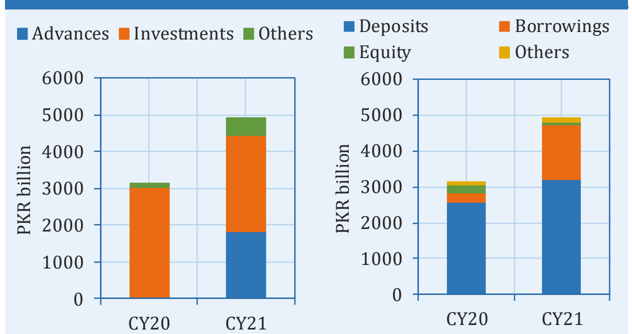
Chapter 3: The Banking Sector

Banking sector maintained a strong growth trajectory in CY21. Besides investments, advances significantly supported balance sheet expansion. The earnings of the sector observed steady pace - the lower provisioning expenses and revival in fee-based income supported the bottom line while the growth in net interest income was softened by the low interest rate environment. With abundant inflow of deposits and banks' ample holding of liquid assets, liquidity profile of the sector remained comfortable. Asset quality indicators illustrated visible improvement owing to elevated repayment capacity of the borrowers, which was in turn driven by impressive corporate sector earnings. Also, market and operational risks dynamics remained encouraging. Despite softening in CAR due to strong expansion in lending and business operations, banking sector has adequate resilience against unexpected losses from severe but plausible macro-financial shocks

Banking sector maintained the strong growth momentum during CY21while its overall risk profile remained satisfactory…

Banks' asset base expanded by 19.6 percent to PKR 30 trillion during CY21 (14.2 percent growth in CY20). The encouraging development of the year was the robust rise in advances.[39] While investments continued to be the leading component (with 48.4 percent share) of banks' asset base and the principal driver behind balance sheet expansion[40], CY21 witnessed a deceleration in the growth of investments (**Chart 3.1**).

Chart 3.1: Assets & liabilities composition of banks (flow)



Source: SBP

The banks financed strong expansion in assets through a mix of deposits and borrowings. Deposits of the banking industry grew by 17.3 percent—higher than previous year's growth of 16.1 percent. Borrowings recorded a robust pace of 47.3 percent in the reviewed year against 9.7 percent rise in CY20.[41] Besides healthy balance sheet dynamics, slower growth in NPLs during CY21 reinforced the banking sector's stability. NPLs decelerated to 3.8 percent as compared to 8.9 percent rise in previous year. Resultantly, **GNPLR** declined to 7.9 percent by end Dec-21 from 9.2 percent a year ago.

[39] Advances (net of provision) explain 37 percent of total assets flow during CY21.
[40] Investments (net of provisions) explain 53 percent of total assets flow during CY21.

[41] In CY21, deposits and borrowings increased by PKR 3.20 trillion and PKR 1.52 trillion, respectively.

The after-tax earnings of the banking sector increased by a reasonable pace of 8.3 percent in CY21. Despite lower net interest income and increased non-interest expenses, marked decline in provisioning expenses and improved non-interest income supported profitability.

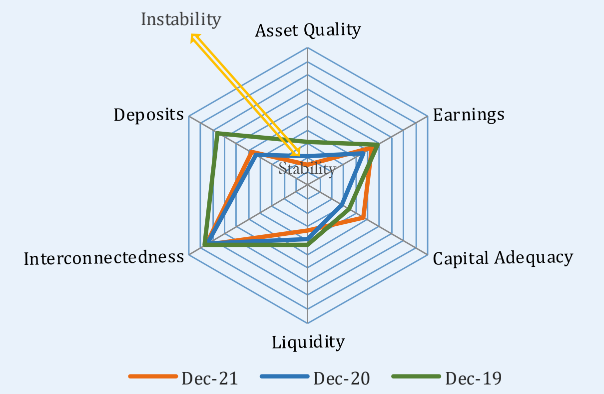
Though **CAR** moved down to 16.7 percent by end Dec-2021 from 18.6 percent a year earlier, solvency still remained robust as the recorded CAR was well above minimum local and global regulatory requirements of 11.5 percent and 10.5 percent, respectively.

Encouragingly, the banking sector continued to maintain Basel liquidity ratios—e.g. Liquidity Coverage Ratio (**LCR**) and Net Stable Funding Ratio (**NSFR**)—well above the required level during CY21. Interconnectedness of the banks slightly increased during the reviewed year manifesting increased liquidity demand.

In view of the above, overall risk profile suggests that stability of the banking sector remained intact during CY21 and the banks remain well positioned to stand against challenging stress scenarios in the future (**Chart 3.2**).

Chart 3.2: Banking Sector Stability Map

(Percentile Ranking)



Source: SBP

Growth in asset base was particularly aided by a rebound in private sector advances, which responded to pick up in economic activity and SBP support measures…

Private sector advances (PSA)—after observing weak expansion in previous couple of years—strongly rebounded by 21.5 percent in CY21 (3.4 percent growth in CY20). The reviewed year's growth was the highest in previous five years. Encouragingly, financing offtake was broad based across economic sectors (**Chart 3.3**). Particularly, textiles, energy, agribusiness, wholesale and retail trade, and construction sectors along with consumers availed major chunk of advances.

Revival in financing was driven by a number of factors such as continued strengthening of economic activity[42], low interest rate environment, higher input prices[43], disbursements under TERF, and its spill over impact on financing demand.

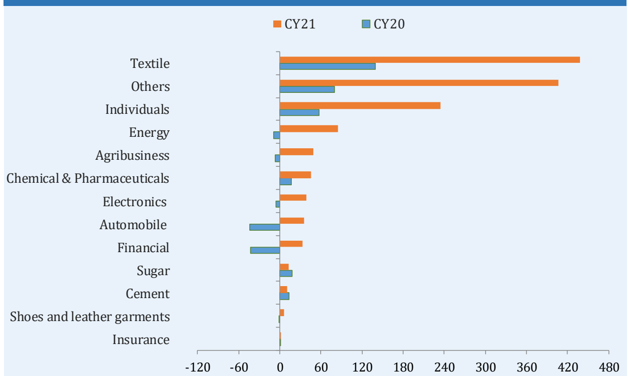
Further, sector-wise analysis indicates that besides cost pressures[44], substantial financing offtake by textile sector (PKR 438 billion in CY21

[42] On average, YoY LSM growth was 17.3 percent in CY21 as compared to -9.2 percent in CY20. Also, Business Confidence Index (BCI) remained in green zone throughout CY21.
[43] On average, Wholesale Price Index (WPI), increased by 18.0 percent in CY21 against 6.0 percent rise in CY20.

[44] Domestic cotton prices increased by 46.5 percent in CY21.

vs. PKR 140 billion in CY20) was due to strong export performance[45] as well as for capacity expansion / Balancing, Modernization and Replacement (**BMR**). Agribusiness loans also increased by PKR 49 billion (against contraction of PKR 7 billion in CY20) mainly reflecting the impact of higher input prices.

Chart 3.3: Sector-wise flow of private sector advances



Others mainly include manufacturers of food products, paper and paper products, coke and refined petroleum products basic metals, construction, wholesale & retail trade, and communication
Source: SBP

In case of energy sector, advances grew by PKR 85 billion as compared to contraction of PKR 9 billion in CY20. Most of the additional financing was of long-term nature, which was primarily availed by coal and wind energy projects. Cement sector, however, availed lower advances during the reviewed period (PKR 11 billion in CY21 vs. PKR 14 billion in CY20). This was due to the improved cash flows of the cement industry on the back of higher sales and prices.[46] Resultantly, the cement sector's demand for credit remained relatively low.

Segment-wise advances reveal that the corporate sector availed both long-term and short-term financing (working and trade financing) during CY21.[47] Significant rise in long-term advances during CY21 reflected the impact of disbursements under TERF and other refinancing schemes like LTFF. Higher working capital and trade financing was due to strong economic activity and cost pressures along with the spillover effects of TERF disbursements on credit demand.

Also, advances to SMEs increased by PKR 59 billion to PKR 511 (PKR 20 billion contraction in CY20). SMEs' financing during CY21 was primarily driven by working capital (PKR 38 billion) followed by fixed investment advances (PKR 20 billion). It is pertinent to mention that SMEs' advances rebounded only in the final quarter of CY21 partially manifesting the impact of seasonal uptick in credit demand. Keeping in view the importance of SME finance and its lower share (5 percent) in banks' credit portfolio, SBP introduced the SME Asaan Finance (**SAAF**) Scheme in August 2021.[48] Under the Scheme, SBP provides time bound financing to banks for onward lending to SMEs in order to help overcome a number of challenges faced by SMEs in getting credit from banks.

The uptick in consumer financing was robust (PKR 184 billion in CY21 vs. PKR 63 billion in CY20). Around 82 percent of the rise in consumer financing was contributed by auto financing and mortgage loans manifesting the impact of low interest rate environment that largely prevailed in CY21, wider choices available to consumers due to new entrants in the automobile market, and mandatory targets given by SBP to the banks for housing and construction finance. However, in the wake of rising external account vulnerabilities, SBP took macro-

[45] Textiles exports increased by 32.4 percent (based on SBP data) during CY21.
[46] The overall dispatches of the cement industry increased by 8.8 percent during CY21. Moreover, cement prices increased by 18.0 percent (YoY). Average price per 50 KG bag during CY21 was PKR 656 as compared to PKR 556 in the comparable period of previous year.
[47] Fixed investment advances, working capital and trade financing increased by PKR 365 billion, PKR 363 billion, PKR 322 billion, respectively during CY21.
[48] IH&SMEFD Circular No. 09 of 2021

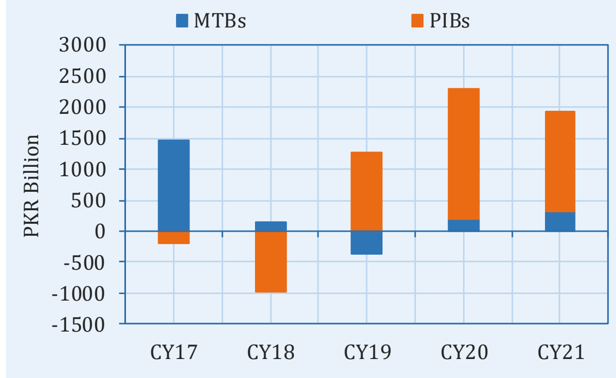
prudential policy measures in September-2021 to moderate auto financing. As a result, the pace of auto financing slowed down in Q4CY21.[49]

However, pace of investment portfolio slowed down…

Banks' investments grew by 22.0 percent—noticeably lower than the recorded growth of 33.5 percent in last year. Despite deceleration, share of investments in banks' assets inched-up to 48.4 percent by end Dec-21 from 47.5 percent a year earlier. More than 90 percent of the total investments were made in Federal Government Securities during CY21.

Further investigation reveals that investments primarily rose in PIBs[50] while stock of MTBs remained muted in the reviewed year (**see Chapter 2**).[51] This reflects Government's continued efforts to improve debt maturity profile as well as the banks' strategy to maintain optimal portfolio mix of their investments in changing interest rate scenario. It can be gauged by the persistently ebbing share of MTBs in total investments, while exposure in PIBs increased overtime.[52] In previous 5 years, notable rise in MTB investments was last observed in CY17 (**Chart 3.4**).

Chart 3.4: Flow of Investments in MTBs and PIBs

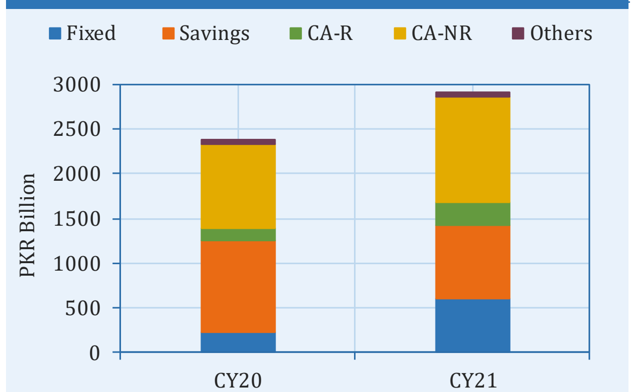


Source: SBP

Robust deposits mobilization provided necessary support to balance sheet expansion…

Banking sector mobilized PKR 3 trillion worth of deposits (PKR 2.6 trillion in CY20) yielding YoY growth of 17.3 percent in CY21. Relatively higher inflow of customers' deposits was observed in fixed and (non-remunerative) current accounts. (**Chart 3.5**).

Chart 3.5: Flow of Customers' deposits



Source: SBP

A number of factors supported the strong deposits growth including revival in economic

[49] In Q4CY21, growth in auto financing decelerated to 5.0 percent from 8.8 percent in Q3CY21.
[50] Around 55 percent of the total investments in PIBs pertained to floating rate category.
[51] PKR 1.60 trillion and PKR 327 billion were invested in PIBs and MTBs, respectively.
[52] MTBs share in total investments declined to 33.4 percent by end Dec-2021 from 52.3 percent at end Dec-2017. On the contrary, PIBs share increased to 47.8 percent by end Dec-2021 from 34.1 percent at end Dec-2017.

activity, higher home remittances[53] and traction in RDA[54], increased use of digital channels for banking transactions, and rise in rate of return[55] owing to monetary tightening. Also, expansion in branch network seems to be a vital determinant in sustaining deposits growth (350 branches were opened in CY21 against 230 in CY20).

Banks' reliance on borrowings remained significant....

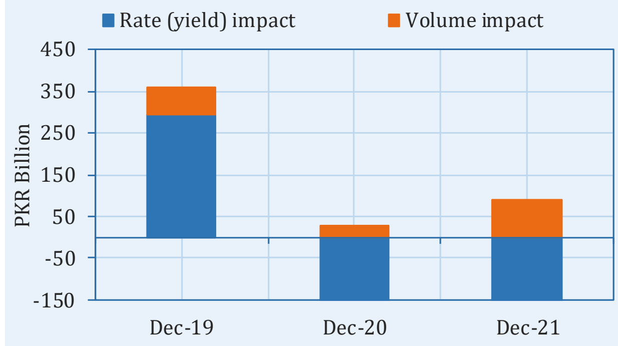
Banks' borrowings rose by PKR 1.5 trillion during CY21 reflecting the necessary funding needed to support the balance sheet expansion. More than 50 percent borrowings pertained to SBP. In addition to the repo and OMO borrowings, increased borrowings from SBP illustrated the impact of TERF funding.

Banks' earnings observed steady growth...

After-tax earnings of the banking sector grew by a decent pace of 8.3 percent in CY21. Although the low interest rate environment contained Net Interest Income (**NII**), sharp slowdown in provision expenses and impressive increase in fee-based and FX income — due to revival in economic activities and foreign trade business—supported profitability. A rate-and-volume variance analysis reveals that lower interest rates adversely influenced interest earnings on both advances and investments while rise in earnings was solely driven by volume (**Chart 3.6 A & B**).

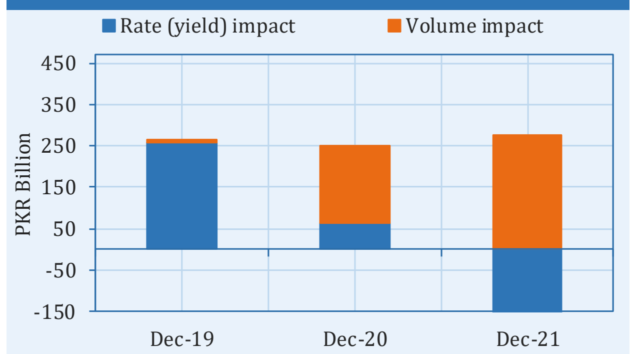
Besides, pace of Non-Interest Income also slowed down in CY21. This slowdown was primarily due to decline in net gain on sale of Government's securities which occurred in the wake of rise in interest rates. In CY21, such gain amounted to PKR 9 billion only as compared to PKR 45 billion in CY20. Nonetheless, impressive increase in fee-based and FX income provided substantial support to non-markup earnings in the reviewed year.

Chart 3.6A: Earnings on advances - Rate vs. Volume Impact



Source: SBP

Chart 3.6B: Earnings on investments - Rate vs. Volume Impact



Source: SBP

There was also increase in administrative expenses due to resumption of expansion activities which were stalled last year due to the pandemic, however, lower provisioning expenses (PKR 50 billion in CY21 vs. PKR 123 billion in CY20)—on account of deceleration in NPLs growth— supported profitability.

[53] Workers' remittances amounted to USD 31 billion in CY21 against USD 26 billion in CY20.
[54] RDA inflows increased to USD 3,160 million by end Dec-2021 from just USD 250 million at end Dec-2020.

[55] Weighted Average Deposit Rate (WADR) increased to 7.5percent by end Dec-2021 from 5.8 percent at end Dec-2020. Moreover, banks attempted to mobilize fixed deposits towards the end of CY21 anticipating further increase in cost of deposits going forward.

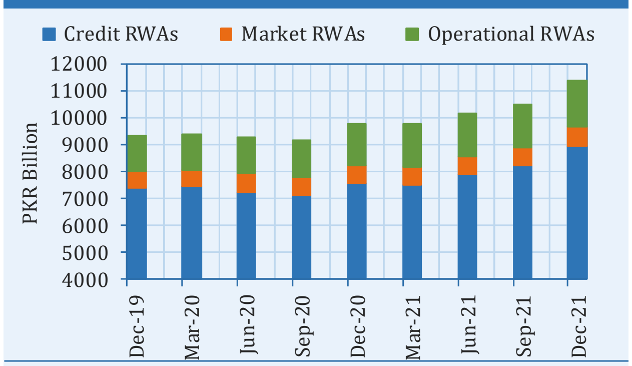
Since the growth in bottom line was mainly volume drive, the Return on Assets (**ROA**-after tax) for CY21 moderated to 1.7 percent (1.8 percent in CY20). However, Return on Equity (**ROE**-after tax) increased to 14.1 percent (from 13.8 percent at end Dec-2020) owing to slower growth in equity base (see **Solvency Section**).

Risk Analysis of the Banking Sector:

Credit Risk

Among the different financial risks faced by the banking sector, credit risk is the leading risk as it mainly accounts for the overall capital requirements of the sector (**Chart 3.7**).

Chart 3.7: Composition of Risk Weighted Assets of

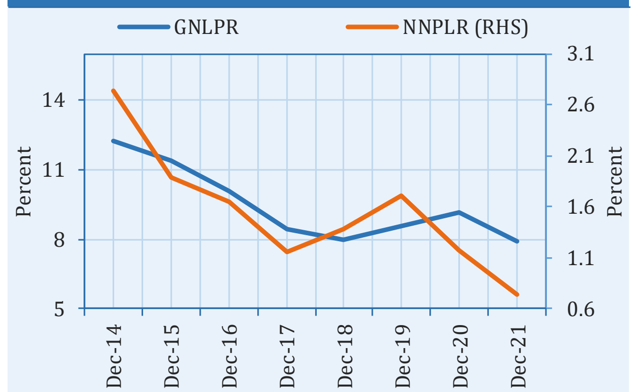


Source: SBP

Asset quality indicators illustrated visible improvement in credit risk profile of the banking sector…

Credit risk of the banking sector remained muted during CY21. Stock of NPLs increased by 3.8 percent as compared to 8.9 percent in CY20. Over the past three years, NPLs have observed persistent deceleration. As a result of contained rise in NPLs and robust growth in advances, GNPLR declined to 7.9 percent by end Dec-21 from 9.2 percent a year ago. Importantly, recorded GNPLR was the lowest in previous seven years (**Chart 3.8**). Since banks made more provisions than the flow of fresh NPLs, the provisioning coverage ratio of NPLs improved to 91.2 percent (88.3 percent in CY20), and net NPLs to Net Loans ratio came down to 0.72 percent from 1.2 percent in the previous year. Accordingly, risks to the banks' solvency from delinquent portfolio of loans further reduced as capital impairment (net NPLs to capital) ratio declined to 4.0 percent by end Dec-2021 from 5.3 percent at end Dec-20.

Chart 3.8: Asset quality indicators



Source: SBP

NPLs flow was concentrated in the energy sector…

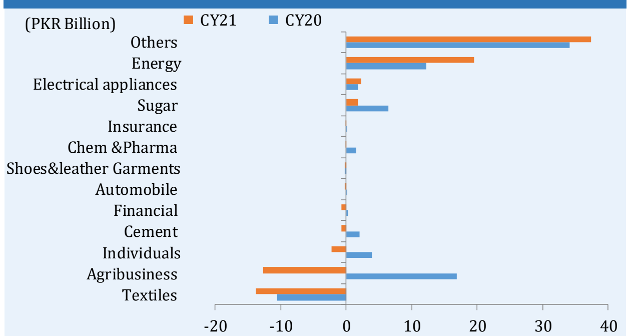
NPLs increased by PKR 31 billion (PKR 68 billion in CY20). Sector-wise analysis indicates that the rise in overall NPLs flow was mainly driven by the energy sector which observed an increase in NPLs of PKR 20 billion during the reviewed year (**Chart 3.9**). Also, one-third rise in NPLs was contributed by increase in PKR value of overseas NPLs which primarily rose due to depreciation in exchange rate.[56]

Among other sectors, Textiles and Agribusiness observed highest contraction in NPLs. Robust performance maintained by the textile sector during CY21 explains healthy asset quality dynamics.[57] NPLs in Agribusiness sector, unlike

[56] PKR depreciated against USD by 9.4 percent during CY21
[57] Textiles exports increased by 32.4 percent during CY21

previous year, contracted primarily owing to compliance to SBP regulations and better recovery efforts.[58]

Chart 3.9: Sector-wise flow of NPLs



Source: SBP

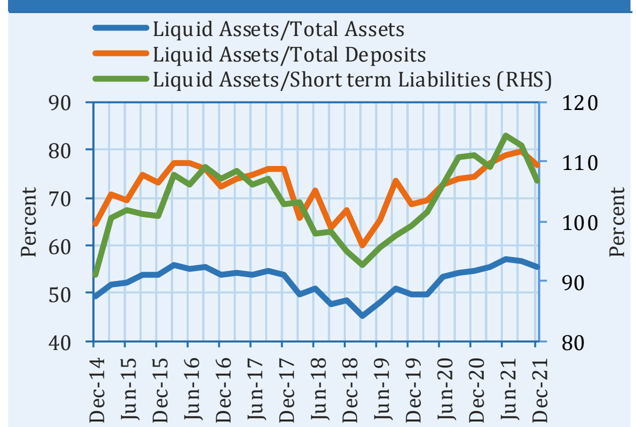
Deceleration in NPLs was driven by elevated repayment capacity of the borrowers…

Domestic economy graduated to recovery phase in CY21 from re-opening in C20. This is evident through the impressive LSM growth and upbeat business expectations as reflected in Business Confidence Index (**BCI**). Persistently low interest rates until September 20, 2021 remained one of the key drivers to boost economic activity. Resultantly, the latest available statistics show that corporate sector's earnings (after tax) sharply rose by 46.5 percent during CY21 (YoY basis) (see **Chapter 7**: **The Corporate Sector**).

Surge in profitability translated into improved repayment capacity of the corporate sector as Interest Coverage Ratio (**ICR**)[59] increased to 8.2 times in Dec-21 from 7.8 times in Dec-20 (**see Chapter 7**). This is also demonstrated by the recovery rate of loans deferred /restructured under the pandemic relief measures: it stood at 90.1 percent by end Dec-21. It remains noteworthy that banking sector's risk perceptions improved during CY21—owing to favorable macroeconomic environment—as general provisions contracted by PKR 14 billion as compared to rise of PKR 47 billion in previous year.[60]

Further analysis of banks' credit risk portfolio in terms of dynamics of their large borrowers (i.e. top 30 borrowing groups) and banks' risk preference indicates that the credit worthiness of these groups ameliorated as their average Obligor Risk Rating (**ORR**) improved and most of the top 30 borrowers showed improved financial indicators during CY21. Moreover, banks in general prefer to lend to large and better rated corporations which is also reflected by gradual increase in externally rated exposures that represent well-established firms having established business track record and strong internal controls and governance mechanisms **(see Box 6.1).**

Chart 3.10: Trend in Liquidity Indicators



Source: SBP

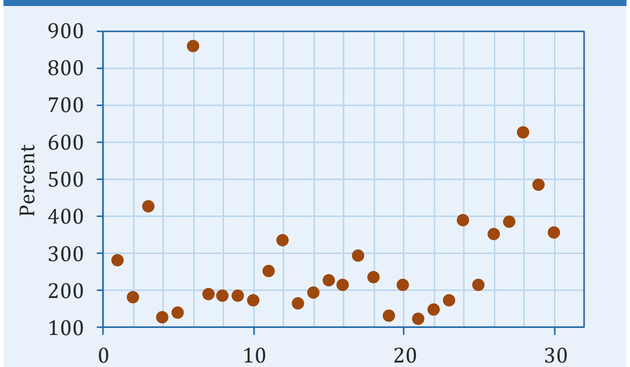
Liquidity Risk

Banks' liquidity profile further strengthened on the back of ample holdings of high-quality liquid assets…

[58] Prudential Regulations for Agriculture Finance
[59] ICR = EBIT/Financial Expenses
[60] Total provisioning expenses amounted to PKR 52 billion in CY21 against PKR 112 billion in CY20. This reduction in overall provisioning expenses was driven by decline in general provisions.

Banks' liquidity profile was at comfortable level, as major part of their asset base was in the form of liquid and risk-free sovereign securities. On average, 69.3 percent of banks' holding of these sovereign securities was in the Available for Sale (**AFS**) category, 4.8 percent in Held for Trading (**HFT**) category and 9.8 percent in Held to Maturity (**HTM**) category during CY21. With notable growth in the holding of government securities during CY21, most of the liquidity indicators further improved over the year (**Chart 3.1.10**).

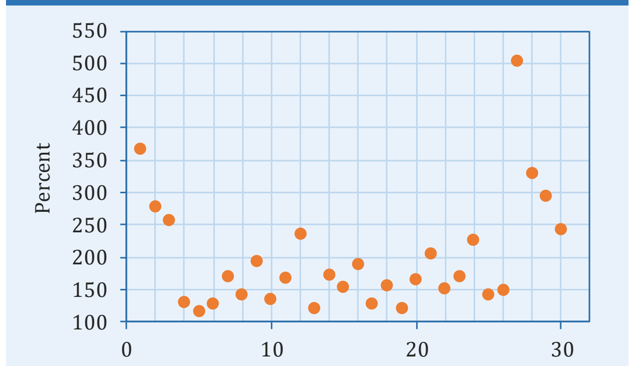
Chart 3.11: Bankwise Liquidity Coverage Ratio at end CY21



Source: SBP

Though some indicators slightly slackened towards the end of CY21, nevertheless, the banks' holding of liquid assets were sufficient to cover banks' short-term liabilities. This sufficiency of liquid assets was also corroborated by the fact that the banking sector continued to meet the dynamic requirements of Basel III liquidity standards with ample cushions – i.e. maintained LCR at 215 percent against the requirement of 100 percent (226 percent in CY20). Similarly, in terms of long-term liquidity profile, the aggregate NSFR at 168 percent (against the requirement of 100 percent) was also in a safe zone. The cross sectional analysis shows that all banks met the requirement of minimum LCR and NSFR in CY21 (**Chart 3.11 and Chart 3.12**).

Chart 3.12: Bankwise Net Stable Funding Ratio at end CY21



Source: SBP

While deposits recorded healthy increase during CY21, SBP still supported market liquidity through its OMOs and refinance schemes…

Though deposits recorded a healthy increase in CY21 (PKR 2.6 trillion growth in CY20), SBP had to provide the necessary support through OMOs to meet the liquidity needs of the market. The proportion of assets, on average, financed from borrowing rose to 15.6 percent during CY21, from 12.9 percent during CY20.[61] Of the PKR 1.5 trillion increase in borrowings, about 51 percent of this increase represent borrowings from SBP (including Repo borrowing).

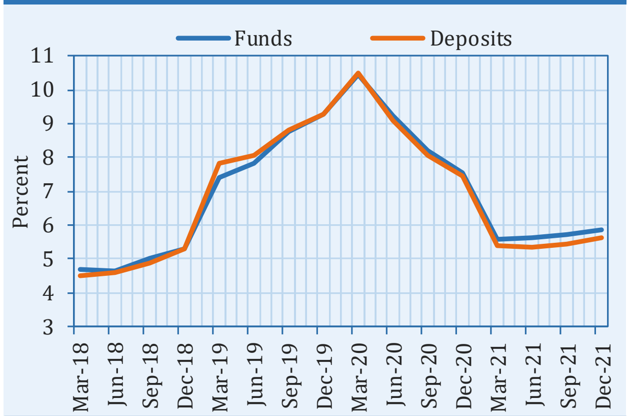
Amid banks' ability to mobilize low cost deposits, cost of funds witnessed marginal increase towards the end of CY21 when policy rate was increased…

Any significant disparity in the demand and supply of funds in the market reflects in banks' cost of funds. In the wake of pandemic-induced accommodative monetary policy, the banking sector enjoyed sharp fall in average cost of funds during CY20 and most part of CY21. The increase in SBP policy rate towards the end of CY21, put pressure on average cost of funds. However, as

[61] Average of quarter end ratios.

the banks were able to strategize low cost deposits – 40.3 percent of increase in total deposits during CY21 was due to non-remunerative deposits –accordingly, the average cost of funds at around 6.0 percent did not witness significant increase. (**Chart 3.13**).

Chart 3.13: Trend in Average Cost of ...

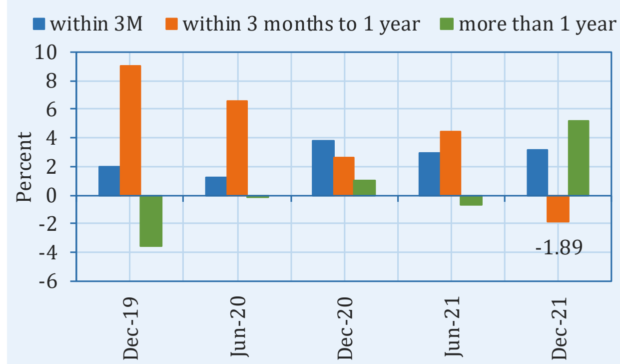


Source: SBP

Maturity profile of assets improved, however, banks continued to maintain adequate profile due to ample stock of high quality liquid assets….

With the increase in the stock of long-term bonds and advances for fixed investment, the average maturity of assets increased and maturity gap in more than one year further increased as compared to last year. Though the negative gap between assets-liabilities maturing in 3 months to 1 year tenor widened, however, the ample stock of high-quality liquid assets and liquidity buffers e.g. strong LCR demonstrated the comfortable liquidity position (**Chart 3.14**).

Chart 3.14: Gap (Assets - Liabilities) as a percentage of Total Assets



Source: SBP

...banks have sufficient cushion to absorb liquidity shocks

SBP's latest sensitivity (stress testing) assessment indicates that banks' liquidity positions are expected to remain resilient to various extreme hypothetical shocks (**Table 3.1**).

Table 3.1: Stress Testing Results of the Banking System for Liquidity Shocks

Position based as December 2021 (Un-audited)

	Liquidity Shocks	No. of Banks with no liquidity after 3 Days	4 Days	5 Days
L-1	Withdrawal of customer deposits by 2%, 5%, 10%, 10% and 10% for five consecutive days respectively.	0	0	1
		1 Day	2 Days	3 Days
L-2	Withdrawal of Wholesale Deposits and Unsecured Borrowings by 10%, 20%, and 50% for three consecutive days respectively.	0	0	2
		Number of Banks with LCR<1		
L-3	Shock to Liquidity Coverage Ratio Applying 20% haircut to the value of Investments in Government Securities	4		

Source: SBP

Market Risk

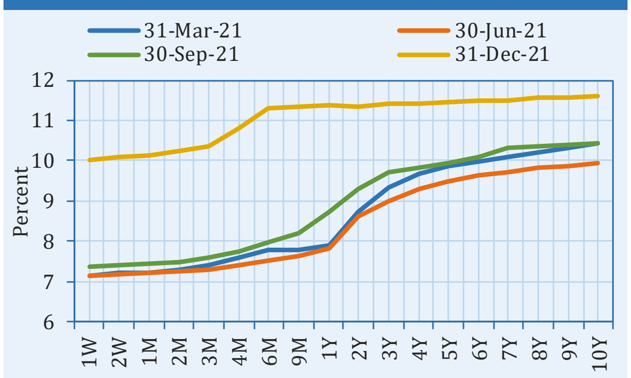
Market risk remains relatively low for the Pakistani banking sector, as the capital charge for market risk accounted for 6.2 percent of overall regulatory requirement of banks.

Interest rate risk was mainly driven by changes in monetary policy while banks accordingly calibrated their asset-liability management strategies…

SBP policy rate went up by a cumulative 275 bps in late CY21, and the yield curve recorded a notable shift during Q4CY21 (**Chart 3.15**). This shift had implications for banks' earnings and value of Rate Sensitive Assets (**RSA**).

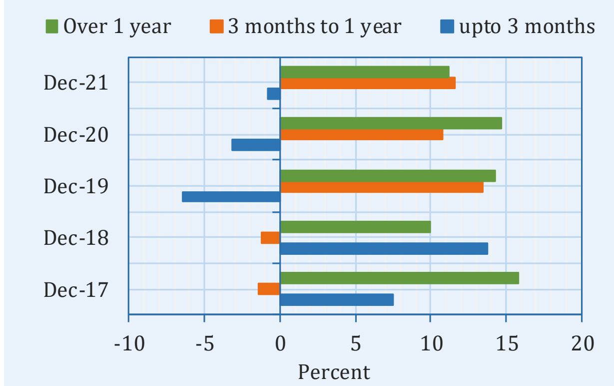
However, banks effectively strategized asset-liability management to withstand any significant shocks to interest rates. The overall gap in banks' rate sensitive assets and liabilities in over 3 months maturity buckets was only around 11 percent at end CY21, indicating the relatively low sensitivity of banks' net worth to changes in interest rates (**Chart 3.16**). It is important to note that over time banks have been able to reduce their sensitivity to changes in interest rates (i.e. duration of their RSA) by increasing the proportion of floating rate PIBs in their stock of investments.

Chart 3.15: Yields Curve



Source: MUFAP

Chart 3.16: Gap (RSL-RSA) as a percentage of Total Assets

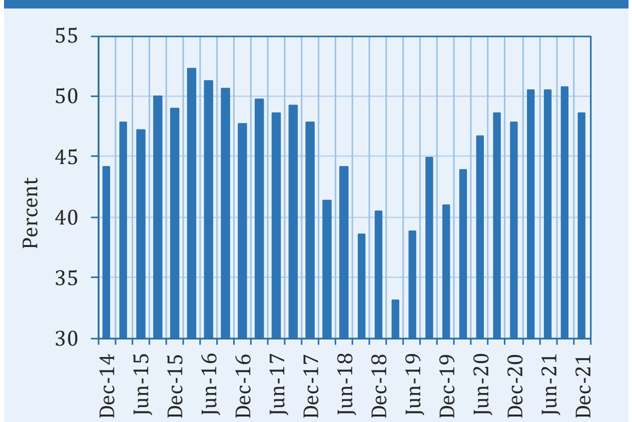


Source: SBP

Banks have sufficient resilience to interest rate risk…

Incidentally, major chunk of banks' RSA comprises government papers which on average constituted around 45 percent of their overall asset base during CY21 and were mainly classified as AFS and HFT (**Chart 3.17**).

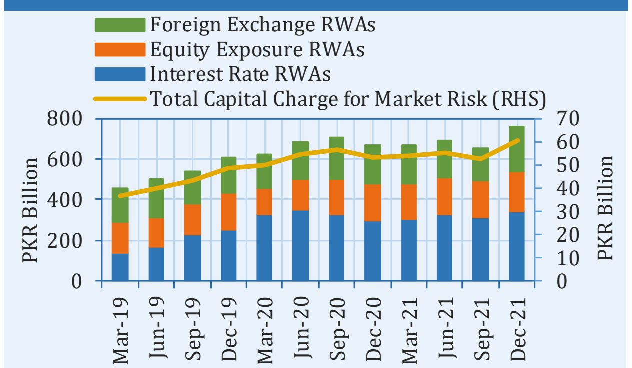
Chart 3.17: Share of Investments in Total Assets



Source: SBP

While these government securities provide ample liquidity and stable source of earnings, at the same time they expose banks to interest rate changes. However, due to relatively short maturity/repricing duration of the RSAs particularly the government securities (which mainly comprise short-term MTBs and floating rate PIBs), and have deep and active secondary market, the overall sensitivity of the banks to changes in interest rates is low. This notion is also corroborated by the relatively low capital charge for interest rate risk (**Chart 3.18**), although the banks' investments in government papers have significantly increased over the last one and a half year. The sensitivity analysis indicates that even though the banking sector faces a decline in its aggregate CAR (from 16.7 percent at end Dec-21 to 15.2 percent) under a severe but hypothetical shock to interest rates i.e. 300 bps increase in yield curve (up to 10 year maturities), most of the banks continue to meet the minimum CAR requirement. On an aggregate basis, due to strong capital cushions, the banking sector has adequate capabilities to withstand any severe shocks to interest rates (**Table 3.2**).

Chart 3.18: Components of Market Risk Weighted Assets and Capital Charge



Source: SBP

FX risk was mainly driven by external account pressures and resultant depreciation in exchange rate. However, banks' exposure to exchange rate risk remained in check…

The PKR depreciated by 9.4 percent in CY21 (3.1 percent depreciation in CY20). However, within the year, the parity witnessed two divergent phases, i.e. the exchange rate appreciated by 5 percent between December 31, 2020 and May 7, 2021, from thereon the PKR depreciated by 13.7 percent between May 07 and December 31, 2021.

Due to conservative regulatory requirements on Foreign Exchange Exposure Limit (**FEEL**), the banks remained largely immune to FX risk, and the Net Open Position (**NOP**) of banking sector remained quite low during CY21 (**Chart 3.19**).

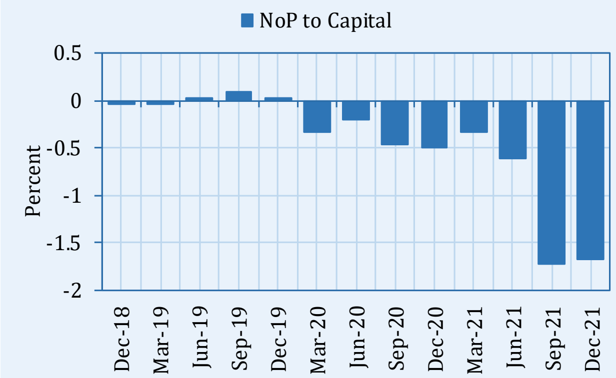
Table 3.2: Stress Testing Results of the Banking System Position based as December 2021 (Un-audited)

Shock Details			Number of Banks with CAR*			
			< 0%	**0% - 8%**	**8% - 11.5%**	**> 11.5%**
Pre-Shock Position			3	0	0	29
Market Shocks			**Number of Banks with CAR**			
			< 0%	**0% - 8%**	**8% - 11.5%**	**> 11.5%**
IR-1	Parallel upward shift in the yield curve - increase in interest rates by 300 basis points along all the maturities.	Hypothetical	3	1	2	26
IR-2	Upward shift coupled with steepening of the yield curve by increasing the interest rates along 3m, 6m, 1y, 3y, 5y and 10y maturities equivalent to the historical maximum quarterly increase.	Historical	3	1	2	26
IR-3	Downward Shift plus flattening of the yield curve by decreasing the interest rates along 3m, 6m, 1y, 3y, 5y and 10y maturities equivalent to the historical maximum quarterly increase.	Historical	3	0	3	26
IR-4	Impact of Increase in interest rate by 100bps on investment portfolio only	Hypothetical	3	0	2	27
ER-1	Depreciation of Pak Rupee exchange rate by 30%.	Hypothetical	3	0	0	29
ER-2	Depreciation of Pak Rupee exchange rate by 15.9% equivalent to the historical quarterly highest depreciation of rupee against dollar.	Historical	3	0	0	29
ER-3	Appreciation of Pak Rupee exchange rate by 7.0% equivalent to the historical quarterly highest level of appreciation of rupee against dollar .	Historical	3	0	0	29
EQ-1	Fall in general equity prices by 41.4% equivalent to maximum decline in the index.	Historical	3	0	2	27
EQ-2	Fall in general equity prices by 50%.	Hypothetical	3	0	2	27

Source: SBP

In fact, banks have sufficient resilience to withstand exchange rate shocks which is also evident in the results of sensitivity analysis (Stress testing). As of Dec-21, even after a severe 30 percent hypothetical depreciation of PKR, the aggregate CAR of banks marginally improved by only 3 bps and no bank loses its compliance with minimum capital requirement.

Chart 3.19: Contained NoP reflects low sensitivity to change in exchange rate

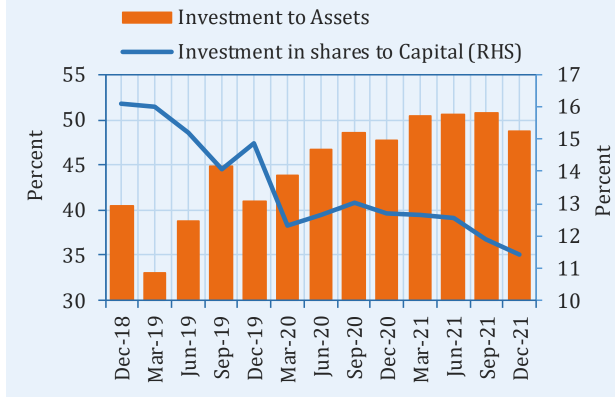


Source: SBP

Equity prices witnessed notable fall towards the end of CY21, however the banks remained largely unscathed…

Although, in general, the uncertainty and volatility remained muted in the equity market during CY21 as compared to last year, nevertheless, some episodes of stress were observed during CY21. Uncertainty and volatility particularly increased in the second half of the year.[62] In the backdrop of rising inflation and CAD in later part of CY21 coupled with significant rise in cut-off rates on government securities in auction on December 1, 2021, the market witnessed a 2,135 points (4.7 percent) decline in the benchmark equity (KSE-100) index on December 3, 2021. However, such a decline as well as different spells of volatility during the year did not pose any stability concerns for the banking sector. Due to relatively conservative regulatory limits on holding of equity stock, bank's exposure remained quite contained. For example, investment in shares comprised a fraction i.e. 1.5 percent of total investments of banks (0.7 percent of total assets) and represented only 11.4 percent of their total eligible regulatory capital as of Dec-21 (**Chart 3.20**).[63]

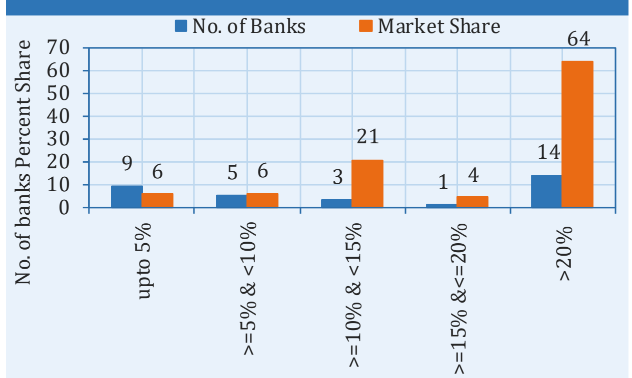
Chart 3.20: Equity Exposure has declined in recent years



Source: SBP

Moreover, disaggregated analysis also shows that most of the banks had contained exposure to equity market (**Chart 3.21**). Accordingly, the banking sector had limited sensitivity to changes in equity prices, as the sensitivity analysis (based on Dec-21 data) shows that with a severe assumed shock of 50 percent decline in equity prices, the aggregate CAR of the sector falls by 50 bps to 16.2 percent.

Chart 3.21: Frequency Distribution of Banks' Exposure in Equity to Regulatory Capital at end Dec-21



Source: SBP

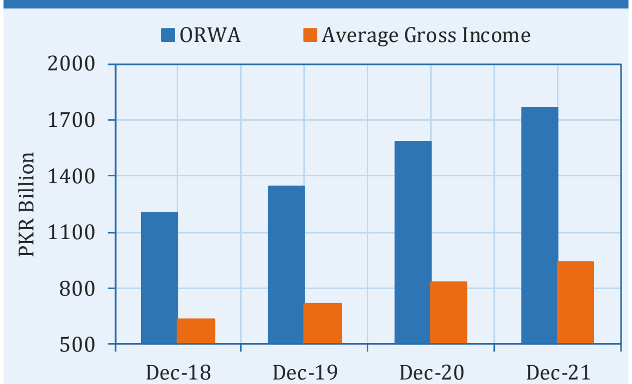
[62] For details, see Chapter 2 Financial Markets' Behavior
[63] The prudential regulations prescribes that a bank's total holding of shares should not exceed 20 percent of its capital and total direct and indirect exposure (including lending secured by shares) should not exceed 50 percent of capital. For details see: BPD Circular Letter No. 16 of 2006

Operational Risk

Banks' faced decelerated growth in capital charge for operational risk as the general profile in terms of incidence of frauds also improved during the year…

Operational Risk Weighted Assets (**ORWA**) of the banking industry increased in line with the growth in average gross income (**Chart 3.22**). It may be noted that most of the banks in Pakistan use the Basic Indicators Approach (BIA), which uses gross income as a proxy for estimating the ORWA.

Chart 3.22: Operational Risk Weighted Assets (ORWA) and Average Gross Income

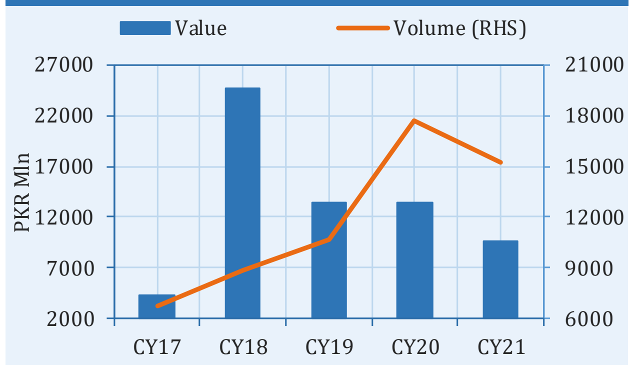


Source: SBP

Besides, the information pertaining to banking frauds reveals that there had been substantial deceleration in the volume and value of such frauds during CY21 (**Chart 3.23**). Incidentally, SBP instituted a comprehensive framework to ensure fair conduct and consumer protection. In this regard, a number of further measures were taken during the year under review.[64]

It is important to note that over recent years cybersecurity risk has emerged as a leading source of operational risk. In the wake of COVID-19 pandemic, this risk particularly increased over the last couple of years due to substantial rise in the use of digital finance products and changes in the dynamics of work and operations including the work-from-home arrangements. In this regard, SBP introduced a comprehensive framework to address cyber security risk. In the context of the pandemic, it took a number of measures to enhance the banking industry's resilience against the increased cybersecurity risk (see **Box 8.1 Cyber security risk**).

Chart 3.23: Banking Frauds



Source: SBP

Solvency

While the banking sector significantly increased its lending activities to support the pick-up in economic activities, its capital base and key indicators witnessed only a slight contraction…

During the year under review, the capital base of the banking sector witnessed decelerated growth as compared to growth in asset base.

Accordingly, CAR of the banking sector decreased to 16.7 percent by end CY21 from 18.6 percent a year earlier. However, solvency remained robust as recorded CAR was well above the minimum local and global regulatory requirements of 11.5 percent and 10.5 percent, respectively. Moreover, the decline in CAR indicated better utilization of the banks' capital to support the revival in economic activity by increasing the flow of credit and banking services in the economy. Moreover,

[64] See Appendix A on Regulatory Developments

the sector paid higher amounts of dividends during CY21 as the overall economic conditions improved and the uncertainties caused by the pandemic receded over the year.

Further analysis reveals that softening in CAR was driven by deceleration in Total Eligible Capital (**TEC**), which increased by to PKR 81 billion in CY21 compared to PKR 232 billion increase in CY20.

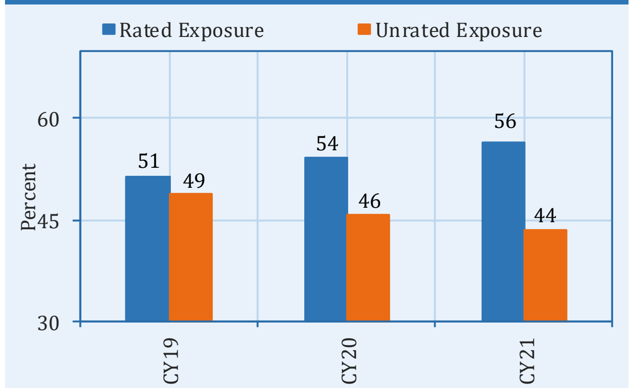
Importantly, increase in TEC during the reviewed year was exclusively contributed by Tier I capital while Tier II Capital declined.[65] Slowdown in Tier I Capital was primarily on account of lower retained earnings.[66] Decline in Tier II capital was mainly attributed to decline in revaluation surplus on AFS securities due to the rise in yields on government securities.

Total Risk-weighted Assets (**TRWA**) – the other component of the CAR – observed a strong expansion of 16.4 percent mainly driven by 18.0 percent growth in Credit Risk Weighted Assets (**CRWA**) during CY21.

Surge in CRWA manifests acceleration in advances in the reviewed year. Nonetheless, banks' increasing exposure to rated corporate borrowers demonstrates the relatively prudent approach on the part of banks to lend to well-established borrowers with better credit worthiness and adequate governance mechanism (**Chart 3.24**). This illustrates continued improvement in the lending quality of the banking sector.

As discussed in previous sections, the other two components of the TRWA, MRWA and ORWA, grew by 6.5 percent and 12.9 percent, respectively.[67]

Chart 3.24: Banks' rated and unrated lending exposure



Source: SBP

Nonetheless, the banking sector's risk absorption capacity remained intact…

Sensitivity analysis shows that the banking sector in general has sufficient capital cushion to withstand any severe shocks to the key risk factors i.e. credit, market, and operational risks under different hypothetical but plausible scenarios.

The quarterly sensitivity analysis (micro stress testing) and scenario analysis (macro stress testing) are regular features of SBP's supervisory process. These assessments cover the likely impacts of extremely severe hypothetical scenarios which are considered as tale events with remote likelihood of occurrence but have strong potential to create systemic crisis.

… SBP has setup a comprehensive supervisory framework to avert and manage financial crises and the same is regularly updated

SBP's supervisory and crisis management framework encompasses all the essential

[65] Tier I Capital increased by 91 billion while Tier II Capital declined by PKR 9 billion.

[66] Retained earnings amounted to PKR 81 billion in CY21—down from PKR 122 billion in CY20. Marked rise in profitability along with restriction on dividends distribution by SBP pushed-up retained earnings in CY20.

[67] See sections on Market and Operational Risk

elements which are considered necessary for ensuring financial stability and managing the crisis in the financial system. SBP continuously reviews this framework and endeavors to strengthen it in the light of changes in the market dynamics, experience gained, and emerging best practices. A brief on SBP's overall supervisory and crisis management framework as well as recent initiatives to further strengthen it are discussed in **Box 3.2.**