Chapter 2: Financial Markets' Behavior

Domestic financial markets continued to function smoothly and exhibited lower volatility as compared to last year. The economic recovery from the pandemic got further traction in H1CY21 and financial conditions remained accommodative. However, with the buildup of inflationary and external account pressures in H2CY21, SBP took various measures – including 275 bps rise in policy rate from September to December 2021. With the change in monetary policy stance, , the expectations started to build for further increase in interest rates due to rising inflationary pressures while demand for bank credit was also high. Accordingly the financial markets witnessed increased volatility. A significant deviation was also noticed in government securities' cut off rates vis-à-vis policy rate. However, on an overall basis, financial markets functioned smoothly and did not pose any significant stability concerns for financial institutions (especially banks), which exhibited adequate resilience to withstand shocks to the financial markets.

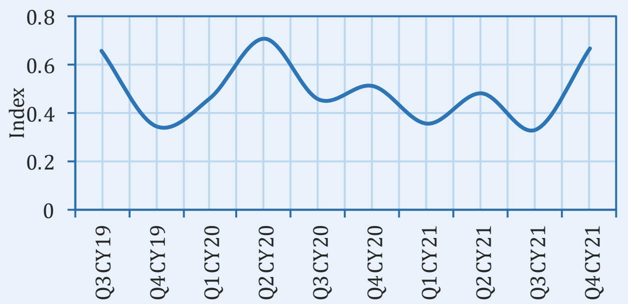
With the rollout of vaccines, return to normalcy was expected in CY21; however, the recovery was accompanied by new challenges of supply chain disruptions and global inflationary pressures

With the rollout of COVID-19 vaccines, economies reopened and activities gathered momentum during CY21. The optimism was also reflected in global financial markets in CY21 as major equity markets responded well to the economic recovery and policy measures, which were introduced last year to cope with impacts of the pandemic. However, the return to normal was not without challenges; the unprecedented policy response (to fight COVID-19) resulted in increased demand that outpaced the growth in supply. Labor shortages (e.g. international travel remained limited and subject to quarantine restrictions in several economies) and shortage of shipping containers along with ports' congestions resulted in soaring freight costs that further exacerbated global supply chain issues.

The spurt in demand led to higher global commodity prices and inflation across a number of countries, posing challenges for policy makers to balance the rising inflationary pressures vis-à-vis sustainability of economic growth especially in Emerging Market Economies (**EMEs**) such as Pakistan.

Starting September 20, 2021, SBP raised the policy rate by a cumulative 275 bps until end CY21, to moderate the rising inflation and achieve a sustainable CAD along with growth. The rise in policy rate also complemented the adjustments in exchange rate, which was facing disproportionate burden from external sector pressures.[24] These developments also reflected in the domestic financial markets' behavior, which witnessed considerable dynamism in CY21, though it largely remained calm as compared to last year (**Chart 2.1**).

Chart 2.1: Financial Stress Index



Note: The index is based on Volatility in three major financial markets variables i.e. Exchange Rate, Overnight Repo rate and KSE-100 index.

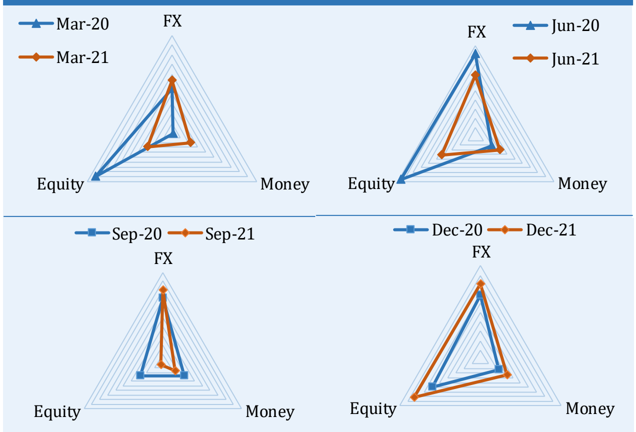
Source: SBP

[24] See Monetary Policy statement of September 2021

Financial markets exhibited lower volatility compared to last year

Financial markets remained relatively calm in H1CY21 as compared to the corresponding period of last year when the pandemic surfaced and rapidly seized economic activity. However, stress resurfaced in H2CY21 specifically in FX and equity markets due to strong economic recovery and buildup of macroeconomic imbalances (**Chart 2.2**).

Chart 2.2: Financial Markets Stability Map



Note: Volatility in the respective markets is calculated using Exponential Weighted Moving Average (EWMA) method. Daily Overnight repo rate, KSE-100 index and Interbank PKR/USD Exchange Rate are used as indicators for the money, equity and foreign exchange markets, respectively.
Source: SBP

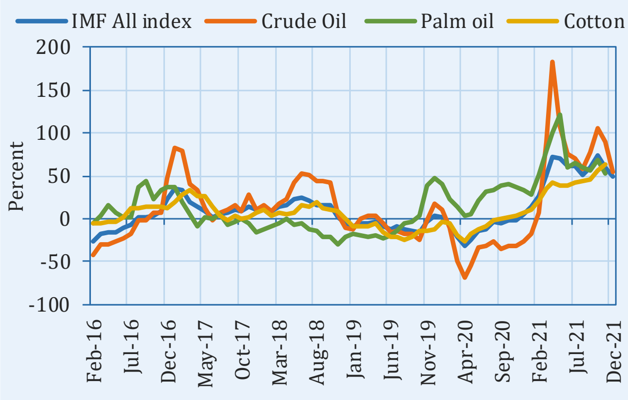
Foreign Exchange (FX) market

The signs of economic recovery (from the COVID induced contraction in FY20) were already visible in the latter part of H2CY20 as several high frequency indicators validated the gathering momentum in economic activities.[25] However, with the quick economic recovery across the globe, prices of commodities in international markets also started rising (**Chart 2.3**). Accordingly, due to the buildup of stress in external account and inflationary pressures in H2CY21, the sentiments and performance of markets changed as the FX market faced liquidity pressures and depreciation in exchange rate (**ER**). However, the market witnessed contained volatility as various FX inflows and support to FX reserves helped in augmenting liquidity and facilitated smooth functioning of the market.

The higher imports resulted in pressure on external sector….

While there was a rise in imports' volume, the upward trending prices of global commodities coupled with supply chain disruptions gave a substantial push to the import bill of the country and created external account pressures in H2CY21. Though, exports and workers' remittances remained robust at an average USD 2.4 billion and USD 2.6 billion per month, respectively, both goods and services imports (particularly transportation on the back of higher shipping costs[26]) also increased significantly. Further pressures were added by the change in the geopolitical situation in the region in the wake of withdrawal of allied forces from Afghanistan, as the country lost access to its FX reserves with US FED and some multilateral institutions (e.g. SDRs from IMF).[27] Accordingly, the current account balance widened and recorded USD 9 billion deficit during H2CY21 (USD 3.2 billion deficit) (**Chart 2.4**).

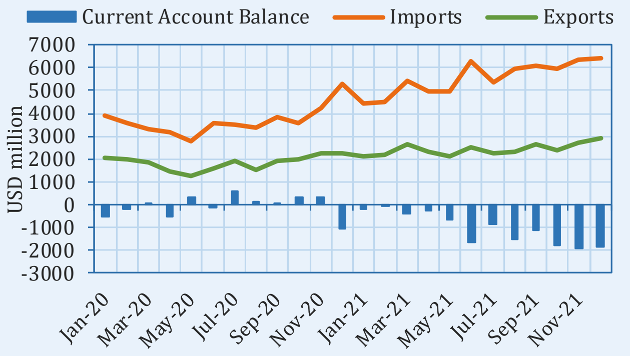
Chart 2.3: Trend in YoY Change of Global Commodity prices



Source: IMF

[25] The economy grew by 5.7 percent in FY21 and 6.0 percent in FY22.
[26] Imports of services rose by 22.8 percent (YoY) to USD 9.8 billion in CY21 as compared to 22.4 percent YoY decline in CY20. Within import of services, transportation constitute around 45 percent share in payments during CY21 as compared to 34.1 percent share last year. The increase in shipping costs was one of the major reason for higher payments for transportation during CY21.
27 IMF's country page on Afghanistan. Accessed on January 28, 2022

Chart 2.4: Current Account Balance, Imports and Exports

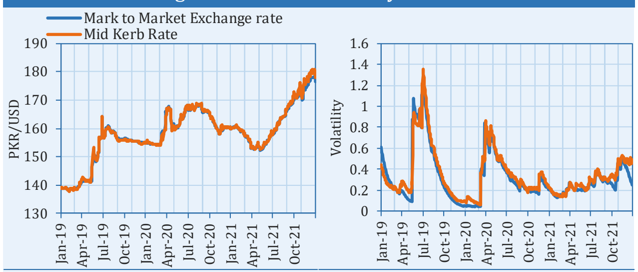


Source: SBP

Though widening CAD led to FX depreciation, volatility remained contained in CY21 vis-à-vis last year at the back of flexible exchange rate regme ..

The PKR depreciated by 9.4 percent in CY21 (3.1 percent deprecation in CY20).[28] However, within the year, the parity witnessed two divergent phases i.e. the exchange rate appreciated by 4.7 percent between December 31, 2020 and May 07, 2021 then it depreciated by 13.7 percent between May 07 and December 31, 2021 (**Chart 2.5 a & b**). These two general trends in prices were broadly consistent with fundamentals e.g. the CAD was mild until May-21 but rose noticeably from Jun-2021 onwards and accordingly reflected in the changes in exchange rate as flexible parity continued to adjust to demand and supply conditions.

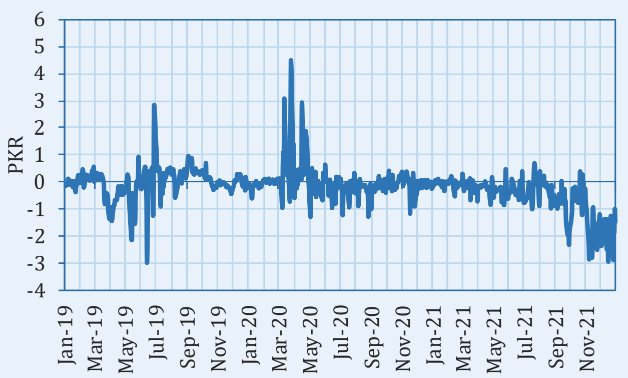
Chart 2.5: Exchange Rate and its Volatility



Source: SBP

From the perspective of shocks and volatility, CY21 differs from last year in the sense that the abrupt and significant volatility in FX market in CY20 emanated from the unprecedented shock of COVID-19 pandemic and its associated uncertainties. However, the relatively low volatility during CY21 can be traced in conventional fundamentals e.g. higher global commodity prices and economic recovery that led to a gradual buildup of CAD during CY21.

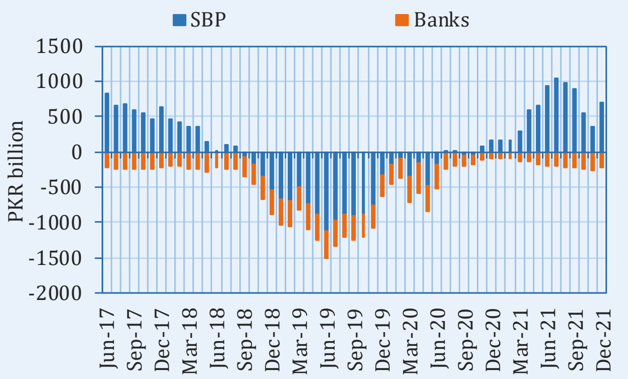
Chart 2.6: Interbank-KERB Spread



Source: SBP

The overall dynamics in external account (e.g. widening CAD) were also reflected in falling Net Foreign Assets (**NFA**) of the banking system and exchange rate (**Chart 2.7**). However, it is important to highlight that Pakistan was not the only country which faced pressures on exchange rate as currencies of other emerging markets (such as Turkey, Chile, South Africa and Thailand, etc.) also depreciated in H2CY21 (**Chart 2.8**).

Chart 2.7: NFA of the Banking System



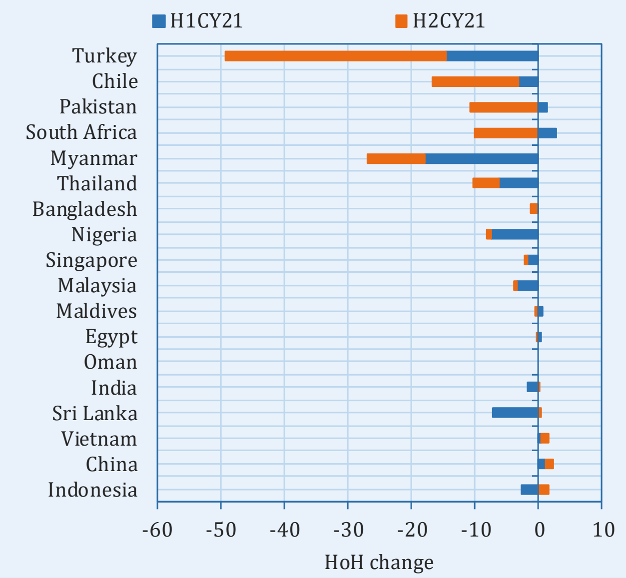
Source: SBP

During the year the FX market functioned smoothly; however, several indicators point towards tight FX liquidity conditions especially toward the end of CY21, such as:

[28] Data source: Mark to market revaluation exchange rate

- The KERB-interbank spread sharply widened in Q3CY21 reflecting, inter alia, the impact of the geopolitical situation in the region in the wake of the withdrawal of allied forces from Afghanistan. The KERB interbank spread, which was 0.34 (in PKR terms) in the first ten months of CY21, on average, widened to 1.73 during Nov-Dec 2021 (**Chart 2.6**).
- Increase in foreign currency advances as well as advances to deposit ratio in foreign currency deposits (i.e. FE-25 deposits) towards the end of CY21 (**Chart 2.9**)
- Episodes of fall in 6M forward premium in CY21 (**Chart 2.10**).

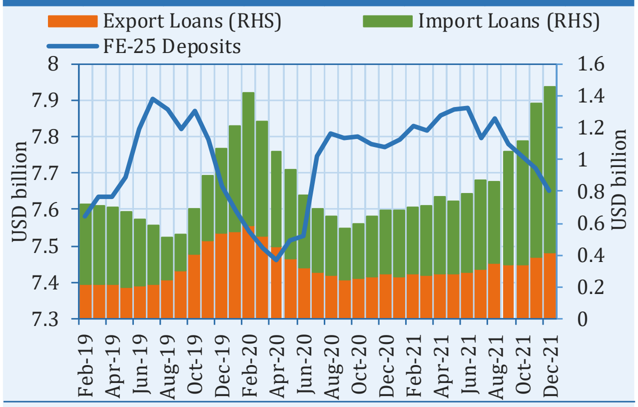
Chart 2.8: Change in Exchange Rate in Selected EMs



Source: Haver Analytics

Nonetheless, the market functioned smoothly, as besides the increase in exports and worker remittances, inflows in RDA augmented FX liquidity during CY21. Additional FX flows from various sources like cash support from Saudi Fund for Development (**SFD**), inflows against Euro bonds, NPC and IMF's new SDRs allocation for Pakistan quota (as part of global SDRs allocation) helped in retaining market confidence.

Chart 2.9: FE-25 Deposits and Loans

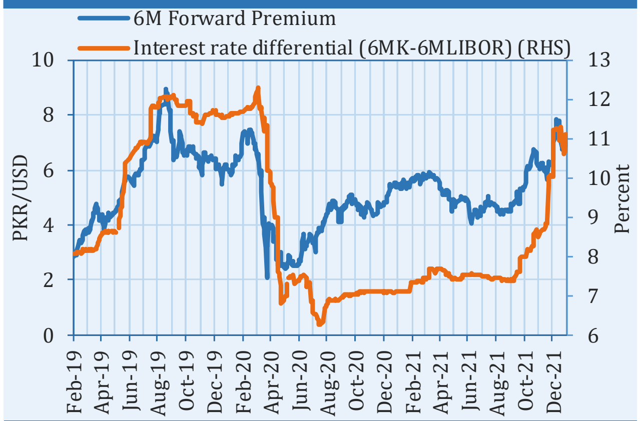


Source: SBP

*....generally, favorable global financial conditions and Debt Service Suspension Initiative (**DSSI**) also supported the external account ...*

Meanwhile, the lower external debt servicing helped in containing some pressures on the external account and building market confidence. Pakistan's external debt servicing was lower at USD 12.4 billion in CY21 (USD 14.6 billion in CY20). The lower external debt servicing mainly reflects the relief of DSSI as well as lower global interest rates.[29]

Chart 2.10: 6M Forward Premium



Source: SBP and FRED

Investors' confidence revived in debt market

Moreover, investors' confidence also revived, as USD 263.9 million net inflows in government securities were recorded in the first eight months of CY21. However, with the exit of US from

[29] According to World Bank's estimates, Pakistan has saved USD 5.40 billion in CY21 from DSSI relief.

Afghanistan and expectations of normalization of monetary policy in advanced economies, net outflows from government securities started again in Sep-21, totaling USD 118.4 million in the last four months of CY21. The relatively lower size of net outflows, however, hardly posed any stability concerns for domestic FX market.

Policy makers took various measures to improve functioning of FX market

SBP and the government took various measures that aimed to improve the functioning of FX market. These measures focused on enhancing liquidity by facilitating FX remittances and inflows, infusing transparency, and discouraging the speculative trading of FX (see **Appendix A**). Some of the major initiatives taken during CY21 include:

- SBP allowed Exchange Companies (**ECs**) to sell forward the exports proceeds received from abroad in US Dollars to banks against the export of permissible foreign currencies.[30]
- The government reintroduced an incentive scheme for the marketing of home remittances by authorized dealers of FX, microfinance banks, and exchange companies in July 2021.[31]
- SBP, Ministry of Finance and financial institutions jointly offered the Sohni Dharti Remittance Program (**SDRP**) in November 2021.[32]
- To promote documentation, transparency, and discourage speculative buying and selling of FX, exchange companies were required to ensure that any individual shall not purchase foreign exchange from all exchange companies in excess of USD 10,000 per day and USD 100,000 (or equivalent in other currencies) per calendar year.[33]

...while banks FX exposure remained contained, with relatively lower dependence of households and corporate sector on FX borrowings ...

Exchange rate movements can affect the financial institutions in various ways. Any open FX position exposes banks to unfavorable movements in exchange rate, which can result in currency revaluation losses. Nonetheless, banks, being leading dealers of FX and a major part of the financial system, have limited exposure to FX, and have sufficient capital cushions to withstand any shocks in exchange rate.

The latest sensitivity (stress testing) results corroborate banks' low sensitivity and high resilience to FX risks, as most of the banks' CAR stay well above the regulatory requirement of 11.5 percent even against severe movements in exchange rate (see **Chapter 3.1: The Banking Sector** for further details).

Money Market

SBP responded to the emerging pressures by raising the policy rate in H2CY21 ...

In order to ensure a sustainable recovery in the face of emerging external account and inflationary pressures, SBP raised the policy rate by a cumulative 275 bps to 9.75 percent from 7.0 percent in CY21 (25 bps increase in Sep-21, 150 bps increase in Nov-21 and 100 bps in Dec-21). Later on, SBP also raised the CRR for banks by 1 percent to 6 percent on November 13, 2021 to contain the upward trend in money supply growth.[34]

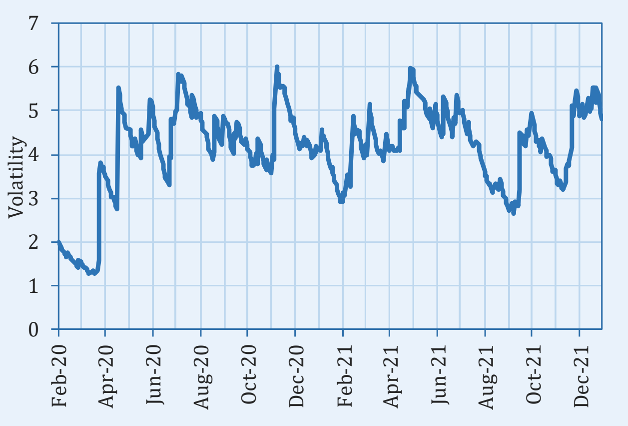
.. which was complemented by Macroprudential measures ...

SBP amended the Prudential Regulations (**PRs**) of consumer financing and imposed cash margin[35] on imports of some additional items to discourage consumption, contain the imports of non-essential items, and address the financial stability issues

30 FE Circular No 2 of 2021 dated February 24, 2021
31 EPD Circular Letter No. 08 of 2021
32 SBP Press Release dated November 25, 2021
33 SBP Press Release dated December 19, 2021
34 SBP Press Release dated November 13, 2021
35 For details see BPRD Circular Letter No. 29 of 2021 dated September 23, 2021 and SBP Press Release dated September 30, 2021

from banks' financing to these avenues. Nonetheless, the overall financial conditions remained broadly accommodative even after these measures, as reflected in the negative real interest rates and pickup in demand for bank credit that recorded a significant increase in H2CY21.[36]

Chart 2.11: Volatility of Overnight Repo Rate (ONR)

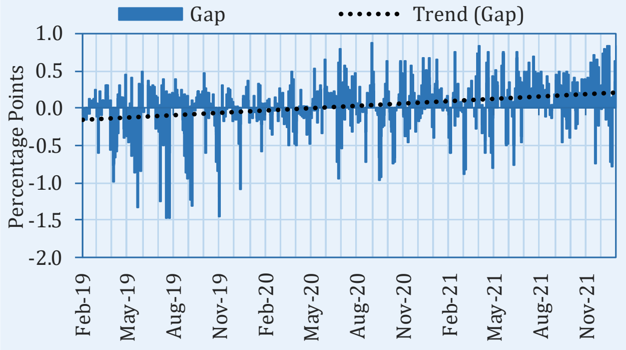


Source SBP

Government's credit needs drove the liquidity conditions in interbank market ...

Responding to the change in SBP policy rate, the overnight repo rate, which remained mostly stable during H1CY21, exhibited excessive volatility in H2CY21 (**Chart 2.11**). The average spreads between overnight repo rate and policy rate were also higher in the second half of CY21, reflecting expectation of further increase in policy rate and high credit needs of the government (**Chart 2.12**).

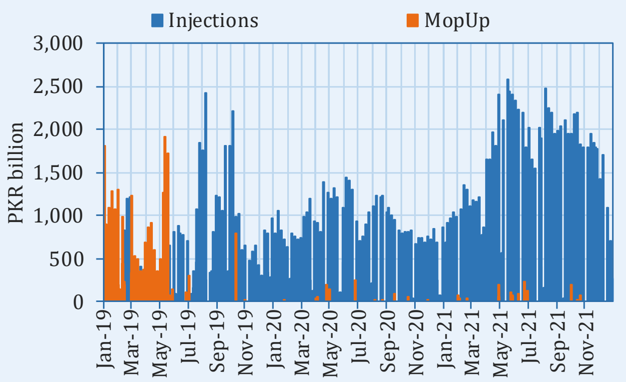
Chart 2.12: Gap between Overnight Repo Rate and policy rate



Source: SBP

However, lower budget deficit in Q3CY21 (compared to Q3CY20) and availability of some external financing (e.g. from Euro bonds, etc.) lowered the government's credit needs and liquidity pressures in the interbank market: the average size of Open Market Operation (**OMO**) injections fell during Q3CY21 compared to Q2CY21.Despite higher budget deficit in Q4CY21, the government's reliance on the banking sector credit remained contained during the quarter due to availability of external financing. This coupled with higher deposits' growth led to decline in the average OMO injections towards the end of the year (**Chart 2.13**).

Chart 2.13: OMOs Injections and Mop-ups



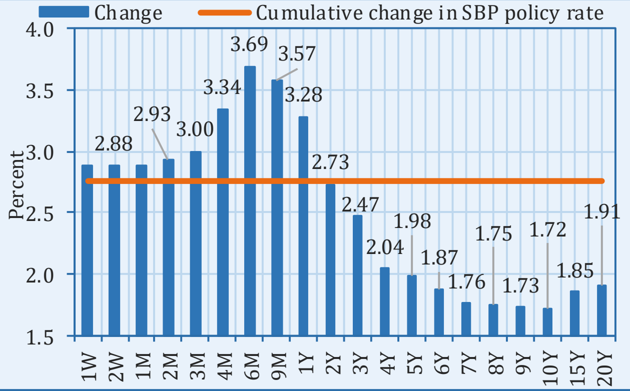
Source: SBP

[36] Credit to Private Sector rose PKR 969.2 billion during H2CY21, more than 3 times increase of PKR 312.7 billion during H1CY21.

Inflation readings fed into market expectations

With the rise in SBP policy rate from September 20, 2021 onwards and the double-digit YoY CPI inflation in Nov- and Dec-21,[37] the secondary market yields, especially of short tenors (up to 1 year), observed higher increase since surge in policy rate (**Chart 2.14**).

Chart 2.14: Change in Secondary Market Yields (17 Sep,2021 and 31 Dec, 2021)

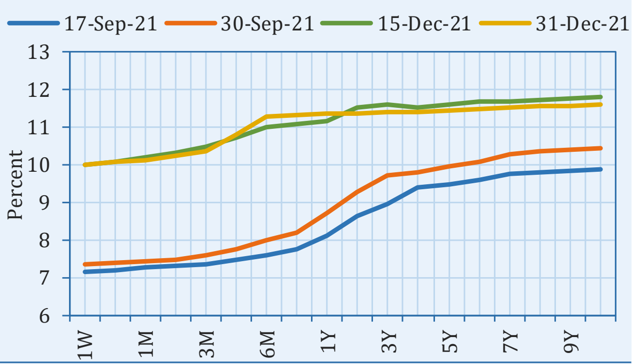


Source: SBP

...and Markert Treasury Bills (MTBs) cut-off rates observed a notable increase in auctions of late CY21, though OMOs helped in moderating the market's expectations

Rising rate expectations of market resulted in an average 308 bps upward shift in the yield curve (up to 2-year maturities) between September 17, 2021 and December 15, 2021 (**Chart 2.15**).

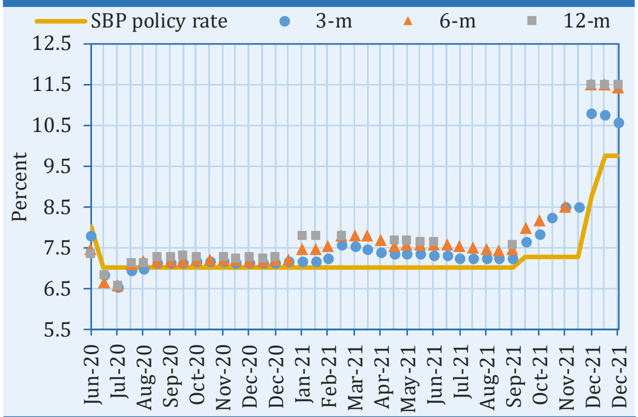
Chart 2.15: Upward shift in Yield Curve post 275bps increase in SBP policy rate in CY21



Source: SBP

The three OMO injections of 63 days, marginally above the SBP policy rate (during Dec-21), played a key role in influencing market expectations, and led to some downward correction in the yield curve by end of Dec-21. But the adjustment across various tenors of the curve was mixed e.g. yields on tenors up to 3 months witnessed downward adjustment while the yields on tenors above 3-months to 1 year increased by end of Dec-21 when compared to December 15, 2021. In fact, the yield curve at end Dec-21 was somewhat flat for 6M and onward tenors, reflecting relatively stable interest rate expectations of the market in the near term (**Chart 2.16**).

Chart 2.16: Deviation of Cut-off rates from SBP policy rate



Source: SBP

Changing market expectations and government credit needs were reflected in the auctions of government securities

The market behavior in the auctions of government securities in CY21 was dynamic, reflecting the changes in market expectations and evolving credit demand and liquidity conditions. The market was expecting the interest rate to rise in Q1CY21 due to gathering pace of demand in the backdrop of V-shape economic recovery (in CY20) and the resumption of IMF program in Q1CY21. Accordingly, the market's interest was tilted towards short-term instruments in the auction of government securities.

[37] The YoY CPI inflation rose 11.53 percent in November 2021 and 12.28 percent in December 2021.

However, the expectations of rising interest rate (reflected in the yield curve) largely decayed by end of Q2CY21. Accordingly, the market showed high interest in fixed rate Pakistan Investment Bonds (**PIBs**). The combined offers in all tenors of fixed rate PIBs were almost 4 times (offer to target ratio of 3.9) in auctions of Q2CY21. Though market's interest in PIBs (fixed rate) remained intact after the rise in SBP policy rate in Q3 and Q4 of CY21, banks offered higher bidding rates as they built in the expectation of further rate hike in the benchmark rates. Accordingly, government's acceptance of PIBs remained less than the target in H2CY21.

Market's interest in floating rate instruments revived in H2CY21

After the initial increase in policy rate and change in forward guidance, market's interest in floating rate PIBs (quarterly coupon payment) revived in Q3CY21 and Q4CY21, as reflected by offer to target ratios of 3.45 and 2.45, respectively. The government also accepted higher than target amounts of PIBs (floating rate, quarterly coupon) in H2CY21 –a strategy to lengthen the maturity profile of its borrowing. However, the offers that were skewed towards 3-year quarterly-coupon floating rate bond in Q3CY21 got tilted towards 2-year floating rate bond in Q4CY21, as rate of return on this latter bond is reset on fortnightly basis and paid on quarterly basis, thus involving lower duration risk to changes in interest rates.

In line with the market expectations and dynamics, the auction results of floating rate PIBs (semi-annual coupon) showed lackluster activity. The government also did not accept any amount in these bonds, except in Q2CY21. The government issued PKR 72.2 billion 10-year floating rate PIBs (semi-annual coupon) and PKR 73.6 billion of 5-year variable rental rate (**VRR**) Government of Pakistan Ijara Sukuk (**GIS**) in CY21 to IPPs in two tranches in Jun- and Nov-21.

Besides special issuance to IPPs, the government also offered regular GIS in CY21. The market, however, showed low interest for fixed rental rate (**FRR**) Sukuk (target amount, PKR 15.0 billion), and the government accepted lower than the offered amount in H1CY21. Contrary to this, the market offered PKR 89.5 billion (more than double the auction target of PKR 35.0 billion) for VRR GIS, out of which the government accepted PKR 66.5 billion in H1CY21. During H2CY21, the market actively participated in the 5-year FRR GIS (offer to target of 2.08) as well as in the 5-year VRR GIS (offer to target of 1.95) in H2CY21. While the government accepted only 80 percent of the target in FRR Sukuk, it accepted 1.7 times of the target for VRR 5-year Sukuk. One of the reasons for lower than target acceptance in FRR GIS may be that banks' bids were at higher rates due to expectation of further increase in policy rate.

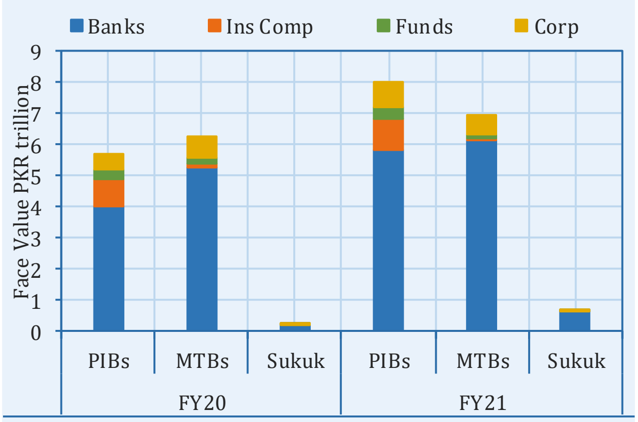
The significant rise and volatility in yield curve have implications for financial institutions and borrowers; however, banks have ample resilience to interest rate risk…

Banks' asset base has been growing at a consistent pace, and their exposure in fixed-income government securities has particularly increased over recent years. In fact, banks are the major holders of government securities (**Chart 2.17**). Though investments in government securities support the liquidity position of banks and augment their earnings, at the same time, such investments expose banks to interest rate changes. Nevertheless, the banks remain largely immune to interest rate risk due to both adequate capital cushions and contained exposures to interest rate risk (in terms of relatively short repricing duration and maturity) of these securities, which mainly comprise short-term MTBs and floating rate PIBs and have deep and active secondary markets. (For further details, please see **Chapter 3.1: The Banking Sector**).

the peak of 48,726 on Jun 14, 2021 (43,755 on December 31, 2020) translating into a growth of 11.3 percent.[38]

After mid-June, the index oscillated around 47,000 level until Sep-20. However, post announcement of the rise in policy rate, benchmark equity index declined to 43,222 level by October 13, 2021. Following expectations of revival of IMF program, the index again went up to 47, 295 by November 5, 2021. With rising inflation, widening CAD and two policy rate hikes in November and December, the stock market after observing increased volatility finished the year at 44,596 level: thus growing by 1.9 percent in CY21 (7.4 percent in CY20). Nevertheless, average volatility in equity market remained lower than last year, which was marked by sharp price movements due to pandemic related uncertainties (**Chart 2.18**).

Chart 2.17: Holding of Government Securities



Source: SBP

...while borrowers also remain largely unscathed due to accommodative financial conditions

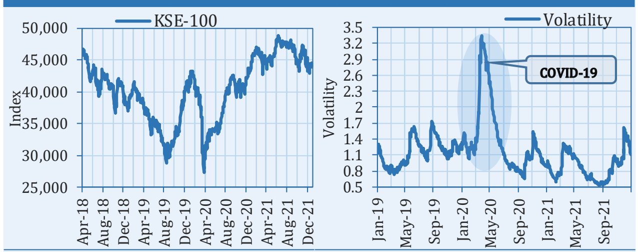
Borrowers of the banking sector have largely remained unaffected by the recent changes in interest rates due to i) accommodative macro financial conditions as the real interest rate still remained negative while economic activity remained on track, ii) the economic recovery boosted their cash flows and earnings. The corporate sector, which uses the lion's share of banks' private sector credit, witnessed improvements in its key debt-servicing, solvency and performance indicators (For details see **Chapter 6: The Corporate sector**). Moreover, the non-performing loan (**NPL**) ratios of the banking sector also came down during CY21.

Equity Market

KSE-100 index kept its growing momentum in H1CY21 but later on moderated in H2CY21 amid external account and inflationary pressures and consequent reversal in monetary policy

During CY21, the equity market went through various divergent phases. In the wake of economic recovery from the pandemic and satisfactory corporate results in H1CY21, the index reached

Chart 2.18: KSE-100 index and its Volatility



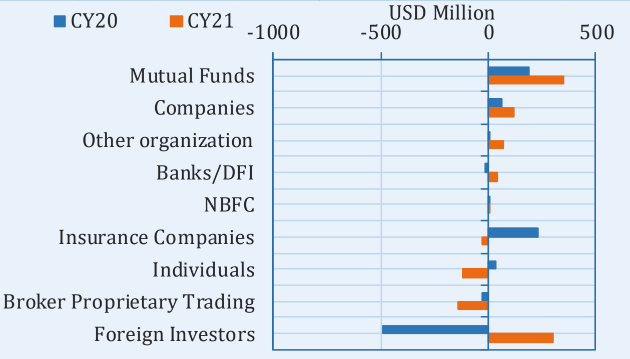
Source: PSX and SBP

Foreign investors remained net buyers in CY21

Foreign investors purchased USD 304.4 million worth of equities in CY21. This inflow of portfolio investment was in contrast to the trend observed last year when the pandemic shock induced foreign investors to rebalance their portfolio and exit emerging markets to ward off the underlying uncertainties. Incidentally, foreign investors were net sellers in H1CY21, as they sold around USD 65.1 million stake in Pakistani equities. However, from Sep-21 onwards, the fall in market index and lowering of price-earnings multiple of firms' scrips revived their interest in Pakistan's equity market (**Chart 2.19**).

[38] See the section on Financial Markets and Risk Assessment in Mid-Year Performance Review of the Banking Sector for H1CY21

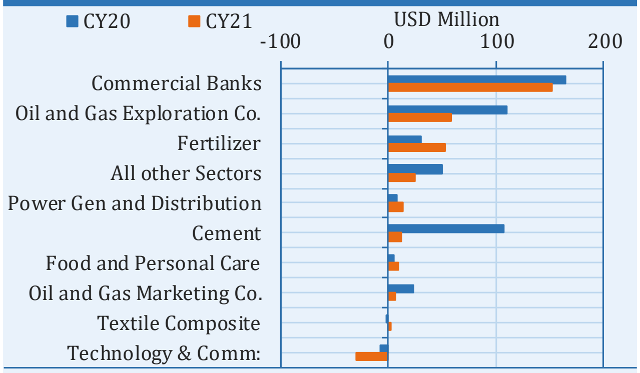
Chart 2.19: Buying by Mutual Funds was prominent in CY21



Source: NCCPL

Though foreign investors purchased shares in various sectors, the banking sector was prominent among them, as investors assessed further improvement in the sector's outlook. Investment in banks' stocks accounted for around half of the net purchases (by foreign investors) during CY21. Investors also showed optimism towards other key sectors of the economy such as energy (due to higher global prices), fertilizer, power generation (due to, inter alia, settlement of some part of circular debt by the government) and cement (higher construction sector activities). However, technology sector witnessed net sales in CY21, as opposed to last year when the lockdown restrictions boosted the sector's prospects (**Chart 2.20**).

Chart 2.20: Banks and Energy related stocks got traction of investors in CY21

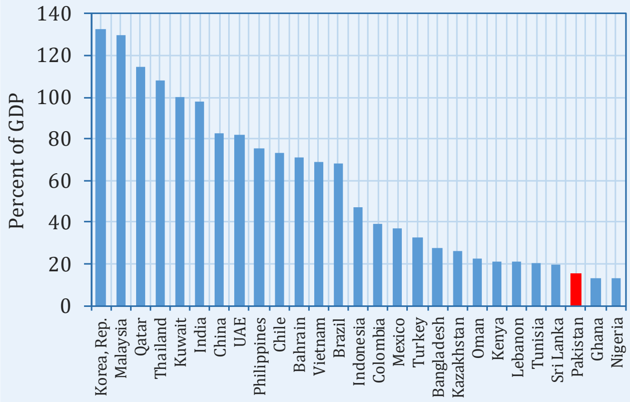


Source: NCCPL

Fresh listings doubled during CY21

The number of IPOs doubled to six in CY21 compared to three in CY20; while the number of listed companies increased to 533 from 531 in last year (**Table 2.1**). Nonetheless, the listed capital grew by 4.4 percent in CY21 to PKR 1.48 trillion. The level of listed capital stood at 3.3 percent of GDP as of end CY21, which is lower compared to other EMEs, suggesting further potential for firms to take benefits from listing and raising long-term funds for capital formation. (**Chart 2.21**).

Chart 2.21: Market Capitalization of Listed Domestic Companies in selected EMs



Source: World Bank, PBS and PSX

Table 2.1: Progress of capital market in Pakistan during CY17-CY21

	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21*
PKR billion except companies, index and bond data					
Total No. of Listed Companies	559	546	534	531	533
Total Listed Capital - Rs. in Million	1276.8	1322.7	1386.6	1421.1	1483.5
Total Market Capitalization - Rs. in Million	8570.9	7692.8	7811.8	8035.4	7900.1
KSE-100™ Index	40,471	37,067	40,735	43,755	46,348
KSE-30™ Index	20,215	17,174	18,656	18,180	17,981
KMI-30 Index	68,612	61,174	66,032	71,168	75,000
KSE All Share Index	29,774	28,043	29,012	30,780	31,549
PSX-KMI All Shares Index	20,357	18,185	19,387	21,718	22,406
New Companies Listed during the year	7	3	1	3	6
Listed Capital of New Companies - Rs in Million	12.5	5.4	8.7	14.2	16.0
New Debt Instruments Listed during the year	1	6	7	7	5
Listed Capital of New Debt Instruments - Rs. in Million	10.5	28.8	240.6	247.0	25.1
Average Daily Turnover - Regular Market (Shares in Mn) (YTD)	249	194	164	330	513
Average Value of Daily Turnover - Regular Market (Rs in Mn) (YTD)	12.1	7.9	5.9	12.3	18.2
Average Daily Turnover - Future Market (Shares in Mn) (YTD)	60	68	74	102	146
Average Value of Daily Turnover - Future Market (Rs. In Mn) (YTD)	4.3	3.0	2.9	4.7	8.9

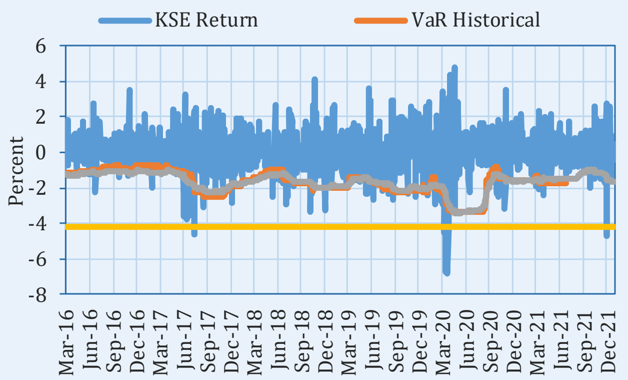
EoP= End of Period

Source: PSX, *as of Nov 11, 2021

The impact of significant rise in cut-off rates of MTBs auctions in late CY21 and attendant market expectations reflected in the movements of the index

Though the level of volatility in KSE 100 index was lower in CY21 than the last year, the index's returns showed 17 instances of breaching the historical Value at Risk (**VaR**) (20 times in CY20) and the magnitudes of these breaches were also lower than last year (**Chart 2.22**). Most of the VaR breaches were observed in H2CY21 and could be broadly traced to macroeconomic developments. For instance, the volatility of KSE 100 index was highest on Dec 2, 2021 when a sizeable rise in cut-off rates of Treasury Bills in auction of Dec 1, 2021 resulted in 2,135 points decline in KSE-100 index on December 2, 2021.

Chart 2.22: VaR of KSE-100 Index



Source: PSX

Due to limited exposure, the banking sector remained resilient to a fall in equity prices

The 4.71 percent decline in KSE-100 index on December 2, 2012 was the largest decline (on daily basis) observed after July 11, 2017, but it did not pose any immediate stability concerns for financial institutions such as banks due to their limited exposure to equities and adequate capital cushions for absorbing shocks. Incidentally, the banks' investments and exposure in equity are subject to conservative prudential limits and their investment in shares comprises only a fraction of total investments (i.e. 1.5 percent) and capital base (i.e. 11.4 percent) at end Dec-21. The latest sensitivity (stress testing) analysis also indicates that banks have sufficient resilience to withstand any severe shock to equity prices.

Going forward, stability in the financial markets will largely depend on: (i) the stress on the external account if global prices remain at elevated levels for longer than expected (e.g. due to geopolitical tensions in Eastern Europe), (ii) the inflationary pressures which may take a longer time to subside, (iii) the successful implementation of the IMF program, (iv) the reaction of monetary authority to adopt further stabilization measures, and (v) any new variants of COVID-19 and severity of contagiousness.