2. Financial Markets' Behavior

The stability in the forex market, in the later part of CY19, reduced the stress in the financial markets. The softening of macroeconomic vulnerabilities and higher certainty among the market participants about the future economic direction were the key drivers for this stability. In response to favorable macroeconomic conditions, foreign portfolio investment flowed into government securities. Moreover, changing interest rate expectations pushed the banks towards longer-tenor securities, which helped reduce the roll over risk for the government. The equity market also rebounded towards the end of CY19, though it remained quite volatile during the year. In the wake of COVID-19 outbreak and the associated emerging risks to the domestic economy, finical markets have remained volatile since Mar-2020.

Easy financial conditions cascaded into growing vulnerabilities in the global financial system during CY19

Trade tensions between the US and China and the resultant policy actions by the Federal Reserve remained the key drivers for the global financial markets' behavior during CY19 .[143] Particularly, equity markets oscillated back and forth in tandem with trade related news. As the economic prospects weakened and downside risks increased, the central banks across the globe relaxed the monetary policy.[144, 145] Resultantly, yields on long-term government bonds in advanced economies (**AEs**) trended downwards turning even negative in a range of countries.[146] However, favorable news on US-China trade negotiations and certainty regarding Brexit in the final quarter of the year induced positive sentiments leading to an uptick in the yields.[147]

On the one hand, the easy financial conditions in AEs during CY19—driven by the dovish stance of major central banks—helped contain downside risks to near-term economic outlook. On the other hand, they stimulated financial risk taking resulting in further build-up of financial vulnerabilities, stretched equity prices (especially, in the USA and Japan) and growing investment into risky assets.

Lower yields compelled institutional investors—in order to generate targeted returns—to invest in riskier and less liquid securities. Consequently, these investors became a –key source of funding for the nonfinancial firms, which, in turn, facilitated a rise in corporate debt burdens.[148]

In emerging markets economies (**EMEs**), financial conditions continued to ease with the rate cutting cycle in AEs. External borrowing costs declined and debt portfolio inflows increased encouraging debt build-up. Worryingly, median external debt of EMEs (sovereign as well as private) advanced to 160 percent of exports in 2019 from 100 percent in 2008.

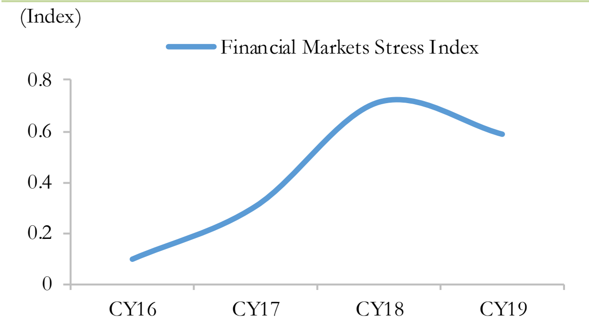
Stress receded in the domestic financial markets in second half…

The elevated level of stress observed in the domestic financial markets in the previous year subsided during second half of CY19 (**Chart 2.1**). Scaling up of the corrective policy measures and consequent improvement in certain macroeconomic indicators brought higher certainty among market participants about the future economic outlook of the country. As the

143 IMF (2020). World Economic Outlook Update. *January*
144 IMF. (2019). Global Financial Stability Report. Washington, October
145 There were 71 interest rate cuts by 49 central banks in CY19.
146 Austria, Belgium, Denmark, Finland, France, Germany, Japan, the Netherlands, Sweden, and Switzerland.
147 IMF. (2020). World Economic Outlook Update. Washington, January.
148 According to IMF (Global Financial Stability Report, Oct-2019), corporate debt at risk could rise to 40 percent (USD 19 trillion) of the total corporate debt in major economies in a material economic slowdown scenario. Also, vulnerabilities among nonbank financial institutions are now elevated in 80 percent of economies with systemically important financial sectors (by GDP).

sentiments improved, calmness returned to the financial markets.

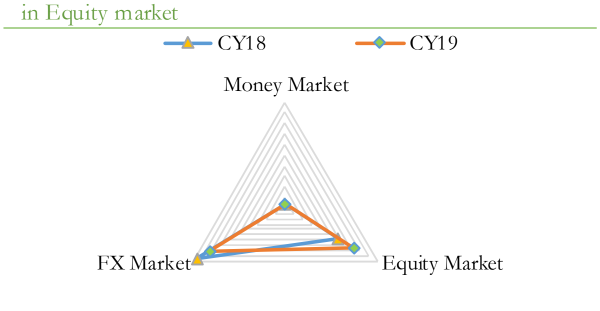
Chart 2.1: Vulnerabilities in financial markets softened during CY19



Note: This chart presents quarterly average of the index.
Source: SBP

Particularly, despite higher average exchange rate depreciation during CY19 (23.12 percent against 15.48 percent in CY18), the volatility in the forex market remained contained. It was primarily due to the narrowing current account deficit, introduction of market based exchange rate system and securing of Extended Fund Facility under IMF program (**Chart 2.2**).

Chart 2.2: Volatility subsided in FX market while increased in Equity market



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.
Source: SBP

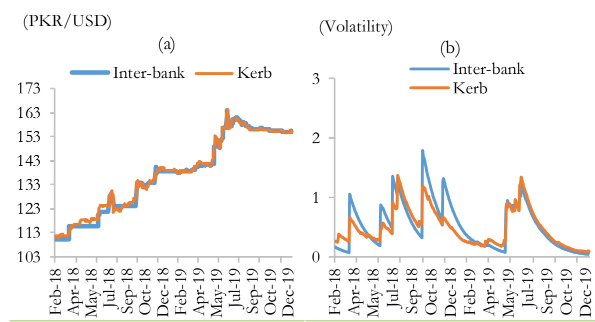
Money market continued to operate smoothly during CY19 on account of interest rate corridor mechanism, SBP's prudent management of market liquidity, and consistent pattern of government borrowings from the banking system. Equity market, however, experienced higher volatility during CY19 as KSE-100 index —on average— was down by 14.47 percent (7.67 percent decline in CY18).

FX Market

Forex market volatility reduced …

Forex market observed higher volatility for a brief period in H1CY19 and subsided afterwards **(Chart 2.3a & 2.3b)**. The exchange rate depreciated against USD by 15.36 percent between May 15, 2019 to June 28, 2019. A number of factors explain the improved stability in the forex market during H2CY19. These include realignment of exchange rate with market fundamentals which helped anchor exchange rate expectations of the market participants hence addressed speculative behavior effectively, softening pressure on current account, and securing IMF Extended Fund Facility in July-2019.

Chart 2.3: Introduction of market based exchange rate system helped contain volatility

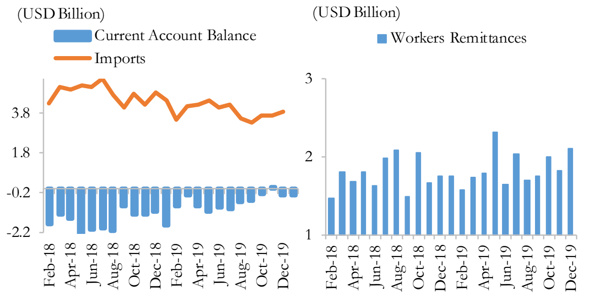


Source: SBP

Current account pressures softened owing to compression in imports and healthy inflow of remittances….

Besides other measures, the adoption of market based exchange rate system played critical role in bringing improvement in current account balance. Current account deficit that surged to USD 19 billion in CY18 reduced to USD 7 billion in the reviewed year showing impressive improvement of 62.0 percent. Compression in imports—in response to the stabilization measures—and healthy inflow of workers' remittances helped contain current account vulnerabilities (**Chart 2.4**).

Chart 2.4: Current account pressures receded during H2CY19

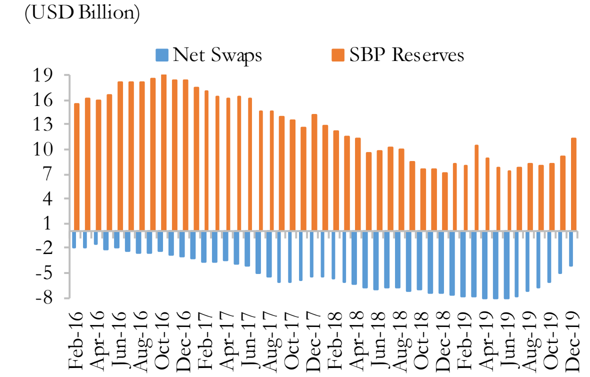


Source: SBP

…and SBP forex reserves began to build-up

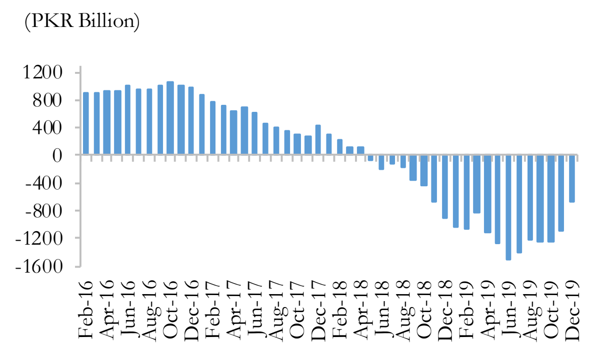
Receding current account pressures, securing IMF program and foreign portfolio investment flows into government securities (mostly in T-bills amounting to USD 1.9 billion) helped bring consistent improvement in SBP forex reserves in the second half of CY19.[149] The reserves rose to USD 11.3 billion by end December-2019 from USD 7.2 billion in June-2019. Resultantly, SBP moved to reduce its foreign currency swaps/forward liabilities with the banking sector during the same period (**Chart 2.5**). Gradual improvement in Net Foreign Assets (NFA)[150] of the banking system during the same period also witnessed emerging healthy conditions in forex market (**Chart 2.6**). In this context, PKR appreciated against USD by 5.02 percent during H2CY19.

Chart 2.5: SBP FCY swap liabilities declined in H2CY19



Source: SBP

Chart 2.6: NFA of the banking system improved (stocks)



Source: SBP

Decompression in forward premium and growing foreign currency loans signaled upbeat sentiment …

In CY18, forex market observed compressed forward premium[151] as well as decline in foreign currency loans owing to the dearth of US dollar liquidity and the associated uncertainty about the exchange rate dynamics. However, in CY19, abating vulnerabilities on external account and the improved forex reserves allowed decompression in

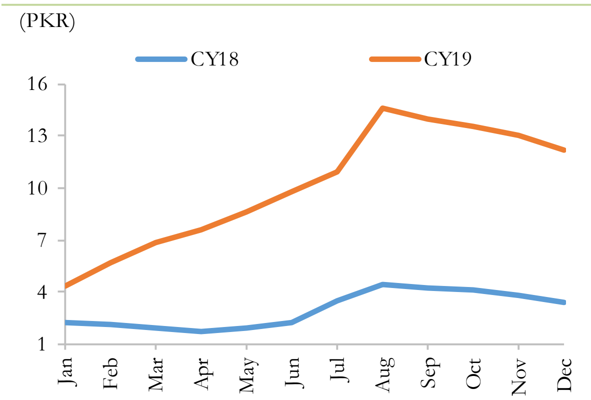
[149] One of the reasons behind build-up of SBP forex reserves in early months of CY19 was materialization of bilateral official inflows from friendly countries.

[150] Improvement in NFA was mainly driven by SBP forex position. SBP NFA improved on account of rise in international reserves and decline in liabilities relating to IMF and deposits of foreign central banks.

[151] FX swap is a short-term contract and forward premium associated with FX swap is based on interest rate differential prevailing between the two currencies in a pair. It implies that the difference of interest rates earned on the two currencies would be adjusted in the exchange rate. For instance, if domestic interest rates are higher than USD-LIBOR, then in such conditions, a swap between USD and PKR means the one who is receiving PKR would earn higher interest income. This interest rate difference would be adjusted in the exchange rate in order to make compensation for the PKR lender because USD would earn lower interest rate if invested at USD-LIBOR. Such transaction presumes easy liquidity conditions of both currencies. However, if USD liquidity is tight in the domestic market then despite higher interest rates on PKR, the compensation (premium) offered to PKR lender would be less than the interest rate differential because of the higher demand for US dollar. Therefore, forward premium/swap points compress/decompress according to the interest rate differentials and liquidity conditions of both the currencies.

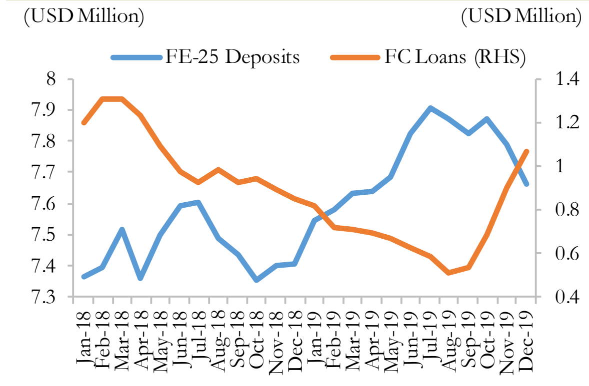
forward premium reflecting adjustment of interest rates spread (**Chart 2.7**).[152] Also, trade related foreign currency loans began to increase in the second half of CY19, while FE-25 deposits receded showing stability in the exchange rate expectations (**Chart 2.8**). Moreover, partial restoration of the facility by SBP—withdrawn earlier in July-2018—of import advance payment up to 50 percent of the value of letter of credit during December-2019 manifested reduced pressures on forex reserves.[153,154] In addition, the average spread between the kerb market and the inter-bank market prices turned negative (PKR -0.19 in CY19 vs. PKR 1.0 in CY18).

Chart 2.7: Decompression in forward premium



Source: SBP

Chart 2.8: Rising FCY loans in H2CY19



Source: SBP

It deserves emphasis that despite improved sentiment in forex market, cross currency swaps (CSS)[155] (longer-term derivative instrument) deals were higher in CY19 as compared to CY18.[156] This could be due to the notable exchange rate uncertainty prevailing in the first half of CY19 which might have driven up CSS deals.

Money Market

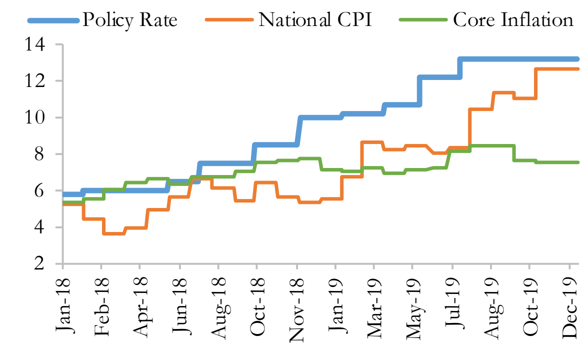
Monetary policy further tightened during CY19…

The contractionary monetary policy stance that began in CY18 continued in CY19. On top of 425 bps rise in CY18, the policy rate was further increased by 325 bps to reach 13.25 percent in July 2019. This continuation was due to inflationary pressures and macroeconomic vulnerabilities associated with current and fiscal accounts (**Chart 2.9**). However, the policy rate remained unchanged afterwards until end CY19, as the inflation dynamics did not warrant any further increase.

152 Interest rate spread refers to 3M KIBOR minus 3M LIBOR. The spread further increased during CY19.
153 EPD Circular Letter No. 18 of 2018: http://www.sbp.org.pk/epd/2019/FECL18.htm
154 This facility was fully restored up to 100 percent in January-2020 as per EPD Circular Letter No. 01 of 2020: http://www.sbp.org.pk/epd/2020/FECL1.htm

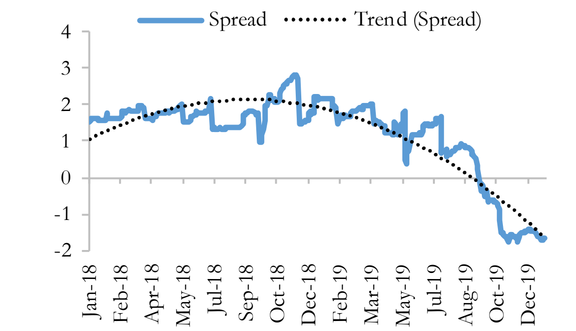
155 In CSS deals, counterparties exchange two different currencies at the spot rate at the inception of the contract. Both parties receive interest rates on lending currency and pay on borrowed currency. The currencies are exchanged at the end of the contract with pre-determined exchange rate
156 The originated deals of CSS during CY19 amounted to PKR 21 billion—up from 11 billion in CY18. Out of the total CSS deals, PKR 15 billion originated during H1CY19.

Chart 2.9: Monetary policy further tightened in CY19



Source: SBP

Chart 2.11: The spread between policy rate and 3Y PKRV turned negative in H2CY19

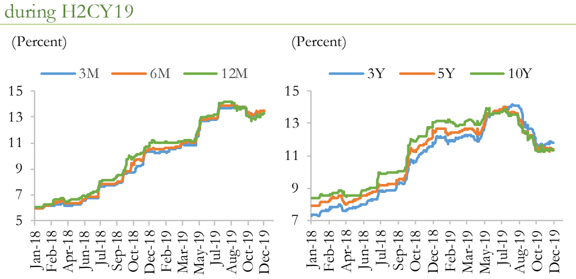


Source: SBP

…while the yield curve eventually inverted…

The yield curve of government securities moved in tandem with monetary policy tightening during H1CY19. However, it inverted—particularly at the longer end—during H2CY19 indicating that market expectations of interest rate decline were on the rise **(Chart 2.10)**. As a result, the term spread (3Y PKRV minus policy rate) turned negative in the second half of CY19 (**Chart 2.11**).

Chart 2.10: Changing interest rate expectations in the secondary market during H2CY19



Source: MUFAP

A number of factors might explain the yield curve inversion, including (i) re-profiling of the government debt to long-term maturity from SBP[157] and resultant market expectations of lower PIBs issuance (ii) market inference of a possible peak in interest rates from monetary policy statement of July-2019 and (iii) foreign portfolio investment inflows into treasury bills. The inversion of yield curve was a result of market dynamics rather than an early manifestation of recessionary tendencies in the economy.

…driving banks' interest in longer-tenor securities …

During H2CY19, the banks began to show keen interest in locking funds in the longer-tenor government securities owing to the expectations of possible monetary easing in the future.[158] The analysis of the primary market reveals that the banks' interest in 3M T-bills declined[159], while it substantially rose for 12M T-bills and PIBs in the second half of H2CY19 **(Chart 2.12 & 2.13)**.[160, 161] Particularly for PIBs**,** banks had been showing interest since the inception of CY19[162] but their appetite substantially increased in the second half of the reviewed year.

157 There was a re-profiling of government debt from SBP at the end of June-2019. The short-term debt (MRTBs) of about PKR 7 trillion was converted into longer-term debt (PIBs). This improved government's bargaining power with the banks in PIBs auctions.

158 In falling interest rate scenario, banks move to invest in long-term fixed income securities in order to generate a steady stream of higher returns going forward. On the contrary, in rising interest rate scenario, banks tend to invest in shorter tenor securities in order to eschew revaluation losses.

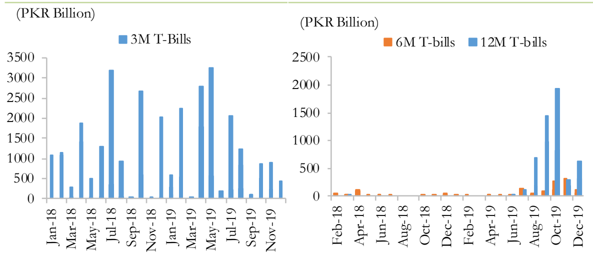
159 In H2CY19, banks offered PKR 8 trillion in 3M treasury bills auctions – lower than PKR 12 trillion in H1CY19.

160 Banks offered PKR 8 trillion in 12M T-bills auctions during H2CY19 as compared to just PKR 18 billion in H1CY19.

161 In H2CY19, banks offered PKR 3 trillion in PIBs auctions as compared to PKR 1.9 trillion in H1CY19.

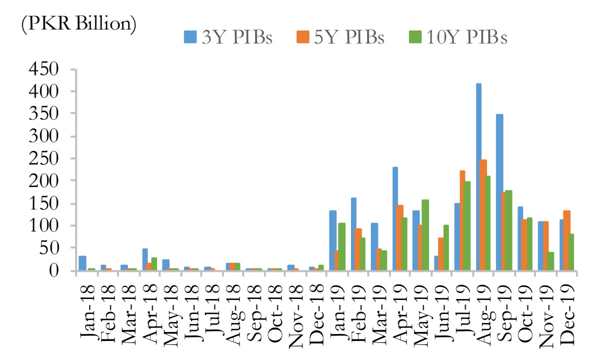
162 Banks' interest in PIBs during H1CY19 was due to attractive returns offered on PIBs and banks' expectation of a peak in interest rates during Q1CY19.

Chart 2.12: Fading banks' interest in 3M treasury bills



Source: SBP

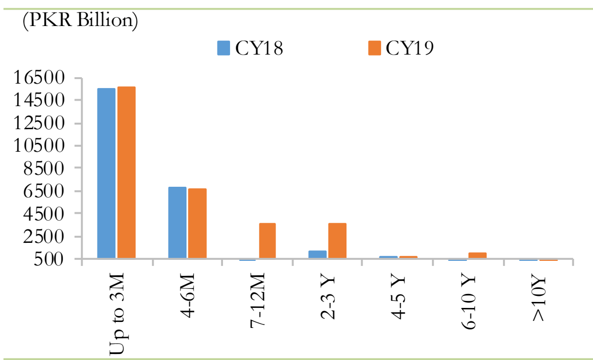
Chart 2.13: Banks' appetite in PIBs increased substantially during CY19



Source: SBP

Unlike previous year, trading activity in government securities also increased in relatively longer- maturities during CY19 **(Chart 2.14).** The rise in trading of longer maturities showed their growing demand and was significant for their effective price discovery. Moreover, the total volume of the secondary market trading also expanded by 25.82 percent in CY19 (PKR 31 trillion vs. PKR 25 trillion in CY18), which was encouraging for market efficiency and depth.

Chart 2.14: Rising trading activity in longer-dated maturities

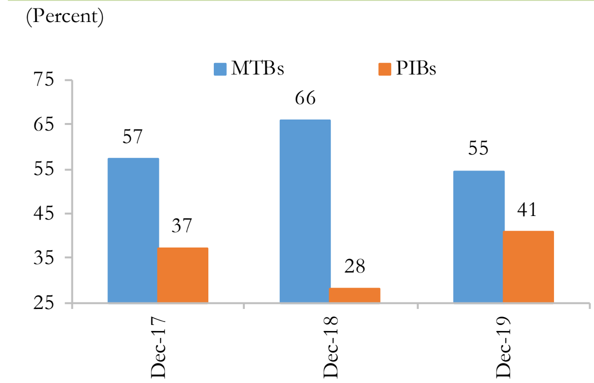


Source: SBP

The rollover risk for the government declined…

The composition of the government debt from the banking sector changed to a meaningful extent (**Chart 2.15**). The share of MTBs (short-term debt) in total government debt declined to 55 percent by end December-2019 while PIBs share increased to 41 percent. Such improvement in the debt maturity profile of the government was a healthy development from the rollover risk point of view.

Chart 2.15: Government rollover risk abated during CY19



Source: SBP

The government securities also became attractive for foreign investors…

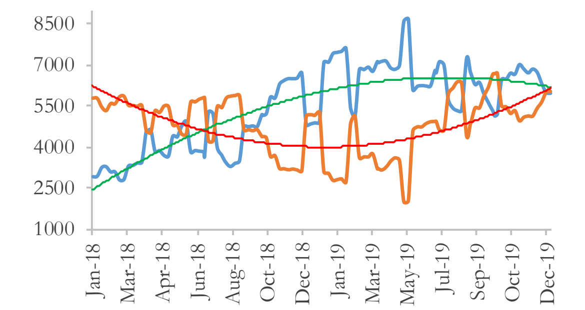
Higher domestic interest rates and stability in the exchange rate attracted foreign portfolio investment inflows of USD 1.9 billion in the government securities (almost entire in MTBs) in H2CY19. Although these inflows helped improve forex reserves and had a healthy impact on exchange rate, the persistency in these inflows could impact the monetary policy and external sector dynamics going forward.

Volatility in the money market remained at a lower level…

In contrast to H1CY19, government borrowed exclusively from the banking sector during H2CY19 owing to the IMF condition of zero Govt. budgetary borrowing from SBP (**Chart 2.16**). To ensure appropriate level of liquidity, SBP's injections in the inter-bank market increased to PKR 574 billion (on average) during H2CY19 as compared to PKR 477 billion during H1CY19 (**Chart 2.17**).[163, 164] This exerted consistent downward pressure on the overnight repo rate (ONR). As a result, the gap between ONR and the policy rate turned increasingly negative during the second half (**Chart 2.18)**.

Chart 2.16: Government budgetary borrowing from the banks increased in H2CY19

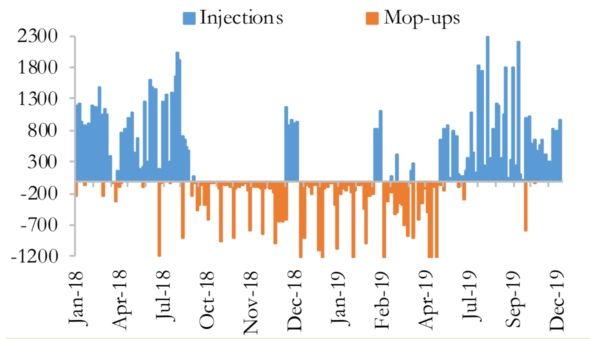
(PKR Billion)



Source: SBP

Chart 2.17: SBP OMOs injections increased in H2CY19

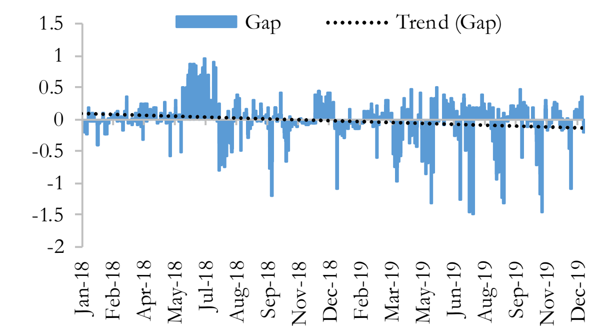
(PKR Billion)



Source: SBP

Chart 2.18: The gap between O/N repo rate and policy rate increased during H2CY19

(Percent)



Source: SBP

Moreover, the higher volume and increased frequency of OMO injections kept the volatility of the overnight repo rate at a lower level during CY19.

Equity Market

KSE-100 index rebounded towards the end of CY19…

In CY19, KSE-100 index averaged at 36,034 (42,142 in CY18) showing contraction of 14.49 percent from the previous year. The analysis reveals that the equity market experienced two divergent phases during the reviewed year. It trended downwards until August 2019, while rebounded afterwards (**Chart 2.19a**). The consistent stress in the equity market kept the

[163] In H2CY19, SBP OMOs injection frequency stood at 55 as compared to 18 in H1CY19.

[164] In H2CY19, there were only two mop-up operations amounting to PKR 824 billion.

trend in volatility upwards (**Chart 2.19b**).

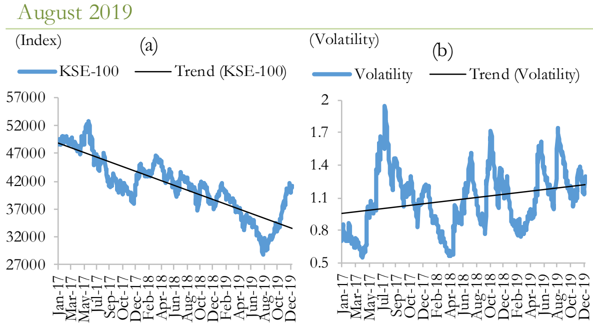
Table 2.1: Progress of capital market in Pakistan

	Dec-17	Dec-18	Dec-19
Million PKR except companies, index and bond data			
Total No. of Listed Companies- EoP	559	546	534
Total Listed Capital - PKR - EoP	1,276,801	1,322,748	1,386,599
Total Market Capitalization - PKR- EoP	8,570,926	7,692,787	7,811,812
KSE-100™ Index -EoP	40,471	37,067	40,735
Growth (KSE-100 Index)	-15.3%	-8.41%	9.9%
KSE-30™ Index - EoP	20,215	17,174	18,656
KSE Meezan Index (KMI-30) -EoP	68,611	61,174	66,032
KSE All Share Index - EoP	29,774	28,043	29,012
New Companies Listed during the year	7	3	1
Listed Capital of New Companies - PKR	12,549	5,432	8,694
New Debt Instruments Listed during the year	1	6	7
Listed Capital of New Debt Instruments - PKR	10,500	28,820	240,624
Average Daily Turnover - Shares in million	249	194	164
Average value of daily turnover - PKR	12,099	7,871	5,909
Average Daily Turnover (Future™)	60	68	74
Average Value of Daily Turnover	4,307	3,022	2,862

Source: PSX

EoP = End of Period

Chart 2.19: KSE-100 index remained under pressure until August 2019



Source: SBP

The pessimistic sentiments in the equity market during the first eight months of CY19[165] were primarily driven by weak macroeconomic fundamentals such as current account deficit concerns, exchange rate dynamics, and the viability of associated stabilization measures. Besides, the political uncertainty as well as uncertainty associated with the IMF program added stress into equity market. Also rise in geopolitical tensions jittered investors' sentiment.

However, upbeat sentiments began to emerge in the equity market in early October-2019. KSE-100 index surged by 37.67 percent (from end August to end December). The strong rebound in the equity market was on account of softening macroeconomic vulnerabilities in the wake of stabilization measures adopted as well as the successful completion of IMF first review. Also, Moody's upgraded Pakistan's outlook to stable from negative in Dec-19. These developments together injected confidence among the equity market participants.

Exchange rate stability and favorable interest rate dynamics were pivotal for investor confidence…

A negative association[166] prevailed between exchange rate depreciation and equity market performance (**Chart 2.20**).[167] As the PKR-USD parity improved to PKR 155 per USD in December-2019 from PKR163 per USD in June-2019, the investor confidence recovered. In addition, the inversion of the yield curve—suggesting market expectations of ebbing interest rates—induced further positive vibes into the market (**Chart 2.21)**. This also triggered an anticipation of improved corporate earnings going forward. The improved returns in equity market as well as falling yield on long-term fixed income securities moved mutual funds to prefer equities over money market funds towards the end of

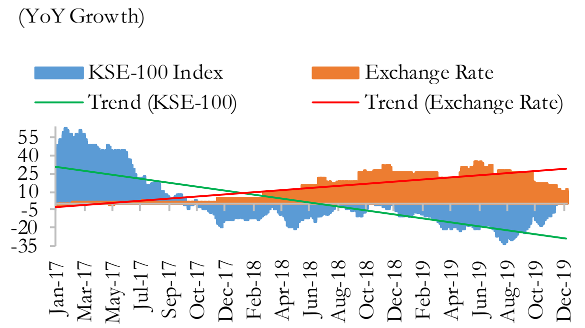
[165] KSE-100 index declined by 19.95 percent in the first eight months of CY19.

[166] The correlation coefficient turned -0.65 for the period CY17-CY19. This is based on the YoY growth of KSE-100 index and PKR/USD interbank exchange rate.

[167] Exchange rate depreciation dampen investors' sentiment by reducing dollar adjusted returns (for foreign investors) and undermine corporate earnings prospects (by inducing input cost and inflationary pressures).

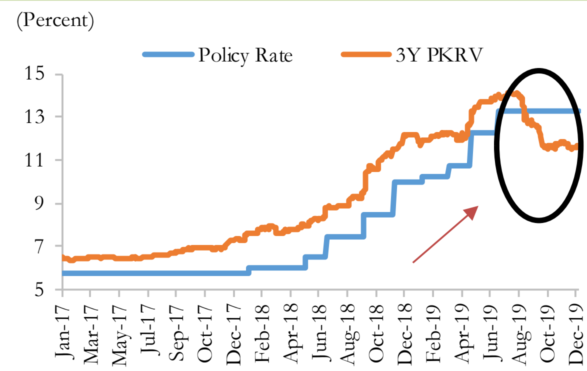
CY19 (**Chart 2.22**).[168]

Chart 2.20: KSE-100 index performance and exchange rate depreciation bears inverse association



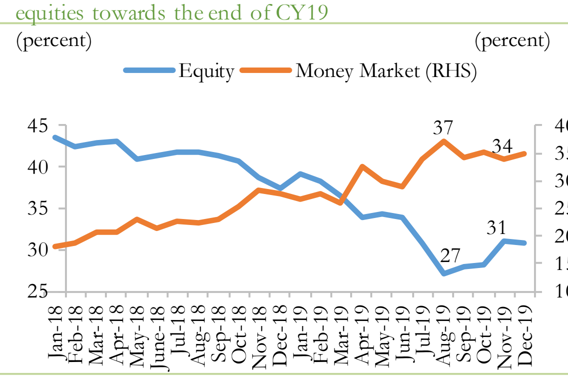
Source: SBP
Note: Positive growth in exchange rate represents depreciation

Chart 2.21: Yield on long-term securities declined



Source: SBP

Chart 2.22: Increasing investments of mutual funds into equities towards the end of CY19



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

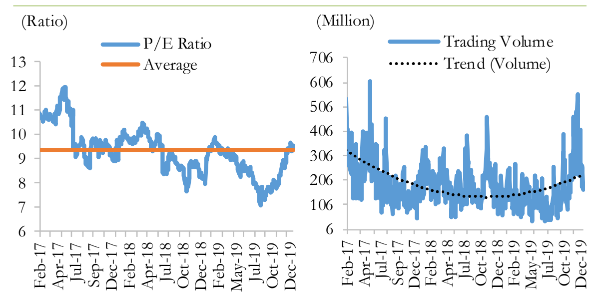
The documentation drive might have influenced recovery in equity market…

Another possible contribution in the notable recovery of KSE-100 might have come from the withdrawal of PKR 40,000/- denominated bearer national prize bonds from circulation in June-2019.[169] Resultantly, PKR 179 billion worth of such prize bonds were encashed during H2CY19. A fraction of this might have been invested into the equities. Besides documentation drive, the tentative sign of economic recovery towards the end of CY19 boosted investors' confidence as reflected by consistent improvement in Business Confidence Index (**BCI**) in the second half of CY19.

Equity valuations as well as trading activity trended upwards in H2CY19…

The average Price to Earnings ratio reduced to 8.67 during CY19 from 9.23 in CY18. The average trading volume declined to 164 million shares in CY19 from 194 million shares in the previous year. However, the equity valuations and trading activity recovered towards the end of CY19 as the investor regained confidence (**Chart 2.23**).

Chart 2.23: Equity valuation and trading activity increased towards the end of CY19



Source: Bloomberg; PSX

…and the foreign investors turned net buyers during CY19

In CY18, local investors were the net buyers of equities while foreign investment kept flowing out of the equity market. However, this trend reversed in CY19. Foreign investors turned net buyers amid

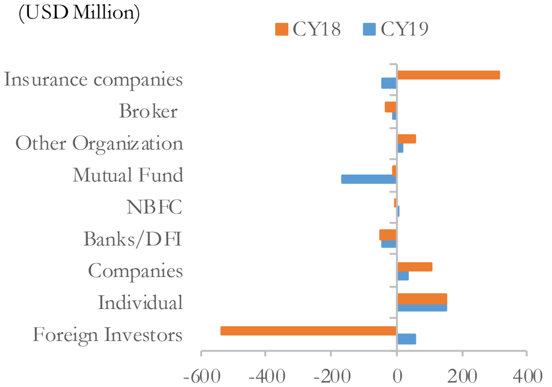
[168] The data shows that the mutual funds invested 46.53 percent of the rise in assets into equities during September, 2019 to December, 2019.

[169]http://www.sbp.org.pk/sbp_bsc/BSC/CMD/Circulars/2019/C1.pdf

improving macroeconomic fundamentals particularly the stability in the exchange rate. The local investors became net sellers, though their volume of net selling was substantially lower than those of the foreign investors in the previous year (USD 56 million in CY19 as compared to USD 537 million in CY18). Further, within local investors, mutual funds were the largest net sellers, while individuals absorbed most of the selling pressure (**Chart 2.24**).

Chart 2.24: Foreign investors turned net buyers in CY19

(USD Million)

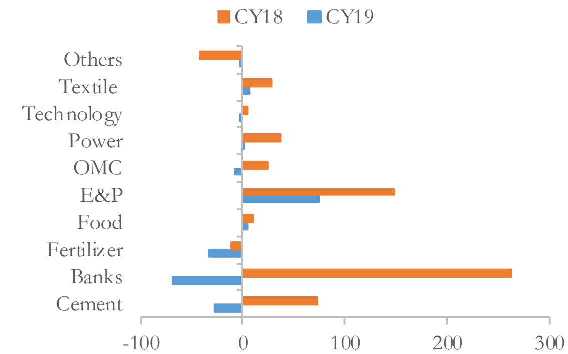


Source: NCCPL

The sector-wise flow of investment in equities by local investors indicate that the outflow was mostly related to banking, followed by cement and fertilizer sectors (**Chart 2.25**). The outflow from the banking sector stocks was possibly due to investors' concern over banks' asset quality and earnings, because of the stabilization measures adopted and retrospective imposition of super tax[170] on banks' profits. The selling pressure in cement stocks probably stemmed from the pessimistic earning prospects of the industry. There was downward pressure on cement prices, mostly driven by feeble demand conditions, leading to lower capacity utilization. As for fertilizer sector , persistent high inventory levels and risk of higher gas prices were the likely factors behind dismal sentiments toward this sector.

Chart 2.25: Sector-wise investment flows by local investors

(USD Million)



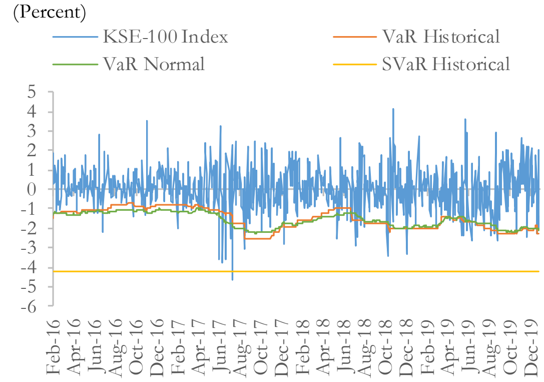
Source: NCCPL

The risks in the equity market remained muted…

Despite contraction in KSE-100 index by 14.49 percent (on average) during CY19, downside risks to the equity market remained muted. Though actual returns of the KSE-100 index breached the Value at Risk (**VaR**)[171] measure with slightly higher frequency (18 times in CY19 vs. 17 times in CY18), the extent of the breaches were narrower in CY19. Moreover, the returns did not dip below the stressed VaR (**SVaR**)[172] during the reviewed year (**Chart 2.26**).

Chart 2.26: Downward risks to equity market remained muted in CY19

(Percent)



Source: SBP

[170] The Finance Supplementary (Second Amendment) Bill, 2019 prescribed a revision of super tax from 0 percent in tax year 2018 to a flat 4 percent for 2017 and 2018. As a result, banks had to bear an additional tax charge during the accounting year 2019.

[171] Value-at-Risk (VaR) represents the probable amount (or percentage) of downside risk of investment at any given point in time. To assess the riskiness of PSX returns, 100 days rolling Historical and Normal VaR along with stressed VaR (SVaR), at 95 percent confidence level, were computed.

[172] Stressed VaR refers to the lowest 100-days rolling value during the entire sample period (January 2001-December 2019). The SVaR was last breached on July 11, 2017.