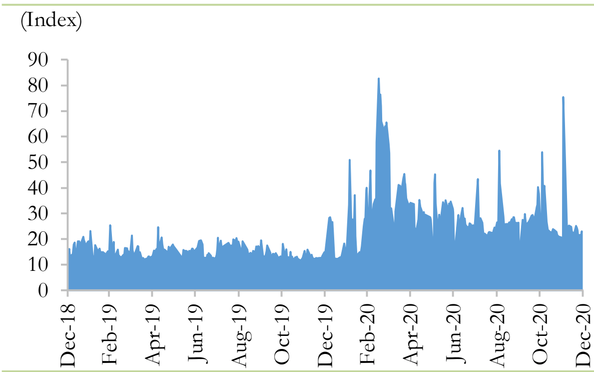
Chapter 2: Financial Markets' Behavior

The COVID-19 related uncertainties induced a short-lived stress in domestic financial markets in early CY20. The equity market observed a V-shape recovery and the momentum continued afterwards. With better economic fundamentals and the market based exchange rate mechanism, the exchange rate stabilized over the year. Investors' interest in long-term instruments remained high in H1CY20 due to a fall in the benchmark rates. However, interest rate expectations reversed in the second half of the year, which resulted in a decline in appetite for longer-tenor securities. Nonetheless, the introduction of new variants of floating rate PIBs and issuance of Ijarah Sukuk helped the government to lengthen maturity profile of its domestic borrowing thus hedging the rollover risk.

The extraordinary policy measures adopted after the onset of pandemic eased the stress in the global financial markets…

The COVID-19 pandemic brought the global economic activity to a standstill and induced panic selling in equity markets. Share prices fell sharply and volatility in the equity markets touched historic highs with the VIX surpassing even the levels observed during the GFC of 2008 (**Chart 2.1**).[26]

Chart 2.1: Trend in Chicago Board Options Exchange's (CBOE) Volatility Index (VIX)

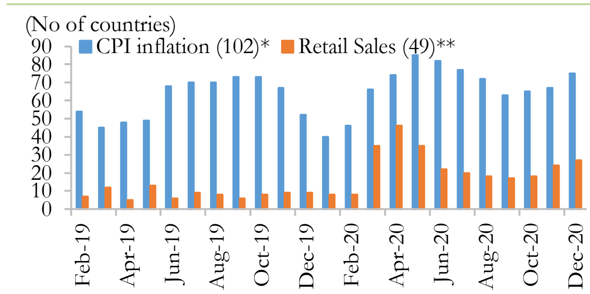


Source: FRED

Moreover, growing uncertainties fueled expectations of a prolonged recession, triggering downward pressures on the yields on long-term government bonds in AEs. Except for the US and the UK, yields even touched negative zone in other AEs.[27]

Side by side, the investors started de-risking their portfolios in Emerging and Frontier Markets, leading to pressures on currencies across a number of countries. At the same time, due to a fall in sales and a rise in layoffs across various jurisdictions, the businesses and households faced cash flow problems causing a significantly depressed demand. As a result, despite supply disruptions, the headline inflation fell across many countries (**Chart 2.2 & 2.3**). Moreover, concerns about global growth pushed down the commodity prices, particularly oil prices.[28]

Chart 2.2: Retail Sales and CPI inflation fell across a number of countries



*No of countries with decline in YoY rate relative to last year's YoY value
**No of countries with contraction in Sales on YoY basis
Note: Parenthesis represent number of total countries for which data is available, Source: Bloomberg

As the economic activity sharply weakened and the future prospects looked bleak, authorities swiftly resorted to strong counter cyclical fiscal, monetary and macro-prudential policy measures. Particularly, the central banks across the globe introduced accommodative monetary policies,

[26] Chicago Board Options Exchange Volatility Index (**VIX**) represents the market's expectations of volatility over next one month. The index was at 82.7 on March 16, 2020, 5 days after WHO's warning about COVID-19 converting into a pandemic, whereas in GFC its highest level was 80.9 on November 20, 2008.

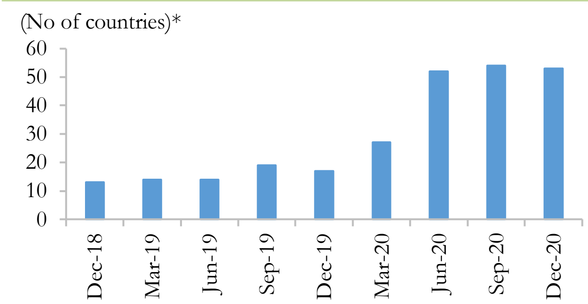
[27] These include: Austria, Belgium, Denmark, France, Germany, Netherlands, Sweden, Switzerland, and Finland

[28] WTI was at USD -37.0 per barrel on April 20, 2020

among other measures, to save the financial system, the economy and livelihoods. Because of these extraordinary measures, the global financial conditions in most of the advanced and emerging economies became accommodative, particularly in AEs, during CY20.

Consequently, firms were able to restore their cash flows by tapping various sources of funding such as bonds, bank credit and government credit guarantee schemes. With the revival in confidence and gradual reopening of economies, economic optimism started to return. The stock markets rebounded from their low levels during the pandemic, as investors again started to search for better returns.

Chart 2.3: Unemployment rate surged across a number of countries



*No of countries with rise in YoY rate relative to last year's YoY value
Note: Data was available for 58 countries.
Source: Bloomberg

Calibrated implementation and tapering of support measures would be vital in reducing potential risks…

The extraordinary policy measures helped in preventing the financial crisis. However, as the pandemic is extant, the vulnerabilities continue to exist and the uncertainties could reemerge due to virus mutations and repeated waves. Further, a premature exit or a delayed tapering of support measures could aggravate the risks to the economic and financial stability. It is, therefore, essential to manage the support measures in well-calibrated manners.

Though the global financial conditions eased further starting June 2020,[29] the EMDEs found it difficult to attract inflows and mobilize external resources because the investors demanded higher risk premiums.[30] Resultantly, the local currency bond issuance (for example, to fund fiscal deficits) became common in most of the EMDEs. Though portfolio flows recovered partially in the second half of CY20, investors preferred investment in jurisdictions with relatively better economic fundamentals and policy environment.[31]

The unprecedented fiscal push during the pandemic further raised the already elevated levels of public debt, which might become problematic for many jurisdictions, especially EMDEs. Debt servicing concerns could burden the public debt management, generate solvency issues and limit the capacity of sovereigns for further policy intervention.

Domestically, financial markets witnessed relatively higher stress during the first half …

After falling in CY19, the stress level in Pakistan's domestic financial markets again rose during CY20, but on average remained lower than the level witnessed in CY18 (**Chart 2.4**). A detailed review of the developments showed that the stress level was particularly higher in second quarter of CY20 when the pandemic quickly spread globally and the country too reported the highest level of infections. However, the extraordinary policy measures and early abatement in the impact of the outbreak played a key role in reducing the stress in markets.

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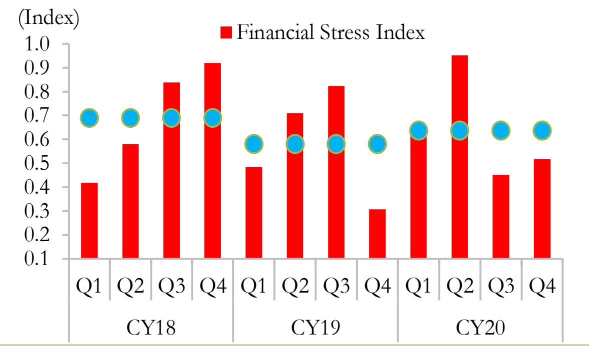
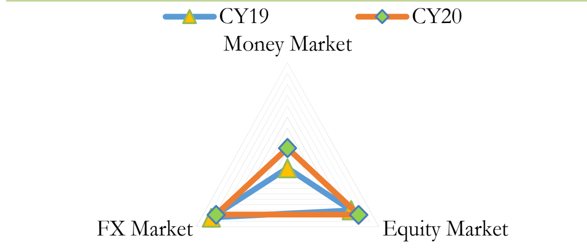
[29] GFSR October 2020, IMF
[30] GFSR October 2020 highlighted that financial conditions have generally eased in emerging markets (excluding China) since June 2020 but external costs for many EM countries were still above pre–COVID-19 levels.
[31] GFSR October 2020, IMF

Chart 2.4: Stress in financial markets rose in H1CY20



Note: The dots represent yearly average of the index.
Source: SBP

Chart 2.5: Volatility subsided in FX market while increased in Equity and Money market



Note: Volatility in the respective markets is calculated using Exponential Weighted Moving Average (EWMA) formulation as described in RiskMetrics (1996), J. P. Morgan Technical Document, 4th Edition, New York, J.P. Morgan. 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

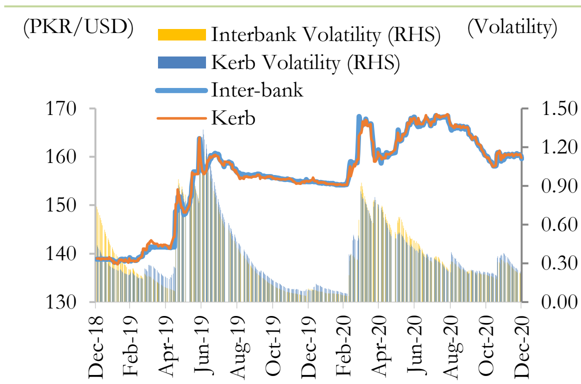
While it took a while for the real sector of the economy to recover, the equity market (KSE-100 index) recorded a quick V-shaped recovery from the effects of the pandemic. The FX market also witnessed another episode of significant volatility during the pandemic, though the magnitude of volatility was lower than last year. However, better fundamentals, improving external sector along with better liquidity and market-based exchange rate helped the market to withstand the shock and normalize the volatility in H2CY20. Amid a sharp reduction in SBP policy rate, volatility in overnight repo rate rose and the pandemic related increase in fiscal deficit contributed to tightening liquidity conditions in money market (**Chart 2.5**). However, SBP's proactive liquidity management helped the smooth functioning of the money market and contained the deviation of overnight interest rate from policy rate during CY20.

FX Market

Uncertainties sparked volatility in FX market for a short period …

The domestic FX market witnessed a brief spike in volatility during the first quarter of CY20 (**Chart 2.6**). On the one hand, changing risk sentiments led global investors to rebalance their portfolios; while on the other hand, weakened economic prospects due to lockdowns triggered balance of payment concerns. Meanwhile, the exchange rate, in a short span of 3-weeks, depreciated by 8.4 percent between March 06, 2020 and March 27, 2020 **(Chart 2.7)**.

Chart 2.6: The Exchange rate exhibited volatility in CY20

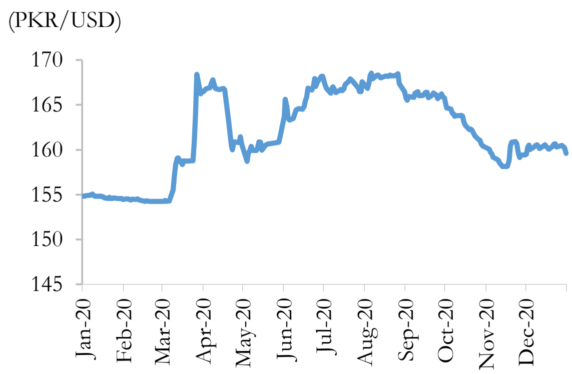


Source: SBP

The market, however, withstood the shock and stabilized soon after the initial wave of the pandemic …

The stress in the FX market proved to be short lived as the volatility gradually tapered off during the remaining year. This was because the fundamentals of the economy (e.g. FX Reserves, current account balance) were in a better position to handle the pandemic shock and the market-based exchange rate mechanism was in place. Moreover, contrary to initial expectations, favorable trade dynamics were observed (e.g. fall in imports and some revival in exports) that helped improve FX liquidity in the market. At the same time, growing workers' remittances, financing under RFI of the IMF, and relief under DSSI provided further comfort on the external front.

Chart 2.7: The two way movement of exchange rate in CY20



Source: SBP

… as the country entered the pandemic with a strong position in terms of improved macroeconomic fundamentals and better cushions…

The county had largely addressed the external account deficit before the inception of the pandemic. SBP's FX reserves along with the net swap position improved substantially since June 2019. By February 2020, the gross SBP reserves reached to the level of USD 12.8 billion; an improvement of 75.1 percent when compared to June 2019 level. Similarly, the SBP's forward liabilities had reduced to USD 2.8 billion by February 2020, reflecting an improvement of 64.7 percent from their June 2019 level. Thus, sufficient cushions were available to absorb the pandemic shock.

… and the market based exchange rate mechanism supported the confidence…

Despite the challenges posed by the pandemic, the exchange rate, on average, depreciated only by 7.4 percent against the greenback in CY20 compared to 18.8 percent in CY19. SBP's adoption of market-based exchange rate could, inter alia, be a reason as the parity responded to the market dynamics. In fact, it exhibited two-way movements during CY20 **(Chart 2.7)**. For instance, PKR depreciated by 8.4 percent against USD between March 06 and March 27, 2020 in the interbank but appreciated by 5.5 percent between March 27 and May 5, 2020. Similar episodes also happened in H2CY20.[32] As a result, the confidence of market participants as well as the market functioning improved.[33] Hence, the adoption of the market-based exchange rate system proved to be an important shock absorber during the pandemic.

…accompanied by the favorable developments on the external front

Moreover, other developments in the external sector more than compensated the stress created from the portfolio rebalancing. First, the country received USD 1.39 billion under RFI from the IMF in April 2020 to address immediate balance of payment concerns. Second, it also obtained debt-servicing relief under DSSI, which abated repayment pressures.[34] Further lower benchmark rates (e.g. LIBOR), also helped reduce debt

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32 A depreciation between May 05 and Aug 26, 2020, and an appreciation between Aug 26, 2020 and November 16, 2020.

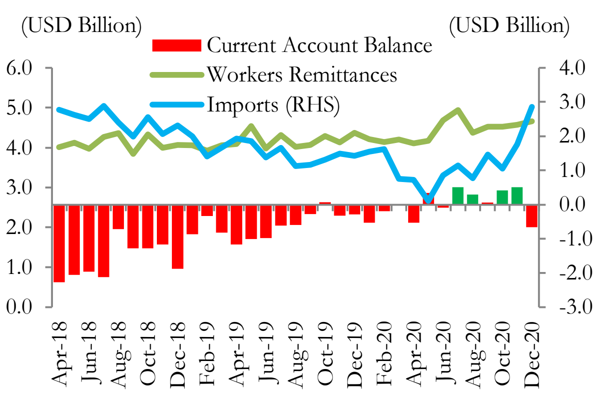
33 Also, the average spread between interbank and KERB remained lower this year (-0.005 in CY20 versus -0.009 in CY19).

34 World Bank estimates that under DSSI Pakistan is expected to save USD 3.7 billion from this relief between May and December 2020 and USD 2.5 billion between January to June 2021. Source: https://www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative

servicing costs during CY20. Resultantly, the growth in external debt servicing reduced substantially to 7.0 percent in CY20 from 55.8 percent in CY19[35].

Third, at a more fundamental level, the current account balance improved, particularly during H2CY20. After an initial dip till May 2020, the exports recovered to their pre-COVID-19 levels from September 2020 onwards. Encouragingly, beating expectations, the workers' remittances remained upbeat at an average of USD 2.16 billion per month during CY20 compared to USD 1.84 billion per month in CY19. Moreover, the imports of USD 43.5 billion in CY20 were lower than USD 47.7 billion in CY19. Consequently, the current account balance recorded a surplus of USD 0.25 billion in CY20—the first since CY03 (**Chart 2.8**). The net outcome of these developments was that the FX market stress abated as the year progressed.

Chart 2.8: The current account balance improved during CY20

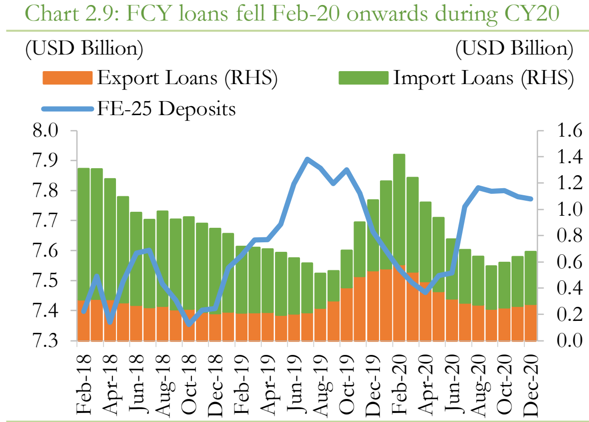


Source: SBP

Easy liquidity conditions prevailed in the FX market as demand for FE-25 loans subsided during pandemic…

To meet the funding needs, both importers and exporters increasingly used FE-25 loans from Jul-2019 to Feb-2020. The attractiveness of these loans stemmed from borrowers' perceived minimal exchange rate risk and (rising) interest rate differential between the local and foreign currency loans. Further, some of the exporters could not avail SBP's concessionary financing (e.g. EFS) due to some supply-side constraints especially in case of those banks that had exhausted most of the limit assigned for EFS.[36] However, with the imposition of COVID-19 related lockdowns, globally and domestically, the economic activity virtually came to a halt and the demand for FX loans plummeted. Furthermore, the sudden exchange rate depreciation in March 2020 and ensuing uncertainties also made FE-25 loans unattractive. Consequently, borrowers started repaying their FE-25 loans (**Chart 2.9**).

Chart 2.9: FCY loans fell Feb-20 onwards during CY20



Source: SBP

…and deposits continued to grow

Contrary to the situation of FX loans, FE-25 deposits maintained their rising trend from March-2020 onwards contributing to the dollar liquidity in the interbank market.

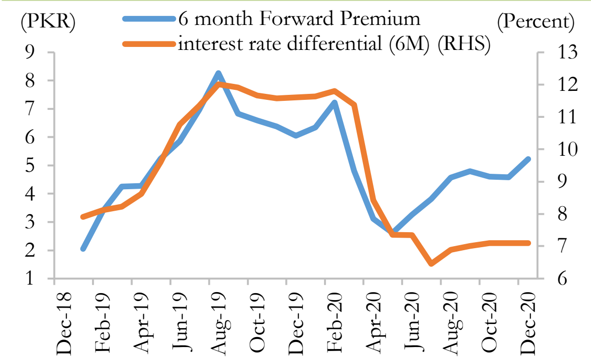
With ample liquidity, forward premiums started rising from June 2020 onwards…

Forward premium that had falling since August 2019, mainly due to declining interest rate

[35] External Debt servicing include principal repayment (short term and long term) and interest payments.
[36] From January 2020 onwards, SBP enhanced the overall limit for the EFS by PKR 100 billion.

differential (6M KIBOR-6M LIBOR), changed direction in May 2020 (**Chart 2.10**).[37] Abundant liquidity in the spot market coupled with steady interest rate differential, helped the exchange rate to appreciate and pushed forward premium upwards since June 2020.[38]

Chart 2.10: Trend in Forward Premium and Interest rate differential

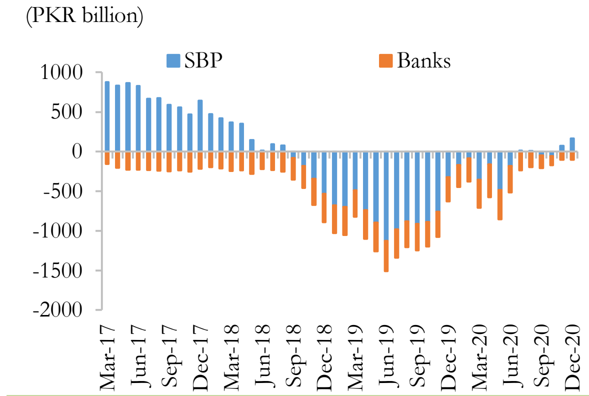


Source: SBP and FRED

…and banks were able to accumulate more foreign assets

Besides an improvement in the Net Foreign Assets (**NFA**) of SBP, the NFA of the banks also recorded a continuous improvement in CY20 (**Chart 2.11**). The NFA of the banks recovered from PKR -307.04 billion at end December 2019 to PKR -101.55 billion by end December 2020, an improvement of 66.9 percent. The growing FX liquidity in the market allowed banks to not only reduce their borrowings from abroad (a drop of 19.7 percent YoY) but also increase their balances held abroad (a rise of 122.4 percent YoY) during CY20. With these positive trends in NFA of both SBP and banks, the overall stock of NFA turned positive in December 2020—the first time since April 2018.

Chart 2.11: NFA of the banking system improved in CY20



Source: SBP

Besides, SBP's trade facilitation measures also contributed to the stability of the market

At the beginning of the year, SBP took several measures to facilitate the international trade. (**Appendix A: Supervisory initiatives**). During the pandemic, SBP provided further relief by allowing authorized dealers to make advance payment of up to 100 percent of the value of import of medical equipment, medicines and ancillary items etc.[39] Such measures not only complemented government's efforts against COVID-19, but also provided a sense of stability in the FX market during the pandemic.

[37] Here, the forward premium is difference between Spot rate and Six month forward rate.

[38] For instance, the current account balance was in surplus for consecutive five months (from July to November 2020)

[39] EPD Circular Letter No. 09 of 2020 dated March 24, 2020

Money Market

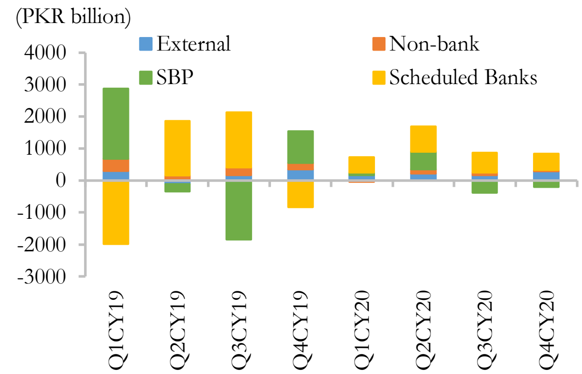
In the wake of the pandemic, SBP responded with a sharp fall in policy rate…

The sharp and significant fall in the policy rate was among the major economic support measures taken during CY20. In a short span of 97 days (between March 17, 2020 and June 24, 2020), SBP reduced the policy rate from 13.25 percent to 7.0 percent. Moreover, with the initiation of interest rate easing cycle, SBP also introduced symmetry in Interest Rate Corridor (**IRC**) on March 17, 2020—in line with international best practices.[40] The purpose was to increase the effectiveness of monetary policy and improve market functioning.[41]

Pandemic also induced higher than expected borrowing needs of the government…

Further, in the aftermath of the pandemic government's financing needs increased as it made sizeable social security and other expenditures to protect lives and livelihoods. The fiscal deficit doubled during Q2CY20 as compared to the expected position in pre-COVID scenario.[42] Facing a difficult situation, the government tried to utilize all possible avenues to mobilize additional resources. Among the domestic avenues, bank financing shared almost half (47 percent) of the borrowing burden during Q2CY20 (**Chart 2.12**).

Chart 2.12: Financing of Budget Deficit was tilted towards banks in CY20

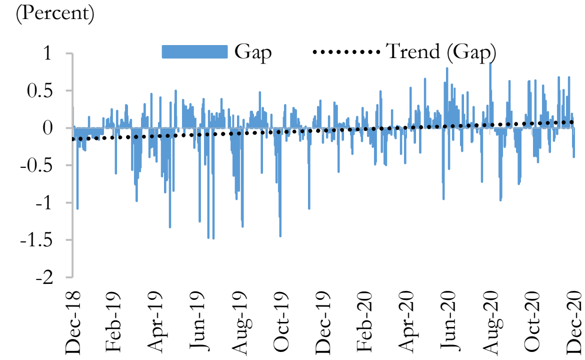


Source: SBP

…leading to a temporary hike in the volatility of overnight repo rate (ONR) and somewhat tighter liquidity conditions

The sharp fall in policy rate and the unexpected rise in government borrowing from the domestic market were reflected in key money market rates. Moreover, the deviations of ONR from policy rate, which on average remained negative during Q1CY20, turned positive afterwards—reflecting tighter liquidity conditions (**Chart 2.13**).

Chart 2.13: Trend in gap between O/N repo rate and policy rate



Source: SBP

40 Earlier, the ceiling rate was 50 bps above the policy rate and the floor rate was 150 bps below SBP Policy rate. The 50 bps positive gap above SBP policy rate was less penal in case banks were short of funds on required reserves compared with the gap for floor rate (150 bps below SBP policy rate) in case of placing surplus liquidity with SBP.

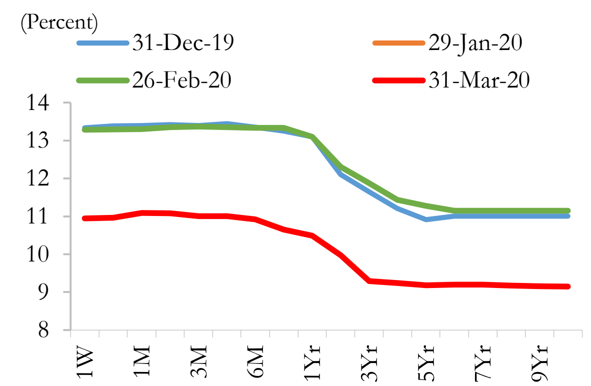
41 The revised width of floor and ceiling rates would encourage banks to improve their liquidity management through bringing more efficiency in the market by discouraging banks' use of ceiling and floor facilities. For details see Chapter 1: Enhancing Effectiveness of Monetary Policy in Annual Performance Review 2019 – 2020, of SBP

42 SBP Annual Report on the State of the Economy, FY20

Moreover, the emerging uncertainty resulted in downward shift in the yield curve…

The inverted yield curve at the end of December 2019, showed a notable downward shift by end Q1CY20 (**Chart 2.14**). With the emergence of the pandemic, market's expectations towards a prolonged fall in economic activity were reflected in the yield curve. Following the 75 bps and 150 bps declines in SBP policy rates on March 17, 2020 and March 24, 2020, respectively, the yield curve exhibited a parallel downward shift by end March 2020.

Chart 2.14: The downward shift in Yield Curve in Mar-20

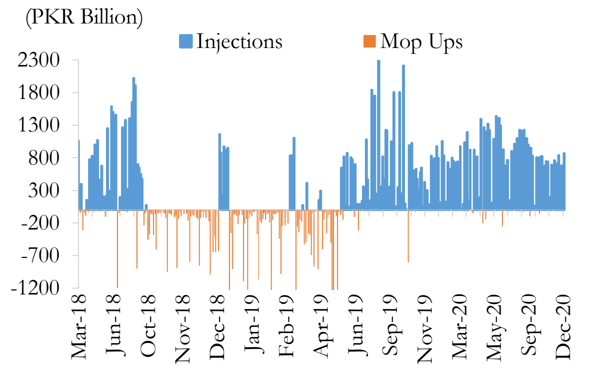


Source: MUFAP

Given the tighter conditions, SBP proactively managed liquidity to reduce the stress in the money market

In the wake of sudden change in market conditions, SBP responded through frequent and sizeable market interventions to maintain ONR closer to policy rate. Not only the frequency of injections more than doubled to 42 in H1CY20 from 18 in the same period last year, but the average OMOs injection size also went up significantly to PKR 682.0 billion in H1CY20 from an average of only PKR 492.0 billion during H1CY19 (**Chart 2.15**).

Chart 2.15: OMOs injections increased significantly in H1CY20



Source: SBP

Encouragingly, higher deposit growth also augmented the supply of funds…

The increase in deposits also provided much-needed support to the supply of funds in the interbank market. Total deposits increased by PKR 1.5 trillion by end H1CY20 from their Dec-2019 level—a rise of 9.1 percent (for details see **chapter 2**). In the absence of this healthy deposit mobilization, the average OMO injections could have been higher than the actual one during H1CY20.

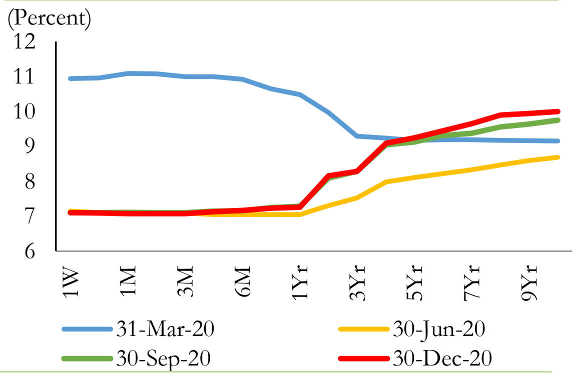
…and gradual implementation of Treasury Single Account also did not add additional pressures

The implementation of Treasury Single Account (**TSA**), though imperative for government's liquidity management, could potentially generate funding pressures for some banks (especially for the ones with higher share of government deposits). Consequently, the gradual implementation strategy helped abate additional pressures in the money market. However, banks heavily relying on government deposits need to diversify their funding sources by focusing on non-government deposits to compensate for any steady loss of government deposits due to TSA.

As economic recovery revitalized in H2CY20, interest rate expectations reversed…

Following the declining trend in COVID-19 positivity rate, the government partially relaxed the lockdown measures during May 2020, which helped in restoring economic activity as well as business confidence. Macroeconomic indicators such as LSM also recorded 2.38 percent YoY growth in Q3CY20 compared to a sharp decline of 24.67 percent in the preceding pandemic-stricken quarter. The CPI inflation also inched up marginally to 8.85 percent in Q3CY20 from 8.45 percent in Q2CY20, which led to rising inflation expectations of market participants. This, among other factors, changed the perceptions of the market participants. As a result, the yield curve normalized from end June 2020 onwards (**Chart 2.16**).

Chart 2.16: Upward shift in the Yield Curve at longer tenors from June 2020 onwards



Source: MUFAP

…and market participants' interest in longer tenor government securities gradually waned

As the expectations of a rise in longer-term rates strengthened from end June 2020 onwards, market's interest in the long-term instruments started waning despite government offering a variety of choices (such as, Ijarah Sukuk and new versions of PIB i.e. floating-rate bonds) (**Chart 2.17**). This view was evidenced by falling offer-to-target ratio for long-term instruments by the end of the year. Instead, the market tilted towards the shorter horizon.

On part of the government, it made considerable efforts to lengthen maturity profile of its borrowing. However, banks' behavior to bid at higher rates compelled the government to accept lower than targeted amounts of longer tenor instruments during H2CY20.

Chart 2.17a: Trend in Offer to Target Ratio

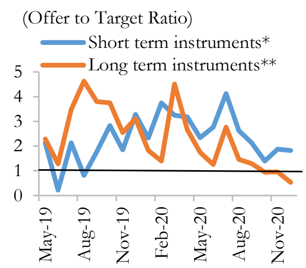
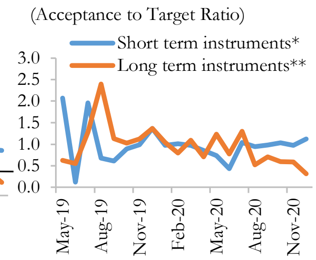


Chart 2.17b: Trend in Acceptance to Target Ratio

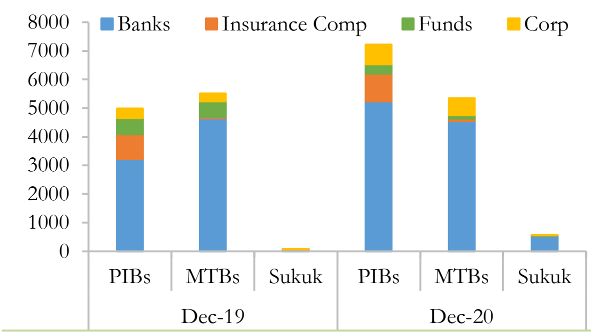


*includes 3, 6 and 12 month Treasury Bills
**includes PIBs (fixed and floating) and Ijara Sukuk, Source: SBP

However, introduction of floating-rate PIB helped reduce rollover risk for the government as well as revaluation risk for the investors…

Though market's interest in long-term securities declined by the end of CY20, the introduction of floating-rate categories of PIBs helped the government to lengthen maturity profile of its borrowing during CY20. Within the total acceptance of PKR 12.2 trillion during the year, the share of floating-rate PIBs rose to 13.9 percent—much higher than 2.9 percent last year Nevertheless, the floating-rate category also helped increase the share of long-term government securities in the balance sheet of banks—the largest investors in government securities (**Chart 2.18**). The share of PIBs in investment in government securities (on banks' balance sheet) went up to 49.9 percent as at end Dec-20 from 41.0 percent in CY19. In fact, since CY16 it was the first time that the share of PIBs was higher than MTBs. The issuance of floating PIBs will help minimize the rollover risk for government.

Chart 2.18: Banks hold a major part of Government securities



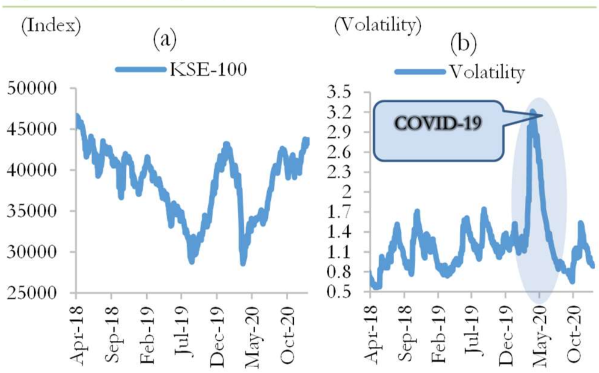
Source: SBP

Equity Market

Onset of pandemic brought considerable volatility in equity market during Q1CY20…

Amid the pandemic, the equity market witnessed significant volatility in the first quarter of CY20. The KSE-100 index was already under stress at the beginning of the year (January and February), reflecting the emerging uncertainties from the unfolding GHC. However, as the pandemic emerged in Pakistan, the index slid by around 31 percent within a few weeks to 27,267 by March 26, 2020; last time the index was lower than this level was on March 31, 2014 (**Chart 2.19**). [43]

Chart 2.19: KSE-100 index; exhibited temporary but significant volatility in Q1CY20

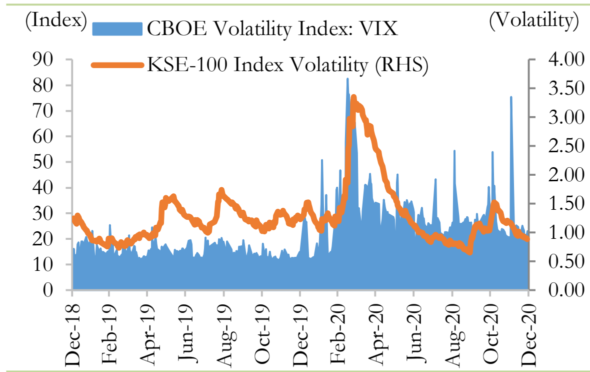


Source: PSX

…however, the decline in equity prices was in line with global trend

The heightened volatility in global equity markets during March also influenced domestic equity market. The VIX index, which is commonly used as an indicator of gauging stability in global equity markets, almost coincided with volatility in KSE-100 index during March (**Chart 2.20**).[44] The panic selling also triggered downward pressures that led to market halts on eight occasions during March-2020.

Chart 2.20: Volatility in VIX Index coincided with that of KSE-100 index during Q1CY20



Source: FRED and PSX

Risks in the equity market were significantly higher during Q1CY20…

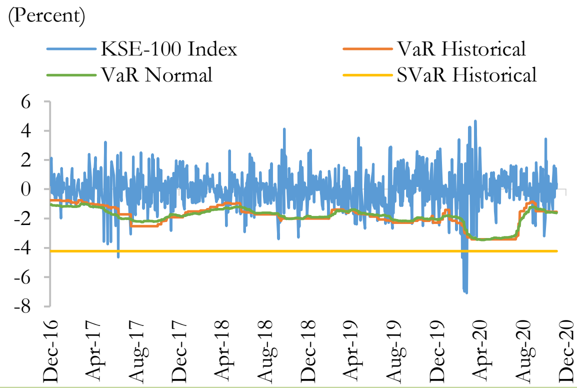
Being a health crisis, the COVID-19 related uncertainty was quite unique for the market. However, the initial response was like previous crisis such as GFC of 2008 – i.e. flight to safety. As highlighted earlier, risks were significantly higher during Q1CY20. Not only the actual returns of KSE-100 index breached the Value at Risk (**VaR**) with higher frequency (20 times) in CY20 (18 times in CY19), the magnitude of breaches was also quite higher. Moreover, the returns also dipped below the Stressed VaR (**SVaR**) on five occasions (**Chart 2.21**); all in March 2020. However, thanks to the support from policy measures, these risks started to

[43] The KSE-100 index previous fell to 27160 level on 31st March, 2014.

[44] The correlation between KSE-100 index and VIX is positive at 0.27 during CY00 and CY20 and is highly statistically significant, the value of coefficient increases to 0.39 and 0.51 when the sample is reduced to CY11 to CY20 and for CY20 (pandemic year only), respectively.

subside from April 2020 onwards.

Chart 2.21: VaR also showed high stress during H1CY20

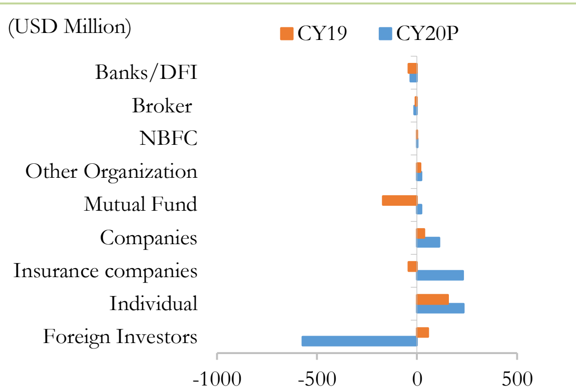


Source: SBP

...leading to 'flight to safety' among different investors....

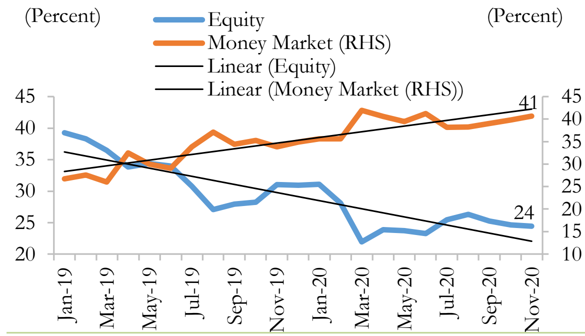
The initial responses from the investors seemed to be contingent upon the perspective of different type of investors. For instance, individuals, insurance firms and companies were net buyers during CY20 while banks and foreign investors were net sellers (**Chart 2.22**). Specifically, the net selling of USD 571.5 million in CY20 by foreign investors was worth noting and was contrary to net buying of USD 55.7 million in CY19. Among local investors, mutual funds also showed some risk averse behavior and remained tilted towards money market (**Chart 2.23,** data is till November 2020).

Chart 2.22: Foreign investors turned net seller in CY20



Source: NCCPL

Chart 2.23: Mutual Funds remained tilted towards Money Market avenues



Note: This chart presents share in total assets of mutual funds
Source: SECP

...SBP and SECP responded with timely actions...

Given the extent of the volatility, the timely policy support measures of SBP and SECP played a critical role in revival of investors' confidence. Both the regulators took various policy measures that helped normalize the impact of the pandemic shock.

...SBP support measures were vital in restoring investors' confidence...

First, SBP responded quickly to the emergence of the pandemic and lowered the policy rate by 75 bps on March 17, 2020 and then within a week by a further 150 bps on March 24, 2020. Furthermore, the central bank clearly communicated to the market that it stood ready to take whatever further actions become necessary in response to the evolving economic impact of the Coronavirus.

Second, SBP relaxed the margin requirement (from 30 percent to 20 percent) and margin calls (from 30 percent to 10 percent) for exposure against shares of listed companies due to prevailing volatility in the country's equity market.[45] Moreover, the central bank allowed Banks/DFIs to take exposure on any person against the shares issued by its group companies, provided the tenor

[45] BPRD Circular Letter No. 13 of 2020 dated March 26, 2020

of the financing facilities did not exceed one year (Financing against Shares/TFCs/Sukuk).

Third, the successive cuts in policy rate during Apr-Jun 2020 gave further impulse to the equity market.

Fourth, since continuity of business was a major concern, SBP took measures (facilitated by banks) to provide uninterrupted financial services to the general public and encouraged the use of alternative delivery channels (**ADCs**). The SBP also instructed banks to waive fee on digital transfers to minimize human contact in banking services. These initiatives helped in facilitating business transactions.

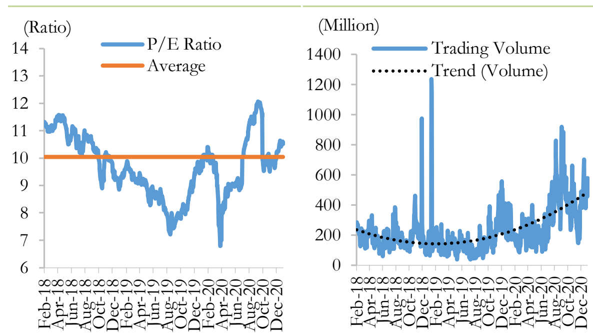
…SECP also took measures to manage the market volatility

Like SBP, the SECP also took various measures that helped in controlling stress in the equity market. The regulations of National Clearing Company of Pakistan Limited (**NCCPL**) were amended to improve market liquidity.[46] As part of the risk management framework, SECP also enhanced the maximum limit of circuit breaker level to 7.5 percent from 5 percent (in a phased manner).[47] The index-based market halts proved to be a good risk management tool. The eight market halts during Q1CY20 were quite helpful in managing the market volatility as the halts increased the resilience and provided reasonable time to investors to better assess the market conditions and calm their sentiments.[48]

After initial set back, the market recovered quite quickly …

With the fall of KSE-100 index during Q1CY20, valuations (Price/Earnings ratio) got cheaper till end June 2020 and proved to be one of the major reasons in reviving the equity market besides attracting investors. Though the P/E ratio at 9.34 for the whole year was higher than 8.76 for CY19, some divergent phases were observed within year under review. The P/E ratio fell to 6.81 on March 26, 2020. However, as the trading activity recovered, the ratio rose to 10.53 by end of CY20 (**Chart 2.24**). Despite rising trend in valuations, KSE-100 index kept its growth momentum, as the economy showed a visible recovery and satisfactory corporate profitability helped in preserving the investors' interest in H2CY20.

Chart 2.24: Falling valuations helped the market to rebound



Source: Bloomberg and PSX

[46] These include: the discontinuing of 10 percent additional margins being collected from brokers and the 10 percent additional haircuts being applied by NCCPL on margin eligible securities (MES); revised slabs of liquidity margins and narrowing the scope to only large exposures of brokers; reduction in security deposit requirements; increase in pool of eligible collateral against margin requirements; revisions in methodology for calculating haircuts on PIBs for acceptance as margin eligible securities (MES); inclusion of GOP Ijarah Sukuk in the list of MES, and enhancing the list of eligible securities from 100 to top 200 for Margin Trading System (MTS).

[47] Source: Introduction of market halts and widening of circuit breakers, available at: https://www.psx.com.pk/psx/files/?file=141446-1.pdf

[48] With the objective to safeguard investors and market participants during volatile markets and collection of margin by the clearing company, market halt procedure has been introduced at PSX after it was approved by SECP in PSX regulations in December of 2019. The index-based market halt is applied in case KSE-30 index moves 4 percent either way from its opening index value. Once circuit breakers reach the level of 7.5 percent, whichever is higher, index based market halts shall only be applicable in case KSE-30 index moves 5 percent either way. In case KSE-30 index continues to trade 4 percent or 5 percent, as applicable, above or below its opening index value for consecutive 5 minutes (during market open state only), the trading in all securities shall be halted for 45 minutes. Source: PSX and SECP press release dated March 12, 2020 and March 13, 2020, respectively available at: https://www.psx.com.pk/psx/files/?file=144562-1.pdf and https://www.secp.gov.pk/wp-content/uploads/2020/03/Press-Release-March-13-SECP-Reviews-Stock-Market-Situation.pdf

…and the momentum of recovery was strong enough to beat the last year performance …

The fall in equities proved short lived and the KSE-100 index started quick recovery from the end of March-2020 onwards. The sustained recovery helped the index to reach 43,755 by end of CY20 (40,735 in CY19), which translated into a growth of 7.4 percent during CY20 compared to 9.9 percent last year. Total market capitalization, however, was higher than last year (**Table 2.1**).

Table 2.1: Progress of capital market in Pakistan during CY18-CY20

	Dec-18	Dec-19	Dec-20
Million PKR except companies, index and bond data			
Total No. of Listed Companies	546	534	531
Total Listed Capital - PKR	1,322,748	1,386,599	1,430,582
Total Market Capitalisation - PKR	7,692,787	7,811,812	8,035,363
KSE-100™ Index	37,067	40,735	43,755
Growth (KSE-100 Index)	-8.41%	9.9%	7.4%
KSE-30™ Index	17,174	18,656	18,180
KMI-30 Index	61,174	66,032	75,276
KSE All Share Index	28,043	29,012	30,780
PSX-KMI All Shares Index	18,185	19,387	21,718
New Companies Listed during the year	3	1	3
Listed Capital of New Companies - PKR	5,432	8,694	111,971
New Debt Instruments Listed during the year	6	7	7
Listed Capital of New Debt Instruments - PKR	28,820	240,624	246,967
Average Daily Turnover - Regular Market (Shares in Million)	194	164	324
Average Value of Daily Turnover - Regular Market (Rs in Mn) (YTD)	7,871	5,909	11,907
Average Daily Turnover - Future Market (Shares in Mn) (YTD)	68	74	99
Average Value of Daily Turnover - Future Market (Rs. In Mn) (YTD)	3,022	2,862	4,514

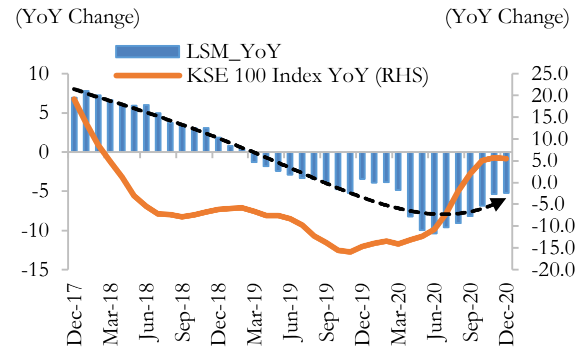
Source: PSX

EoP= End of Period

Recovery of the market preceded the revival in real sector of the economy…

The equity market seems to have gained optimism quite quickly as compared to recovery of the real sector (e.g. LSM) (**Chart 2.25**). While the lockdown restrictions such as business closures held back economic activity for most of the Q2CY20, the equity market continued its upward trend during the same time as the policy measures and attractive valuations fueled the optimism of the investors.[49]

Chart 2.25: 12MMA YoY Trend of LSM and KSE 100 Index



Source: PBS and PSX

…higher listing was also encouraging during CY20…

CY20 was also better in terms of Initial Public Offerings (**IPOs**) (**Table 2.1**).[50] Three firms raised PKR 5.44 billion of capital by issuing 226.2 million ordinary shares. Besides these IPOs, a chemical sector firm also issued 37.5 million preference shares for PKR 375.0 million during CY20. An increased use of e-IPO was also observed during the pandemic. Furthermore, SECP also simplified account opening process for low-risk investors and enhanced the maximum investment limit from PKR 500,000 to PKR 800,000.

…sector wise dynamics continued to influence investors' choices…

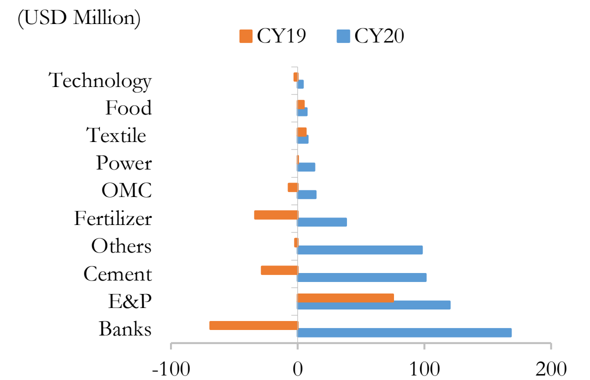
The sector wise investment pattern during CY20 was different from CY19 but almost similar to CY18 (**Chart 2.26**). Sector wise flows of portfolio (LIPI[51] data) show that banks' stocks were the top choice among local investors. Besides strong solvency, banks' profitability could be the main reason and buyers may have taken a strategic view on the future earnings as well as payout of suspended dividends.

[49] The market also continued working on June 29, 2020 during a terrorist attack on PSX, Karachi, as the law enforcement agencies were able to handle the situation.

[50] The IPOs were, i) The Organic Meat Company Limited (TOMCL) was listed on August 3, 2020, ii) TPL Tracker on August 10, 2020 and (iii) Agha Steel Company on November 02, 2020. Moreover, Engro Polymer and Chemicals issued Preference shares on December 31, 2020.

[51] LIPI stands for Local Investors Portfolio Investment

Chart 2.26: Banks and cement were the favorite sectors



Source: NCCPL

Exploration and Production (**E&P**) also performed well as the valuations were quite attractive due to depressed energy prices in global markets. Investors took positions to benefit from potential recovery amid the revival in demand as the economies gradually opened from pandemic and energy prices started rising during H2CY20.

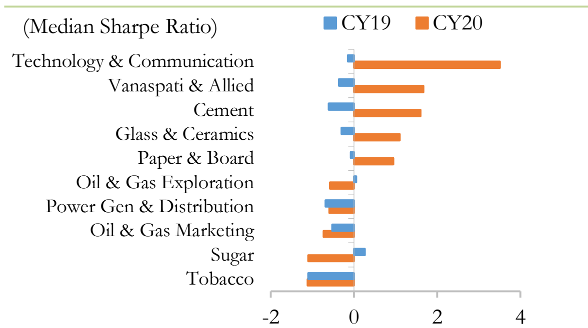
The other prominent sector was cement. As the sector leveraged heavily to finance capacity expansion in recent years, a significant reduction in finance costs during CY20, along with higher demand (dispatches) for cement, better prospects due to government construction package under Naya Pakistan housing scheme and higher future earnings may be the factors that caught local buyers' attention.

….COVID-19 and the associated policy support measures were also reflected in sector wise performance in KSE-100 index

The pandemic had a dual impact on various sectors of the economy – some severely hit while others got a boost. CY20 turned a good year for construction and allied sectors in domestic economy. The changing working patterns (e.g. remote working from home), enhanced use of technology to minimize human contact due to the virus and the policy support measures such as the construction package and Naya Pakistan housing scheme provided an opportunity of further growth to various businesses. Contrary to this, closure of factories (no use of electricity & gas) and restrictions on travel severely affected sectors that involved close human contacts and interaction such as transportation, tourism and hoteling, etc. and therefore reduced demand for energy and utilities businesses.

The sector wise median Sharpe ratios[52] suggest that firms in technology & communication (e.g. increased automation) and construction related sectors were among the top five performing stocks whereas tobacco, sugar and energy sectors could not perform well in CY20 – travel restrictions during the pandemic and subdued consumer demand may explain the subpar performances of these sectors (**Chart 2.27**).

Chart 2.27: Top and bottom 5 Performing sectors in KSE-100 Index



Note: Industrial Classification based on PSX
Source: Bloomberg

Going forward, stability in the financial markets will largely depends on (i) the changing situation of the pandemic (successive waves); (ii) the evolving policy environment and the timing of unwinding of the pandemic-related measures; (iii) the successful implementation of the IMF program, and (iv) the growth momentum of the economy.

[52] Developed by Nobel laureate William F. Sharpe, the Sharpe ratio is used to help investors understand the return of an investment compared to its risk. The ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Generally, the greater the value of the Sharpe ratio, the more attractive the risk-adjusted return. Risk free investments such as treasury bills has a Sharpe ratio of zero.