



Workshop for Journalists
Understanding Macroeconomics, Financial sector and Banking

Financial Markets

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Outline



Part 1: Financial Markets – what are they and why are they needed

- ❖ Financial Market – Definitions, Types and Concept
- ❖ Role of Financial Markets
- ❖ More on Money and Fx Markets

Part 2: SBP's Implementation of Monetary Policy – Recent Changes in the Interest Rate Corridor

- ❖ Monetary Policy Framework
- ❖ Instruments of Monetary Policy
- ❖ Concept and Recent Changes in the SBP's IRC Corridor

Part 3: SBP's Data Related to Pakistan's Financial Market

Part 4: Exercise



Part 1: Financial Markets – what are they and why are they needed?



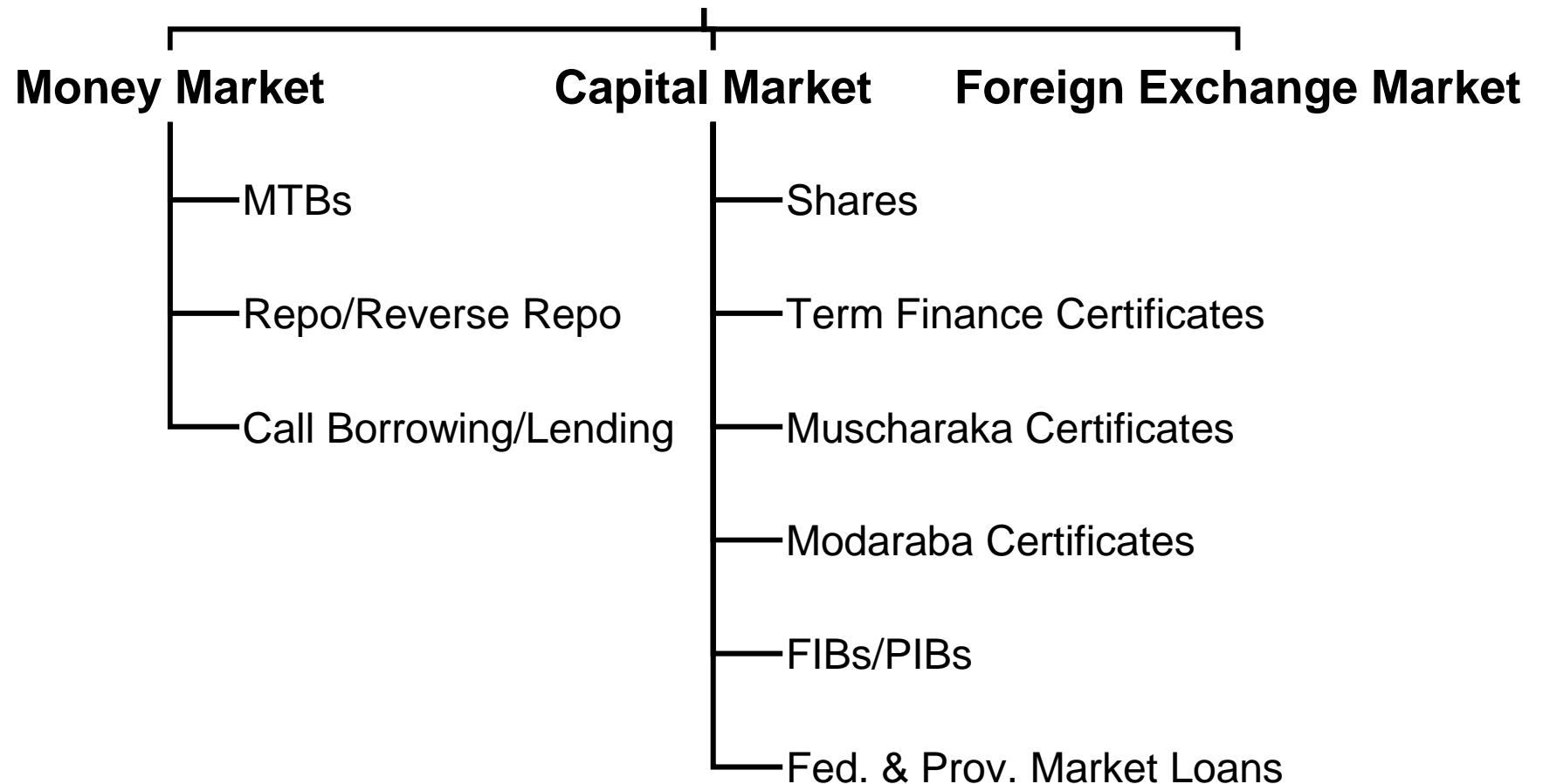
Financial Markets

- ❖ A financial market is a mechanism through which buyers and sellers participate in the trade of financial assets such as equities, bonds, currencies and derivatives.
- ❖ Typically, financial markets facilitate transfers of funds from person or business without investment opportunities (i.e., “Lender-Savers”, or “Surplus Unit”) to those who have investment opportunities (i.e., “Borrower-Spenders”, or “Deficit Unit”).

Main Financial markets & Instruments



Financial market instruments





Functions of Financial Markets

- ❖ Optimal utilization and channelization of financial resources
- ❖ Facilitate price discovery
- ❖ Provide liquidity to financial assets
- ❖ Reduce cost of financial transactions



Introduction to Money Market

- ❖ A market for short-term (less than one year maturity) debt instrument.
- ❖ Interbank money market is for transactions in wholesale short-term loans & deposits and for trading short term financial instruments.
- ❖ Major players: Banks, DFIs, Brokerage houses, Central bank
- ❖ Main instruments/transactions: MTBs, CPs, Repo, Call, Clean, etc.
- ❖ Primary Market: The market in which new issues of financial instruments/ securities are sold initially.
- ❖ Secondary Market: A market for buying and selling securities in the period between their issue and maturity.
 - A liquid secondary market enhances the attractiveness of financial instruments/securities to investors.



Primary Market of Government Securities

Auction Process

- ❖ Government Announces Auction Targets
- ❖ Primary Dealers Submit their bids to SBP
 - Non Competitive Bids, one day before the auction day
 - Competitive Bids on Auction Day
- ❖ All Bids are consolidated and submitted to Government/MoF
- ❖ Ministry of Finance decides the cutoff rates.
- ❖ Result is announced through Press, Reuters & Bloomberg



Primary Market of Government Securities (conti.)

Market Treasury Bills

- ❖ Zero-coupon Securities: A debt security that doesn't pay interest (a coupon) but is traded at discount, rendering profit at maturity when the bond is redeemed for its full face value.
- ❖ Tenors of MTB: 3-Months (84 D); 6-Months (182 D); 12-Months (364 D)
- ❖ Auction Schedule: Fortnightly
<http://www.sbp.org.pk/ecodata/tb.pdf>

Pakistan Investment Bonds

- ❖ Fixed Coupon Bond: A debt security that pay periodic interest (a coupon) and can be traded at discount or premium.
- ❖ Tenors: 03Y, 05Y, 10Y and 20Y (currently active)
- ❖ Auction: Monthly
<http://www.sbp.org.pk/ecodata/gop-ijara-summary.pdf>



Primary Market of Government Securities (conti.)

Government Ijara Sukuk

- ❖ Floater : A bond whose coupon rate changes with market conditions (short-term interest rates)
- ❖ Tenor: 03 Years
- ❖ Auction Schedule: As and when decided by MoF

<http://www.sbp.org.pk/ecodata/gop-ijara-summary.pdf>

Can Individual Participate in Primary Auctions of GS ?

IPS Account and NCBs



- ❖ IPS accounts were introduced by SBP in 1991 to encourage investments in PKR denominated government securities. by non-bank sector.
- ❖ Various circulars have been issued by SBP to signify the importance of IPS accounts and the rules governing these accounts.
- ❖ Any client who maintains PKR denominated account in a bank is eligible to open IPS account.
- ❖ SBP has instructed banks to offer IPS accounts to their clients.
- ❖ Unfortunately, there is lack of awareness among individual and small investors regarding the opening and purpose of IPS accounts.



Non-Competitive Bids

- ❖ SBP introduced Non-competitive bids in 2003.
- ❖ The facility is intended to accommodate individual and small institutional investors to invest directly through auction in Government of Pakistan issued Market Treasury Bills (MTBs) and Pakistan Investment Bonds (PIBs).
- ❖ Primary Dealers have been instructed to create awareness among their clients regarding NCBs and various circulars have been issued in this regard. SBP also started a campaign, issued brochures and flyers to create awareness about NCBs.
- ❖ However, the participation of individual and small investors in Government Securities auctions has been low and desired results have not been achieved mainly due to conflict of interest of banks.
- ❖ Data regarding NCBs is published regularly on SBP website along with the auction results.

<http://www.sbp.org.pk/ecodata/Auction-TBills.pdf>

<http://www.sbp.org.pk/ecodata/Auction-Investment.pdf>



Secondary Market Interest Rates

- *Clean rate*: weighted average lending rate on all uncollateralized (clean) transactions held between the financial institutions;
- *Call rate*: weighted average lending rate on all uncollateralized transactions held among scheduled banks with the option of being called by the lender at any time before the maturity;
- Most of the interbank transaction are repo based; about 85% of interbank transactions are repo based
- KIBOR—Karachi Interbank Offered Rate—is an average of clean ‘offer rates’ quoted by the banks in the KIBOR club (currently, 18), excluding three highest and three lowest offered rates;
 - KIBOR is used as benchmark for corporate lending;
 - indicate participant banks’ view on clean lending and borrowing rate levels in interbank market for various tenors;
 - is calculated and disseminated by Financial Markets Association of Pakistan (FMAP);
 - each bank in the club submits KIBOR (KIBID) for all tenors on Reuters and FMAP web on a daily basis for a minimum amount of Rs100 million;



Introduction to Foreign Exchange(FX) Market

- ❖ **Foreign Exchange Markets:** The Currency Market where money denominated in one currency is bought and sold with money denominated in another currency.
- ❖ **Exchange Rate:** Price of one currency in terms of an other currency
- ❖ **Foreign Exchange Transaction:** Buying or selling of one currency for another with the delivery of the currencies taking place either immediately or at some pre-specified time in the future, at the rate agreed today.
- ❖ **Spot Transaction:** that executed today to buy or sell one currency for another currency for cash settlement in **TWO** business days.
- ❖ **Forward Transaction:** that is executed today to buy or sell one currency for another at a rate agreed today with settlement at an agreed future time (after two days).



Foreign Exchange Market Participants

- ❖ **Major participants at wholesale level:** mainly banks and central bank
- ❖ **Major participants at retail level:** business corporate and individuals as demanders and suppliers of foreign exchange.
- ❖ **Major participants in spot market:** commercial banks, brokers, central banks, customers of banks
- ❖ **Major participants in the forward market:** traders, hedgers, speculators, arbitrageurs



How Are Exchange Rates Determined?

- ❖ Exchange rates are determined by the demand and supply for different currencies

- ❖ Three main factors that impact exchange rate movements are:
 1. A country's inflation
 2. A country's interest rate
 3. Market psychology



How Can Agents Minimize Exchange Rate Risk?

To minimize transaction and translation exposure, managers should

- ❖ Buy forward
- ❖ Use swaps
- ❖ Lead and lag payables and receivables
 - lead strategy - attempt to collect foreign currency receivables early when a foreign currency is expected to depreciate and pay foreign currency payables before they are due when a currency is expected to appreciate
 - lag strategy - delay collection of foreign currency receivables if that currency is expected to appreciate and delay payables if the currency is expected to depreciate

Role of Central Bank - Foreign Exchange Intervention?



- ❖ Foreign exchange intervention is defined generally as foreign exchange transactions conducted by the monetary authorities with the aim of influencing exchange rates. It is the process by which the monetary authorities attempt to influence market conditions and/or the value of the home currency on the foreign exchange market.
- ❖ Intervention usually aims to promote stability by countering disorderly markets, or in response to special circumstances.
- ❖ Exchange is primarily determined through demand and supply forces in the foreign exchange market. SBP occasionally intervenes in the market with the objectives of building foreign exchange reserves and ensuring smooth functioning of the market.



Exchange Rates

- ❖ Different kinds of exchange rates are published on the website with the intention of creating awareness among clients/customers by keeping them informed about the market which include:
 - ❖ Daily Weighted Average Rates
 - ❖ Daily Mark-to-market revaluation rates
 - ❖ Daily conversion rates



Exchange Rates

- ❖ **Weighted average rates** are an estimate of the Exchange Rates quoted by various Commercial Banks to their **clients**. They are compiled from the Exchange Rate sheets issued daily by various Commercial Banks providing their indicative Exchange Rates for commercial transaction with customers. Daily weighted average rates are also published on SBP.

<http://www.sbp.org.pk/ecodata/rates/war/WAR-Current.asp>

- ❖ **Mark-to-market revaluation rates** are issued for Authorized Dealers to revalue their books daily on Mark-to-Market basis. These are compiled on the basis of closing Exchange rates **prevailing in Inter Bank Foreign Exchange Market**.

<http://www.sbp.org.pk/ecodata/rates/m2m/M2M-Current.asp>

- ❖ **Daily Conversion Rates** are the rates used for converting FC deposits that were frozen in 1998 into PKR. <http://www.sbp.org.pk/index.asp>



Foreign Exchange Rates and Depreciation/Appreciation

- ❖ Measuring appreciation/depreciation in the spot rate for quotations expressed in home currency terms (direct quotations):

$$\% \text{app/dep} = \frac{\text{Ending rate} - \text{Beginning Rate}}{\text{Ending Rate}} \times 100$$

- ❖ Quotations expressed in foreign currency terms (indirect quotations):

$$\% \text{app/dep} = \frac{\text{Beginning Rate} - \text{Ending Rate}}{\text{Beginning Rate}} \times 100$$

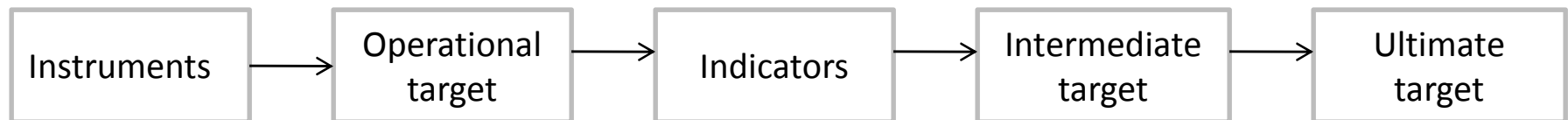


Part 2: SBP's Implementation of Monetary Policy – Recent Changes in the Interest Rate Corridor

A bird's eye view of the monetary policy regime of SBP



- ❖ **Ultimate objective** – Monetary stability; Soundness of the financial system; Fuller utilization of country productive resources
- ❖ **Intermediate target** – Inflation (assessment of near-term inflation path and inflation expectations vis-à-vis announced inflation target). Assessment of monetary aggregates
- ❖ **Operational target** – money market overnight repo rate.
- ❖ **Indicators** – market interest rates, behavior of monetary aggregates, etc
- ❖ **Instruments** – policy rate, standing facilities, OMOs, Fx SWAPs, CRR, SLR, etc.





Operational framework -- Operational target

Controlling overnight money market repo rate close to the SBP's policy (target) rate

- ❖ Overnight money market repo rate is a weighted average interest rate on overnight repos against Treasury Bills/PIBs in the interbank market, using share of respective transactions in total amount as weight.
 - *Repo transaction* is the spot sale of securities with agreement to purchase (forward) the same.
 - *Reverse repo transaction* is the mirror image of the repo transaction i.e. spot purchase of securities with the agreement to sell (forward) the same.



Monetary policy instruments

SBP's Policy Rate:

- ❖ SBP's target for the average money market overnight repo rate.
- ❖ Recently, introduced in May 2015 and set at 6.5 percent.

SBP's Reverse Repo Rate – Standing Ceiling Facility:

- ❖ In case banks fail to raise needed funds from the market, they can borrow against approved securities from SBP as a last resort at SBP's reserve repo rate.
- ❖ Currently, w.e.f. 25th May 2015, it is set at 7.0 percent per annum; 50 bps above the policy rate.

SBP's Repo Rate – Standing Floor Facility:

- ❖ Similarly, if banks have excess funds left, they can place them with SBP at SBP's repo rate with the central bank
- ❖ W.e.f 25th May 2015, it is set at 5.0 percent; i.e. 150 bps below the policy rate.



Monetary policy instruments

Open Market Operations (OMOs)

- ❖ Are conducted regularly on Fridays and on need basis on other days;
- ❖ Are auction based where banks bid for amount and the rate.
- ❖ Using OMOs the central bank either provides funds to the market by lending against collateral or mops-up the surplus liquidity:
 - to inject (*drain*) liquidity, SBP purchases (*sells*) T-bills from (*to*) commercial banks generally with an agreement of sale (purchase)—reverse repo (*repo*);
 - Outright sale or purchase of T-bills (in case market is expected to remain long or short over longer period).
- ❖ Also, OMOs for Islamic Banking Institutions on Bi-Muajal and Outright Ready transactions basis have been introduced in FY15.
- ❖ **What is the safe limit of OMOs?**



Monetary policy instruments

Cash Reserve Ratio (CRR)

- ❖ CRR is the percentage of depository institutions' specified liabilities which they must hold as cash with the central bank, usually at zero return;
- ❖ Increase in CRR forces the FIs to hold more balances at the central bank that implies decline in loanable funds with FIs, which leads to low credit and a potential slowdown in money creation, and *vice versa*;
 - ❖ Currently, it is 5% for demand liabilities (including less than 1 year time deposits) and 0% for time liabilities of above 1-year tenor. For foreign currency deposits, there is an additional 15% special CRR on top of the basic 5% CRR.

Statutory Liquidity Ratio (SLR)

- ❖ SLR is the percentage of depository institutions' specified liabilities which they must hold in government paper
 - ❖ 19% for demand liabilities (including less than 1 year time deposits) and 0% for time liabilities of above 1-year tenor.



Monetary policy instruments

Forex swaps

- ❖ These are SBP transactions in the foreign exchange market;
- ❖ Swaps are similar to repo operations described above;
- ❖ Purchase of dollars results in injection of Pak rupees, while selling of dollars drains rupee liquidity.
- ❖ Are used depending on the prevailing conditions in the forex market.



Why Central Banks have 'Interest Rate Corridor'?

- ❑ The main objective of adopting an Interest Rate Corridor (IRC) by a central bank is to stabilize short-tenor interest rates around the 'policy rate' for the smooth transmission of monetary policy.
- ❑ Stability in the short-term interest rates around the chosen 'policy rate' helps in transmitting the intended policy stance to market interest rates.
- ❑ Large volatility in the short-term rates may dilute signals and effectiveness of the chosen 'policy rate'.
- ❑ Many central banks are currently using IRC to implement their monetary policy.



International Best Practices – IRC

Albeit few country specific difference, following common features are found in the IRC frameworks practiced by other central banks:

- ❑ Central banks have a single Policy Rate; generally defined as a target for a short-term interest rate (mostly overnight rate) in the interbank money market.
- ❑ The policy rate is set within an interest rate corridor; generally charted by two standing facilities. These facilities serve as safety valves for keeping conditions in the inter-bank market stable and ensuring that short-term interest rate don't move far from target (policy) rate.
- ❑ Central banks liquidity operations, mainly OMOs, aim to keep the short-term (O/N) rate closer to the Policy (Target) and ensure that standing ceiling and floor facilities are used as the last resort facilities.
- ❑ Hence, as per the best international practices, central banks have a single policy rate and have committed to market that the short-term interest rates will remain close to the policy rate.



Structure of IRC in Other Central Banks

Sr No.	Central Bank	Current Policy Rate (%)	Current Ceiling Rate	Current Floor Rate
1	Reserve Bank of Australia	2.00	2.25	1.75
2	Bank of Canada	0.75	1.00	0.50
3	European Central Bank	0.05	0.30	-0.20
4	Reserve Bank of India	7.50	8.50	6.50
5	Bank of Japan	0.10	0.30	0.10
6	Bank of Korea	1.75	2.75	0.75
7	Bank of England	0.5	0.75	0.50
8	Federal Reserve System	0 - 0.25	PC: 0.75 SC: 1.25	0.25
9	Bank of Thailand	1.75	2.25	1.25



Structure of IRC Framework Before 25May 2015

- ❑ Prior to adoption of SBP's target for O/N rate as a policy rate in May 2015, SBP sets Ceiling and Floor rates (with a spread of 250 bps); but has no target rate within IRC. Also, Ceiling rate was same as the 'policy rate'.

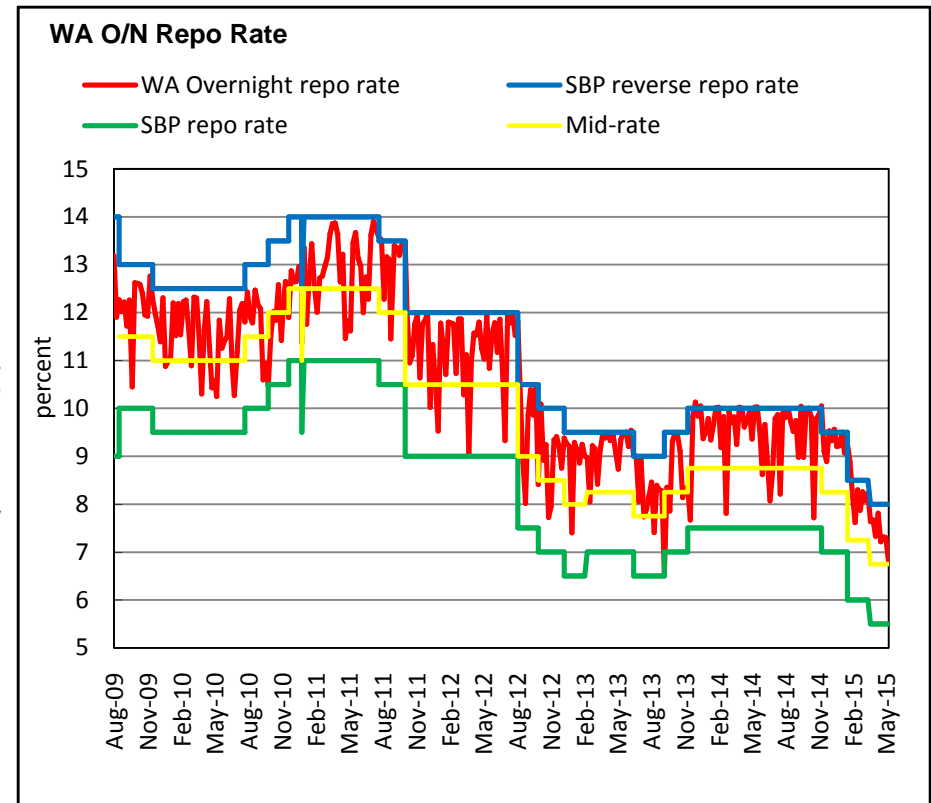
- ❑ This implies:
 - overnight repo rate could alternate anywhere between the Floor and the Ceiling rates, which dilutes the effective transmission of desired policy stance to other interest rates in the market.
 - Monetary management unit of SBP had significant discretion where to keep short-term interest rates and might base their decision on multiple operational considerations; which could lead to inconsistent and confusing signals to the market.
 - In liquidity shortage situation (mostly the case in Pakistan) O/N rate used to remain closer to the ceiling and the ceiling rate by default could be viewed as the central bank's policy rate. While in liquidity surplus situations, the floor rate could be considered as an implicit policy rate.



Structure of IRC in Pakistan ... (contd.)

□ In Pakistan, O/N repo rates have remained mostly in the upper half of the corridor, close to its ceiling, which:

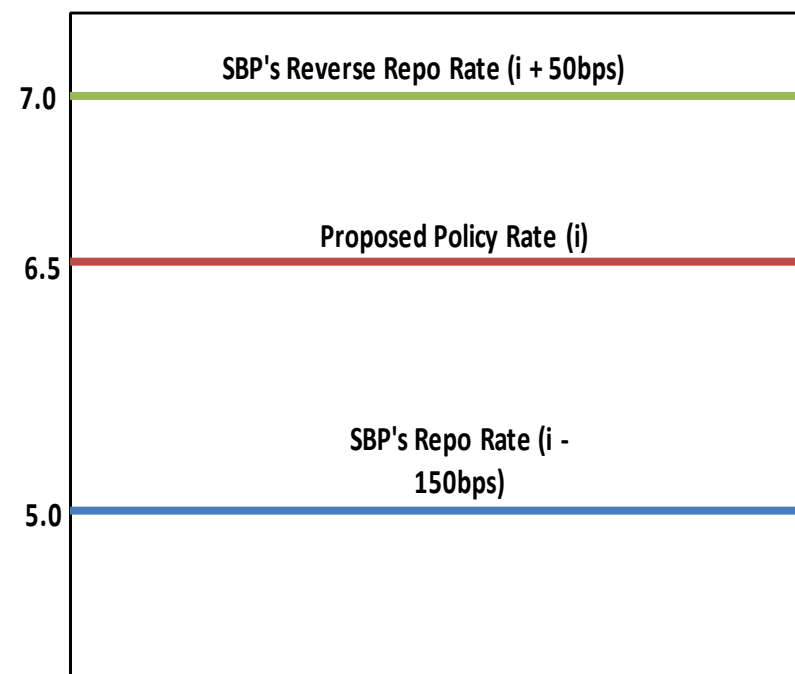
- made the ceiling rate less penal,
- increased probability of banks availing discounting more frequently
- at times lender of last resort facility becomes lender of first resort.
- limited the volumes in the money market.



SBP's Revised IRC Structure



- ❑ A new 'SBP Target Rate' is introduced and designated as "Policy Rate", in addition to ceiling and floor rates of IRC.
- ❑ This O/N target rate is adopted as a single policy rate to unambiguously signal SBP's stance of monetary policy.
- ❑ SBP has committed to keep the overnight rate close to the SBP Target rate.
- ❑ Width of the interest rate corridor has been reduced to 200 bps.





Implications of the IRC Changes

Changes in IRC structure implies:

- a commitment by SBP to keep the overnight rate aligned to the Board approved 'policy rate'.
- lower volatility in the shorter tenor interest rates, and strengthening of the transmission of monetary signals to term structure and banks lending and deposit rates.
- reduce visits on SBP's ceiling and floor liquidity facilities that are meant to be used as the last resort. This will increase secondary market volumes and reduce banks' dependency on SBP's funds over the medium-term.



Part 3: Financial Markets' Data Available at SBP's Website



Data on SBP Website

- ❖ Money market Interest Rates:
 - ❖ http://www.sbp.org.pk/ecodata/kibor_index.asp
 - ❖ http://www.sbp.org.pk/ecodata/call_turnover.pdf
 - ❖ <http://www.sbp.org.pk/ecodata/OVR-Repo-History.pdf>

- ❖ Auction related data:
 - ❖ <http://www.sbp.org.pk/ecodata/auction-treasurybills.pdf>
 - ❖ <http://www.sbp.org.pk/ecodata/MTB-BID.pdf>
 - ❖ <http://www.sbp.org.pk/ecodata/Auction-TBills.pdf>
 - ❖ <http://www.sbp.org.pk/ecodata/Auction-Bond.pdf>
 - ❖ <http://www.sbp.org.pk/ecodata/PIB-BID.pdf>
 - ❖ <http://www.sbp.org.pk/ecodata/Auction-Investment.pdf>
 - ❖ <http://www.sbp.org.pk/ecodata/Auction-Ijara.pdf>



Data on SBP Website

- **Other Money market reports:**

- ❖ <http://www.sbp.org.pk/ecodata/Result-OMO.pdf>
- ❖ <http://www.sbp.org.pk/ecodata/OMO-Inject-Hist.pdf>
- ❖ <http://www.sbp.org.pk/ecodata/OMO-GIS.pdf>
- ❖ <http://www.sbp.org.pk/ecodata/Bai-Mujjal.pdf>
- ❖ <http://www.sbp.org.pk/ecodata/ECR.pdf>

- ❖ **Exchange Rate & FX Reserves Data:**

- ❖ <http://www.sbp.org.pk/ecodata/rates/m2m/M2M-Current.asp>
- ❖ <http://www.sbp.org.pk/ecodata/rates/war/WAR-Current.asp>
- ❖ <http://www.sbp.org.pk/ecodata/forex.pdf>



Part 4: Exercise