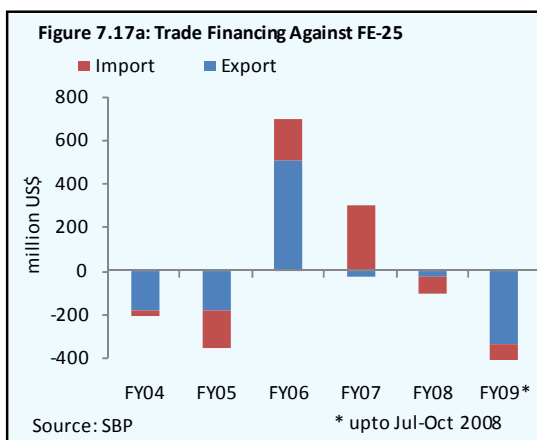
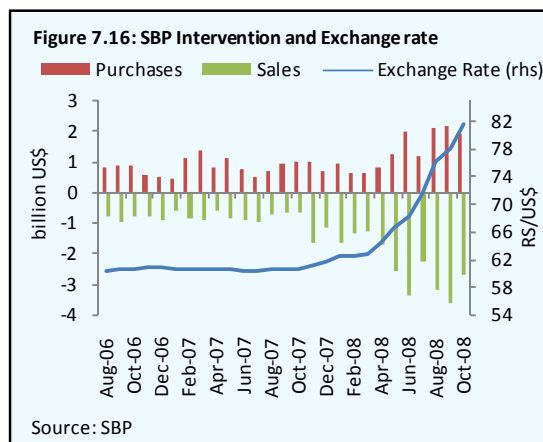


⁹ Upto November 15.

¹⁰ Total volume includes ready, forward and swap transactions.

payments of furnace oil to the interbank market in July FY08.¹¹

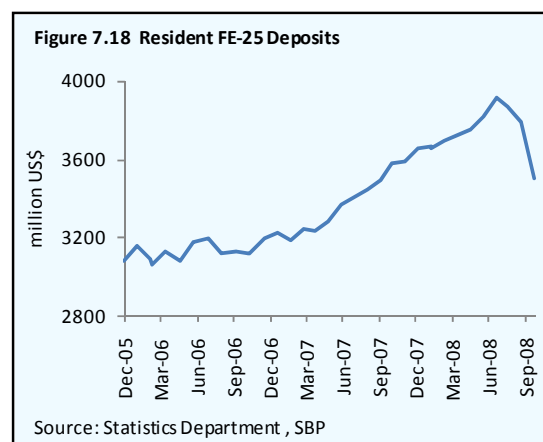
Due to the largely stable exchange rate environment prevalent until FY08 and the large interest rate differential in LIBOR vs. KIBOR due to the ongoing monetary tightening, FE-25 loans had seen a growth in demand and volumes since the advent of monetary tightening in FY05, whereas loans extended under the Export Finance Scheme (EFS) saw a corresponding decline in FY08. However, with the depreciation in the exchange rate, the demand for FE-25 loans has declined considerably, and their retirement also put pressure on the exchange rate (Figure 7.17a and Figure 7.17b).



A corresponding trend has then been an increase in the appeal of FE-25 deposits, and the re-emergence of a dollarization trend in the economy (Figure 7.18). This has served to increase banks' NFA with a shift in deposits from the PKR to the US\$ and the Euro as the more popular currencies.

7.2.2 Exchange Rate

After a period of 4 years of relative stability in the exchange rate, barring volatility trends seen in FY05,¹² FY08 saw considerable volatility and depreciation in the value of the Pak Rupee against major currencies. In particular, the PKR depreciated by 11.5 percent against the US\$ in FY08, and 13.3 percent in the first few months of FY09.¹³ The situation was relatively stable until Q1-FY08, when the trade



¹¹ EPD Circular No. 16, dated July 11, 2007.

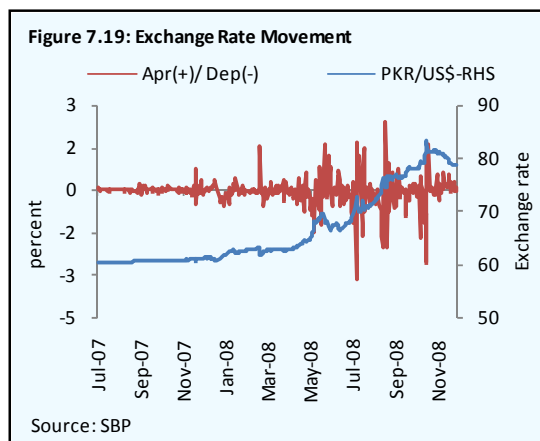
¹² In FY05, the PKR witnessed relatively sharp depreciation of 2.5 percent, when the current account balance turned negative due to the widening of the trade deficit, driven mainly by the high oil import bill, combined with the termination of the Saudi oil facility.

¹³ Upto November 29, 2008

deficit continued to be financed by strong financial flows, which even enabled the accumulation and rise of foreign exchange reserves to its highest ever level of US\$ 16.4 billion in October FY08.

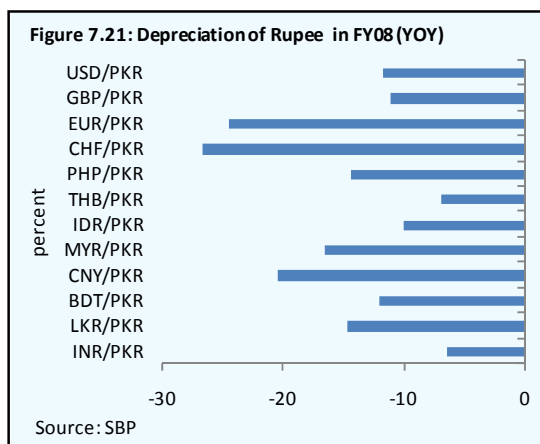
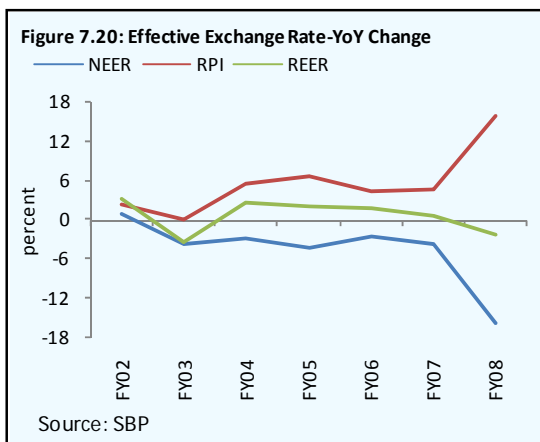
The depreciation trend picked up pace from November FY08 onwards, and in Q2-FY08 the rupee depreciated by 1.7 percent, touching Rs 61.7 by end Q2-FY08. During this quarter and in subsequent months, the economy experienced a series of adverse developments, leading to a rapid depletion of reserves and unprecedented loss in the value of the rupee. Consequently, reserves stood at US\$ 11.4 billion at end FY08, with a depletion of US\$ 4.2 billion during the year.

Notably, the 5.8 percent depreciation of the PKR against the US\$ during April-May FY08 was driven mainly by speculative sentiments, which subsided considerably by SBP's policy measures implemented in May FY08, to check the sharp decline in the rupee value by amending regulations related to import L/C margin, tenor of forward contracts and advance payments against imports (Box 7.3).¹⁴ These measures temporarily helped the rupee to regain lost value. As shown in Figure 7.19, along with consistent depreciation, the PKR/US\$ exchange rate also remained quite volatile during H2-FY08.



Real Effective Exchange Rate

The Real Effective Exchange Rate (REER), an indicator of external competitiveness against a given basket of currencies, indicated a depreciation of 2.3 percent in FY08, as compared to an appreciation of 0.8 percentage points in FY07. Figure 7.20 shows that there is no significant change in REER in the last few years: it has actually remained stable with reduced volatility. On the other hand, the rising RPI is a reflection of the high inflation in Pakistan as compared to other countries whose currencies form part of the basket. The impact of the nominal depreciation is offset by the sharp rise in RPI, leaving REER almost stable. Had RPI not increased sharply, the Rupee would have witnessed real depreciation during FY08. Comparative performance of the PKR during FY08 against different currencies is given in Figure 7.21, which shows that the PKR also depreciated against all major currencies during FY08 with major depreciation against EURO and CHF. The main reason for the depreciation against all currencies was the weakness of US\$ against these currencies.



¹⁴ FE Circular No. 4 dated May 9, 2008.

Box 7.3 : Regulations issued during FY08 and FY09

Circular Reference	Details
<i>EPD Circular No.16 dated July 11, 2007</i>	<ol style="list-style-type: none"> 1. All purchases of foreign currency related to the import of Furnace Oil (HS code 2710.1941) will be made by the Banks from the interbank market. 2. All POL related foreign currency purchases which are made on the basis of specific Form 'M' approvals issued by the Exchange Policy Department will be made by the Banks from the interbank market. 3. State Bank of Pakistan will continue to provide foreign exchange to Banks for the import of all POL products other than those specified in point no.1 & 2 above.
<i>BSD Circular No. 9 dated December 3,2007</i>	Special Cash Reserve Requirement reduced from 15 percent to 5 percent of total FE-25 deposits for banks and DFIs
<i>BSD Circular No. 8 dated April 5,2008</i>	Special Cash Reserve Requirement reduced from 6 percent to 2 percent of total FE-25 deposits for Islamic Banks
<i>FE Circular No.2 dated April 29, 2008</i>	<p>Exchange Companies:</p> <ol style="list-style-type: none"> 1. Limit to surrender a minimum of 15 percent (earlier 10 percent) of the foreign currency received from home remittances to the interbank market. 2. Limit to bring minimum of 25 percent of the foreign currency exported in their foreign currency accounts with banks in Pakistan.
<i>FE Circular No. 3 dated April 29, 2008.</i>	<p>Authorized Dealers</p> <ol style="list-style-type: none"> 1. Advance payments on imports were restricted to a maximum of 50 percent of the value of imports, and that too against letter of credits only. 2. Some reforms were introduced in the forward hedging mechanism available to importers / exporters to curb the misuse of the facility other than true hedging.
<i>FE Circular No. 4 dated May 09, 2008.</i>	<p>Exchange Companies</p> <ol style="list-style-type: none"> 1. Abolishment of Nostro accounts, with shifting of the Nostro balances to commercial banks in Pakistan. 2. Restriction to affect outward remittances to the extent of 75 percent of the home remittances mobilized by the respective company during the preceding month 3. Restriction to surrender surplus foreign currency to SBP, instead of exporting it to exchange companies abroad.
<i>May 23, 2008 (SBP interim monetary policy)</i>	<ol style="list-style-type: none"> 1. Imposition of 35 percent margin requirement on opening of import L/C (except for petroleum and food imports) announced on May 23, 2008.
<i>BSD Circular No. 14 dated June 21, 2008</i>	Special cash reserve requirement against FE-25 deposits reverted back to its original rate with effect from June 30, 2008. Banks / DFIs have been directed to maintain 15 percent (up from 5 percent) of their total FE-25 deposits on daily basis with SBP.
<i>BSD Circular No. 15 of June 21, 2008.</i>	Similarly the reserve requirement (SCRR) for Islamic banks has been reverted back to 6 percent from 2 percent.
<i>FE Circular No. 6 dated July 08, 2008.</i>	Requirement of prior approval of State Bank for all transactions of US \$ 50,000 or above (or equivalent in other foreign currencies) on account of outward remittances or sale of foreign currencies to the customers, for Exchange Companies.
<i>FE Circular No.7 dated July 08, 2008.</i>	<p>Exchange Companies, B category</p> <p>Requirement of prior approval of State Bank for all transactions of US \$ 50,000 or above (or equivalent in other foreign currencies) on account of sale of foreign currencies to the customers.</p>
<i>FE Circular No.8 dated Jul 08, 2008.</i>	<ol style="list-style-type: none"> 1. Advance import payments were further restricted to the extent of 25 percent of the value of imports, and that too against letter of credits only. 2. Forward forex booking against all type of imports was suspended (temporarily). 3. SBP to provide foreign exchange to the Authorized Dealers for the import of all categories of Furnace oil (as well as against all POL payments on the basis of Form 'M' approvals). <p>Trading time for all types of Foreign Exchange Transactions by Authorized Dealers with their customers reduced in order to curb the speculative pressures on the market.</p>
<i>EPD circular letter #.6 dated July 11, 2008</i>	Authorized Dealers advised to immediately launch campaign for realization of overdue export proceeds.

* This was a temporary arrangement to provide liquidity comfort to the then tight market.

Box 7.3 : Regulations issued during FY08 and FY09 (Cont'd)

Circular Reference	Details
<i>EPD Circular No.16 dated July 11, 2007</i>	<ol style="list-style-type: none"> All purchases of foreign currency related to the import of Furnace Oil (HS code 2710.1941) will be made by the Banks from the interbank market. All POL related foreign currency purchases which are made on the basis of specific Form 'M' approvals issued by the Exchange Policy Department will be made by the Banks from the interbank market. State Bank of Pakistan will continue to provide foreign exchange to Banks for the import of all POL products other than those specified in point no.1 & 2 above.
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<i>FE Circular No. 3 dated April 29, 2008.</i>	<p>Authorized Dealers</p> <ol style="list-style-type: none"> Advance payments on imports were restricted to a maximum of 50 percent of the value of imports, and that too against letter of credits only. Some reforms were introduced in the forward hedging mechanism available to importers / exporters to curb the misuse of the facility other than true hedging.
<i>FE Circular No. 4 dated May 09, 2008.</i>	<p>Exchange Companies</p> <ol style="list-style-type: none"> Abolishment of Nostro accounts, with shifting of the Nostro balances to commercial banks in Pakistan. Restriction to affect outward remittances to the extent of 75 percent of the home remittances mobilized by the respective company during the preceding month Restriction to surrender surplus foreign currency to SBP, instead of exporting it to exchange companies abroad.
<i>May 23, 2008 (SBP interim monetary policy)</i>	<ol style="list-style-type: none"> Imposition of 35 percent margin requirement on opening of import L/C (except for petroleum and food imports) announced on May 23, 2008.
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<i>FE Circular No.8 dated Jul 08, 2008.</i>	<ol style="list-style-type: none"> Advance import payments were further restricted to the extent of 25 percent of the value of imports, and that too against letter of credits only. Forward forex booking against all type of imports was suspended (temporarily). SBP to provide foreign exchange to the Authorized Dealers for the import of all categories of Furnace oil (as well as against all POL payments on the basis of Form 'M' approvals). <p>Trading time for all types of Foreign Exchange Transactions by Authorized Dealers with their customers reduced in order to curb the speculative pressures on the market.</p>
<i>EPD circular letter #.6 dated July 11, 2008</i>	Authorized Dealers advised to immediately launch campaign for realization of overdue export proceeds.

* This was a temporary arrangement to provide liquidity comfort to the then tight market.

Comparison of Exchange Rate in the Inter-Bank and Kerb Market

The exchange rate differential between the inter-bank market and the kerb market was largely narrow at the start of FY08, but then widened gradually over time, reaching 1.68 percent by May 3, FY08 (**Figure 7.22**). Notably, movements in the kerb differential were bi-directional, when the kerb market traded forex at a discount. Both the widening differential and the two-way movements indicates a certain degree of uncertainty prevalent in the market.

Various policy measures taken in May FY08 were also aimed at controlling observed trends in the kerb market, such as restrictions on outward remittances by exchange companies to 75.0 percent of their inward remittance only, prior approval of SBP prior to the sale of foreign currency of more than USD 50,000 or more and restriction on export of the Pound Sterling, Euro and UAE Dirhams. SBP also provided liquidity in the market by entering into FX swaps with exchange companies. Although deteriorating economic conditions coupled with an uncertain political environment were the main causes of the consistent depreciation of the PKR, speculative activities in the forex market also exacerbated the situation.

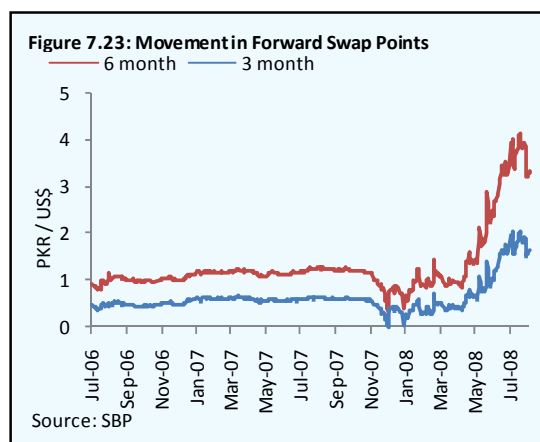
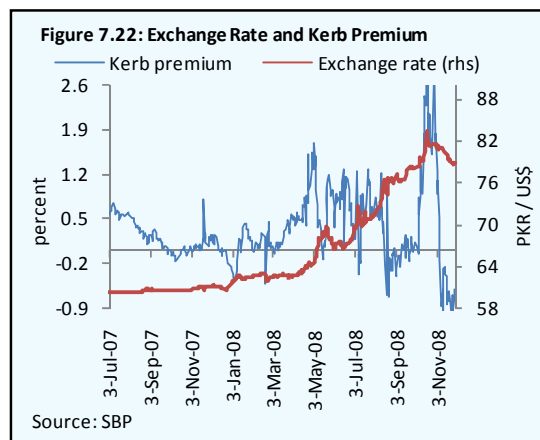
Forward Points

Figure 7.23 shows movements in forward swap points. The steep rise coincides with the depreciation in the value of the rupee. The weakening of the rupee from November FY08 resulted in pressure on forward rates which started rising since then. Average swap points were as high as Rs. 3.72 per US\$ in June FY08.

7.2.3 Foreign Exchange Reserves

The strong influx of foreign exchange liquidity since FY03 helped SBP in building up foreign exchange reserves, as a cushion against adverse developments. This move came in handy when, after touching its highest level of US\$ 16.4 billion in October FY08, foreign exchange reserves showed a rapidly declining trend during FY08, and decreased to US\$ 11.4 billion by the end of FY08. Foreign exchange reserves held by commercial banks actually increased marginally (increasing volume of FE-25 deposits contributed to this trend) but reserves held by SBP declined significantly because of the increase in oil support provided by SBP to the market (due to rising international oil prices).

During FY08, SBP provided oil support of US\$ 8.9 billion. The foreign exchange reserves held by SBP are sufficient to meet the import bill for around 12 weeks which is the lowest level in the last four years, and as compared to other regional countries (**Table 7.11(a) and b**).



SBP Oil Support

To check PKR/US\$ parity due to lumpy payments especially against oil import bill, SBP continued its policy to provide support to the market by effecting payments related to POL products import. SBP made payments of US\$ 3,729.1 million during H1-FY08 compared with US\$ 3630.1 million and US\$ 3,842.8 during H2-FY07 and H1-FY07 respectively. Quarter wise breakup is given in **Table 7.12**. However w.e.f July 13, 2007 all purchases of foreign currency payments related to the import of furnace oil and all POL related payments under specific form 'M' approvals were transferred to the inter-bank market. Due to this, 20 to 30 percent of import bills were being paid from the interbank market. After this decision, oil support provided by SBP declined to US\$ 1,691.30 million in Q1-FY08 from US\$ 1,949.0 million in Q4-FY07. Increase in oil support from SBP in Q2-FY08 was mainly due to the higher oil prices in the international market. From July FY09, however, SBP started to provide full support for oil payments.

Table 7.11(a) Reserve Adequacy Ratio-Pakistan

	FY04	FY05	FY06	FY07	FY08
Import Coverage	40.5	27.2	22.4	25.7	12.6

*Import cover refers to number of weeks of average imports of goods.

Table 7.11b : Import Coverage -Regional

Indonesia	31.7
Malaysia	39.4
Philippines	29.4
Thailand	38.0

Data Based on ADB Asia Regional Integration Center (ARIC)

Table 7.12: Foreign Exchange Reserves & Oil Support

million US\$		
End-Period	Net Reserves with SBP(stock)	SBP's Oil Support(flow)
Q1-FY08	13,866.0	1,691.3
Q2-FY08	13,344.0	2,037.8
Q3-FY08	11,080.6	2,069.7
Q4-FY08	8,569.7	3,152.6

Source: SBP

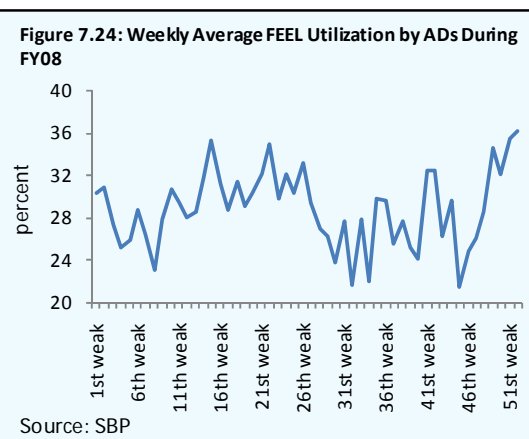
Foreign Exchange Exposure Limit

In order to liberalize and rationalize the operations of the foreign exchange market, the system of Net Open Position was replaced by an aggregate Foreign Exchange Exposure Limit (FEEL) for each bank.¹⁵ Under this system, banks have to conduct their foreign exchange operations within the overall Exposure Limit (denominated in PKR) set by the SBP with reference to their paid up capital. The aggregate exposure limit for each bank is equivalent to 10.0 percent of its paid-up capital, with maximum and minimum limits of Rs. 500 million and Rs. 50 million respectively.

FEEL for Authorized Dealers (ADs) was revised from 10.0 percent to 15.0 percent of their paid-up capital in March FY07, with a maximum cap of Rs. 1.5 billion. This revision increased the market's FEEL to Rs 18.2 billion i.e. 49.5 percent increase on overall basis. As a result of subsequent changes in bank's individual FEEL, total market's FEEL has increased to Rs. 21.8 billion by end June, FY08.

FEEL of all ADs was enhanced keeping in view the rising daily forex market transactions due to the increasing trade volumes and foreign inflows i.e. remittances & FDI. The increase

has provided comfort to all market players to carry out their activities without breaching their exposure limits. However, as shown in **Figure 7.24**, on aggregate basis, a lot of space is available



¹⁵ F.E. Circular No. 2 dated May 29, 1999

for ADs to increase their FEEL utilization. Less utilization of FEEL indicates that banks are not using their capacity to run exposures.

7.3 Functioning of the Derivatives Market

While the rising degree of integration of local markets with international financial markets provides opportunities, it also increases the risk factor for domestic economic agents. Moreover, the operating environment for financial institutions is becoming more and more competitive and requires them to explore new and innovative avenues for income generation and risk mitigation. Financial derivatives facilitate tapping such opportunities, and are now widely being used in international financial markets primarily as a tool for hedging risks. In Pakistan, the use of financial derivatives as a formal means of managing the risk profile of corporate clients and financial institutions, is very recent and currently at a nascent stage. The first recognized derivatives transaction was carried out only in the second half of 2003. Stock futures are available in stock exchanges, whereas index futures have recently been introduced in March FY08. Commodity futures contracts have also recently been introduced from the platform of the National Commodity Exchange Limited (NCEL). Currently NCEL trades in Gold and Rice futures and plans to expand the contracts to interest rates as well.

7.3.1 Policy Environment

While derivatives provide an efficient tool for hedging and managing risk profile, they can also be a source of potentially large scale losses, especially if not utilized prudently and/or are used for speculative purposes. Mindful of these risks, at the initial stage SBP asked financial institutions interested in undertaking derivatives transactions with their clients, to seek approval for doing so on a case to case basis, for hedging purposes only. Moreover, in response to the changing market dynamics and to further develop a formal Over the Counter (OTC) Derivatives Market in Pakistan, SBP issued the Financial Derivatives Business Regulations (FDBR) in 2004.¹⁶ These regulations provide guidelines for transacting OTC derivatives in the country and currently permit three types of derivative transactions: (a) Foreign Currency Options (FX Options), (b) Forward Rate Agreements (FRAs) and (c) Interest Rate Swaps (IRSs). Cross-currency swaps on the other hand are approved on a case to case basis by SBP.

Under these regulations SBP may grant the status of either Authorized Derivatives Dealer (ADD) or Non Market Maker Financial Institution (NMI) to the eligible financial institutions. However, these institutions have to meet the minimum criteria laid out by SBP for transacting such business. The eligibility criteria take into account the applicant's capability and capacity to transact derivatives business after detailed on-site and off-site assessments by SBP. On acquiring the desired status, these institutions are no longer required to obtain approval on a case to case basis for their derivative transactions as allowed in the FDBR's product details. By end August 2008, SBP has granted the status of Authorized Derivatives dealer to five banks, i.e. Standard Chartered Bank, Citibank N.A., Deutsche Bank, Royal Bank of Scotland, and United Bank Limited, whereas no institution currently has an NMI status. Apart from Authorized Derivative Dealers (ADDs), other active institutions in the derivative market include MCB Bank, Habib Bank and National Bank of Pakistan.

7.3.2 Recent Developments

As mentioned above, the use of financial derivatives is a recent phenomenon in Pakistan and the first such real derivatives transaction took place in August 2003 which was a PKR 100.0 million FRA. During the last few years, the derivatives market has grown substantially. Besides the plain vanilla products referred to above, the market is slowly & gradually moving towards more complex & esoteric structures. All approvals outside the FDBR are reviewed and approved under

¹⁶ BSD Circular No. 17, November 26, 2004.

specific transactional approval process by the Derivatives Approval & Review Team (DART) at SBP. Though the specific transactions approved thus far are more complex and include variations of CCS, IRS with embedded options etc., even the FX Option structures have been done with some variations, but are approved only to hedge the underlying exposure.

Table 7.13 : Outstanding Derivatives Volumes by Category :

amount in million Rupees, share in percent

	H2-FY07	Share	H1-FY08	Share	H2-FY08	Share
FX Options	42,561	20.0	47,312	16.4	88,701	22.6
Interest Rate Swaps	80,061	37.7	84,071	29.2	106,944	27.2
Cross Currency Swaps	89,689	42.2	156,391	54.3	194,944	49.6
Forward Rate Agreement	300	0.1	-	0.0	2,650	0.7
Total	212,611	100.0	287,773	100.0	393,239	100.0

Source: SBP Calculations

Total volume of the derivatives market has reached Rs. 393,239 million as of end-June FY08, from Rs. 212,611 million as at end-June FY07, a growth of almost 85.0 percent in one year. Bifurcation of outstanding (notional) market volume among different derivative classes are shown in **Table 7.13**, which shows that Cross-Currency Swaps continue to have a dominant share in the volume of total outstanding derivatives, while FX options and Interest rate swaps also have large shares. FRAs, however, continue to have a negligible share in total outstanding derivatives. While perceptions of stable exchange rate prevalent until Q2-FY08 were responsible for the increase in CCS transactions and FX Options, movements along the yield curve resulting from the increase in the discount rate (by 250 bps) in FY08 explains the decline in the share of PKR interest rate swaps by over 10.0 percentage points. Another reason is the lack of depth in the interbank market, which is essential for the development of the swap market. FRA volumes have also remained stagnant mainly due to the inactive interbank market. Incidentally, most of the transactions are concentrated among three ADDs, and their combined share constitutes 82.0 percent of total market share.

In order to get an overview of the currency-wise break-up of these transactions, the transactions approved by SBP in various product categories are detailed in following two tables (**Table 7.14**) showing a trend over the years. It is to be noted that FDBR allows derivatives' transactions in G-7 currencies only.

Table 7.14 : Outstanding Derivatives by Currency as of end-FY08

Rupee equivalent (millions)

Currency	FX Options	FRA	IRS	CCS	Total	Percentage by Ccy
PKR	-	300	19,023	-	19,323	9.0
Euro	33,077	-	4,732	20,301	58,110	27.0
USD	113	-	56,306	69,387	125,807	59.0
CHF	1,203	-	-	-	1,203	1.0
GBP	-	-	-	-	-	0.0
JPY	8,168	-	-	-	8,168	4.0
AUD	-	-	-	-	-	0.0
Total	42,561	300	80,061	89,689	212,611	
Percentage by product	20.0	0.0	38.0	42.0		100.0

Source: SBP Calculations

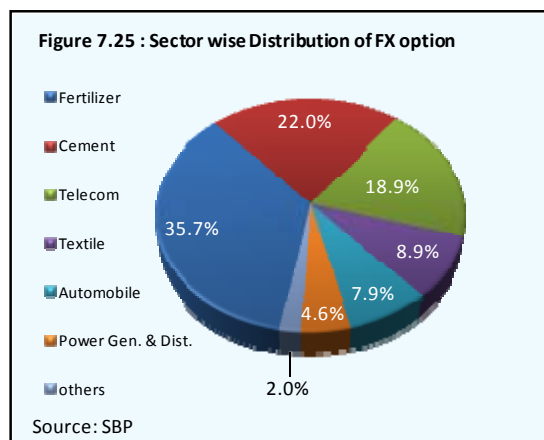
7.3.3 Product-wise Transactions

Detailed analysis of different derivative classes is given as under:

FX Options

FX Options are booked against all existing FX exposures arising out of trade transactions and loan exposures. As stated in the FDBR, there is no restriction on the minimum or maximum size of ‘notional principal’ amounts of FX options, and the maximum tenor may not exceed one year.

The volume of FX options has grown substantially in FY08, in particular during the last quarter, driven by the depreciation of the Pak rupee against the US\$ in that period. The fertilizer sector was the main contributor in the FX options market, with 36.0 percent share of total transactions at end-FY08, 22.0 percent share of cement, 19.0 percent in Telecom, 9.0 percent in textiles and 8.0 percent in the automobile sector (**Figure 7.25**). Two ADDs had a major share of the total outstanding FX Options volume as at end-FY08, with 83.0 percent market share.

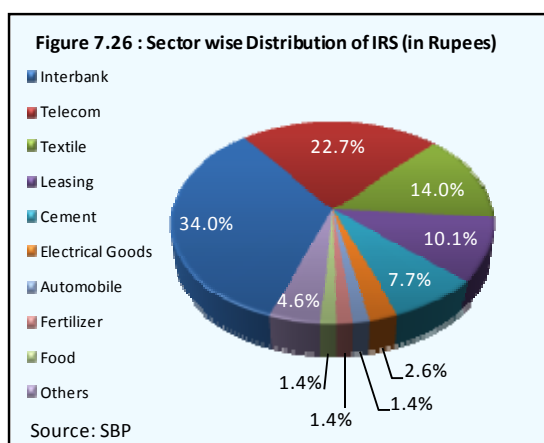


The G-7 foreign currency market has been quite volatile with clients opting for Foreign Currency Options instead of taking views on simple forwards. Flexibility of the product with growing awareness has made the clients more inclined towards opting to hedge their exposures through this product. Mostly stable exchange rate during CY07 was the reason for less growth in volume of FX options but towards the end of the CY07 i.e. in last quarter, depreciation in the exchange rate has again resulted in the slight increase in volumes of FX options.

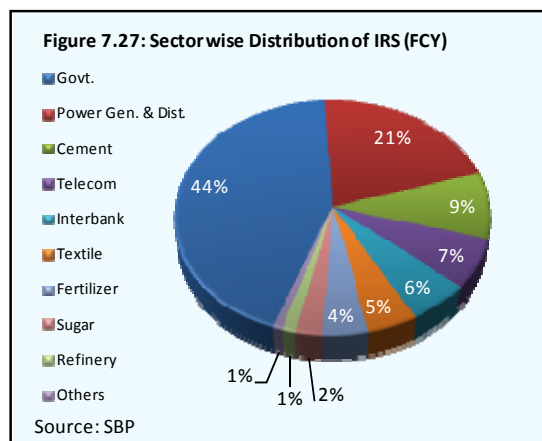
Interest Rate Swaps

An Interest Rate Swap (IRS) is a financial contract between two parties exchanging or swapping a stream of interest payments for a ‘Notional Principal’ amount on multiple occasions during a specified period. The swap is usually based on ‘fixed to floating’ or ‘floating to floating’ exchange of interest rates. IRS transactions are permitted in PKR only in the FDBR, with a maximum tenor of 5 years. During FY08, the volume of outstanding IRS transactions has increased by over 33.0 percent, from PKR 80,061 million as at end-FY07 to PKR 106, 944 million as at end-FY08.

PKR IRS: Volume of outstanding PKR IRS has increased substantially during FY08 to PKR 58,370 million, from PKR 19,023 million as at end-FY07. This increase is mainly due to expectations of rising interest rates among market participants. Major increase was observed in H2-FY08 due to movements in the yield curves resulting from increase in discount rate by SBP by 250 bps. Sector-wise analysis shows (**Figure 7.26**) that the telecom sector has major share of 23.0 percent of the total transactions, followed by textile (14.0 percent), cement (8.0 percent) and interbank market at 34.0 percent. 87.0 percent of the business is concentrated between two ADDs.



FCY IRS: Volume of outstanding FCY IRS, for which approval is sought on a case to case basis, has shown a declining trend during FY08. It remained almost stable during the first three quarters of FY08, but declined by PKR 16,411 million during the last quarter. This decline was due to maturities of large value FCY IRS during that period. As shown in **Figure 7.27**, GoP has major share of 44.0 percent (although it has only one transaction), the power generation sector 21.0 percent, Cement 9.0 percent, Telecom 7.0 percent and interbank market has a 6.0 percent share. In FCY IRS, major business is concentrated between two ADDs with 64.0 percent market share.

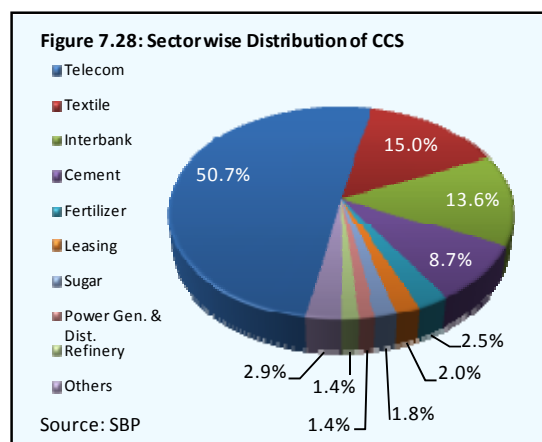


Forward Rate Agreements

A Forward Rate Agreement (FRA) is an interest rate contract between two parties that allows an entity to position itself in the interest rate market. FRAs are off-balance sheet transactions and in the FDBR, dealing in FRAs is permitted in PKR only. While there is no restriction on the size of notional principal amounts, or on the minimum tenor, the maximum tenor is restricted to 24 months. The FRA portfolio of an ADD / NMI is required to be marked to market on a daily basis. The FRA market, already negligible in size, remained almost inactive during FY08 with some transactions which were done during the last quarter of FY08. Transactions remained concentrated among only two ADDs and the textile sector.

Cross Currency Swaps

Cross Currency Swap has been the most active type of transaction during FY08. Extraordinary growth in CCS is because of the corporate entities switching their funding cost from KIBOR to LIBOR or EURIBOR while locking their exchange risk, in an environment of stable exchange rate, as was the case until Q2-FY08. Corporate customers with large export volumes are taking advantage of the low FCY interest rates (as a result of the safeguard measures taken since mid-2007 by the G-7 countries) through CCS. Although depreciation of Pak rupee against US\$ during FY08 has increased the cost of CCS for exporters, but these are hedged transactions, therefore they will also receive higher rate for their export proceeds. Increasing gap between local and international interest rates has further induced the local corporate customers to swap their local currency exposure with LIBOR or EURIBOR. Sector-wise analysis (**Figure 7.28**) at end-FY08 reveals that 51.0 percent of outstanding CCS transactions pertain to the telecom sector, 15.0 percent to the textile sector, and 9.0 percent to the cement sector, whereas 14.0 percent are interbank transactions.



7.4 Capital Markets

The significance of a well-functioning and developed financial system, with active contribution from banks, non-bank financial institutions and the financial markets, is undisputed in ensuring and maintaining financial stability. However, a general trend observed in emerging economies,

particularly in Asia, has been an over-reliance on the banking system to fulfill the financing needs of the economy, with capital markets relatively slower to develop in comparison. Whereas in most countries the banking system has absorbed the evolving financing requirements of various sectors, the efficiency of scale that emerges with the availability of long-term and alternative financing options from capital markets, has been conspicuous by its absence. The continued integration and deepening of financial markets is a significant issue for policy makers, and particularly for central banks that are entrusted with the formulation and implementation of monetary policy, since smoothly functioning and efficient financial markets are crucial in ensuring a smooth transmission of monetary impulses.

While financial sector reforms in Pakistan have led to a successful transformation of the banking sector into a healthy and profitable industry, with increasing competition, diversification of credit portfolio, and incentives and opportunities for both domestic and foreign players alike, the pace of development in the capital markets was slower in comparison. In a real sense, it was not until FY03 that trading volumes at the Karachi Stock Exchange (KSE), which was established soon after independence in September 1947, gathered momentum. From there onwards until April FY08, despite some upheavals along the way, the growth in the KSE-100 index and market capitalization has been unprecedented and remarkable. Subsequent to April FY08, however, the equity market has seen a period of rapid decline: the KSE-100 index has fallen by over 41.0 percent¹⁷ since touching its peak in April.

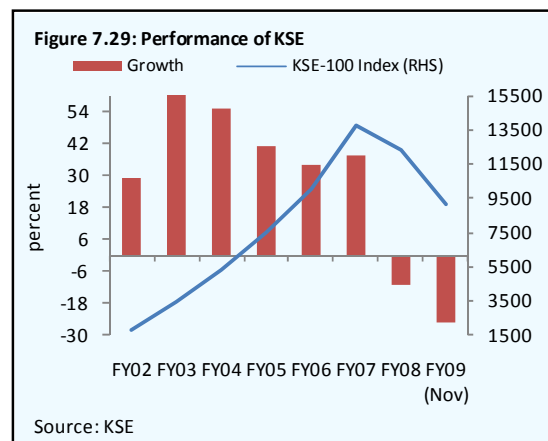
Incidentally, Pakistan is one of several emerging markets which have seen a run up to astronomical values in their stock markets, particularly since FY03, and then a subsequent downturn and readjustment, as seen in FY08. Egypt is a prime example of such an emerging market with behavioral patterns similar to Pakistan.¹⁸

Notwithstanding the increase in value over the years, much of which has disappeared in the post-April FY08 period, the equity market in Pakistan has performed more as a trading platform rather than an avenue to raise financing. With limited listings, concentrated trading and a small amount of resource mobilization in the form of Initial Public Offerings (IPOs), listed debt issues etc, capital markets in Pakistan still have substantial room for improvement.

This section discusses developments in both the equity market and the corporate debt market in Pakistan during FY08 and the first few months of FY09.

7.4.1 Equity Markets

FY08 and the first two months of FY09 were particularly volatile for the stock market which touched its peak level of 15,676 points as well as an all time low in trading volumes of 2.5 million shares.¹⁹ While a confluence of factors were responsible for this volatility, this is not the first occurrence of a crisis in the stock market (**Box 7.4**), though it is the most prolonged one since the bull run in the market started in FY03 (**Figure 7.29**).



¹⁷ Until December 4, FY09.

¹⁸ "Go long or short in Pyramids? News from the Egyptian Stock Market", IMF WP/07/179.

¹⁹ In September FY09, the lowest since May 1998.

Box 7.4: Equity Market Crises and Crashes in Pakistan

March 2005

The KSE-100 Index rose from 6,220 on January 3, 2005, to a record-high of 10,303 on March 15, 2005, and fell to 7,708 on March 28, 2005. The extended rally which started in FY03, and the climb up to the March 15, 2005 level, was an intensified run which lured a large number of investors into the market and pushed trading to unprecedented volumes. Subsequent to March 15, 2005, the KSE-100 index lost approximately 25 percent of its value in only 8 trading sessions.

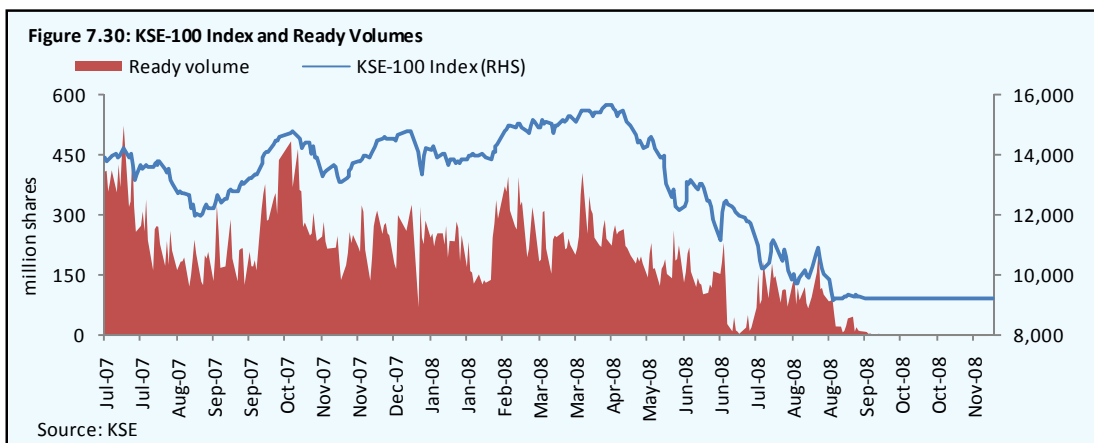
The March 2005 market crash was a significant event in the history of equity markets in Pakistan: market value worth billions of rupees was created and reversed in a matter of weeks, and there were widespread accusations of unscrupulous and manipulative behavior. It was widely speculated that the market decline was due to over-ambitious day traders, over-heated futures counter, while the manipulation of the available financing and equity markets by various major market players was not ruled out. This last hypothesis has received the most attention and was the subject of the inconclusive forensic report issued by Diligence USA, LLC.

2008

After touching its highest ever peak of 15,676 on April 18, 2008, in a year other-wise marked with high volatility and turbulence, a gradual process of decline started in subsequent weeks, which continued unabated until August 28, 2008 when the KSE management decided to place a floor of 9,144 points (closing value of index on August 27) on the KSE-100 index as an emergency measure to prevent further erosion in value. From April 21 to August 27, the index declined by around 71 percent.

While ongoing withdrawal of foreign funds from the market is said to be one of the factors for this decline, several other factors are also responsible: the key factor, on which market sentiment is based, is erosion of investor's confidence. With the ongoing political transition in the country, evolving geo-political situation, rising commodity prices which fed into the already high domestic inflation, and vulnerable macro indicators, investors have been generally despondent on the prospects of Pakistan's economy and this is reflected in the declining market volumes.

While issues related to macroeconomic stability and political noise impacted investor sentiments and contributed to the decline in value, lack of adequate corporate governance measures and an ad hoc approach to institute quick-fixes, exacerbated the situation. To halt the continuing decline in value, the KSE management placed a floor of 9,144 points on the KSE-100 Index from August 28, FY09 which served to prevent further decline and insulated the market from all kinds of global and domestic developments, while also reducing trading to negligible levels. Incidentally, there is no known precedence of such an action in any developing, emerging or advanced economy (Figure 7.30).



Market Developments

FY08 was generally not a good year for equity markets around the globe, given the spillover effects of the global financial crisis (**Table 7.15**). While the equity market in Pakistan was largely insulated from the first round impact of the crisis due to its rising but still low correlation with global financial markets, the imposition of the floor also ensured that a direct impact of the crisis on local market volumes was prevented. As against FY07, FY08 saw a net reversal of the substantial Foreign Portfolio Investment (FPI) flows. The extent to which the foreign equity flows are responsible for driving the market volumes is discussed in the **Special Section: Foreign Investment in the Equity Market in Pakistan**. Despite the fact that the foreign investment in the equity market is not of a sizable amount, it does tend to sway the sentiment of the domestic investors. Depreciation of the rupee since H2-FY08 has added to the foreign investor's risk averse sentiments.

Incidentally, other regional economies have also seen a net outflow of foreign investment in the equity market as shown in **Table 7.16**.

In terms of the size of the market and growth of indices, all the three stock exchanges of Pakistan (Karachi, Lahore, Islamabad) have shown substantial growth during the last few years (**Table 7.17**).

Notably, despite several adverse developments during the year which impacted market volumes, the build-up to the peak level of April 18 was remarkable, and even indicated the presence of an asset bubble. Extensions of the capital gains tax regime, healthy corporate earnings and exuberant foreign interest led to a positive rally in the first half of 2007. The market remained largely resilient in the first 3 quarters of the year, and continued to regain lost ground with each bout of a fresh bull-run. However, the consequent decline has been the most prolonged bear-run in the history of equity markets in Pakistan. Prior to the onset of the consistent decline, the market remained an attractive destination spot for investors, based on PE multiples.

However this situation could not be sustained, as the global financial crisis had a severe impact on major international markets, including some of the regional economies, which reduced the average PE of Emerging Markets Asia as defined by MSCI to single digits (**Table 7.18**). Though Pakistan's PE is still attractive, there is no change in the discount relative to the average MSCI EM Asia PE due to the bearish spell across global equity markets, which now stands at 9.8 times.

Table 7.15 : MSCI EM Asia Performance from Peak Level in 2008*

Country	% Decline in local currency	% Decline in US\$
China (SSEA)	-65	-63
India (SENSEX)	-50	-59
Korea (KOSPI)	-35	-53
Thailand (SETI)	-49	-53
Pakistan (KSE)	-41	-53
Indonesia (JKSE)	-49	-50
Philippines (PSI)	-42	-50
Taiwan (TWII)	-45	-48
Malaysia (KLSE)	-38	-43
Other Markets Performance from Peak Level in 2008*		
Russia (RTS)	-66	-69
Dubai (DFM)	-49	-49
UK (FTSE)	-39	-48
Saudi Arabia (TASI)	-47	-47
Hong Kong (Hang Seng)	-46	-46
Singapore (STI)	-44	-45
Japan (Nikkei)	-44	-39
USA (Nasdaq)	-37	-37
USA (Dow Jones)	-35	-35

Source: Bloomberg

* October 13, 2008

Table 7.16: 2008 YTD Foreign Flows in Key Asian Markets *

Country	Foreign Flows (US\$m)	% of Market Cap.
S.Korea	-32,544	4.7
Japan	-31,771	0.9
Taiwan	-11,404	2.2
India	-9,193	1.0
Thailand	-3,820	2.8
Philippines	-659	1.0
Pakistan	-408	1.1
Indonesia	807	0.5

Source: Bloomberg

* September 2008

Table 7.17: Overview of Capital Market

Equities (KSE)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Listed Companies	numbers	701	666	659	658	656	652	655
Listed Capital	billion Rs.	313	377	439	496	631	706	735
Market Capitalization	billion Rs.	756	1,422	2,068	2,801	4,019	3,778	2735
Market Capitalization as % of GDP	percent	19.7	25.2	31.4	36.3	44.2	36.1	27.0
New Listed Companies	numbers	6	14	18	4	18	8	3
New Listed Capital	billion Rs.	4.6	55.6	32.3	7.8	7.9	36.8	1.4
Debt Instruments (listed)								
New Debt Instruments Listed	numbers	15	6	12	7	8	7	1
Amount	billion Rs.	10.7	3.3	15.6	7.0	11.2	22.5	0.6
KSE-100 index				7,450	9,989	13,772	12,289	9,187
High		4,606	5,621	10,303	12,274	9,504	15,676	12,222
Low		2,357	3,431	4,890	6,971	13,772	11,162	9,145
KSE-30 Index						16,993	14,326	9955**
KSE All Share Index				4,876	6,708	9,758	8937	6642**
Turnover (KSE)								
Average Volume per day (shares)	billion	0.31	0.39	0.35	0.32	0.21	0.24	0.1
Total Value	billion Rs.	3,841	4,862	7,168	8,707	5,453	6313	221**
Turnover Ratio		4	3.4	3.5	3.1	1.3	1.7	0.1
Lahore Stock Exchange								
LSE-25 Index		2,035	2,828	3,762	4,379	4,850	3,869	2,825
LSE Market Capitalization	billion Rs.	751	1406	1995	2693	3,185.41	3514	2613
Market Capitalization as % of GDP		15.6	24.9	30.3	34.9	35.1	33.5	24.9
Islamabad Stock Exchange								
ISE-25 Index		8210	11894	11571	11528	2,716.0*	2749	2444
ISE Market Capitalization	billion Rs.	5,41.3	1,106	998	2,102	3,061	3,810	3,618
Market Capitalization as % of GDP		11.2	19.6	15.2	27.2	33.6	36.4	34.5
SCRA Investment (net flows)	MIn US\$				354.0	980	-232.1	-281.8**

Source: Stock exchanges

* LSE and ISE-10 Index

**Data upto December 5, 2008.

FY08 was marked with higher volatility relative FY06 and FY07 (**Figure 7.31**). Despite several adverse developments during the year, the index continued its upward momentum in the first few months of the year, even reaching 14,000 points in mid-July FY08.

The performance of the equity market in the post-election period in February FY08 was also impressive, with a gain of 6.5 percent during the month. Foreign funds also played an active role in this month, with incremental investments of US\$ 154 million, turning the cumulative balance positive. The highlights of April FY08 were the implementation of CFS-Mk

II and the highest ever level touched by the KSE-100 index. This could not however be maintained and subsequent months saw a continuous decline, which lead the front-line regulator to take a series of measures to arrest the declining trend. At first, there was an adjustment in the circuit

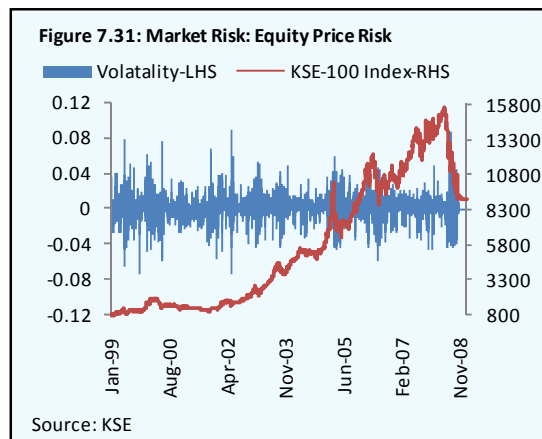
Table 7.18: PE & PBV of MSCI Emerging Markets Asia

Country	PE09 (x)	PBV (x)
India	11.7	3.7
China	11.2	2.5
Taiwan	10.8	1.6
Philippine	10.4	1.8
Malaysia	10.4	1.6
Indonesia	10.1	2.9
Korea	8.8	1.4
Thailand	7.8	1.4
Pakistan	6.8	1.5
Average	9.8	2

Source: Bloomberg

* September 30, 2008

breaker mechanism during June FY08, but then August saw the introduction of a floor mechanism for the KSE-100 index. Under the new rule, the KSE management decided to freeze the KSE-100 index and the price level of stocks at the closing prices of August 27. According to the new rule, applicable from August 28, individual stock prices are free to move based on the 5.0 percent circuit breaker, though with a price freeze on the closing prices prevailing on August 27. The move applies to both the ready as well as the futures market.

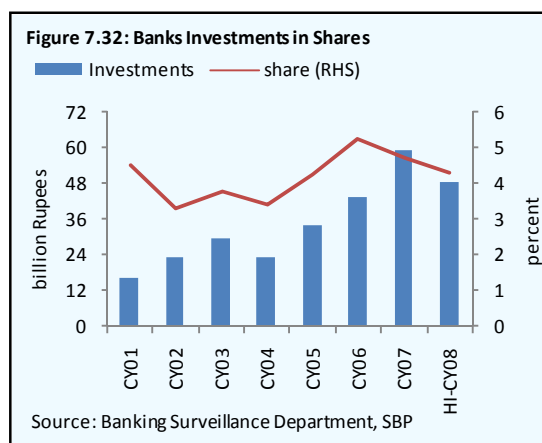


Since the imposition of the floor, there have been several occasions when the market expected the floor to be lifted, however the equity market has now been effectively closed for over 3 months. In the interim period, with the objective of providing stability to the equity market after the proposed removal, the SBP and the government had proposed several confidence building measure to restore trading norms, such as the conversion of the existing financing against shares, amounting to Rs. 33 billion, into a term finance facility of one year. This was followed by the announcement of the Rs. 20 billion stabilization fund and a put option of Rs.30 billion to support the nine GoP owned listed entities (OGDC, NBP, KAPCO, PTC, PPL, PSO, HBL, SSGC and SNGP) via state owned entities (EOBI, State Life Insurance and NIT), however on October 26, 2008 the KSE Board of Directors to extend the floor mechanism to finalize procedural issues related to implementing the put option and the NIT-State Enterprise Fund.

As a result of this measure, trading activities in the market have declined significantly and since October 14, 2008, the ready market volume is below one million shares, while the average ready market volume remained only 39.5 million shares during FY09.

The systemic repercussions of the inactive market has not only harmed investor sentiment but has also spread to the mutual funds industry, with the placement of the freeze on issuance, pricing and redemption of equity funds. Some debt funds have also stopped redemptions.

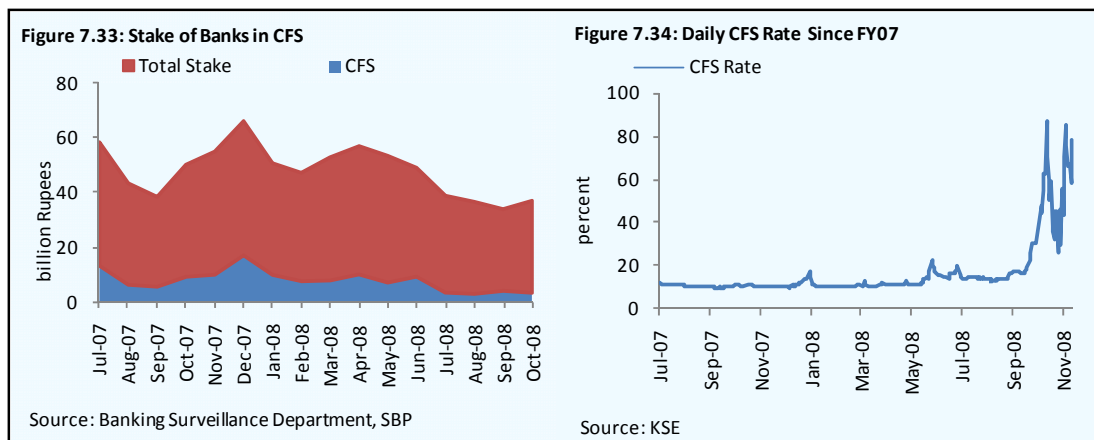
Risks to financial stability from banks' direct stake in the equity market remain low, as banks' equity investment has been 3.9 percent (average) of their total investments in the last four years, well within the limits specified is SBP's Prudential Regulations (Figure 7.32).²⁰



The exposure of banks in the CFS Market is also within prudent limits, as shown in Figure 7.33, which also shows the indirect exposure of banks towards the equity market due to the loans extended by them with shares as collateral. Due to extreme risk aversion in

²⁰ Regulation G-1 for banks' exposure in shares has recently been revised. BPRD Circular Letter No. 30, dated October 26, 2008, states that total investment of banks in shares should not exceed 30 percent of their equity (previously 20 percent), and in case of Islamic Banks and DFIs 45 percent (previously 35 percent) of their equity, provided that investments in future contracts does not exceed 10 percent of their equity.

the first few months of FY09, CFS rate touched an all time high of 60.0 percent in October FY09 (Figure 7.34), reflecting lender’s withdrawal of funds due to fear of potential settlement issues once the floor on the market is removed.



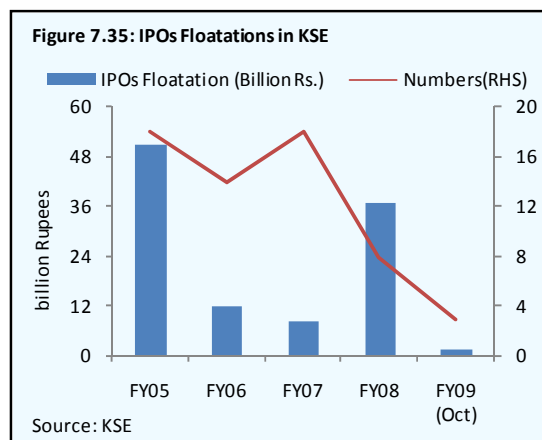
Sector-wise performance

Sector-wise performance of the corporate sector is given in Table 7.19. Details are discussed in the *Special Section: Financial Analysis of the Listed Corporate sector* at the end of this chapter.

7.4.2 Corporate Debt Market

The fixed-income or debt market in Pakistan is largely dominated by government bonds, primarily the MTBs and PIBs for which the investor base consists of banks and corporate entities, and the NSS instruments, in which both individuals and institutional investors can invest, other than banks and DFIs.

The listed corporate bond market, having taken its roots in Pakistan in 1995, still constitutes a miniscule portion of total financial assets (Figure 7.35), with the outstanding amount at less than 1.0 percent of GDP: a negligible as compared to other emerging economies (Box 7.4). Issuances in FY08, however, had a substantially larger amount than in the previous 2 years. Moreover, in the last 3 years, most of the TFCs have been issued by banks and other financial institutions to meet their tier 2 capital requirements. The financial sector holds 41.0 percent share of total outstanding TFCs as of end FY08, followed by the power, transport and fertilizer sectors comprising 13.0 percent, 12.0 percent and 11.0 percent respectively. Total outstanding listed TFCs as of end-FY08 amounted to Rs 123 billion, 60.0 percent of which would mature between FY2011-2013.



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The underlying bench mark rates for floating TFCs have also shifted over time with changes in the interest rate environment as shown in Table 7.20, which lists the different underlying rates used for the TFCs issued since FY98. As can be seen, most of the TFCs generally used floating rates, based on PIBs or SBP discount rate during the easy monetary policy regime. Floating rate TFCs gained momentum with increasing interest rates since FY05. Despite some progress in the primary market, the secondary market for TFCs is still illiquid, due to a number of factors e.g. small size issues, buy-and-hold mindset of the investors, absence of well functioning secondary markets, market making system and well-trained fund managers. Floating rate TFCs were attractive investment options

during a rising interest rate environment and result in increasing return through corresponding increase in coupon payments.

While the size of the listed corporate bonds market remains small, there has been increased activity in privately placed TFCs and Sukuks, which are invested in largely by financial institutions.

Table 7.19: Sector-Wise Corporate Results for 2006 and 2007 (PAT in million, Div in Percent)

Sectors	2006					2007				
	No	PAT	Cash	Stock	Total	No	PAT	Cash	Stock	Total
1 Close - End Mutual Fund	19	8,265.6	31.0	17.5	31.2	26	9,842.2	19.7	11.5	21.0
2 Modarabas	30	809.1	13.8	12.5	14.4	37	770.4	11.8	6.3	11.8
3 Leasing Companies	19	788.1	17.4	19.7	23.7	20	-555.1	17.8	6.0	17.8
4 Inv. Banks/Cos	22	7,202.4	36.3	23.8	35.2	29	10,123.2	45.3	58.2	83.5
5 Commercial Banks	22	60,468.5	31.3	26.8	43.1	28	71,485.3	38.0	27.0	50.5
6 Insurance	31	14,459.6	27.4	35.4	46.7	39	32,364.8	32.1	53.6	62.3
7 Textile Spinning	98	838.6	16.2	9.5	14.2	112	58.1	12.5	8.8	11.8
8 Textile Weaving	12	195.4	12.5	10.0	11.3	19	-506.6	20.0	-	20.0
9 Textile Composite	47	5,292.2	18.5	67.9	34.3	60	5,376.8	20.7	11.0	18.6
10 Woolen	2	-3.1	-	-	-	6	238.4	-	50.0	50.0
11 Synthetic & Rayon	15	1,820.4	13.3	-	13.3	20	804.4	16.9	-	16.9
12 Jute	5	586.7	52.5	20.0	62.5	7	848.7	70.0	30.0	100.0
13 Sugar & Allied Industries	36	1,415.2	17.3	22.1	20.5	38	-834.1	20.4	18.8	24.7
14 Cement	21	11,911.4	19.7	9.9	22.2	22	4,104.5	20.6	12.5	17.9
15 Tobacco	5	3,465.3	71.3	20.0	78.0	4	4,160.6	118.5	-	118.5
16 Refinery	4	5,255.5	83.8	35.0	59.4	5	4,521.2	91.1	22.5	106.1
17 Power Generation & Distribution	12	1,263.9	40.7	-	40.7	14	-4,439.6	34.5	-	34.5
18 Oil & Gas Marketing Companies	7	16,636.9	160.6	17.5	167.6	8	10,046.0	109.0	20.0	97.5
19 Oil & Gas Exploration Companies	4	65,683.6	90.2	50.0	102.7	5	69,396.2	95.5	10.0	98.0
20 Engineering	10	1,245.4	31.6	23.3	34.9	15	1,971.6	34.7	16.6	43.9
21 Automobile Assembler	12	10,513.3	110.5	38.8	103.9	13	8,639.0	175.0	15.0	177.5
22 Automobile Parts & Accessories	10	612.6	28.3	15.0	30.8	13	312.0	43.8	15.0	47.5
23 Cable & Electrical Goods	7	1,382.0	342.5	38.3	200.0	10	3,278.5	468.8	23.6	252.1
24 Transport	3	-11,233.6	10.0	-	10.0	6	-11,610.3	15.0	20.0	17.5
25 Technology & Communication	9	22,294.3	33.3	14.2	35.6	10	15,848.4	35.0	37.0	35.7
26 Fertilizer	4	11,682.5	73.8	-	73.8	5	21,190.0	58.8	20.0	63.8
27 Pharmaceuticals	8	3,598.0	42.3	18.0	53.6	9	3,639.6	69.3	16.3	77.4
28 Chemical	21	3,148.1	74.3	21.7	73.4	25	3,835.4	53.3	20.0	58.3
29 Paper & Board	9	6,763.5	42.0	17.5	49.0	11	4,842.8	40.0	24.0	40.0
30 Vanaspati & Allied Industries	6	-91.0	15.0	-	15.0	13	-79.1	22.0	5.0	13.5
31 Leather & Tanneries	5	205.4	30.0	-	30.0	6	516.6	62.5	-	62.5
32 Food & Personal Care Products	20	4,616.3	134.9	15.0	137.2	23	5,531.6	182.6	18.0	189.0
33 Glass & Ceramics	7	601.8	18.3	16.7	35.0	11	473.7	11.9	12.5	14.5
34 Miscellaneous	22	1,412.5	32.5	25.0	34.0	29	1,874.1	41.0	17.5	38.9
	564	263,106				698	278,069			

Source: Karachi Stock Exchange

* Sectoral averages excluding zero dividend and zero stock dividend.

Table 7.20: TFCs Rates

Period	Fixed		Floating					
			Discount Rate		3 & 6-Months KIBOR		PIB/ P&L	
	No	Amount	No	Amount	No	Amount	No	Amount
FY-98	1	250	-	-	-	-	-	-
FY-99	3	1,276	-	-	-	-	-	-
FY-00	3	1,088	-	-	-	-	-	-
FY-01	4	2,842	3	1,450	-	-	1	500
FY-02	1	100	9	3,900	-	-	7	5,610
FY-03	-	-	15	28,412	-	-	8	5,205
FY-04	-	-	2	1,700	-	-	2	1,000
FY-05	-	-	-	-	10	11,325	4	4,775
FY-06	-	-	-	-	8	10,135	-	-
FY-07	-	-	-	-	12	12,850	-	-
FY-08	-	-	-	-	20	50,095	-	-

Source : Pak Oman Inv Co. and JS Inv Bank

Box 7.5: Growth of Local Currency Bond Markets in Regional Countries:**Indonesia:**

The LCY corporate bond market grew substantially during CY07 due to promulgation of following reforms:-

- Move toward listing and pricing of all bonds publicly;
- Clarifying accounting and eligibility rules for mutual funds,
- New tax incentives provided to the corporate customers.
- Growth of Islamic bond market that now makes up 4 percent of the corporate bond market. The steady decline in the central bank's reference rate also encouraged fresh investors and issuers to contribute into the market growth.

Malaysia:

The corporate bond market witnessed modest growth in CY07. Although corporate demand for funds remained strong but to a larger extent it has been satisfied by the banks or by the recently booming equity market. The reduced demand for bonds was even more pronounced in the securitization market, which declined by 14 percent in value in H1-CY08. The Islamic Financial sector continued its double-digit growth over the period at an annualized rate of 26 percent. Islamic securities now comprise more than half of corporate bonds outstanding, at 61 percent.

Singapore:

Singapore's LCY corporate bonds also grew modestly in 2007. A contributing factor was the steady rise in the number of foreign firms issuing SGD bonds in Singapore. Foreign-based issuers constitute almost 25 percent of total LCY corporate bonds. Some of this growth in 2005 and 2006 also came from real estate equity investment trust (REIT)-related bond issuers. While the REIT sector continued to grow, securitized notes as a whole contracted by 15 percent in the first half. Increasing volatility in the international securitization sector reduced the appetite for many of the market's traditional investors.

Thailand:

In Thailand, the corporate bond market grew strongly in 2006, but slowed down in 2007, showing modest growth of 4 percent in response to policy uncertainty and a significant increase in its instruments from the central bank. The securitized note market also declined. Even though the central bank reduced its policy rate six times between December 2006 and July 2007, and the 5-year yield dropped to 4 percent, the yield curve steepened steadily and many firms chose to borrow short-term funds from the banks, which resultantly reduced new debt issues

Table1: Growth Rate % of Emerging East Asian Local Currency Bond Market

	2005	2006	2007
Indonesia			
Total	-0.1	4.9	9.8
Government	0.1	4.7	7.7
Corporate	-1.7	6.5	24.5
Malaysia			
Total	9.7	6.1	12.2
Government	8.0	8.8	22.8
Corporate	11.3	3.5	1.5
Singapore			
Total	5.9	10.3	7.2
Government	8.0	10.0	8.6
Corporate	3.3	10.8	5.5
Thailand			
Total	24.7	22.7	8.9
Government	29.0	18.7	11.7
Corporate	16.1	31.7	3.5

Source: www.asianbondonline.com