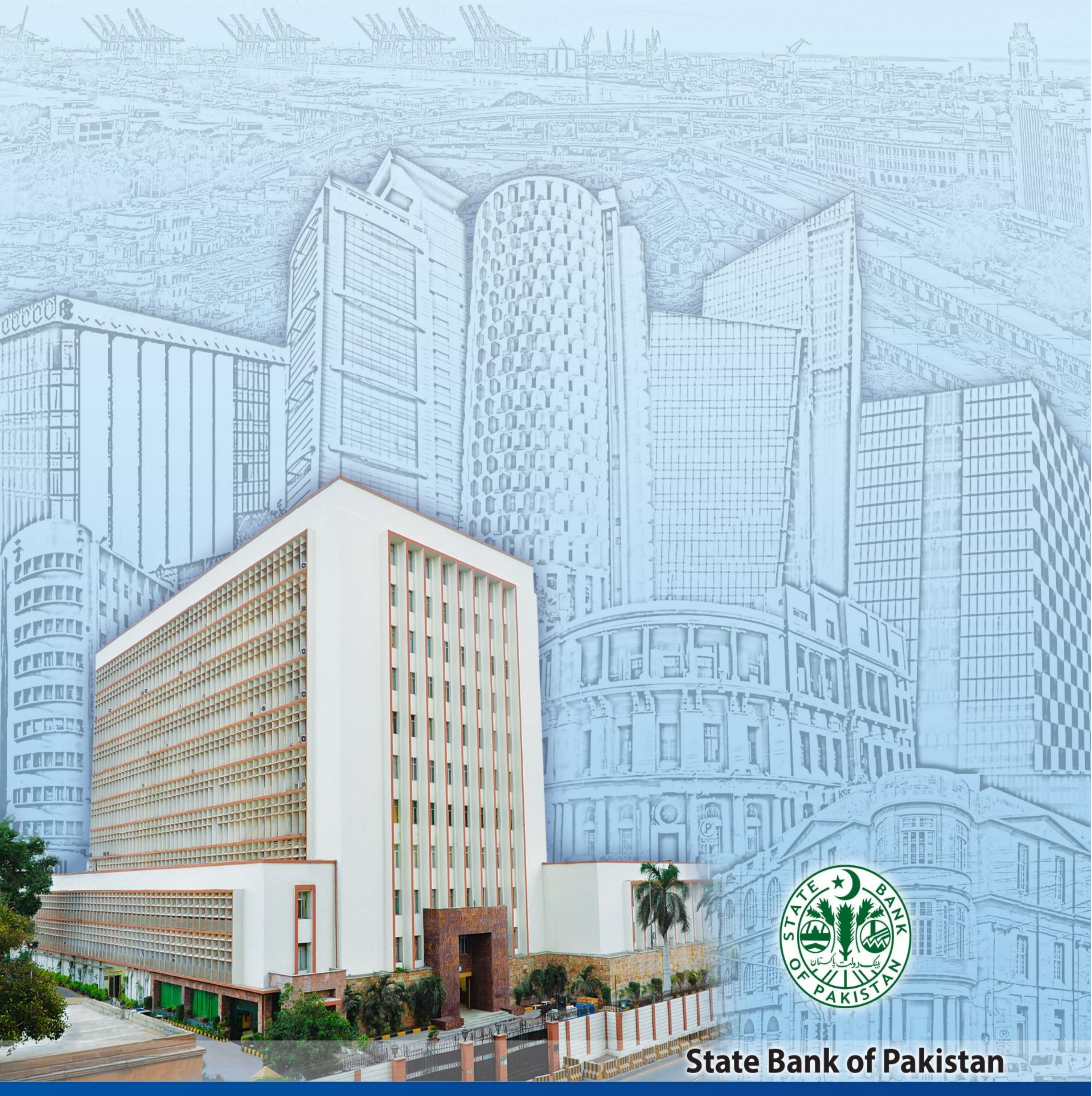
Financial Stability Review
2021



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The Financial Stability Review (FSR) is the annual report of the Board of Directors of State Bank of Pakistan (SBP) prepared and published in terms of requirements prescribed in sub section (3) of section 39 of the State Bank of Pakistan Act, 1956 as amended in January 2022.

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Governor's Message

The year 2021 marks the beginning of the end of the pandemic and a revival in economic activity. With the extensive inoculation drive as well as a sustained and coordinated policy response, the impact of the pandemic is fading and the social and economic life across the globe is gradually returning to normal. Global economic recovery has remained strong, despite the emergence of new COVID variants and rising global prices mainly due to supply chain disruptions. Global financial markets in general reflected optimism though they experienced some bouts of increased volatility particularly in the second half of CY21.

Pakistan's policy and administrative measures to curb COVID-19 and mitigate its impact on the economy generally yielded the desired dividends. Resultantly, the domestic economy successfully sailed through a couple of virus waves during CY21. The economy posted a strong growth of 5.7 percent during FY21, which was one of the highest among selected Emerging Markets and Developing Economies. The momentum continued in FY22 as the economy is estimated to post a broad based growth of 6.0 percent. Industrial activity rebounded and Business Confidence touched Multi-year high in mid of CY21. However, with the strong rebound in economic activity and a sharp rise in global commodity prices, the current account deficit increased in the second half of CY21 and inflationary pressures became more persistent. Accordingly, SBP proactively took various monetary policy and macroprudential measures to ward off the emerging imbalances and preserve financial stability against concomitant risks.

Despite the evolving macroeconomic challenges, the domestic financial sector remained resilient and performed reasonably. Financial markets functioned smoothly, and the strong capital and liquidity buffers helped banks to cater to credit needs of the economy. Credit risk remained contained as most of the asset quality indicators of banks improved. The healthy deposits growth enabled banks to expand their earning asset base. This growth, among others, has been facilitated by an increase in the pace of digitalization of financial services which got traction due to surge in demand as well as SBP's initiatives and enabling regulatory framework. In particular, the launch of person-to-person instant payment under SBP's *Raast* initiative, was a notable landmark in the digital payments' landscape. Further, the Roshan Digital Account initiative, introduced in late CY20 to provide a convenient way of digital banking services to Pakistani Diaspora, crossed 400 thousand accounts with cumulative inflows of above USD 4 billion by end Apr-2022. Like the banking segment, the non-bank financial sector also demonstrated notable growth, with both mutual funds and lending NBFCs witnessing growth in assets. The performance of non-financial corporate sector also improved with better earnings that enhanced its repayment capacity.

In policy landscape, the macroprudential policy framework has been further strengthened, particularly with a clear articulation of *Stability of the Financial System* as one of the SBP's objectives in the State Bank of Pakistan Act, 1956 as amended in January, 2022, introduction of regulations for lender of last resort (LOLR) facility and adoption of a forward looking risk-based supervisory framework for the banking sector.

Going forward, risks to financial stability are contingent upon the strength of external buffers, policy continuity, and overall macroeconomic conditions in the context of developments on geo-political front in Europe, global commodity prices and financial conditions. Stress test results show that banking sector maintains a reasonable resilience against various hypothetical adverse economic shocks over a protracted horizon. Amid the dynamic and challenging environment both at domestic and global fronts, SBP is vigilant to the emerging risks and stands ready to take necessary measures to achieve the statutory objectives of price stability, financial stability and economic growth.

Dr. Murtaza Syed

Acknowledgements

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The team would also like to thank various departments of SBP, especially Economic Policy Review Department (**EPRD**), Research Department (**RD**), Banking Policy and Regulations Department (**BPRD**), Banking Supervision Departments (**BSD**), Exchange Policy Department (**EPD**), Agricultural Credit & Microfinance Department (**AC&MFD**), Infrastructure, Housing & SME Finance Department (**IH&SMEFD**), Domestic Markets and Monetary Management Department (**DMMD**), Islamic Banking Department (**IBD**), Monetary Policy Department (**MPD**), Payment Systems Policy & Oversight Department (**PSP&OD**) and Statistics and Data Warehouse Department (**S&DWHD**) for their valuable feedback and support.

We are also grateful to the Securities & Exchange Commission of Pakistan (**SECP**), National Clearing Company of Pakistan (**NCCPL**), Mutual Funds Association of Pakistan (**MUFAP**) and Pakistan Stock Exchange (**PSX**) for providing relevant data, technical information and comments on the relevant chapters/sections of the report.

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Data Convention and Coverage

The FSR 2021 uses CY for the Calendar Year, FY for the Fiscal Year (starting in July of a CY and ending in June of the following CY), Q1-Q4 for the four quarters of the corresponding CY or FY and H1-H2 for the two halves of a CY or FY, as the case may be. Exact dates are given in long form (e.g. November 29, 2021) while specific months are given in short form (e.g. Sep-21).

The review is generally based on the data reported in the unaudited or audited accounts (where available) of financial institutions for different components as follows:

- Banking sector (conventional and Islamic banks), Development Finance Institutions (**DFIs**), Microfinance Banks (**MFBs**) and Payment System are based on un-audited financial statements reported to SBP through Quarterly Reporting Chart of Accounts (**RCOA**) and various other returns.
- Non-Bank Financial Institutions (**NBFIs**) is based on monthly reports submitted to Securities & Exchange Commission of Pakistan (**SECP**) through Specialized Companies Return System (**SCRS**).
- Insurance companies is based on audited and un-audited financial statements extracted from the insurers' websites and regulatory returns submitted to SECP.

The data pertaining to the corporate sector has been obtained from SECP, SBP, PSX, Bloomberg and the financial statements of companies.

The Overview

The performance of the financial sector of Pakistan improved as it continued to exhibit financial and operational resilience during CY21. Despite legacy economic challenges and uncertainties surrounding the path of pandemic, the sector supported the economic recovery with uninterrupted provision of credit and financial services. The consolidated asset base of the sector increased by 15.6 percent in CY21 compared to 14.0 percent growth in the previous year and the financial depth in terms of financial sector assets to GDP ratio stood at 63.9 percent. (**see Table 1**)

The environment in which the financial sector operated during CY21 was marked with a strong rebound in economic activity as the global output increased by 6.1 percent—in stark contrast to a 3.1 percent contraction in CY20, which was beset by wider disruptions in economic activities owing to mobility restrictions, lockdowns and heightened uncertainty driven by the pandemic.[1] Impressive economic recovery was driven by a surge in demand, effective diffusion of vaccine and the receding intensity of the pandemic with contained impacts of its new variants. Besides, sustained support from fiscal and monetary policies also provided necessary impulse to the economic recovery.

Along with spurt in economic activity, however, inflationary pressures also emerged across the globe and gradually got stronger towards the end of CY21. Amid policy stimulus activated during the COVID-19 outbreak, a surge in pent up aggregate demand coupled with supply chain bottlenecks mainly drove up global commodity prices and inflation levels.

Table 1: Assets Composition of the Financial Sector

PKR billion

	CY18	CY19	CY20	CY21
MFBs	328	380	494	582
DFIs	238	377	439	539
NBFIs	1,185	1,339	1,700	2,023
Insurance	1,472	1,693	1,931	2,143
CDNS	3,654	3,998	4,248	3,884
Banks	19,682	21,991	25,124	30,058
Total	**26,559**	**29,778**	**33,935**	**39,230**
YoY Asset Growth (Percent)				
MFBs	32.7	15.9	30.0	17.8
DFIs	4.6	58.1	16.5	22.6
NBFIs	3.1	13.0	27.0	19.0
Insurance	10.5	15.0	14.0	11.0
CDNS	5.3	9.4	6.2	-8.5
Banks	7.3	11.7	14.2	19.6
Overall Financial Sector	**7.2**	**12.1**	**14.0**	**15.6**
Percentage Share in Total Assets				
MFBs	1.2	1.3	1.5	1.5
DFIs	0.9	1.3	1.3	1.4
NBFIs	4.5	4.5	5.0	5.2
Insurance	5.5	5.7	5.7	5.5
CDNS	13.8	13.4	12.5	9.9
Banks	74.1	73.9	74.0	76.6
Assets as a Percentage of GDP*				
MFBs	0.8	0.8	1.0	0.9
DFIs	0.6	0.8	0.9	0.9
NBFIs	2.9	2.9	3.3	3.3
Insurance	3.5	3.7	3.7	3.5
CDNS	8.8	8.8	8.2	6.3
Banks	47.4	48.2	48.6	49.0
Overall Assets	**64.0**	**65.2**	**65.7**	**63.9**

Note: *GDP at market prices (2015-16=100)

Source: SBP, SECP, CDNS & PBS

Economic dynamics in Pakistan broadly remained in line with the global economic trends. After experiencing a 0.94 percent contraction in FY20, GDP posted a robust recovery of 5.7 percent in FY21. This momentum continued in FY22 as the economy is estimated to post a broad based growth of 6.0 percent. Marked revival in economic growth was attributed to a number of factors such as re-opening of the economy, effective management of the pandemic, timely and targeted

[1] IMF. (2022). World Economic Outlook Update. *April.*

policy interventions and continuation of pandemic support measures introduced in CY20.[2]

Nonetheless, as a result of robust recovery in demand and rising international commodity and oil prices, external account pressures re-emerged, and Current Account Deficit (**CAD)** gradually increased to USD 12.3 billion in CY21 (USD 0.65 billion in CY20). Though, exports performance improved and remittances inflows increased, upsurge in prices and volume of imports widened the external account deficit particularly in the second half of the year. Accordingly, PKR depreciated by 9.4 percent vis-a-vis USD, nudging the headline inflation even further up. Core inflation, which remained broadly stable, also started to inch-up towards the end of CY21.

Due to the deteriorating inflation outlook and rising risks to the external account, SBP took a number of stabilization measures to discourage imports and moderate domestic demand. For instance, policy rate was increased by 275 basis points (**bps**) in the last four months of the year, list of import items subject to 100 percent cash margin requirements (**CMR**) was expanded and macro-prudential measures were instituted to contain growth in consumer financing.[3] Furthermore, cash reserve requirement (**CRR**) was increased by one percentage point to 6 percent (see **Chapter 1**).

Amid changing macroeconomic dynamics, **financial markets** continued to function smoothly and exhibited relatively lower volatility and stress compared to last year. However, FX and equity markets experienced some increase in volatility during H2CY21. The volatility in FX market - driven by widening CAD - remained relatively contained owing to FX inflows from issuance of Euro bonds, enhancement of quota from IMF, receipts in Roshan Digital Accounts (**RDA**), and deposits' placement from a friendly country. Importantly, cumulative RDA inflows crossed USD 4 billion by end March-2022. After heading North in the first half of CY21, the equity market moderated in the second half of CY21. The slowdown was due to emerging macroeconomic pressures and economic stabilization measures. In the money market as well, the overnight repo rate experienced a brief period of increased volatility in the second half on account of rise in SBP policy rate and growing credit needs of the Government. The tightening in policy stance and rising inflation expectations also shifted the yield curve up. The market interest rates, however, remained within the interest-rate corridor due to effective liquidity management by SBP (**see Chapter 2**).

The **banking sector**—with 19.6 percent increase in asset base—maintained a strong growth trajectory in CY21 while its overall risk profile of remained satisfactory. The balance sheet expansion was supported by strong growth in both private sector advances and investment. Substantial growth in advances was backed by continued revival of economic activities, low interest rate environment, higher input prices, and SBP's Temporary Economic Refinance Facility (**TERF**). The assets expansion was well supported by substantial growth in deposits which was aided by a number of factors including sizable inflow in RDA, increased use of digital channels for banking transactions, higher workers' remittances, and rise in return on deposits towards the year end. Further, banks funded higher growth in assets by increasing reliance on borrowings from financial institutions.

Credit risk of the banking sector remained contained as asset quality indicators illustrated visible improvement. Most of the non-performing loans (**NPLs**) ratios declined below the pre-pandemic level. The timely debt relief measures introduced by SBP, prudent lending practices and improved repayment capacity of the borrowers as reflected in impressive corporate sector earnings

[2] Around 55 percent of the total population was fully vaccinated by first week of end May-22. Moreover, the pandemic waves experienced in CY21 were contained and less fatal and disruptive as compared to CY20. The country performed relatively better vis-à-vis peer countries in managing the pandemic.

[3] Later on, the policy rate was further increased by 400 bps until May-2022 to 13.75 percent.

were the key drivers of improvement. Even after expiry of the policy support measures, the overall recovery rate of loans deferred /restructured under debt relief schemes remained satisfactory. Besides, market risk dynamics remained satisfactory due to limited market-related exposures and adequate resilience of the banks.

Banks' profitability increased at a reasonable pace, and ROE improved to 14.1 percent in CY21 (13.8 percent in CY20). However, the baseline indicator of ROA slightly moderated owing to the low interest rate environment that prevailed during most of part of the year and volume led growth in income. Capital and liquidity buffers remained robust. The Capital Adequacy Ratio (**CAR**) at 16.7 percent as of end-CY21 was well above the minimum local and global regulatory requirements of 11.5 percent and 10.5 percent, respectively. Similarly, the Basel-III **Liquidity Coverage Ratio** (LCR) at 215 percent was well above the regulatory standard of 100 percent. Though CAR moderated somewhat owing to healthy growth in private sector advances, it also indicated better utilization of the banks' capital to support the economic revival as the flow of credit and banking services increased.

The performance of **Islamic Banking Institutions** (**IBIs**) was impressive in CY21 as the asset base grew by 30.6 percent. This growth came mainly from a surge in financing flows followed by investment in Government Sukuk. Strong growth in deposits funded most of the increase in asset base. Asset quality indicators of IBIs further improved, earnings remained steady, and CAR stood well above the regulatory minimum requirement **(see Box 3.1)**. Despite a significant share in total banking sector assets, the Islamic banking industry lacked Shariah compliant facilities to manage their short term liquidity. To address the liquidity management challenges, SBP has introduced *Shariah-Compliant Standing Ceiling Facility* and *Mudarabah-based Open Market Operations* (**OMO-Injections**) for IBIs **(see Annexure A).**[4, 5]

The asset base of **Microfinance Banks** (**MFBs**) exhibited 17.8 percent growth during CY21. The expansion was mainly contributed by advances followed by investments. In the wake of the pandemic, asset quality of the MFBs deteriorated as the mobility restrictions and precautionary measures severely impacted the repayment capacity of the MFBs' traditional low net worth borrowers and disrupted the institution-borrower relationships. As a result, the overall infection ratio inched up and earnings indicators deteriorated due to increase in provision charges. Though some of the MFBs faced challenges in maintaining the capital requirements, the overall CAR of MFBs stood at 18.3 percent, well above the minimum regulatory requirement of 15.0 percent (**see Chapter 5**).

Non-Bank Financial Sector manifested a mixed picture during CY21. Growth momentum of **Development Finance Institutions (DFIs)** continued as the asset base expanded by 22.6 percent as compared to 16.5 percent increase in CY20. Although advances observed strong growth, balance sheet expansion was mainly driven by investments. Short-term borrowings remained the major source of funding. Asset quality indicators improved owing to enhanced repayment capacity of the borrowers. Earnings, nonetheless, moderated while solvency profile remained strong. (**see Chapter 6.1**)

Non-Bank Financial Institutions (NBFIs) witnessed 19.0 percent growth in CY21 (compared to 27.0 percent growth in previous year). Money market funds primarily supported NBFIs growth. Moreover, NBFIs involved in the financing business, which particularly faced pandemic-related stresses in CY20, demonstrated improved performance during the reviewed year. Encouragingly, three housing finance companies were established in CY21 as a result of Government's initiatives to promote the housing

[4] DMMD Circular No. 24 of 2021

[5] DMMD Circular No. 25 of 2021

sector. Nonetheless, lending segment of NBFIs remained relatively concentrated as a few firms hold major market share, while liquidity risk remains an important factor for these firms as they generally have limited access to ready market funding for asset-liability management. Moreover, risks arising from interconnectedness between the banks and NBFIs remained contained, though the sectors have sizeable inter-sectoral exposures. (**see Chapter 6.2**).

The **Insurance and Takaful industry** grew by 11.0 percent during the reviewed year (14.0 percent in CY20). Both life and non-life segments observed a sharp rise in insurance premium which contributed to increased profitability. The acceleration of national health insurance program mainly uplifted the premium of life insurance sector. Life insurance sector in general continued to maintain most of their investments in government securities, while non-life sector increased its investments in equity stocks (**see Chapter 6.3**).

The performance of **Financial Market Infrastructures** (**FMIs**) further improved as their resilience remained intact in CY21. Electronic transactions, both in terms of value and volume, posted strong growth. SBP also took a number of measures to promote digital finance, including the introduction of person-to-person free instant payment through SBP's flagship initiative *Raast* for retail transactions, development of a licensing and regulatory regime for digital banks, and continuation of fee waivers on interbank fund transfers up to certain limits.

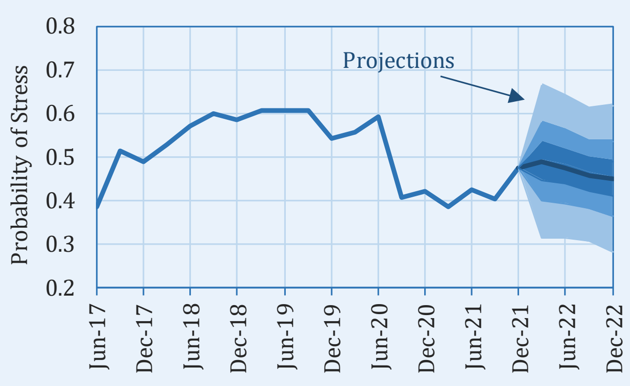
The increasing popularity of digital finance among customers and rise in digital transactions, however, have been accompanied by increase in cyber security risks. Besides a comprehensive regulatory and supervisory framework which supports the industry against cyber security risk, SBP took a number of further measures during the reviewed year to enhance the industry's resilience against the risk. For example it has linked approval of the new digital financial initiatives like digital banks with cyber readiness. (**see Chapter 8 and Box 8.1**)

Other than conventional economic and financial risks, climate change is a significant exogenous risk factor faced by the economy. Due to a unique geographical location, Pakistan is among the countries that are highly susceptible to the effects of climate change and extreme weather conditions. These changes have serious repercussions for financial stability as well as the economic and social wellbeing of the nation. To this end, SBP analyzes the climate-related risks caused by the extreme weather conditions as a part of its periodic macro stress testing exercise. Further, SBP is taking measures to mitigate these risks. For instance, to facilitate banks to effectively implement the green banking guidelines, SBP is developing the Environmental and Social Risk Management (**ESRM**) Implementation Manual. (**see Chapter 4 and Box 4.1**)

The **Non-Financial Corporate Sector** showed a marked improvement during CY21. Among the sectors, automobiles, textiles and petroleum sectors observed notable expansion in sales. The sample of top 100 listed firms witnessed improvements in their profitability, liquidity, business efficiency and turnover indicators. Particularly, after-tax profit surged by 46.5 percent. Consequently, debt repayment capacity observed healthy improvement. Moreover, financial standing and performance of top 30 borrowing groups of banking sector also improved during CY21 (**see Chapter 7 & Box 7.1**).

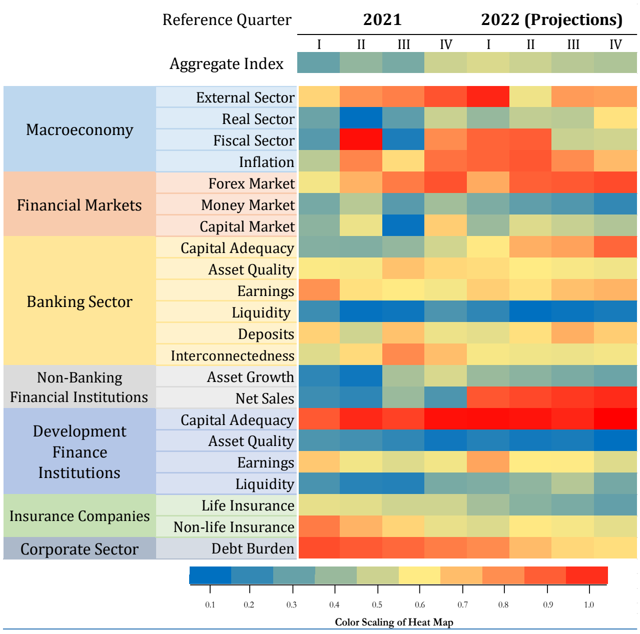
The **consolidated financial stability matrix** points to some increase in risks to stability of the financial sector towards end CY21, primarily driven by external account pressures and associated rise in inflation (**Chart 1A & 1B**). Accordingly, SBP proactively implemented necessary measures such as monetary tightening, increase in CRR, and adjustment in Macro prudential policy tools to narrow down the CAD and keep inflation in check.

Chart 1A: Financial Sector Vulnerbility Index (FSVI)



Source: SBP Estimates

Chart 1B: Financial Sector Heat Map



Source: SBP Estimates

Going forward, the state of financial stability largely depends on emerging macroeconomic dynamics in the context of trajectory of global commodity prices (particularly the oil prices), geo political tension in Eastern Europe, evolving domestic political scenario, and monetary policy stance in advanced economies.

The commodity prices index has been showing a staggering rise (**see Chart 2**), which has also been identified by market participants in the latest Systemic Risk Survey among the top risks facing the financial system (**see Box 1**). Moreover, IMF projects a significant slowdown of global economy to 3.6 percent in CY22 compare with 6.1 percent in CY21. These factors may influence the country's external account dynamics. A further increase in oil prices may exacerbate the CAD that may have adverse implications for financial markets and the real economy. On the other hand, continued tightening by Federal Reserve, for instance, may push up the external funding cost and add to pressures on exchange rate, impacting foreign trade and portfolio investments.

Chart 2: Global Commodity Price Index

Source: IMF

On the domestic front, preserving external sector stability, implementation of agreed reforms under IMF program—including fiscal discipline — and political stability will play a pivotal role in keeping the confidence in financial markets, maintaining financial system stability and addressing the emerging risks to macro economy.

The recent tightening of monetary policy may have differential implications for the banking sector. Usually such a rise impacts the debt repayment capacity of highly leveraged borrowers. However, the delinquency rates in banks' lending portfolio are expected to remain in check owing to improved debt servicing capacity of the corporate sector, decent recoveries on rescheduled /restructured loans under the debt relief scheme and continuing demand for bank credit due to higher input prices.

The consumer portfolio of banks may also face some strain due to both rate rise and general inflation levels. However, keeping in view household sector's low level of leverage, contained exposure of banks to this sub-sector, and risk management capabilities that banks have developed over the years for retail exposures, and the prudential requirement of making general provisions against consumer portfolio, it is expected that the banks may not face any significant strain on asset quality and earnings. The recent increase in interest rates will improve the banks' margins on growing earning assets. Also, the fiscal needs of the government may keep the level of banks' investments in government securities at elevated level. However, the mobilization of deposits and generation of adequate liquidity is likely to remain a key challenge for banks to finance the increased demand for bank credit from public and private sector.

The implementation of IFRS-9 may result in slight increase in provisioning expenses in respect of prospective losses; however, it has been observed that the banking industry in general has already raised the level of general provisions over the last few years.

Given that considerable uncertainties surround the projected path of financial stability, SBP regularly conducts scenario analysis (macro stress testing) to chart out probable outlook of banks' credit risk and solvency against the multiple domestic and global stress factors for informing its policy interventions. The latest results of the scenario analysis show that the banking sector has adequate resilience to withstand the severe but plausible macro-financial shocks, as its capital adequacy ratio remains significantly higher than both domestic and global benchmarks of solvency in the medium term. Reassuringly, the domestic systemically important banks particularly show stronger capital buffers and the banking sector in general is likely to continue supporting the economy by lending even during periods of economic stress (see **Chapter 4: Resilience of Banking Sector under Adverse Conditions**).

SBP has instituted a comprehensive micro and macro prudential policy framework to proactively monitor and address the emerging risks to financial stability. This framework is continuously being reviewed and updated to align with emerging international best practices and domestic market dynamics. In this connection, a number of measures were taken during the reviewed year, including institution of emergency liquidity assistance framework, implementation of risk-based supervision framework, amendments in the SBP Act to explicitly formalize SBP's financial-stability mandate and roles in respect of bank resolution and crisis management. Moreover, a key tool to manage liquidity crisis i.e. Lender of Last Resort facility (emergency liquidity assistance) has been further strengthened. In the past, SBP has effectively applied its supervisory and crisis management framework and its relevant tools in the face of various complex and dynamic stressed scenarios to ensure continued financial stability in the system. With these capabilities, experience and enhanced toolkit, SBP stands prepared to address near-term challenges to the resilience of the financial system and facilitate economic activity.

Box 1: SBP's Systemic Risk Survey-9th Wave (January 2022)

(Disclaimer: The results presented here represent the opinion of the respondents of the survey and do not reflect the views of the State Bank of Pakistan (SBP)

SBP completed the 9th wave of its biannual Systemic Risk Survey (**SRS**) in January 2022. The survey helps in the assessment of market participants' perception about risks faced by the financial system and evaluate their confidence in the stability of the system. As was the case in previous iterations, the core questions of the survey remained unchanged. However, to gauge the perceptions of the participants about the stability implications of ongoing COVID-19 pandemic, the survey questionnaire has been supplemented with a set of additional questions since the sixth wave (conducted in July 2020).

Besides risks emanating from the pandemic, the survey gauged the present and future (over the next six months) perceptions of the respondents related to five broad categories of risk i.e. global, macroeconomic, financial markets, institutional and general. The respondents for the current iteration included a broad spectrum of stakeholders.[6] Ninety-four participants took part in the current wave yielding a 47% response rate.

Summary of Results:

1. At present, on the aggregate level, respondents rank the "Financial Market Risks" category as the most vital, followed by "Domestic Macroeconomic Risks". The perception remains similar for the next six months **(Chart A & B).** In the context of financial market risks, the risk perception for next six months with respect to exchange rate, interest rate, and deterioration in Balance of Payment (BoP), however shows some moderation **(Chart C).**

2. In terms of key risks at present, the highest rated are "volatility in commodity prices", "foreign exchange rate risk", and "deterioration of BoP". Likewise, respondents' perception regarding the key risks for the next six months remains the same **(Chart C).**

3. Comparison among the last three waves (7th, 8th and 9th waves) indicates that the risk perception has slightly increased with regards to domestic inflation, exchange rate risk, deterioration in BoP and volatility in commodity prices **(Chart E).**

4. Encouragingly, respondents' confidence on the stability of the financial and banking system remains strong **(Chart D).** While respondents' showed satisfaction regarding the efficacy of SBP's overall policy measures, in the pandemic's perspective, for the economy **(Chart F1 & F2).**

5. In comparison to previous waves, the current wave indicates improvement in risk perception regarding COVID-19's impact on the financial industry **(Chart G).**

6. Overall, respondents' views regarding the impact of the pandemic on financial stability at present remains largely unchanged compared to the last wave. However, respondents' views slightly worsened for medium and long term, due to the uncertainty around Omicron variant which was in full swing in Jan-2022 when the 9th wave of the survey was conducted. **(Chart H)**. Incidentally, the prevalence and impact of COVID-19 has significantly subsided in following months and NCOC has also waived the related restrictions.

[6] The respondents included executives from commercial banks, insurance companies, exchange companies, MFBs, DFIs, major financial market infrastructures, financial journalists, members of academia, SECP officials and think tanks.

Chart A: Perception on sources of systemic risk- present

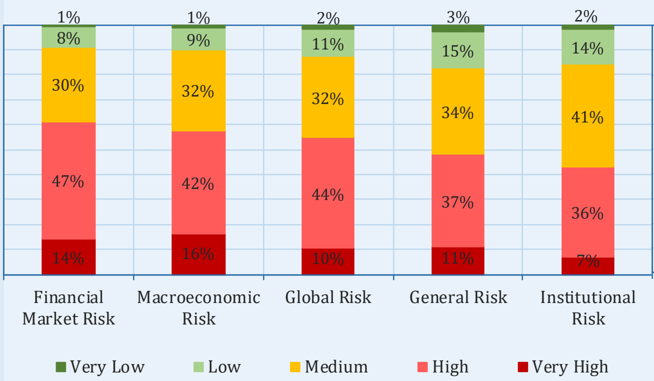


Chart B: Perception on sources of systemic risk- next 6 months

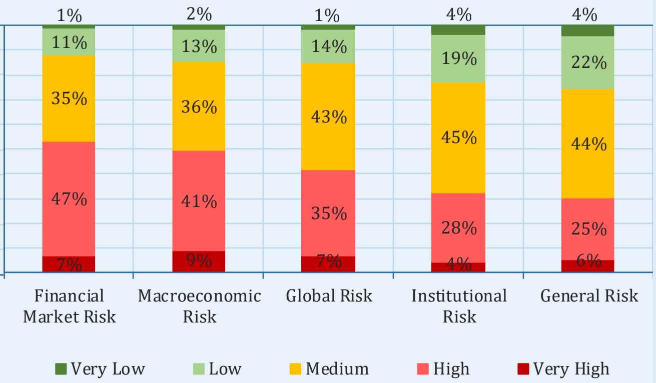


Chart C: Top 10 Risks Identified

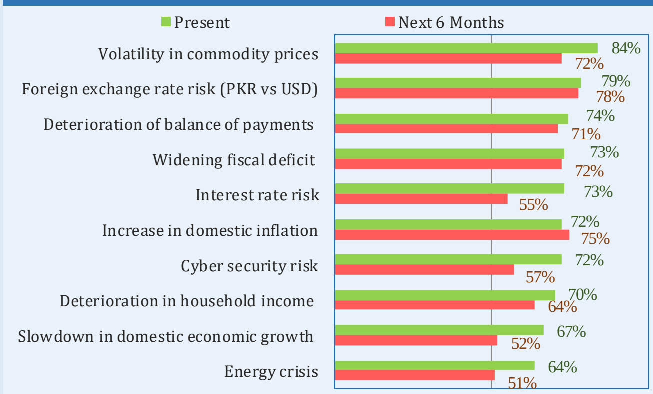


Chart D: Confidence in Financial Stability

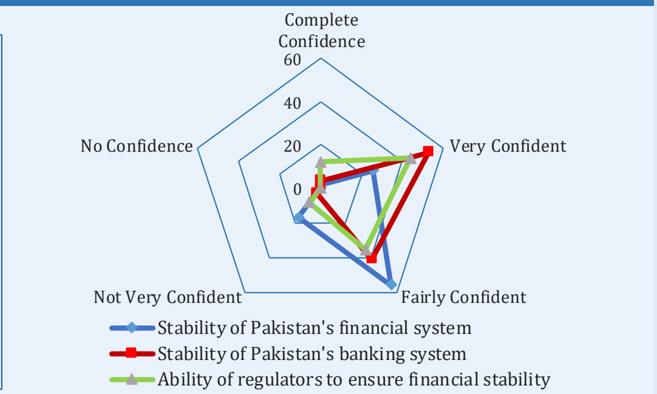


Chart E: Comparison of SBP's Systemic Risk Survey (SRS) Results (7th, 8th and 9th waves)

		7th Wave (Jan-21) Present (Average)	8th Wave (Jul-21) Present (Average)	9th Wave (Jan-22) Present (Average)
Global Risks	Slowdown in global growth	2.42	2.73	2.52
	Sovereign default risk	3.03	3.12	2.99
	Lack of funding from abroad	2.61	2.76	2.49
Macroeconomic Risks	Volatility in commodity prices	2.25	2.18	1.89
	Slowdown in domestic growth	2.26	2.51	2.22
	Increase in domestic inflation	2.19	2.33	1.99
	Widening fiscal deficit	2.40	2.45	2.09
	Deterioration of BoP	2.58	2.48	2.11
	Sovereign rating downgrade	2.77	2.71	2.47
	Slowdown in corporate sector growth	2.53	2.74	2.63
	Slowdown in infrastructure development	2.88	2.79	2.75
	Deterioration in household savings	2.12	2.36	2.10
	Volatility in real estate prices	2.97	3.04	2.91
	Energy crisis	2.39	2.34	2.34
	Political uncertainty	2.43	2.71	2.49
Financial Market Risks	Foreign exchange rate risk	2.39	2.42	1.91
	Equity price risk	2.79	2.89	2.64
	Interest rate risk	2.62	2.72	2.18
	Liquidity risk	2.79	2.75	2.62

		7th Wave (Jan-21) Present (Average)	8th Wave (Jul-21) Present (Average)	9th Wave (Jan-22) Present (Average)
Institutional Risks	Regulatory risk	2.63	2.67	2.55
	Legal risk	2.89	2.96	2.89
	Asset quality deterioration	2.54	2.56	2.53
	Shortfall in capital requirement	2.72	2.83	2.65
	Access to funding (deposit mobilization & borrowings)	2.92	2.82	2.82
	Excessive private sector credit	2.98	2.90	2.83
	Concentration risk in PSC	2.94	2.89	2.80
	Concentration risk in mutual fund	3.11	3.34	3.11
	Operational risk	2.77	2.74	2.70
	Cyber security risk	2.18	2.25	2.13
	Disruption in financial market	2.84	2.82	2.79
General Risks	Terrorism	2.58	2.63	2.66
	Geopolitical risk for Pakistan	2.44	2.24	2.39
	Natural disasters/ Increasing threat of climate change	2.88	2.74	2.73
	Social unrest	2.71	2.93	2.79

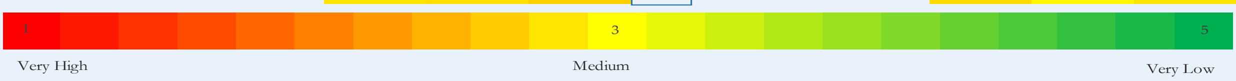


Chart F1: Respondents confidence on the SBP's measures to mitigate the implications of Covid-19 Shock

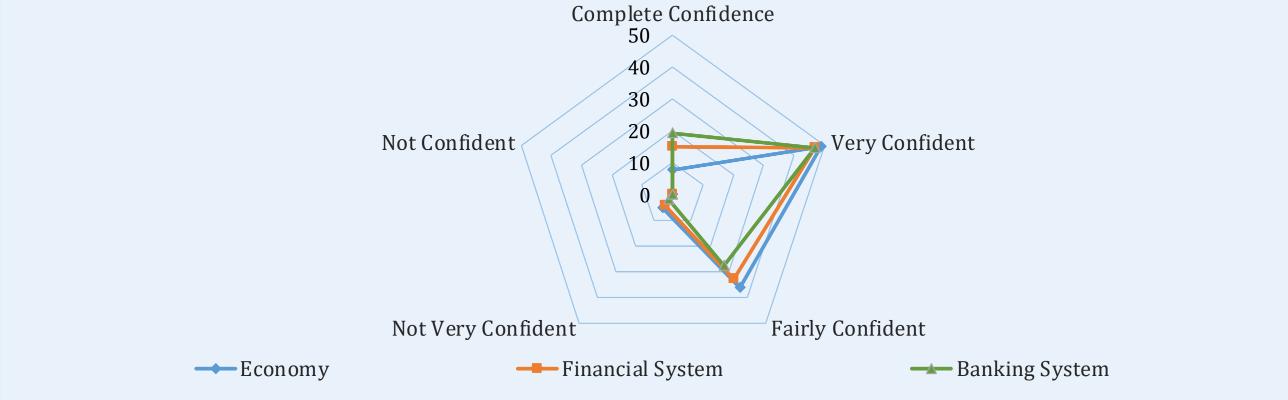


Chart F2: Respondents' views about the efficacy of SBP measures for the economy

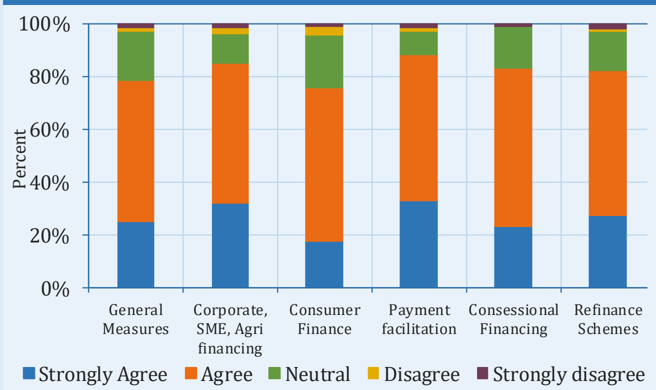


Chart G: Respondents views about the likely impact of COVID-19 on key areas of the financial industry

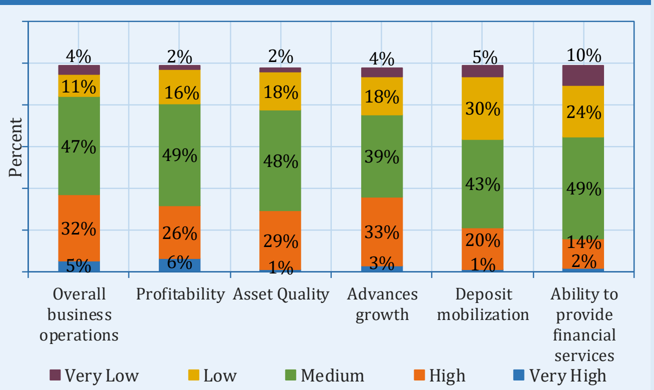
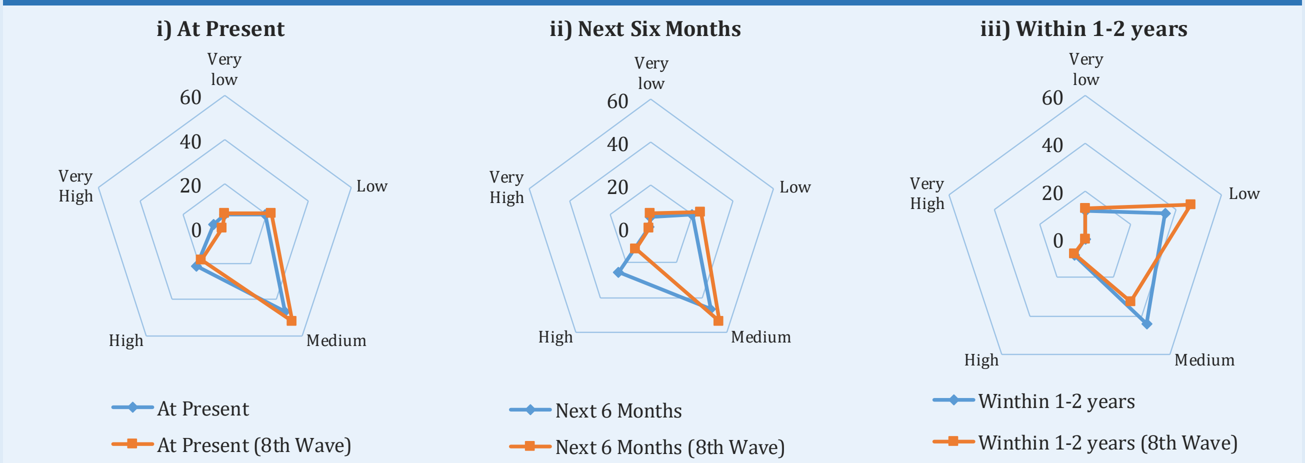


Chart H: Likelihood of COVID-19 pandemic undermining the stability of Pakistan's financial system - Comparison with 8th wave of SRS



Chapter 1: Global and Domestic Macro Financial Environment

Global economy experienced a sharp but slightly uncertain recovery after facing historic losses owing to COVID-19 during CY20. Policy support measures were largely effective in containing the negative effects of the pandemic and strongly supported the economic recovery in CY21. With the release of held up demand and supply chain disruptions, commodity prices increased sharply, with some commodity prices surpassing their pre-pandemic levels. This was reflected in inflationary pressures in both advanced as well as emerging economies. Globally, fiscal and monetary policy support that was introduced in CY20, continued during CY21, though some consolidation, especially in fiscal measures, was also observed during the reviewed period. However, the already elevated levels of public debt were pushed to new highs in the wake of fiscal support in advanced and emerging markets. The recent monetary policy normalization due to persistent inflationary pressures, tighter fiscal space and geo-political dynamics may present challenges for any further contingency measures and an early normalization of policy regime to pre-COVID level.

In Pakistan, timely and effective policy interventions to support the economy during pandemic, enabled a robust rebound in domestic economy, exhibited by 5.7 percent Gross Domestic Product (GDP) growth during FY21. Manufacturing in general and large-scale manufacturing in particular benefitted from strong growth of private sector credit amid the low interest rate environment, availability of refinance schemes and Economic Stimulus Package by the government. Fiscal consolidation led to reduction in budget deficit to GDP ratio despite COVID-related expenditures and increased debt servicing. Banking sector solvency and profitability remained firm. However, inflation remained volatile and elevated, primarily on account of supply side factors. The Current Account Deficit (CAD) widened in H2CY21, which also reflected in pressure on exchange rate and Foreign Exchange (FX) reserves. To respond to external account pressures and rising inflation, SBP took various monetary and macro-prudential policy measures. Going forward, the state of political stability and global commodity prices would be the key elements to determine domestic macroeconomic performance in the near term.

Global Developments

Global economy remained firmly on a recovery path in 2021 despite the continued resurgence of pandemic waves throughout the year. A significant uptick in the economic activity was observed, with rebound in consumption and investment levels. The IMF's latest estimates for 2021 put the global growth at 6.1 percent compared to a contraction of 3.1 percent in 2020 **(Table 1.1)**.

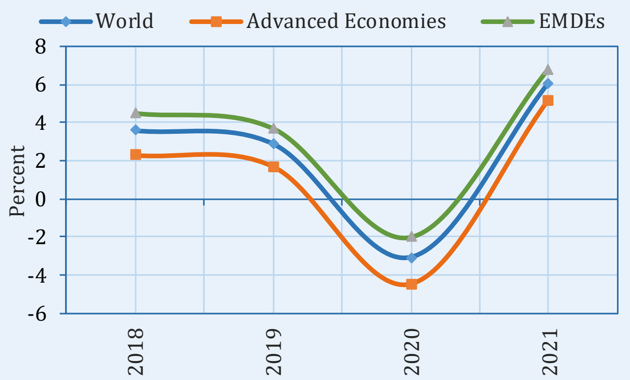
However, a few factors posed concerns for global recovery. For instance, new COVID-19 variants, such as Delta and Omicron, affected growth prospects in several countries; disruptions in global supply chain negatively impacted manufacturing; and, the rise in commodity prices and wage growth increased production costs. Overall, the risks to global growth remained on the downside in comparison to 2020.

Table 1.1: Global Economy: Real GDP Growth (percent)	2019	2020	2021	2022*	2023*
World	2.9	(3.1)	6.1	3.6	3.6
Advanced Economies	1.7	(4.5)	5.2	3.3	2.4
EMDEs	3.7	(2.0)	6.8	3.8	4.4
EMDEs - Asia	5.3	(0.8)	7.3	5.4	5.6
USA	2.3	(3.4)	5.7	3.7	2.3
Euro Area	1.6	(6.4)	5.3	2.8	2.3
U.K	1.7	(9.3)	7.4	3.7	1.2
Japan	(0.2)	(4.5)	1.6	2.4	2.3
China	6.0	2.2	8.1	4.4	5.1
Turkey	0.9	1.8	11.0	2.7	3.3
India	3.7	(6.6)	8.9	8.2	6.9
Russia	2.2	(2.7)	4.7	(8.5)	(2.3)
Saudi Arabia	0.3	(4.1)	3.2	7.6	3.6
United Arab Emirates	3.4	(6.1)	2.3	4.2	3.8
Pakistan	3.1	(1.0)	5.7	4.0	4.2

*Projections
Source: IMF World Economic Outlook Report, April 2022

The rollout of new vaccines/mass vaccination, continued policy support and sustained uptick in trade volumes amid a surge in global demand supported the worldwide economic recovery in 2021 **(Chart 1.1)**.

Chart 1.1: Global Economic Growth Rates

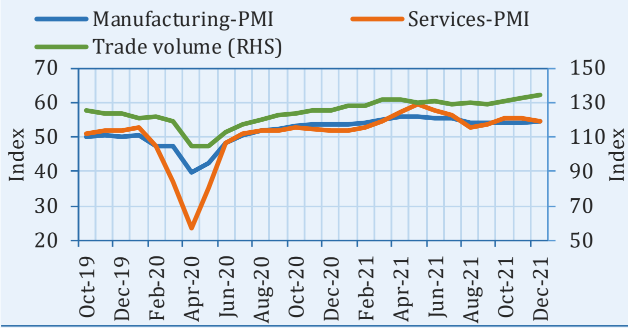


Source: IMF

... Strong recovery in global demand supported the economic recovery ...

Global demand has sharply recovered from the COVID-19 induced recession of 2020. The robust recovery in economic activity across the major economies, led by pent-up demand after ease in restrictions on businesses and movement of people, the impact of excess savings (especially in Advanced Economies (**AEs**)), and the effects of policy support measures taken during the pandemic in 2020 contributed to the recovery in global demand for goods and services during 2021. Global trade improved with sustained performance throughout the year, as evident from the highest ever volume of traded goods and services in the month of Dec-21 **(Chart 1.2)**.

Chart 1.2: Global High Frequency Economic Indicators



Note: PMI= Purchasing Managers Index
Source:Bloomberg and CPB Netherlands Bureau of Economic Policy Analysis

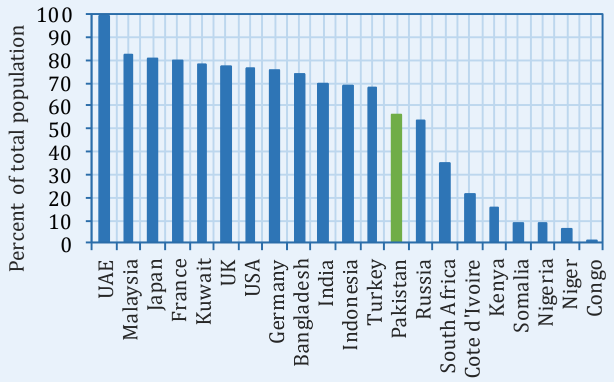
... Inequality in vaccine access, a key concern for recovery in some developing countries ...

Inequality in access to vaccines between advanced economies and emerging markets and developing economies (**EMDEs**) widened the divergence in their respective economic recovery by hindering economic activity with greater intensity in low income countries.[7] On top of relatively low access to vaccines, the resurgence of new variants during 2021 further exacerbated the difficulties for EMDEs **(Chart 1.3)**.[8]

[7] World Economic Outlook (WEO) – Oct 2021

[8] By 4th Quarter 2021, over 96 percent population in low income countries remain unvaccinated in contrast to 60 percent fully vaccinated population in AEs.

Chart 1.3: Share of Population Vaccinated



Source: Our World in Data

Relatively better economic recovery seen in GCC Countries ...

Economic rebound during CY21 has been particularly pronounced in Gulf Cooperation Council (**GCC**) economies in the MENAP region.[9] In particular, recovery in global demand, rise in oil prices,[10] higher vaccination rates and relaxation of travel restrictions supported the stronger revival of economic growth in the GCC countries. The recovery in oil-based economies, like Saudi Arabia and UAE, proved to be a boon for economies like Pakistan whose labor force are employed by these countries, and their current accounts get critical support from the workers' remittances (**Table 1.2**).[11]

Table 1.2: Gulf Cooperation Council (GCC) Macroeconomic Performance

	2018	2019	2020	2021*
Real GDP (annual growth rate)	2.0	1.0	(4.8)	2.5
Current Account Balance (percent of GDP)	8.6	5.8	(0.4)	6.0
Fiscal Balance (percent of GDP)	(1.5)	(1.5)	(8.8)	(1.8)
Oil Price (US$ per barrel)**	68.5	61.5	41.6	69.1
Inflation (annual average, percent)	2.2	(1.5)	1.2	2.8

* IMF-Projections

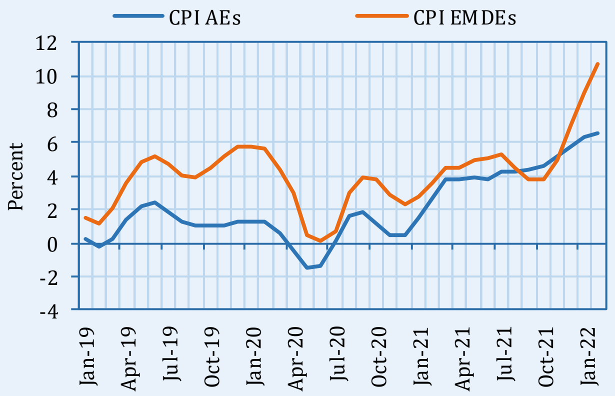
** Average of UK Brent, Dubai Fateh and West Texas Intermedital crude oil prices.

Source: Regional Economic Outlook, Middle East and Central Asia, IMF, October 2021 and World Bank

Rising consumer price inflation in advanced and emerging economies ...

Strong global economic recovery and consequent surge in global commodity prices amid continued supply constraints led to build-up of inflationary pressures across the globe during 2021 in sharp contrast to the subdued levels observed in 2020. However, the increase was somewhat sharper in the latter part of the year **(Chart 1.4),** as the rise in global aggregate demand and input shortages amid supply chain disruptions started to weigh more heavily on global commodity prices.

Chart 1.4: Rising Inflation in AEs and EMDEs



Source: IMF

Increase in demand and supply chain bottlenecks jacked up the commodity prices ...

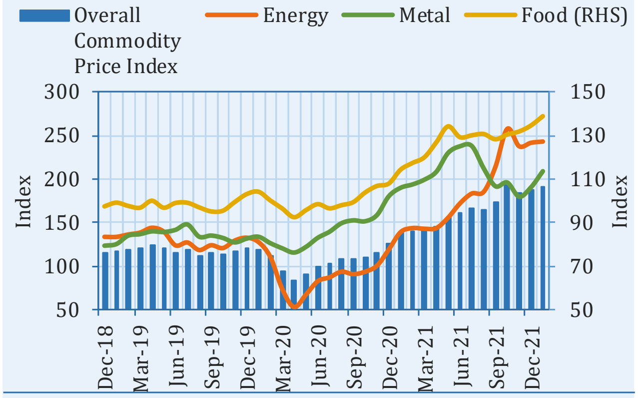
In fact, global commodity prices were already on a rising trend since Jun-20 resulting from reopening of the economies amid global supply chain issues, and the trend was further accentuated in CY21 due to pervasiveness of these disruptions **(Chart 1.5).**

[9] MENAP = Middle East, North Africa, Afghanistan and Pakistan

[10] The annual average price of crude oil remained 66.2 percent higher in 2021 than 2020.

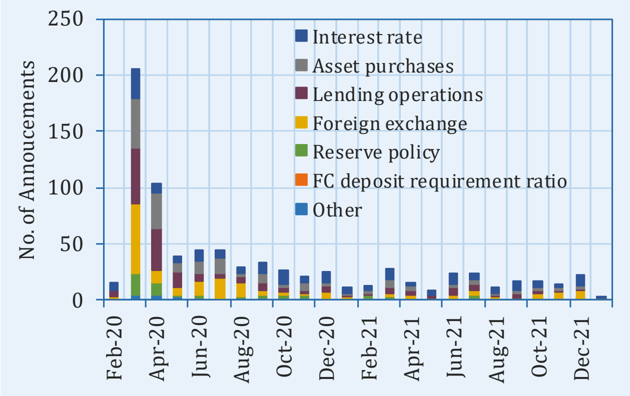
[11] World Economic Outlook (WEO) Middle East & Central Asia – Oct 2021

Chart 1.5: Global Commodity Prices



Source: IMF

Chart 1.6: Monetary Policy Responses to the



Source: Bank for International Settlements (BIS)

In case of food items, besides robust demand and supply side disruptions, the weather conditions also contributed in pushing prices up. For instance, bad weather conditions in Kazakhstan and Russia, kept wheat prices on a rising trend in CY21.[12] Besides, prices of other food items such as maize, soybean, palm oil and sugar remained on an upward trajectory throughout CY21.

Monetary policy stance generally remained accommodative across majority of the world economies…

Despite price pressures, however, the central banks around the globe generally chose a cautious approach by keeping key policy rates unchanged to continue support for economic recovery in CY21. One of the major reason was that initially the leading central banks considered the surge in commodity prices to be transitory.

Except UK, other major advanced central banks kept the policy stance unchanged during CY21.[13] The Federal Reserve maintained its Federal Funds Rate at 0.125 percent, which was last changed in Mar-20. Likewise, European Central Bank (**ECB**) also continued with an accommodative monetary policy and kept the key rates unchanged.[14]

On the other hand, within major EMDEs, central banks of Brazil, Russia and South Africa had to resort to some tightening to fight the emerging inflationary pressures while China and India broadly maintained status quo in policy rate during CY21.

Incidentally, central banks worldwide had a high level of unprecedented policy response in reaction to the pandemic in 2020. With generally improved outlook of economic recovery and building inflationary pressures, central bank's policy response during 2021 was based on the approach of gradual normalization. Moreover, emerging economic concerns in late 2021 from Omicron variant posed a major challenge **(Chart 1.6).** In the start of CY22**,** when the intensity of the pandemic had receded and the inflationary pressures seemed to have become an entrenched phenomenon, the central banks in AEs started reversing the policy stance and have gradually been increasing key rates, with Fed signaling further rates hikes in 2022.[15]

However, fiscal stance exhibited some tightening in CY21 …

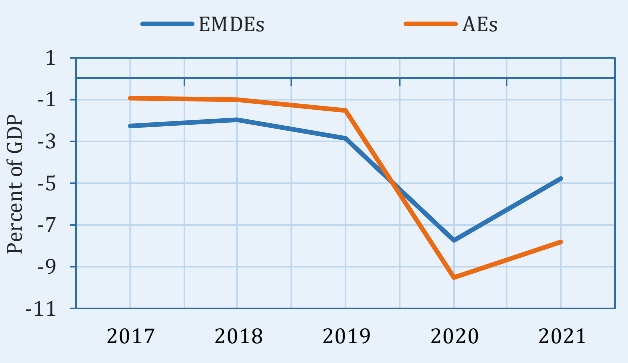
Alongside the expansionary monetary policy, fiscal authorities across the globe adopted overwhelming supportive policies to dampen the impact of COVID-19 in 2020. However, the fiscal

[12] Box 3.1: Drivers of the Sharply Rising Global Commodity Prices: Shortages and Supply Constraints. *SBP Quarterly Report on The State of Pakistan's Economy for Q1FY22.*
[13] Bank of England (BoE) raised its Bank Rate by 0.15 percentage points to 0.25 percent in December 2021.

[14] ECB sustained the deposit rates at 2019 levels i.e. 0.5 percent.
[15] Federal Reserve increased the fed funds rate by 0.25% in March 2022 with the strong signal for further increase to reach 1.9% by end of 2022.

stance went through some tightening in 2021 in both AEs and EMDEs. While the AEs, with relatively larger fiscal space, gradually rolled back their fiscal support to some extent, the tightening was relatively sharper in EMDEs, which have limited fiscal space and capacity **(Chart 1.7).**

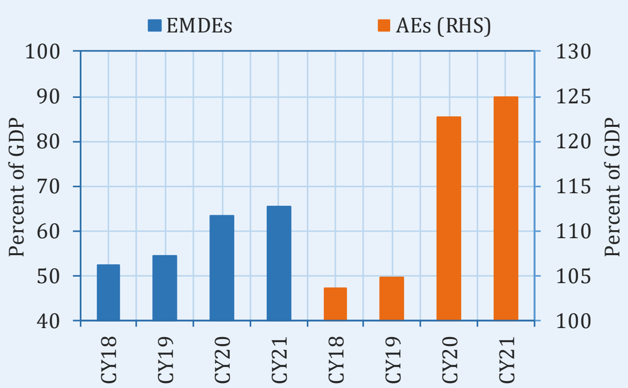
Chart 1.7: Primary Balance in EMDEs and AEs



Source: IMF-Haver Ana:vtics

The extraordinary policy support provided during 2020, pushed already elevated public debt to new heights. In 2021, despite the economic recovery, the recurrence of COVID-19 waves resulted in persistence of high debt levels, which could have otherwise seen contraction **(Chart 1.8).** The sustainability of high levels of public debt is particularly a source of concern for EMDEs, which have constrained fiscal space.

Chart 1.8: Government Gross Debt in AEs and EMDEs



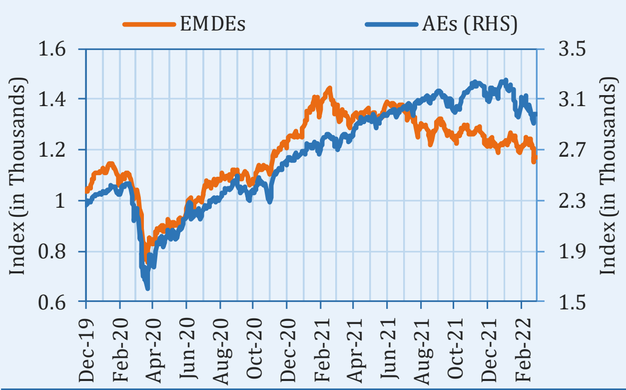
Source: IMF

Additionally, external debt servicing costs for EMDEs may increase given the expected normalization of monetary policy in AEs to cope with persistent inflationary pressures and avoid the buildup of any asset price bubbles. Besides, the rising global commodity prices may add further challenges for EMDEs.

Financial markets showed a relative calm during CY21 though investors' confidence tapered off towards the year end ...

Responding to the reopening of economies, policy support measures and the rollout of various vaccines around the globe, the financial markets generally showed exuberance during most of CY21. However, brief episodes of volatility were observed in response to emergence of new COVID variants such as Delta. Moreover, as the inflationary pressures got more persistent, market participants expected gradual reversal in monetary policy stance. Resultantly, equity markets in AEs witnessed some correction in the latter part of CY21 while equity markets in EMDEs were already on a gradual declining trend since the start of CY21 **(Chart 1.9a).**

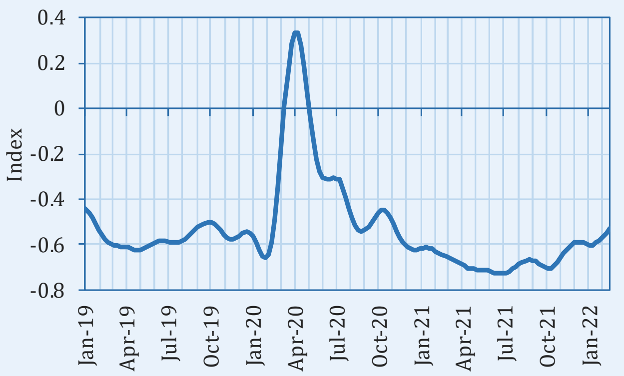
Chart 1.9-a: Equity Prices in AEs and EMDEs



Source: Bloomberg

Financial conditions have remained accommodative, consistent with macro-developments for most of CY21 **(Chart 1.9b).** But the emergence of inflationary pressures led to the expectations of reversal in key interest rates.

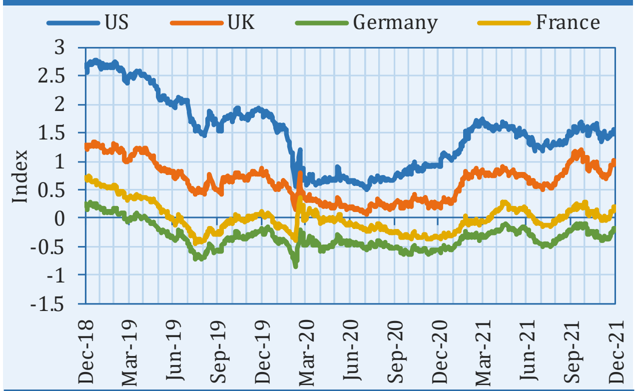
Chart 1.9-b: Financial Conditions Index



Source: US Federal Reserve

After recording rise in the first half of CY21 (due to better growth outlook), the 10-year yields on government bonds in major economies (US, UK, Germany and France) started falling in Q3CY21, responding to the investors' concerns about Delta variant. Yields started rising again in early Q4CY21 but underwent some moderation due to emergence of new wave of COVID-19 (Omicron). Though the yields on 10-year bonds have trended upward by end of CY21, barring France, yields for other economies (US, UK and Germany) remained lower than the pre-pandemic level (Jan-21) **(Chart 1.10)**.

Chart 1.10: Ten-Year Government Bond Yields



Source: Bloomberg

Going forward, while COVID-19 has receded with its Omicron variant seemingly lesser of a threat on the horizon, the global growth outlook largely hinges on the dynamics of international commodity prices and inflationary pressures, supply chain dynamics, and the recently unfolding geopolitical tension between Ukraine and Russia.

These two countries are major suppliers of various key commodities like wheat, oil and gas, etc. The current tensions have implications for the supply of fuel to various countries of Euro Area and may adversely affect the pace of global recovery. Moreover, in the start of 2022, the trend of rising global commodity prices has sustained with no clear signs of weakness. Consequently, developments in global economic activity and inflationary trends will be key concerns (among others) for investors' sentiments in financial markets, going forward.

Domestic Developments

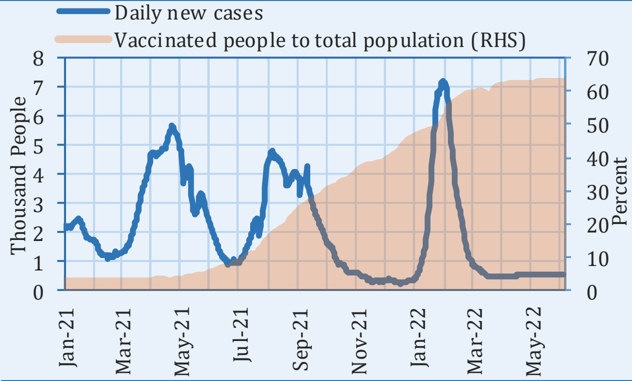
COVID-19 led to historically low growth during FY20 and recurrent waves continued afterwards...

The domestic economy was hit by multiple waves of COVID-19 during CY20 and CY21. Lockdowns and other pandemic containment measures led to losses in services and industrial activity, pushing the economy towards contraction of 0.9 percent for FY20 (**Chart 1.12, Table 1.3**). To contain the spread of the virus, Pakistan resorted to strict lockdowns in the initial phase of the pandemic. However, after Q2CY20, although the most stringent restrictions were gradually eased away, yet smart lockdowns and partial restrictions on mass gatherings continued till the end of CY21.

...yet, targeted and timely policy interventions successfully contained the pandemic and supported economic recovery...

Focused efforts in the areas of vaccination, smart lockdowns and contact tracing proved to be successful in controlling the pandemic, as indicated by the low death rate amid healthy inoculation rate (**Chart 1.11**).

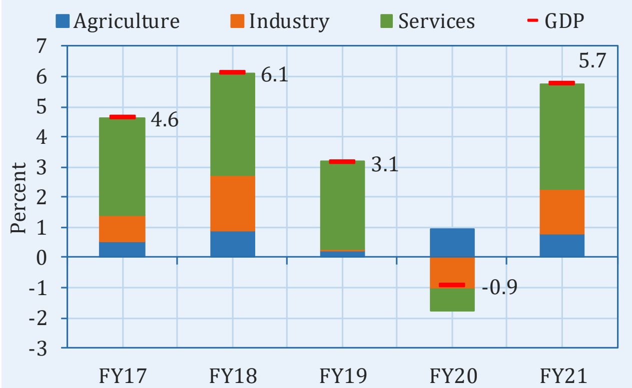
Chart 1.11: Covid-19 Vaccination and Deaths



Source: Ministry of National Health Services and National Institute of Population Studies

Besides the efforts to control the pandemic, the government provided financial support to more than 15 million of the most vulnerable families via Ehsaas emergency cash program.[16] Through Economic Stimulus Package (**ESP**), the government provided targeted incentives to support recovery in manufacturing, exports and agriculture sectors that was equivalent to around two percent of GDP in size.

Chart 1.12: GDP Growth and Sectoral Contributions



Source: PBS

Along with the government, the SBP made targeted and timely interventions to limit the COVID-induced economic fallout and safeguard financial stability. These interventions included 625 bps reduction in the monetary policy rate (**Chart 1.15**), introduction of refinance schemes to avoid layoffs (Rozgar Scheme), support the health sector (Refinance Facility for Combating COVID-19-**RFCC**) and promote long term investment through Temporary Economic Refinance Facility (**TERF**).[17] To support the borrowers and insulate the financial sector from delinquencies arising out of lockdowns, SBP allowed deferment of principal and restructuring of loans. Collectively, the SBP relief measures were around five percent of GDP.

...leading to robust rebound in economic activity in FY21 ...

Timely and targeted policy interventions not only helped in containing a sharp fall, they also supported a strong recovery in economic activity with GDP growth rebounding by 5.7 percent in FY21. Moreover, as compared to FY19 and FY20, the FY21 growth outcome was remarkable in the sense that it was broad-based and contributed by all three sectors proportionately (**Chart 1.12, Table 1.3**).

Table 1.3: Key Economic Indicators of Pakistan*

	2017	2018	2019	2020	2021
Real Sector	(Percent)				
Real GDP Growth (FY)	4.6	6.1	3.1	-0.9	5.7
Industrial Sector Growth (FY)	4.6	9.2	0.2	-5.8	7.8
Agricultural Sector Growth (FY)	2.2	3.9	0.9	3.9	3.5
ServiceSector Growth (FY)	5.6	6.0	5.0	-1.2	6.0
LSM Growth (Average YoY)	7.1	2.2	3.1	-10.9	18.4
Inflation (Average YoY)	5.0	5.3	9.4	9.5	9.5
External Sector	(USD Billion)				
SBP Reserves (End-of-Period)	14.1	7.2	11.3	13.4	17.7
Current Account Balance	-16.3	-18.8	-7.1	-0.7	-12.3
Exports (Goods)	21.5	23.4	23.3	21.9	29.1
Imports (Goods)	57.3	60.1	50.0	44.1	66.6
Trade Balance	-35.8	-36.6	-26.7	-22.2	-37.5
Remittances	19.7	21.0	22.1	25.9	31.1
PKR/USD Rate (Year Average)	105.5	121.7	150.0	161.9	162.9
Fiscal Sector	(Percent)				
Fiscal Deficit (as % of GDP, FY)	-5.8	-6.5	-9.1	-8.1	-7.1
Revenue Growth (YoY)	20.3	-3.0	12.3	10.1	17.5
Expenditure Growth (YoY)	17.0	6.0	18.9	9.4	12.5
Monetary Sector	(Percent and PKR Trillion)				
Credit to Private Sector (YoY Growth)	14.2	19.1	5.2	4.7	20.3
Government Budgetary Borrowing	8.6	10.0	11.8	14.2	15.6
Borrowing from Schedule Banks	6.2	5.2	5.8	8.2	10.3
Borrowing from SBP	2.3	4.9	6.0	6.0	5.3

*All data are on Calendar Year unleas stated otherwise.
Source: Ministry of Finance, Pakistan Bureau of Statistics and State Bank of Pakistan

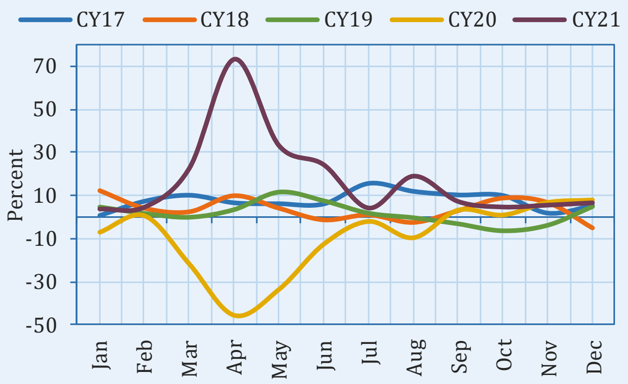
16 PASS- Ehsaas Emergency Cash Program. Accessed on April 19, 2022

17 SBP's COVID Loans: RFCC and TERF.

Recovery in manufacturing and resilience in agriculture paved the way for turnaround in services ...

During FY21, large- and small-scale manufacturing sectors grew by 11.4 percent and 9.0 percent, respectively. The manufacturing sector, Large-Scale Manufacturing (**LSM**) in particular, reflected a robust recovery during CY21 by growing at the rate of 18.3 percent compared to the contraction of 10.9 percent in CY20 (**Table 1.3, Chart 1.13**).[18] Most of the key subsectors of LSM exhibited remarkable growth during CY21 vis-à-vis the last four years (**Chart 1.14**). Fiscal and monetary stimuli (**Chart 1.16**), base effect of low production during lockdowns, impact of pent-up demand during the recovery phase, construction sector package and attractive financings under TERF and Long Term Financing Facility (**LTFF**) were the key factors that explain the robust recovery of LSM.

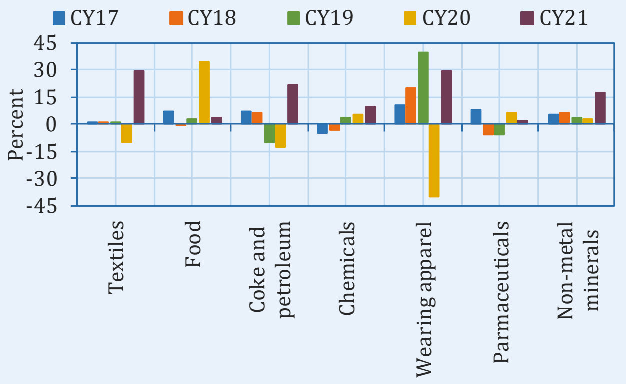
Chart 1.13: LSM Growth Rate (YoY)



Source: PBS

The vibrant growth outcome in industry and reasonable growth in agriculture, coupled with removal of lockdowns and travel restrictions, paved the way for recovery in the services sector. Within services, the two key subsectors, wholesale & retail trade, and transport & communication grew by 10.6 percent (FY20: -5.3 percent) and 5.1 percent (FY20: -9.0 percent) during FY21, respectively.

Chart 1.14: Growth Rates of Key Sectors of LSM



Source: PBS

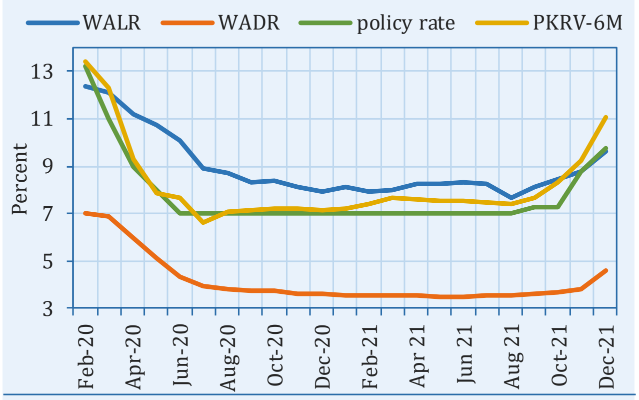
Expansionary monetary policy and refinance schemes supported the recovery in private sector credit...

After reducing the monetary policy rate from 13.25 percent to 7 percent during Mar– to Jun-20, SBP kept the policy rate unchanged till Sep-21. The transmission of reduction in policy rate to lending rates (**Chart 1.15**), coupled with SBP refinance schemes in general and TERF[19] in particular, boosted private sector credit during CY21. Higher input prices also led to an increase in demand for working capital loans. After lackluster growth of 4.7 percent during CY20, credit to private sector grew at a healthy rate of 20.3 percent during CY21 (**Table 1.3**). Manufacturing and personal finance were the largest contributors to the healthy increase in private sector credit (**Chart 1.16**).

[18] Wholesale and retail trade and transport & communication subsectors grew by 10.6 percent (FY20: -5.3) and 5.1 percent (FY20: -9) during FY21.

[19] Total loans approved and disbursed under TERF at the end of CY21 stood at PKR 436 billion and PKR 269 billion, respectively.

Chart 1.15: Inerest Rates



Source: SBP

Chart 1.16: Credit to Private Sector

Source: SBP

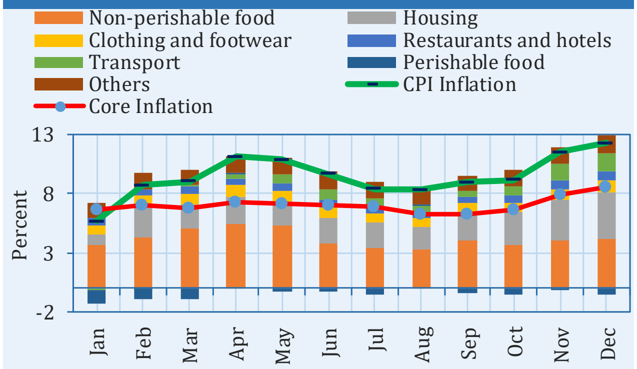
...however, external sector pressures and increasing domestic prices pivoted the focus of monetary policy to stability towards the end of CY21

With the revival in economic activities and rising trend in global commodity prices, the current account balance began to widen from mid-CY21, resulting in USD 12.3 billion deficit in CY21 (USD 0.7 billion deficit in CY20) (**Chart 1.18**). The rising imbalance (from May-21 onwards) was also reflected in the movement of PKR-USD parity, which depreciated by 13.7 percent between end-May to end-Dec-21 (**Chart 1.20**). Meanwhile, the rising global commodity prices not only deteriorated the external account but also resulted in increasing domestic headline and core inflation rates from Aug-21 (**Chart 1.17**). Responding to these developments, SBP recalibrated its monetary policy stance by taking monetary policy and macro-prudential measures to contain the emerging risks to the macro economy and financial stability. Starting from September 20, 2021, SBP policy rate was increased by a cumulative 275 bps in three tranches to 9.75 percent by the end of CY21 (**Chart 1.15** and **Box 3.3**).[20]

Attributable to supply side factors, headline inflation was somewhat volatile and elevated...

Average CPI inflation for CY21 was recorded at 9.50 percent, almost equal to 9.53 percent observed during CY20 (**Table 1.3**). During the year, following factors explain the elevated level of inflation. First, electricity prices were raised in February 2021 on account of increase in base tariff, quarterly adjustment for capacity payments and fuel charge adjustment. Second, inflation in non-perishable food (wheat and sugar) (**Chart 1.17**) emanated from commodity management issues and higher global food prices which rose due to COVID-induced supply constraints (**Chart 1.5**).

Chart 1.17: CPI Inflation, its Key Components and Core Inflation

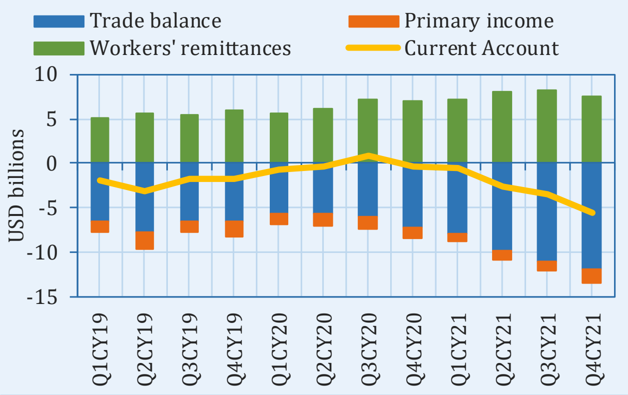


Source: SBP

[20] Policy rate increased by a cumulative 400 bps to 13.75 percent after review period up till May CY22.

Third, world oil prices rose quite persistently, although, in somewhat staggered manner from USD 21 per barrel in Apr-20 to more than USD 80 per barrel towards the end of CY21. Following the rise in global oil prices, domestic fuel prices also witnessed an increase which led to a rise in inflation and inflation expectations. Finally, 13.7 depreciation of local currency during May- to Dec-21 also contributed in pushing up domestic inflation.[21]

Chart 1.18: Current Account Balance



Source: SBP

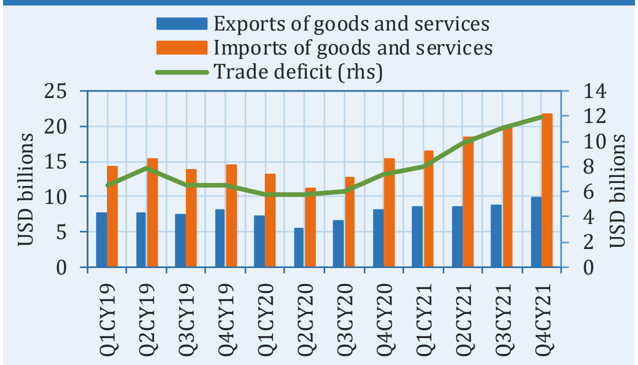
...pushing up core inflation towards end of CY21

Despite considerable pressure on headline inflation, core inflation remained broadly stable at around 6.9 percent during the first nine months of CY21.[22] However, towards the end of CY21, a gradual rising trend in core inflation was observed inching it up to 7.4 percent in last four months.

Persistent rise in imports led to a rapid surge in CAD ...

On balance of payment front, the increase in CAD resulted from persistently deteriorating trade balance since Q4CY20 (**Chart 1.18 and Table 1.3**). During CY21, exports and remittances grew by 32.5 percent and 19.8 percent, respectively. However healthy performances of exports and remittances were overshadowed by a 50.9 percent increase in imports, which can be explained by the following factors. First, strong recovery in domestic economic activity after ease in COVID restrictions led to a rise in import demand. Second, disbursements under TERF boosted imports of capital goods, especially in the textile sector. Third, import of industrial raw materials such as cotton to fill the demand-supply gap of the inputs. Fourth, import of COVID vaccines. And finally, imports of key non-perishable food items e.g. wheat and sugar also contributed in increased imports. Besides the rising volumes, the elevated international prices, such as oil and food, owing to longer than previously anticipated disruptions in global supply chain also led to a rise in domestic imports bill.

Chart 1.19: International Trade Flows and Trade Deficit



Source: SBP

...leading to pressure on the rupee

The external imbalances (CAD) also translated into stress on parity. After 5 percent appreciation during the initial four months, rupee depreciated by 13.7 percent during the last eight months of CY21. On a cumulative basis, rupee depreciated by 9.4 percent in CY21 (**Chart 1.20** and **Chapter 2**).

Policy measures to restrain imports and inflation were taken...

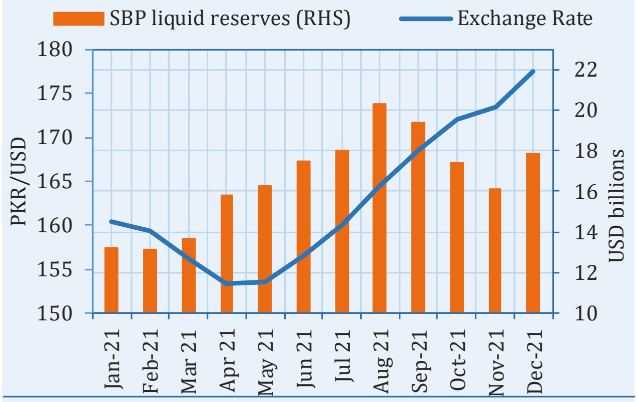
To counter the pressure on current account and domestic prices amid the global inflationary environment, SBP took monetary as well as macro-prudential policy measures. First, the SBP policy rate was raised by a cumulative 275 bps from Sep- to Dec-21, and two subsequent hikes of 250 bps and 150 bps in Apr-22 and May-22,

[21] Depreciation is calculated based on end of period date mark-to-market rate.

[22] Measured by average of rural and urban NFNE inflation rates.

leading to a cumulative increase of 675 bps. Second, the Cash Reserve Requirement (**CRR**) was increased from 5 percent to 6 percent. Third, macro-prudential measures such as amendments were made in prudential regulation for consumer financing to contain growth in consumer finance.[23] Finally, Cash Margin Requirements (**CMR**) were increased by enhancing the list of items subject to CMR to contain imports of non-essential items.

Chart 1.20: Exchange Rate and FX Reserves



Source: SBP

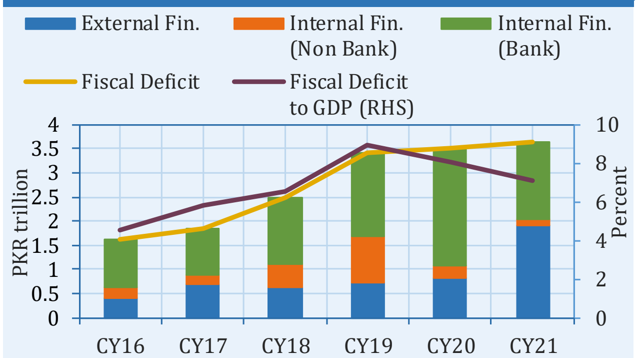
...while availability of multilateral, bilateral and private flows led to a rise in reserves despite widening CAD

During first half of the year, official and private inflows led to a rise in foreign exchange reserves. The country received USD 2.5 billion in Eurobonds in Apr-21, USD 0.5 billion on resumption of IMF Extended Fund Facility (**EFF**) in Apr-21, an additional USD 1 billon through Eurobonds via tap option in Jul-21 and USD 2.8 billion Special Drawing Right (**SDR**) allocation by IMF in Aug-21. These inflows supported the level of SBP liquid FX reserves till Aug-21. However, rising CAD and repayment of Sukuk led to a fall in SBP FX reserves afterwards (**Chart 1.20**). Bilateral deposits of USD 3.0 billion from Saudi Arabia in Dec-21 also provided support to FX reserves. Further, USD 2.0 billion gross inflows were received in Naya Pakistan Certificates (**NPC**) through Roshan Digital Accounts (**RDA**) during CY21. On a cumulative basis, SBP FX reserves increased by USD 4.26 billion during CY21.

Fiscal consolidation led to lower deficit relative to GDP ...

The process of fiscal consolidation that was started after COVID-related extraordinary expenditures in Q2CY20, continued to improve fiscal deficit. This helped in reducing the fiscal deficit to GDP ratio to 7.1 percent in FY21 from 8.1 percent a year earlier. Rise in Federal Board of Revenue's (**FBR's**) tax revenues and reduction in non-interest current spending enabled the government to reduce deficit despite additional spending on cash transfers and pandemic induced ESP (**Chart 1.21**).

Chart 1.21: Fiscal Deficit and Financing



Fiscal Deficit to GDP ratio is based on FY baisis

Source: SBP

On a calendar year basis and in absolute terms, fiscal deficit increased by 3.3 percent (CY20: 3.2 percent) to PKR 3.6 trillion during CY21. Major part of fiscal deficit for CY21 (52.5 percent) was financed through external financing in the form of multilateral and private flows as discussed earlier. While the government adhered to the restriction of zero fresh budgetary borrowing from SBP, scheduled banks and non-bank financial institutions financed 43.6 percent and 3.9 percent of the total budget deficit, respectively.

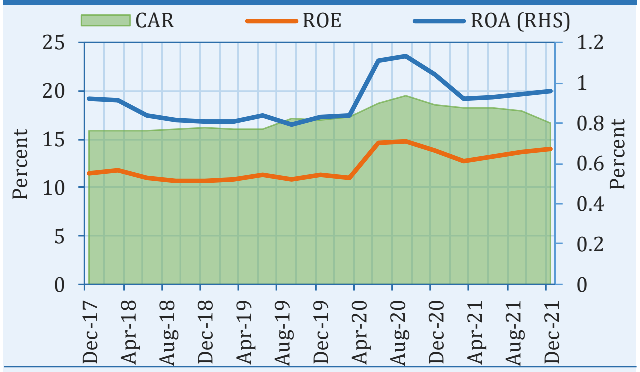
[23] BPRD Circular Letter No. 29 of 2021

Banking sector credit risk reduced while profitability and solvency continued to remain strong ...

The banking sector remained resilient and solvent. Asset quality improved as Gross Non-Performing Loans Ratio (**GNPLR**) declined to 7.9 percent by the end of CY21 from 9.2 percent at the end of CY20. Although Capital Adequacy Ratio (**CAR**) lowered to 16.7 percent from 18.6 percent a year earlier, it still remained well above the regulatory minimum requirement of 11.5 percent (**Chart 1.22**). This decline in CAR was attributable to rise in risk weighted assets (**RWA**) owing to significant expansion in private sector credit (**Chart 1.16**).

After-tax profits of the banking sector increased Year on Year (**YoY**) by 8.19 to PKR 264 billion in CY21, mainly due to a reduction in provisioning expenses and rise in non-interest income. Return on Assets (**ROA**) of the banking industry marginally declined to 0.96 percent at the end of CY21 from 1.04 percent a year earlier due to volume driven growth in income as the lower interest rate environment prevailed during most part of the year (**Chart 1.15** and **Chapter 3**).

Chart 1.22: Profitability and Solvency of Banking Sector



Source: SBP

Going forward, political stability and global commodity prices are the critical factors to determine domestic economic outcomes ...

Assuming low probability of new vaccine resistant variants of COVID-19, near term domestic macroeconomic outcomes are contingent upon domestic political stability and global commodity prices, especially in the context of supply chain disruptions and geopolitical situation in Eastern Europe. In addition, evolving domestic political scenario may have a bearing on the continuity of the ongoing stabilization program as well as sentiments of investors.

Chapter 2: Financial Markets' Behavior

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

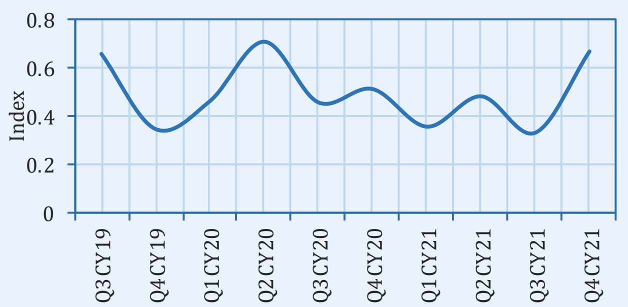
With the rollout of vaccines, return to normalcy was expected in CY21; however, the recovery was accompanied by new challenges of supply chain disruptions and global inflationary pressures

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

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

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

Chart 2.1: Financial Stress Index



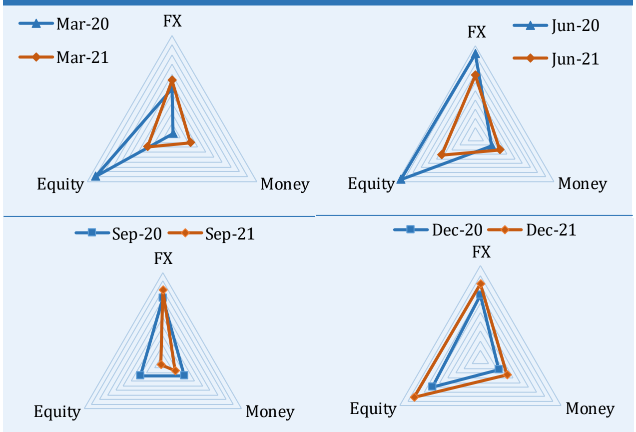
Note: The index is based on Volatility in three major financial markets variables i.e. Exchange Rate, Overnight Repo rate and KSE-100 index.
Source: SBP

[24] See Monetary Policy statement of September 2021

Financial markets exhibited lower volatility compared to last year

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

Chart 2.2: Financial Markets Stability Map



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

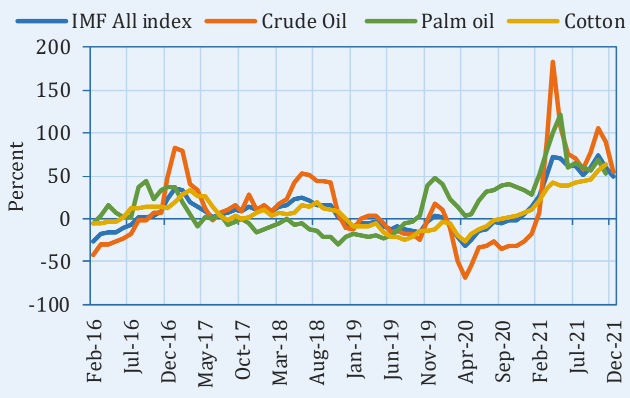
Foreign Exchange (FX) market

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

The higher imports resulted in pressure on external sector….

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

Chart 2.3: Trend in YoY Change of Global Commodity prices



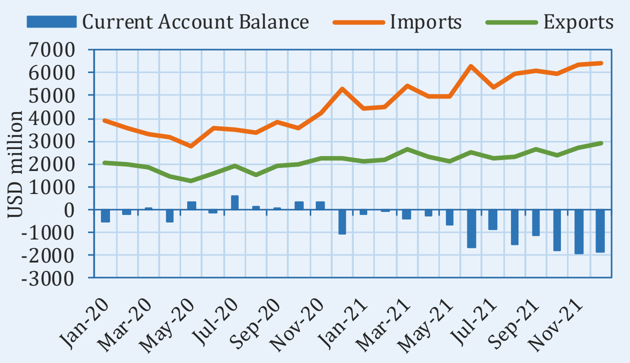
Source: IMF

[25] The economy grew by 5.7 percent in FY21 and 6.0 percent in FY22.

[26] Imports of services rose by 22.8 percent (YoY) to USD 9.8 billion in CY21 as compared to 22.4 percent YoY decline in CY20. Within import of services, transportation constitute around 45 percent share in payments during CY21 as compared to 34.1 percent share last year. The increase in shipping costs was one of the major reason for higher payments for transportation during CY21.

27 IMF's country page on Afghanistan. Accessed on January 28, 2022

Chart 2.4: Current Account Balance, Imports and Exports

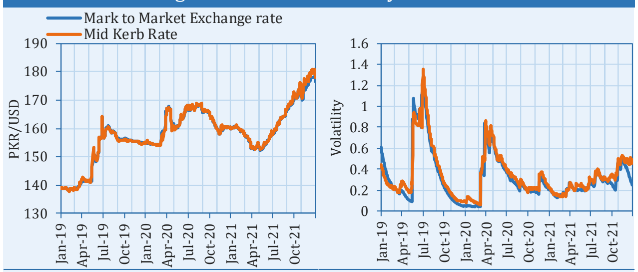


Source: SBP

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

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

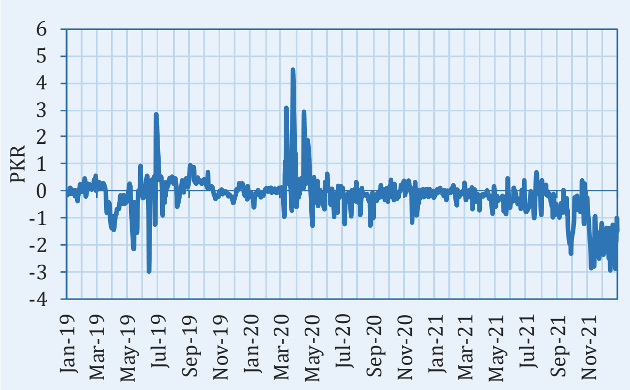
Chart 2.5: Exchange Rate and its Volatility



Source: SBP

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

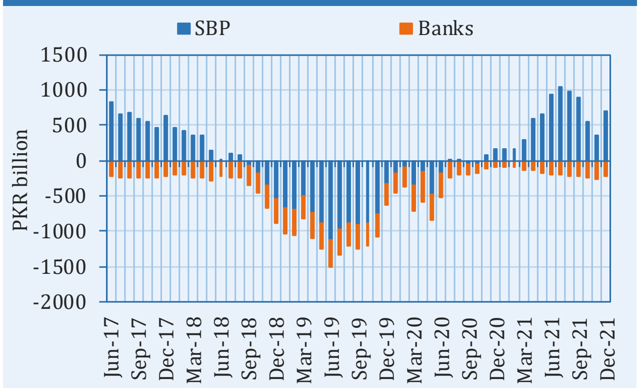
Chart 2.6: Interbank-KERB Spread



Source: SBP

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

Chart 2.7: NFA of the Banking System



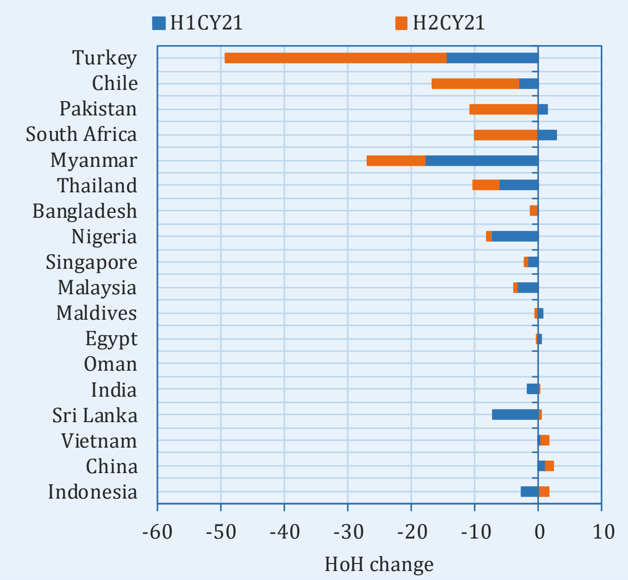
Source: SBP

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

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

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

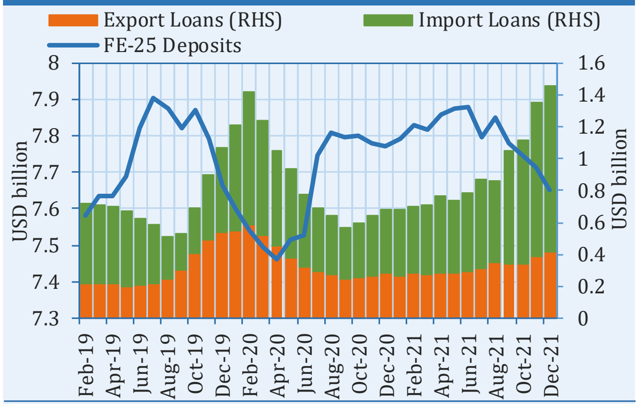
Chart 2.8: Change in Exchange Rate in Selected EMs



Source: Haver Analytics

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

Chart 2.9: FE-25 Deposits and Loans

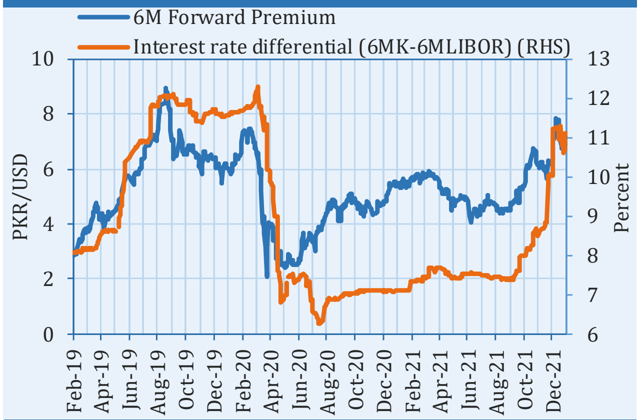


Source: SBP

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

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

Chart 2.10: 6M Forward Premium



Source: SBP and FRED

Investors' confidence revived in debt market

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

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

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

Policy makers took various measures to improve functioning of FX market

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

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

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

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

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

Money Market

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

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

.. which was complemented by Macroprudential measures ...

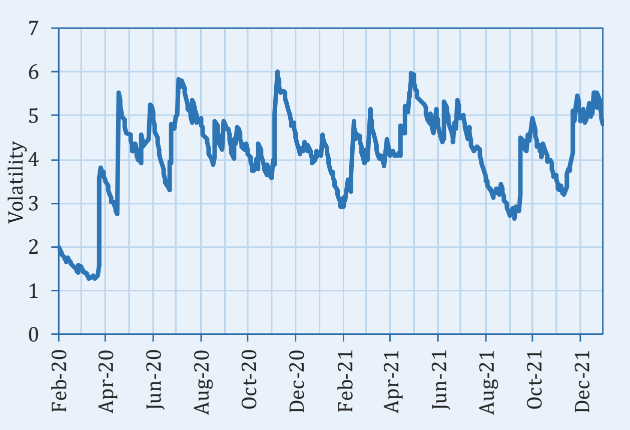
SBP amended the Prudential Regulations (**PRs**) of consumer financing and imposed cash margin[35] on imports of some additional items to discourage consumption, contain the imports of non-essential items, and address the financial stability issues

[30] FE Circular No 2 of 2021 dated February 24, 2021
[31] EPD Circular Letter No. 08 of 2021
[32] SBP Press Release dated November 25, 2021
[33] SBP Press Release dated December 19, 2021
[34] SBP Press Release dated November 13, 2021

[35] For details see BPRD Circular Letter No. 29 of 2021 dated September 23, 2021 and
SBP Press Release dated September 30, 2021

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

Chart 2.11: Volatility of Overnight Repo Rate (ONR)

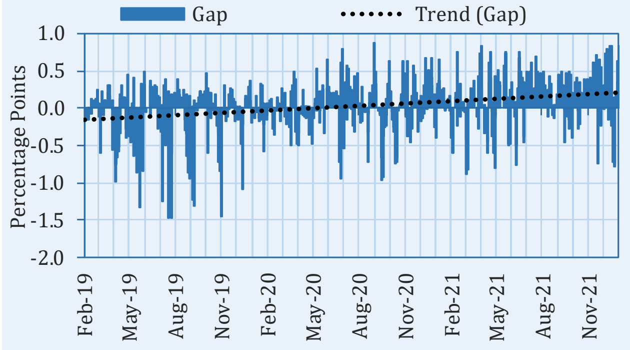


Source SBP

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

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

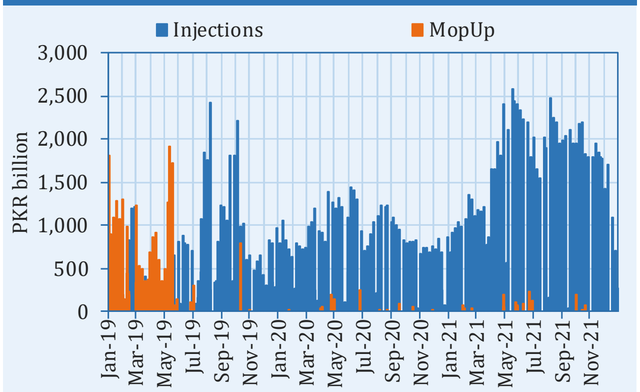
Chart 2.12: Gap between Overnight Repo Rate and policy rate



Source: SBP

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

Chart 2.13: OMOs Injections and Mop-ups



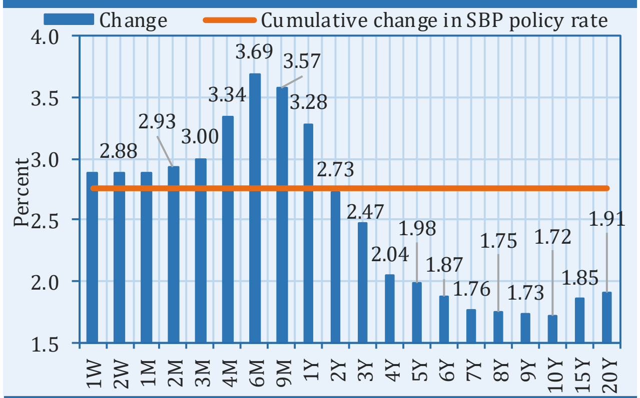
Source: SBP

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

Inflation readings fed into market expectations

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

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

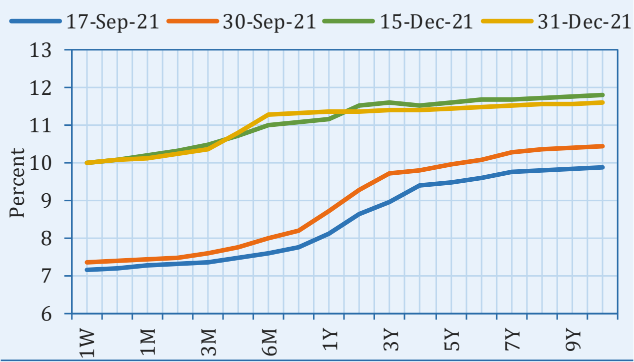


Source: SBP

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

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

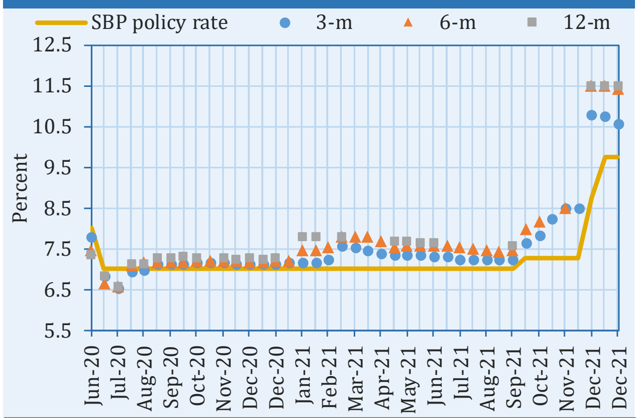
Chart 2.15: Upward shift in Yield Curve post 275bps increase in SBP policy rate in CY21



Source: SBP

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

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



Source: SBP

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

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

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

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

Market's interest in floating rate instruments revived in H2CY21

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

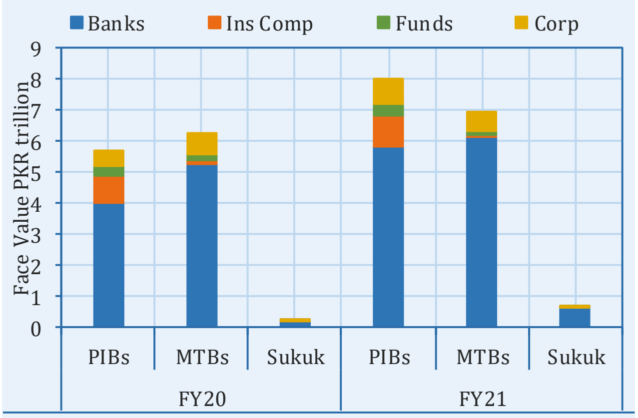
In line with the market expectations and dynamics, the auction results of floating rate PIBs (semi-annual coupon) showed lackluster activity. The government also did not accept any amount in these bonds, except in Q2CY21. The government issued PKR 72.2 billion 10-year floating rate PIBs (semi-annual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

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

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

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

Chart 2.17: Holding of Government Securities



Source: SBP

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

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

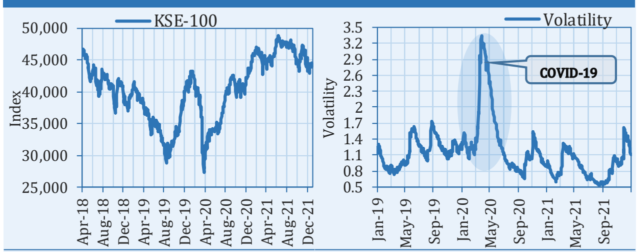
Equity Market

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

During CY21, the equity market went through various divergent phases. In the wake of economic recovery from the pandemic and satisfactory corporate results in H1CY21, the index reached the peak of 48,726 on Jun 14, 2021 (43,755 on December 31, 2020) translating into a growth of 11.3 percent.[38]

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

Chart 2.18: KSE-100 index and its Volatility



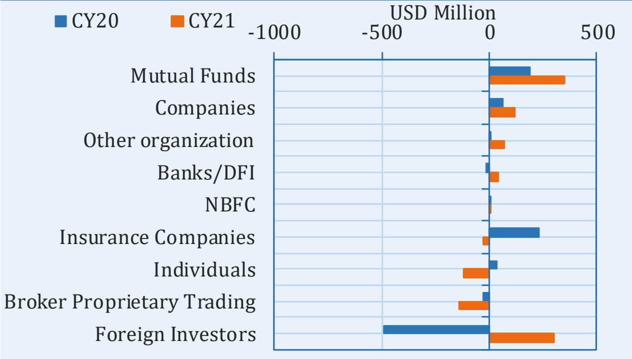
Source: PSX and SBP

Foreign investors remained net buyers in CY21

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

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

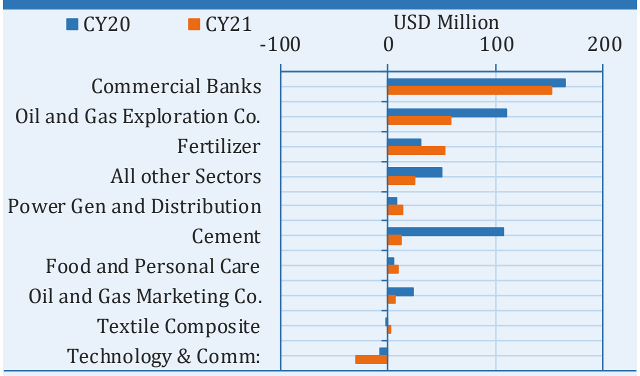
Chart 2.19: Buying by Mutual Funds was prominent in CY21



Source: NCCPL

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

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

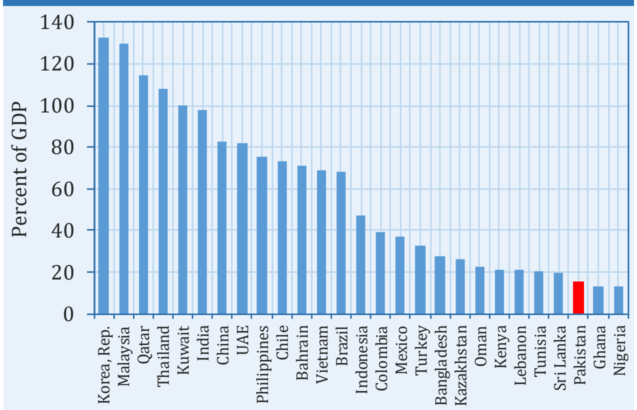


Source: NCCPL

Fresh listings doubled during CY21

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

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



Source: World Bank, PBS and PSX

Table 2.1: Progress of capital market in Pakistan during CY17-CY21					
	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21*
PKR billion except companies, index and bond data					
Total No. of Listed Companies	559	546	534	531	533
Total Listed Capital - Rs. in Million	1276.8	1322.7	1386.6	1421.1	1483.5
Total Market Capitalization - Rs. in Million	8570.9	7692.8	7811.8	8035.4	7900.1
KSE-100™ Index	40,471	37,067	40,735	43,755	46,348
KSE-30™ Index	20,215	17,174	18,656	18,180	17,981
KMI-30 Index	68,612	61,174	66,032	71,168	75,000
KSE All Share Index	29,774	28,043	29,012	30,780	31,549
PSX-KMI All Shares Index	20,357	18,185	19,387	21,718	22,406
New Companies Listed during the year	7	3	1	3	6
Listed Capital of New Companies - Rs in Million	12.5	5.4	8.7	14.2	16.0
New Debt Instruments Listed during the year	1	6	7	7	5
Listed Capital of New Debt Instruments - Rs. in Million	10.5	28.8	240.6	247.0	25.1
Average Daily Turnover - Regular Market (Shares in Mn) (YTD)	249	194	164	330	513
Average Value of Daily Turnover - Regular Market (Rs in Mn) (YTD)	12.1	7.9	5.9	12.3	18.2
Average Daily Turnover - Future Market (Shares in Mn) (YTD)	60	68	74	102	146
Average Value of Daily Turnover - Future Market (Rs. In Mn) (YTD)	4.3	3.0	2.9	4.7	8.9

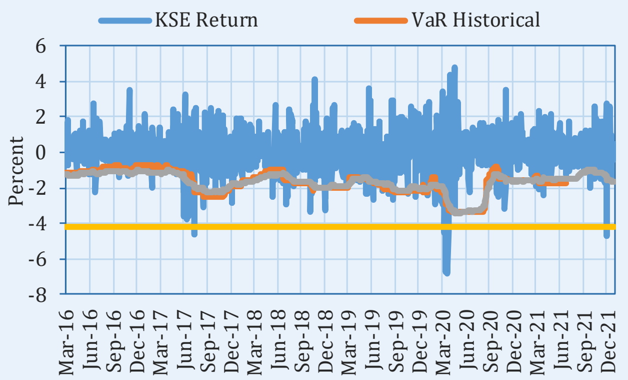
EoP= End of Period

Source: PSX, *as of Nov 11, 2021

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

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

Chart 2.22: VaR of KSE-100 Index



Source: PSX

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

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

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

Section A: Performance and Risk Analysis of Banking Sector

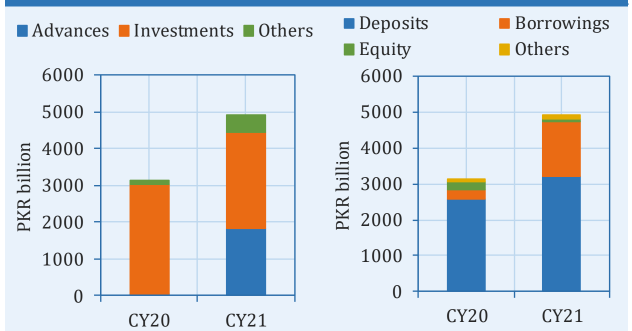
Chapter 3: The Banking Sector

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.

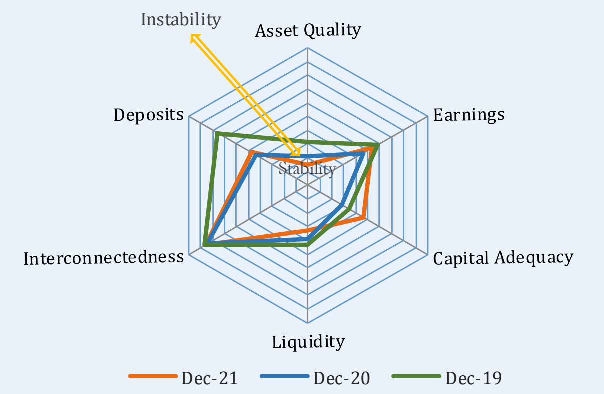
The after-tax earnings of the banking sector increased by a reasonable pace of 8.3 percent in CY21. Despite lower net interest income and increased non-interest expenses, marked decline in provisioning expenses and improved non-interest income supported profitability.

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



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.

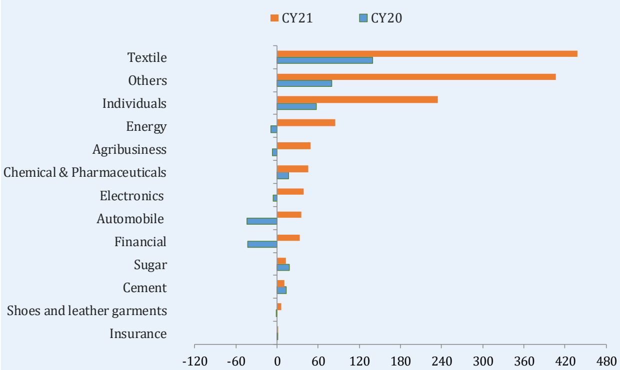
Further, sector-wise analysis indicates that besides cost pressures[44], substantial financing offtake by textile sector (PKR 438 billion in CY21

[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

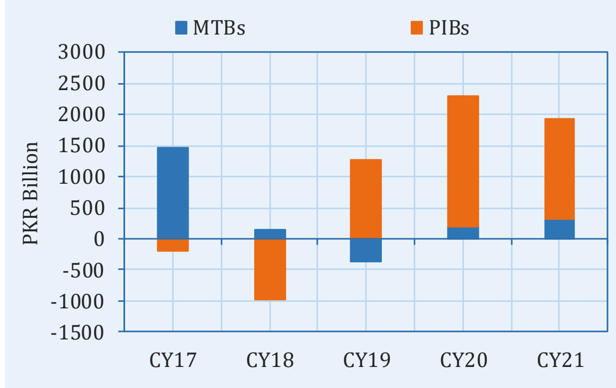
prudential policy measures in September-2021 to moderate auto financing. As a result, the pace of auto financing slowed down in Q4CY21.[49]

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

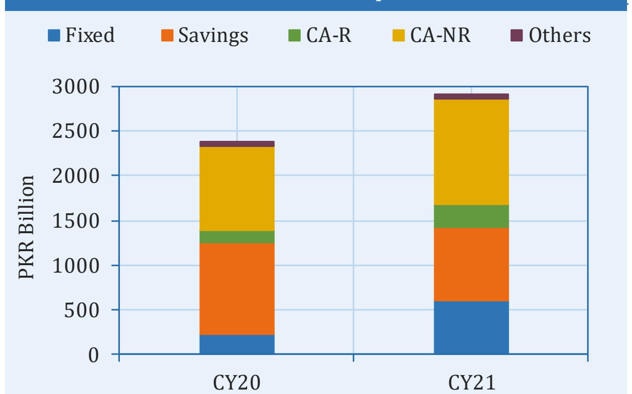


Source: SBP

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….

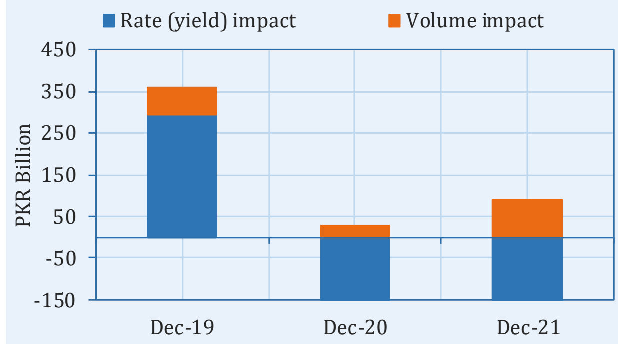
Banks' borrowings rose by PKR 1.5 trillion during CY21 reflecting the necessary funding needed to support the balance sheet expansion. More than 50 percent borrowings pertained to SBP. In addition to the repo and OMO borrowings, increased borrowings from SBP illustrated the impact of TERF funding.

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**).

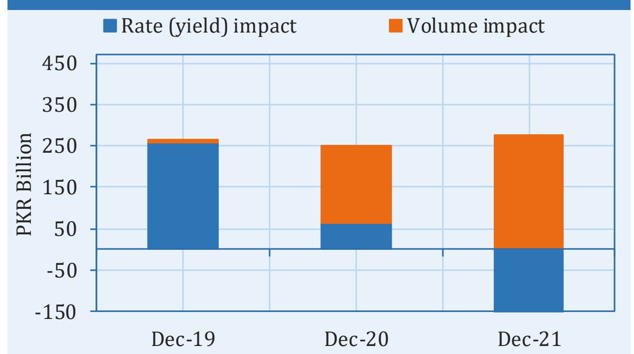
Besides, pace of Non-Interest Income also slowed down in CY21. This slowdown was primarily due to decline in net gain on sale of Government's securities which occurred in the wake of rise in interest rates. In CY21, such gain amounted to PKR 9 billion only as compared to PKR 45 billion in CY20. Nonetheless, 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.

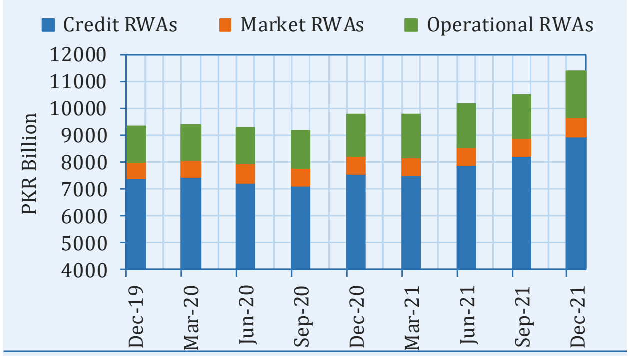
Since the growth in bottom line was mainly volume drive, the Return on Assets (**ROA**-after tax) for CY21 moderated to 1.7 percent (1.8 percent in CY20). However, Return on Equity (**ROE**-after tax) increased to 14.1 percent (from 13.8 percent at end Dec-2020) owing to slower growth in equity base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

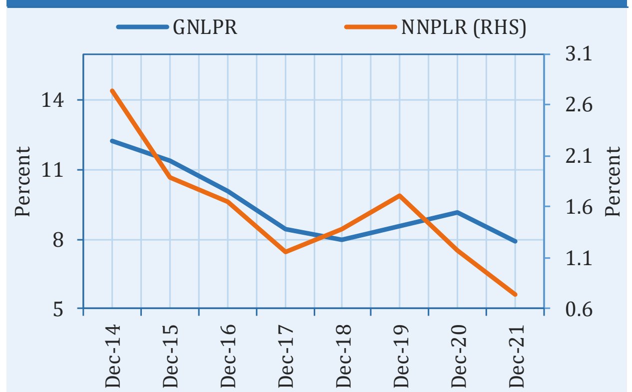


Source: SBP

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…

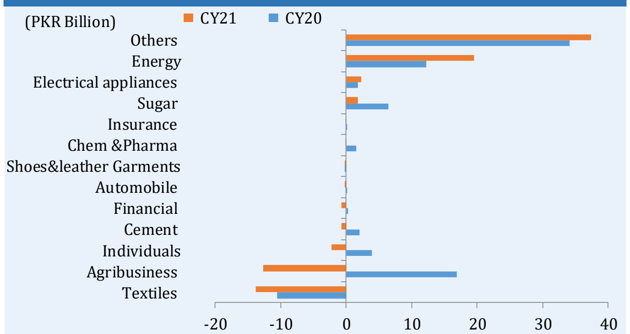
NPLs increased by PKR 31 billion (PKR 68 billion in CY20). Sector-wise analysis indicates that the rise in overall NPLs flow was mainly driven by the energy sector which observed an increase in NPLs of PKR 20 billion during the reviewed year (**Chart 3.9**). Also, one-third rise in NPLs was contributed 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

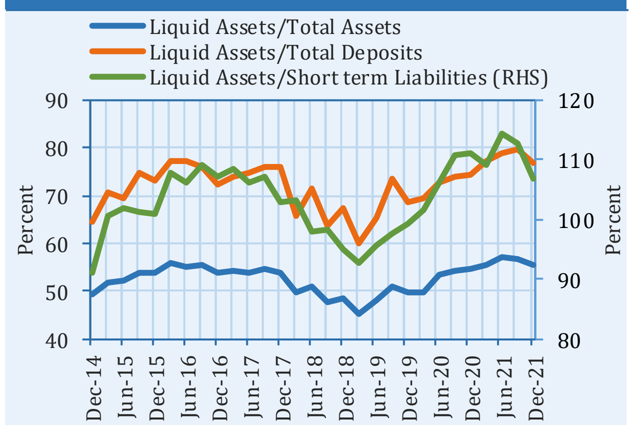
Deceleration in NPLs was driven by elevated repayment capacity of the borrowers…

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

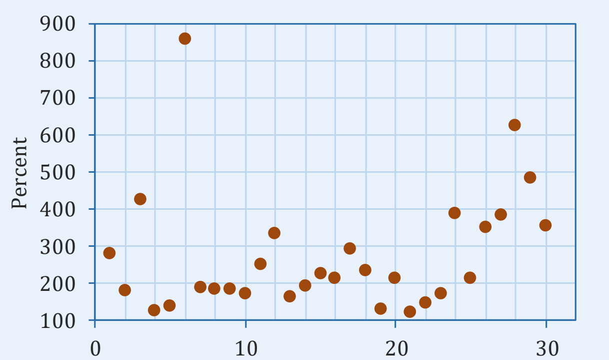
Liquidity Risk

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**).

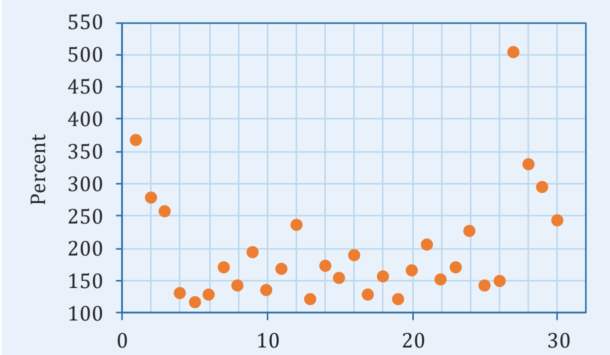
Chart 3.11: Bankwise Liquidity Coverage Ratio at end CY21



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).

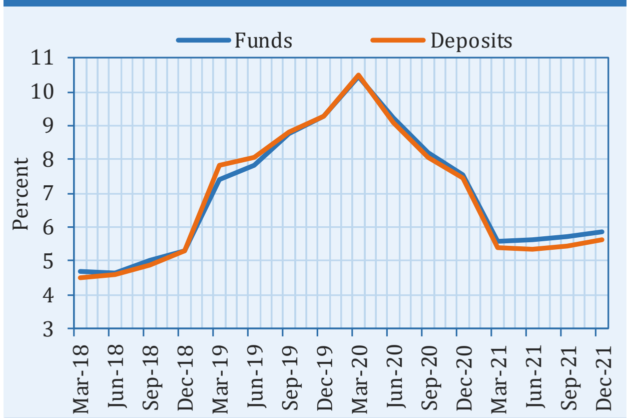
Amid banks' ability to mobilize low cost deposits, cost of funds witnessed marginal increase towards the end of CY21 when policy rate was increased…

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 ...

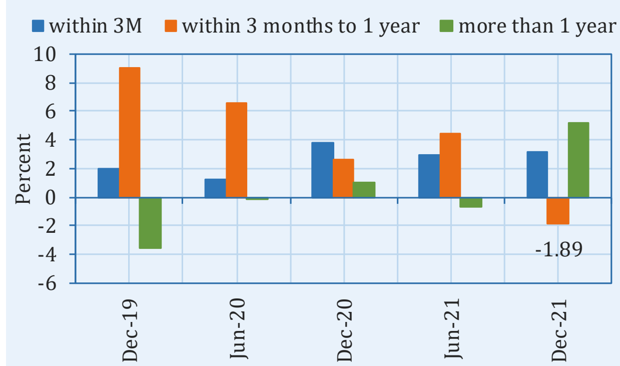


Source: SBP

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

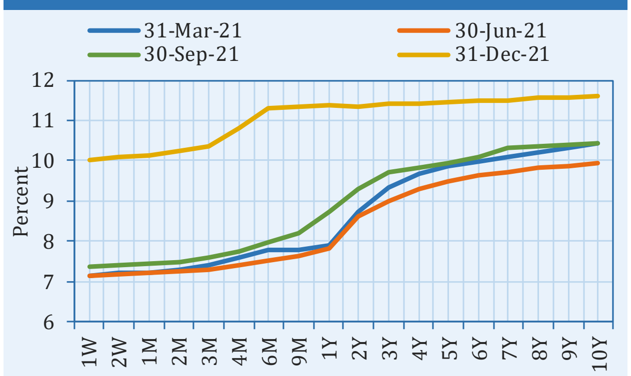
Market risk remains relatively low for the Pakistani banking sector, as the capital charge for market risk accounted for 6.2 percent of overall regulatory requirement of banks.

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**).

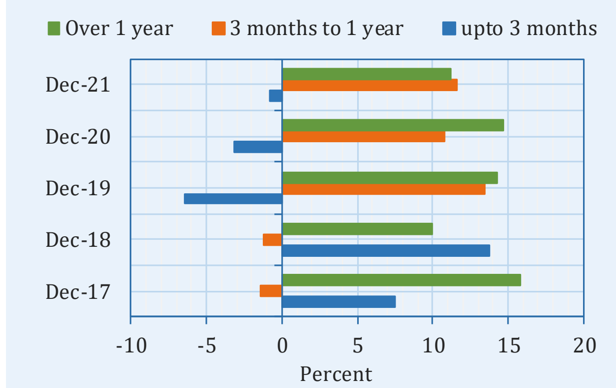
However, banks effectively strategized asset-liability management to withstand any significant shocks to interest rates. The overall gap in banks' rate sensitive assets and liabilities in over 3 months maturity buckets was only around 11 percent at end CY21, indicating the relatively low sensitivity 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

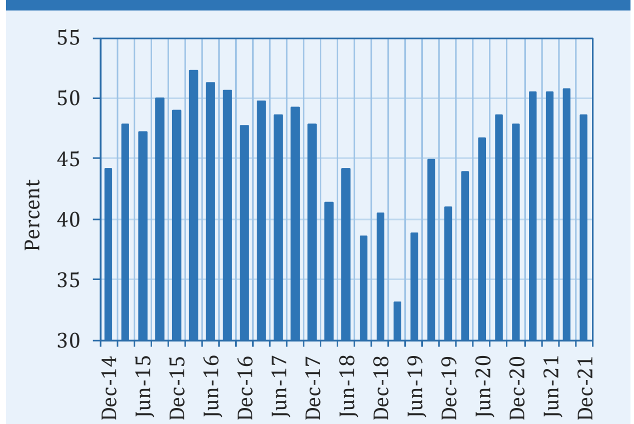


Source: SBP

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**).

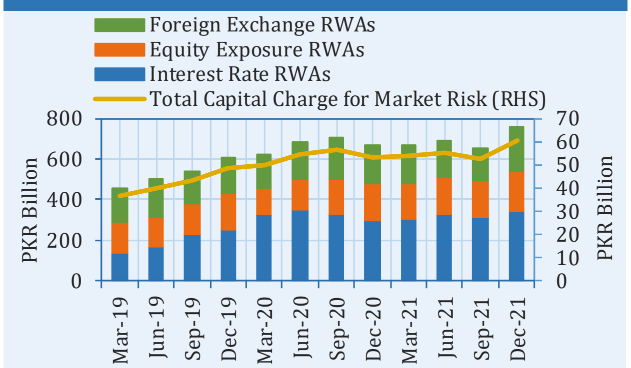
Chart 3.17: Share of Investments in Total Assets



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**).

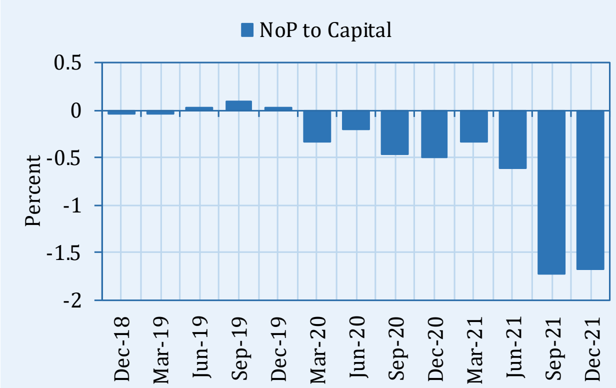
Table 3.2: Stress Testing Results of the Banking System Position based as December 2021 (Un-audited)

Shock Details			Number of Banks with CAR*			
			< 0%	0% - 8%	8% - 11.5%	> 11.5%
Pre-Shock Position			3	0	0	29
			Number of Banks with CAR			
Market Shocks			< 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

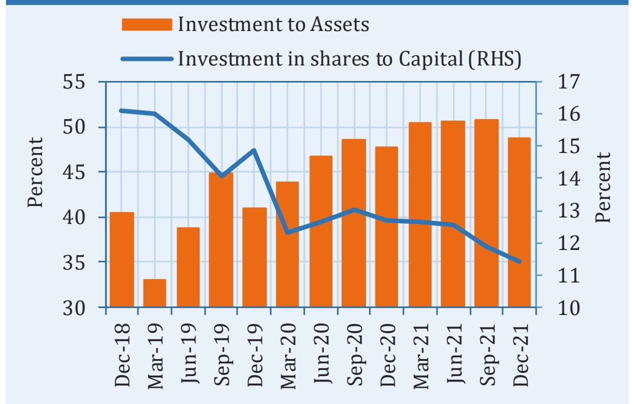


Source: SBP

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]

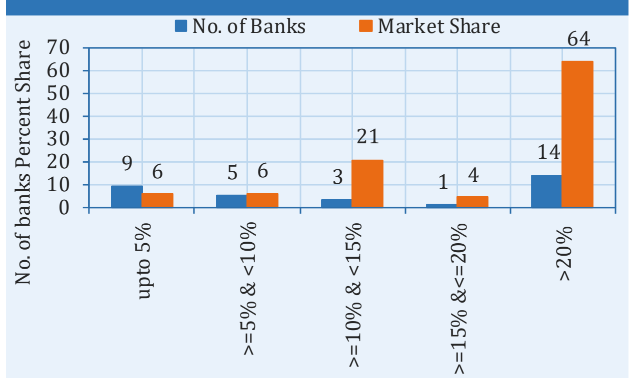
Chart 3.20: Equity Exposure has declined in recent years



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

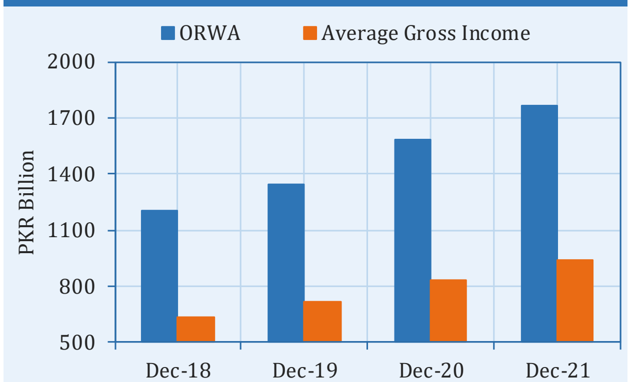
63 The prudential regulations prescribes that a bank's total holding of shares should not exceed 20 percent of its capital and total direct and indirect exposure (including lending secured by shares) should not exceed 50 percent of capital. For details see: BPD Circular Letter No. 16 of 2006

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

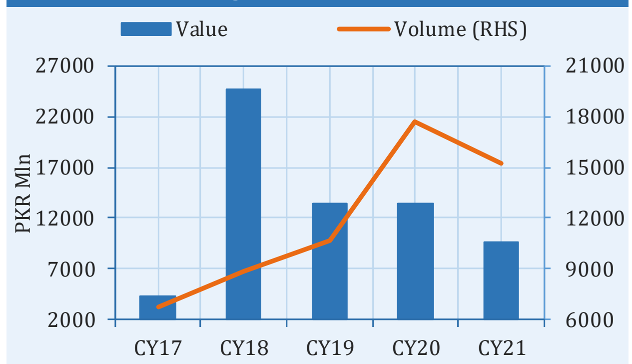


Source: SBP

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.

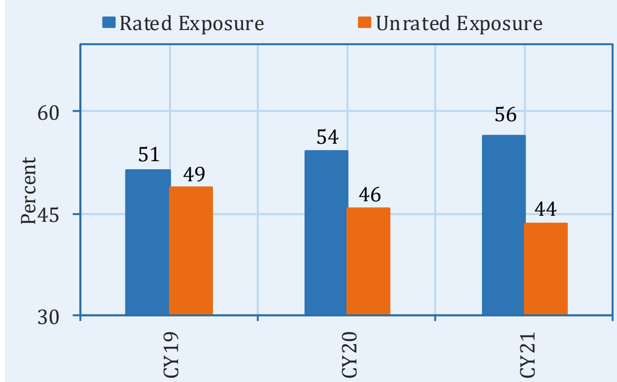
Importantly, increase in TEC during the reviewed year was exclusively contributed by Tier I capital while Tier II Capital declined.[65] Slowdown in Tier I Capital was primarily on account of lower retained earnings.[66] Decline in Tier II capital was mainly attributed to decline in revaluation surplus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

Box 3.1: Islamic Banking

Islamic banking Institutions continued to grow with impressive pace during CY21. Both financing and investments sourced assets expansion, nonetheless, financing contribution was relatively higher as the financing to deposit ratio further increased. Besides strong inflow of deposits, IBIs borrowed significantly to finance assets growth. Due to low profit rate environment, earnings indicators slightly moderated. However with muted credit risk and improvements in asset quality indicators, resilience of the IBIs segment remained robust. Moreover, SBP's continued its efforts to provide enabling regulatory framework for IBIs including the introduction of Shariah Compliant Standing Ceiling Facility and Mudarabah based OMOs-injections.

The Global Islamic Financial Services Industry manifested strong growth …

Despite pandemic related challenges, global Islamic Finance Services Industry (**IFSI**) maintained impressive growth momentum. As per the latest available statistics, the total assets of IFSI grew by 10.7 percent during CY 21 to reach USD 2.7 trillion (USD2.4 trillion in CY19). The Islamic banking and Islamic capital markets underpinned the expansion in assets while Takaful contribution experienced slight contraction.[68]

Domestic Islamic Banking Industry maintained robust growth momentum during CY21…

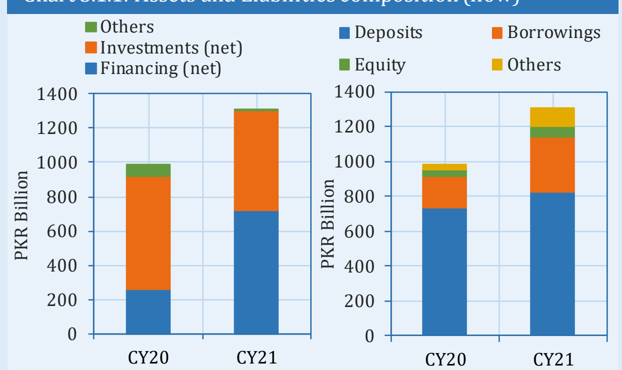
The growth in asset base of the Islamic Banking Institutions (**IBIs**)[69] continued to outpace their conventional counterparts, as it accelerated by 30.6 percent in CY21—slightly up from last year's growth of 30.0 percent (**Table 3.1.1**). Importantly, the pace of expansion was highest since CY12. Unlike last year's trend of investment led growth, financing made the major contribution in assets expansion during CY21 (**Chart 3.1.1**). It is important to note that IBIs are more focused on financing activities as compared to their counterparts conventional banks, and financing constitute 46.6 of IBIs' asset base (as compared to 33.7 of overall banking sector).

Table 3.1.1: Performance of Islamic Banking Institutions

	IBIs			Conventional Banks		
	CY19	CY20	CY21	CY19	CY20	CY21
			PKR Billion			
Total Assets	3,284	4,269	5,577	18,708	20,854	24,482
Investments (net)	597	1,261	1,852	8,343	10,673	12,703
Financing (net)	1,623	1,881	2,597	6,626	6,411	7,523
Deposits	2,652	3,389	4,211	13,301	15,130	17,509
			YoY Percent Change			
Total Assets	23.5	30.0	30.6	9.9	11.5	17.4
Investments (net)	15.9	111.3	46.8	12.8	27.9	19.0
Financing (net)	7.4	15.9	38.1	2.8	-3.3	17.4
Deposits	20.4	27.8	24.2	10.4	13.7	15.7
			Share in Total Assets (Percent)			
Investments (net)	18.2	29.5	33.2	44.6	51.2	51.9
Financing (net)	49.4	44.1	46.6	35.4	30.7	30.7
FDR/ADR (Percent)*	61.2	55.5	61.7	49.8	42.4	43.0

* FDR= Financing to Deposits and ADR=Advances to Deposits
Source: SBP

Chart 3.1.1: Assets and Liabilities composition (flow)



Source: SBP

On funding side, IBIs mobilized PKR 821.7 billion worth of deposits—showing an over the year

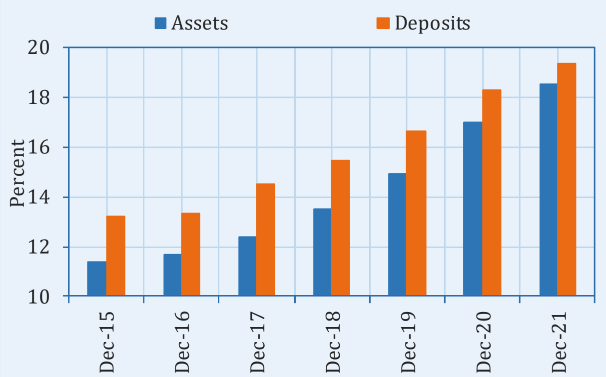
[68] IFSB (2021). *Islamic Finance Services Industry Stability Report.* This latest available report covers the global IFSI performance up till 2020

[69] IBIs include both full-fledged Islamic banks as well as Islamic banking branches of conventional banks

increase of 24.3 percent. Besides, borrowings observed a sizeable rise to meet the increased funding demand to support the growing asset base. It is noteworthy that IBIs' prominence has been increasing over time as IBIs contribute almost one fifth (i.e. 18.6 percent) of the total asset base of banking sector as of end CY21 (11.4 percent share at end Dec-15).

Similarly, share of deposits increased to 19.4 percent from 13.2 percent at end Dec-15 (**Chart 3.1.2)**.

Chart 3.1.2: IBIs share in banking industry's ...

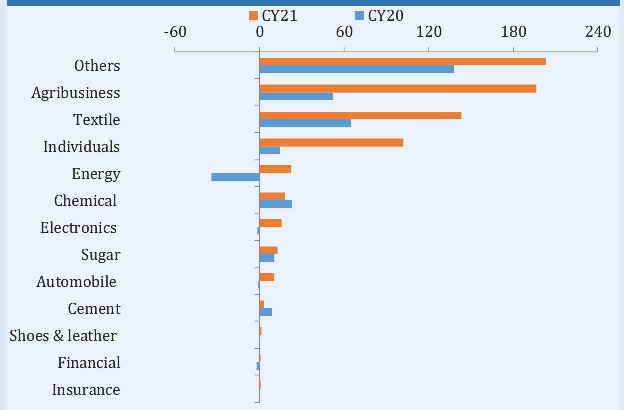


Source: SBP

Financing flows were mainly driven by agribusiness, textiles, and individuals...

The overall gross financing (including public and private) grew by PKR 731 billion in CY21 as compared to PKR 271.6 billion in CY20. Agribusiness, Textiles, and Individuals together availed 60 percent of the total financing flows (**Chart 3.1.3**). Rebound in economic activity, increased input prices, disbursement under TERF, and higher commodity financing for wheat procurement[70] explain robust financing growth.

Chart 3.1.3.: Sector-wise financing flows



Source: SBP

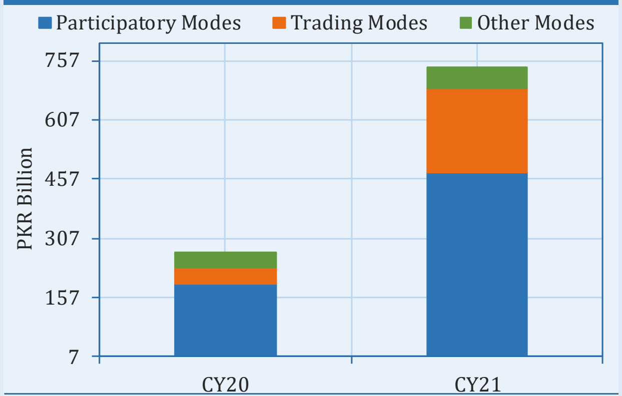
Segment-wise financing analysis indicates that 62 percent of the overall financing was availed by corporates. Working capital and long-term financing mainly drove-up corporate sector financing. Besides, consumer financing increased by PKR 92 billion to PKR 282 PKR billion – mainly driven by PKR 55.1 billion growth in auto-finance. Moreover, mortgage finance posted a heartening increase of PKR 33 billion. It is noteworthy that IBIs have already dominant share in mortgage financing, it was further augmented by SBP's different measures[71] to promote the mortgage finance and construction activities in the economy.

In terms of mode of financing, participatory mode (Musharaka and diminishing Musharaka) continued to dominate the flow of financing. The financing under participatory and trading modes increased by PKR 473 billion and PKR 212 billion, respectively during CY21 (**Chart 3.1.4**).

[70] Minimum support price increased from PKR 1,400 per 40 kg to PKR 1,650 per 40 kg to encourage wheat cultivation.

[71] IH&SMEFD Circular No. 04 of 2021

Chart 3.1.4: Financing flows under different modes



Source: SBP

Encouragingly, financing to deposit ratio observed noticeable improvement…

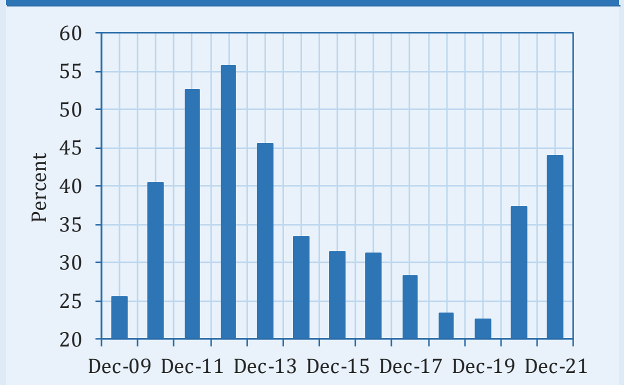
It is noteworthy that IBIs are playing stronger role—as compared to conventional banks—in the intermediation process. The robust rise in financing translated into improved financing to deposit ratio which increased to 61.7 percent by end Dec-21 (55.5 percent at end Dec-20). Accordingly, IBIs have higher financing to deposit ratio as compared to their conventional counterpart's ratio of 46.6 percent at end Dec-21).

With the increased availability of Shariah-compliant instruments, investment portfolio continued to post strong growth, resulting in improvements in the liquidity profile…

IBIs' investments increased by PKR 592 billion (46.8 percent) in CY21 as compared to PKR 664 billion (111.3 percent) in last year. The investments were made in Ijarah Sukuk.[72]

Despite deceleration, Investment to Deposit Ratio (**IDR**) increased to 44.0 percent by end Dec-21 from 37.2 percent a year ago. Moreover, it is noteworthy that IDR—after declining consistently until CY19—rose in recent years (**Chart 3.1.5**). Accordingly, liquid assets to total assets ratio substantially increased to 33.2 percent by end Dec-21 from 20.8 percent at end Dec-20. This illustrates increased availability of Shariah Compliant instruments which in turn facilitate IBIs in managing their liquidity.

Chart 3.1.5: Investments to deposits ratio



Source: SBP

IBIs continued to maintain strong deposits growth…

On funding side, deposits observed a rise of 24.3 percent in CY21 as compared to 27.8 percent growth in previous year. Further analysis reveals that almost entire rise in customers' deposits was contributed by savings and current account (non-remunerative) deposits during CY21 as compared to 86 percent contribution in CY20. This was owing to the contraction in fixed deposits by PKR 14 billion as compared to increase of PKR 82 billion in previous year. Contraction in fixed deposits can be ascribed to lower returns that prevailed during most part of the CY21 due to accommodative monetary policy which led the return-sensitive depositors to explore other investment avenues as well as to IBIs' strategy to focus on mobilizing low cost CASA deposits.

[72] PKR 89 billion were invested in FRR and PKR 647 billion were invested in VRR Sukuks.

The overall strong momentum in deposits—as was also seen in case of conventional banks—was due to a number of factors such as growing remittances and RDA inflows, improved economic activity etc.

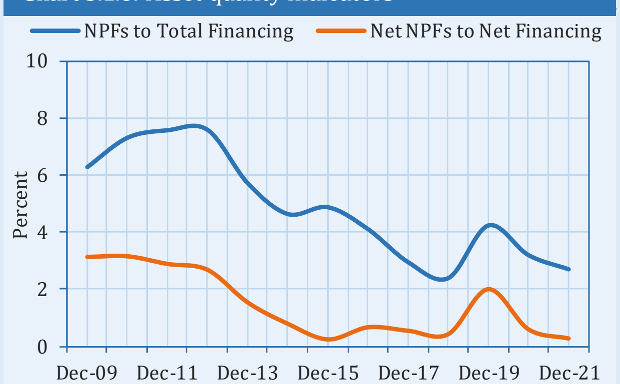
Due to faster growth in asset base, IBIs reliance on borrowings increased over the year...

The IBIs' borrowings (year-end balance) increased by 91.3 percent over CY21 and their contribution in asset base rose to 12 percent by end Dec-21 (8.2 percent in Dec-20). This increase mainly pertained to financing from SBP under different financing schemes.

Credit risk as reflected in asset quality indicators remained in check...

Asset quality of the IBIs further improved in CY21 as Non-Performing Financing (**NPFs**) to total financing ratio declined to 2.7 percent by end Dec-21 from 3.2 percent a year ago. Although, NPFs stock grew by 16.4 percent during CY21, however, sharp rise in financing kept credit risk in check. Moreover, provisioning to NPFs ratio increased to 90.8 percent from 82.4 percent by end Dec-20. Also, Net NPFs to capital ratio came down to 2.1 percent by end Dec-21 from 4.2 percent a year earlier manifesting muted risk to the solvency of IBIs from delinquent portfolio (**Chart 3.2.6**).

Chart 3.1.6: Asset quality indicators



Source: SBP

IBIs posted steady earnings ...

After tax earnings of IBIs grew by 4.5 percent in CY21. Although net mark-up income slowed down owing to low profit rate, sharp deceleration in provisioning expenses and marked rise in non-markup income supported IBIs earnings.

Owing to low profit rate environment and strong growth in asset base, after-tax **ROA** and **ROE** moderated to 1.3 percent (1.6 percent in last year) and 21.4 percent (24.5 percent in last year), respectively.

IBIs solvency remained robust...

CAR slightly moderated to 16.0 percent by end Dec-21 from 16.6 percent a year ago. Though the ratio softened yet its level was well above the minimum local and global regulatory requirements of 10.5 percent and 11.5 percent, respectively.

Further analysis reveals that strong growth in TRWA of 18.8 percent relative to 14.3 percent rise in TEC caused moderation in CAR. However, it also represents, utilization of capital to support the financing activities that will in turn augment the banks' earnings and capital position.

Rise in TEC of PKR 24 billion was mainly driven by Tier I capital which increased by PKR 20 billion. Tier I capital to RWA ratio stood at 12.8 percent, indicating that the major part of the regulatory capital comprise better quality instruments which bode well for the solvency against any crisis situation.

More than 75 percent rise in TRWA was contributed by **CRWA** which constitute 80.1 percent of the total risk weighted assets followed by operational risk assets (17.4 percent) and market risk assets (2.5 percent).

SBP's continues to provide enabling regulatory environment for IBIs….

Keeping in the view the increasing size of the industry, nature of its operations, and diversified portfolio of products and services there is a need to have uniform practices across the Islamic banking industry for the management of Shariah Non-Compliance Risk (**SNCR**) and, SBP issued further instructions[73] to broaden IBIs focus on management of SNCR. Particularly, SBP introduced *Shariah Compliant Standing Ceiling Facility* and *Mudarabah-based OMO-Injections* during CY21 to address the liquidity management issues faced by the IBIs (**see Appendix A**).[74] [75]

[73] IBD Circular No.1 of 2021 dated June 14, 2021
[74] DMMD Circular No. 24 of 2021
[75] DMMD Circular No. 25 of 2021

Box 3.2: Supervisory and Crisis Management framework of SBP – recent initiatives to strengthen the financial stability

Financial stability is one of the key public policy objectives as it is essential for sustainable economic growth and public welfare, with a predominant role of central bank. In terms of the recent amendments, section 4B of the SBP Act, 1956[76] has explicitly delineated the stability of the financial system of Pakistan as one of the objectives of SBP. Further, section 4C of the Act, among others, empowers SBP to use necessary macro-prudential tools for this purpose.

Effectiveness of central bank's role in financial stability reflects in effectiveness of its supervisory framework; and well-designed safety nets as a part of the crisis management framework.

SBP strives to continuously improve and update its supervisory and safety nets framework

To this end, the overall supervisory framework and financial safety nets of SBP adequately complies with internationally accepted best principles and standards. Effective management of different crises and contribution to stability of the financial system over the years corroborate the effectiveness of the safety nets available at disposal of the SBP. Incidentally, SBP regularly reviews and updates its supervisory framework in light of emerging best practices and changing dynamics of the market. In this regard, SBP took various measures in recent years to strengthen its safety, which are discussed below.

Risk Based Supervisory framework as the primary safety net against financial fragility

SBP has adequate supervisory powers to issue regulations and directions as well as to supervise banks and take corrective measures for redressing any supervisory concerns and orderly resolving failing institutions. Accordingly, SBP has issued necessary guidelines and prudential regulations to banks to provide guidance and minimum standards of prudence on different key areas **(**see **Table 3.2.1).**

Table 3.2.1: Supervisory regime and financial safety nets
• Risk-Based Supervision and Corrective Action Regime • Problem Bank Management • Lender of Last Resort • Deposit Protection Corporation
Legal Framework and Powers (SBP Act 1956, BCO 1962 and DPC Act 2016)

SBP has instituted a comprehensive surveillance mechanism which is based on the premise of *Risk-Based Supervisory (**RBS**) Framework* in 2021.[77] This framework provides more future-oriented and comprehensive assessments of financial institutions and help in optimum utilization of supervisory resources. Under the framework, SBP continuously supervises the regulated institutions and takes corrective measures e.g. direction to improve their governance and controls, imposes penalties in case of breach, removes a bank's management where its conduct is detrimental for the bank and its depositors, etc. SBP also has legal powers and institutional arrangements to take resolution measures for the rehabilitation and reorganization of problem bank that cannot

[76] The State Bank of Pakistan Act, 1956

[77] Risk Based Supervisory Framework. The CAMELS based supervisory system was replaced by the RBS framework replaced in 2021.

continue as going concern entity and thus can cause losses to general depositors and lead to loss of public confidence in the banking system and system wide crisis. For this purpose, SBP can also impose moratorium on a failing bank with the approval of federal government to avoid run on bank and consequent value destruction, and prepare scheme of reconstruction for the bank. Under this scheme, any losses can be imposed on the shareholders and creditors of the bank.

For dealing with a crisis situation, SBP has formulated contingency planning process which comprises crisis binder to guide and formalize the role of different departments in a crisis scenario, identification of Domestic Systemically Important Banks (**D-SIBs**) and subject them to additional capital requirement and enhanced supervision including the requirement to prepare recovery plan, communication strategies for dealing with crisis events, etc.[78]

To strengthen the contingency planning process, SBP is working to improve resolution-planning process for D-SIBs and plans to conduct a simulation exercise to test its abilities to handle a situation of financial crisis.

With a view to strengthen its resolution regime, SBP is contemplating certain changes in its legal and supervisory framework to align with emerging best practices on banks' resolution.

Safety nets have been instituted to provide financing to banks in crisis and protection to depositors

In the recent years, SBP has taken a number of measures to further improve the safety nets. For instance, regulations for the provision of *Lender of Last Resort* (***LOLR***) facility have been formulated under section 17G of the SBP Act, 1956[79]. Under this section SBP can extend financing to a bank for improving the liquidity position so that an interim liquidity shortage may not lead to the failure of a bank. Unlike standard financing facilities which are provided against the security of federal government papers, LOLR facility can be extended against a wide variety of adequate collaterals. The facility can be extended under both conventional and the Shariah-compliant modes.

Moreover, **Deposit Protection Corporation (DPC)** was established and operationalized in 2018 under the Deposit Protection Corporation Act, 2016 as an explicit deposit insurance system in Pakistan. DPC plays a pivotal role in promoting financial stability and preserving the general confidence in the banking system. It aims to compensate the small and financially unsophisticated depositors to the extent of protected deposits in the event of a bank failure. All scheduled banks are member institutions of the DPC. They pay prescribed premium to DPC which compensate the depositors of a failing bank up to the protected amount.[80]

Macro-prudential supervision framework focus on the systemic risks and cross sectional dynamics

The regulatory regime of SBP is based on the principle of proportionality and comprises both rule and principle based instruction. It duly addresses the emerging systemic risks as well as any peculiarities arising from the interconnectedness and other dynamics of the

[78] D-SIBs are identified on the basis of their size, interconnectedness, substitutability and complexity. Please refer BPRD Circular No. 04 of 2018

[79] SBP issued LOLR Regulation in January 2022. These regulations cover modes of financing, types of collaterals, pricing of facility, tenor, minimum eligibility criteria, documentation requirements, etc. Moreover, banks have been advised to appropriately incorporate the issued regulations in their operational processes to access LOLR facility in case of exceptional liquidity stress.

[80] In order to further enhance depositors' confidence and support financial stability, DPC has recently enhanced the level of protected deposit from PKR 250,000 to PKR500,000 per depositor-per bank

financial market. In order to continuously monitor the **macro prudential risks and take timely measures,** the SBP carries out various macro prudential surveillance assessments including scenario analysis (macro stress testing) to estimate projected solvency position of bank over a protracted period of time, assessment and designation of D-SIBs, preparation and publication of financial stability review, detailed statistics on banks, Microfinance Banks (**MFBs**) and DFIs, financial soundness indicators, and special studies. Moreover, consolidated surveillance of banks and financial conglomerates is carried in coordination with SECP. To facilitate the coordination between key stakeholders for timely policy actions, SBP has instituted a number of high-level forums both within the institution as well as with other agencies like SECP and Ministry of Finance.

Box 3.3: COVID-19 and the Banking Sector: SBP measures, lessons learnt and way forward

Global banking industry remained resilient…

COVID-19 pandemic profoundly affected the global economy and tested the resilience of the global financial system. Despite the fact that COVID-19 presented the severe shock, resilience of the global banks remained intact as they entered the pandemic crisis with higher capital and liquidity buffers than 12 years ago at the time of Global Financial Crisis (**GFC**). Though provision expenses of the global banking industry surged during 2020 anticipating deterioration in re-payment capacity of borrowers, substantial rise in NPLs remained absent owing to central banks' policy measures such as payment holidays, loan guarantees and job support programs. Nonetheless, these support measures were scheduled to expire in 2021.

With revival in economic activity across the globe, the corporate balance sheets have generally strengthened, revenues have risen, with profitability surpassing pre-pandemic levels in several economies. Importantly, substantial pickup in bankruptcies, which was being feared in the wake of expiry of supportive policy measures, has not materialized.[81]

SBP took a wide range of measures to support economy and financial system….

SBP acted swiftly to contain the economic and macro-prudential risks associated with the pandemic. Broadly, SBP took the following measures:

- SBP adopted a quite proactive approach in assessing the evolving situation around the globe and within the country. It did extensive discussions with the banking industry through both formal and informal channels and engaged other stakeholders for understanding the issues and challenges and the extent of impact on the banking customers. Besides, **a number of surveys** were conducted that provided timely assessment of vulnerabilities associated with the pandemic and helped in formulation and recalibration of relevant policy responses.
- **Aggressive monetary easing** with a 625 bps cut in policy rate during March 17-June 25, 2020 to ease the financial burden on economic agents. As a result, it reduced interest cost of around PKR 470 billion.
- **Macro prudential** measures to support the solvency of borrowers and preserve and to enhance the capital position of banks so as to maintain the flow of credit in the economy.
- Commencement of **various concessionary financing schemes** such as Rozgar scheme (to support employment), Temporary Economic Refinance Facility (to promote new investments and BMR), and Refinance Facility for Combating COVID-19 (to enhance the capacity of health sector). Also, financing limits under existing concessionary refinance schemes (EFS, LTFF) were enhanced. Moreover, to support the provision of Rozgar Scheme credit to priority sectors, credit guarantee scheme for SMEs was introduced in cooperation with the federal government.
- Measures to ensure **continuity of financial services** and promote the use of safe modes of financial services including digitization of financial services.

The estimated financial impact under these measures was equivalent to 5 percent of GDP.

[81] IMF (2021). Global Financial Stability Report. *October*

Moreover, it is noteworthy that above measures were taken to address liquidity stress, avoid insolvencies and to support economic recovery. Afterwards, SBP moved towards normalization in the wake of robust recovery, higher international commodity prices and inflationary pressures along with ebbing impact of the pandemic waves and effective handling of the pandemic. For instance, policy rate was increased by 275 bps to 9.75 percent[82] as well as macroprudential measures were enacted to curb auto financing during CY21.

SBP's policies had material macro-financial impact...

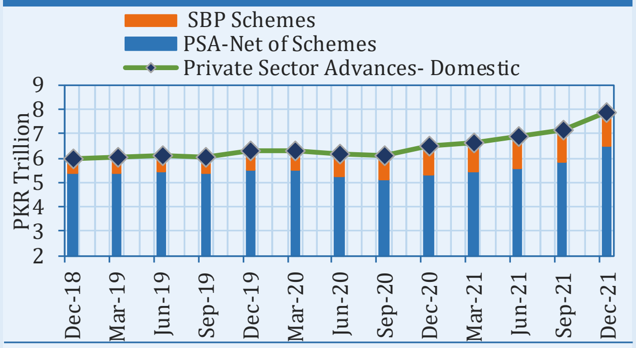
SBP policy measures helped lessen the intensity of pandemic shock. For example, effective communication strategy helped calm the market during the elevated stress phase of the outbreak. Under loans deferment/restructuring scheme, PKR 911 billion worth of loans were deferred/restructured. Counterfactual analysis reveals that there could have been a steep rise in banks' NPLs had the deferral on principal and rescheduling/ restructuring not been allowed. Assuming complete losses against the loans deferred and restructured/rescheduled, gross NLP ratio could have risen to 18.2 percent (against 9.2 percent recorded at end Dec-20) — still well below the estimated critical level of this infection ratio. Similarly, CAR could have declined to 15.7 percent (18.3 percent recorded at end Dec-20), and banks might have experienced negative pre-tax profitability of PKR 227 billion in CY20. These estimated negative results had the strong potential to spark systemic risk of pro-cyclicality between deterioration in banks' solvency and contraction of credit.

Besides, financing under Rozgar scheme—amounting to PKR 212 billion—helped prevented lay-off of 1.7 million employees including 383 thousands employees of SMEs and small corporates. Moreover, various economic sectors including textiles, cement, and auto availed substantial financing of PKR 283 billion under TERF for capacity expansion. In addition, the spillover impact of disbursements under TERF—in the form of additional working capital financing—have started to materialize and is likely to be seen further going forward.

It is noteworthy that **PSA** remained under stress during CY20 owing to the pandemic. However, SBP schemes introduced during the pandemic played a major role in supporting PSA (**Chart 3.3.1)**. Encouragingly, asset quality indicators also continued to improve manifesting the conducive role of SBP actions to support borrowers' solvency and stimulate economic activity (**Chart 3.3.2**).

On digitization front, SBP policy drive to waive the bank charges on online transactions commonly known as Inter Bank Funds Transfers (**IBFT**) fee and moral suasion to banks to promote the use of digital finance led to significant increase in the use of digital banking services. However, this measure was revised in the month of Jun-21, withdrawing fee waiver for transactions exceeding PKR 25,000 per month per account. During CY21, E-banking transactions increased by 40.5 percent (YoY basis).

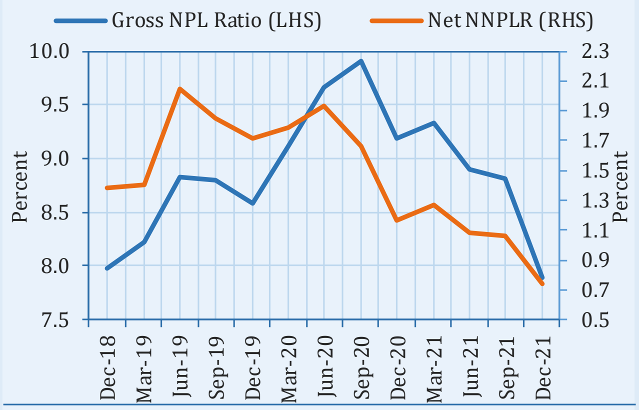
Chart 3.3.1: Bifurcation of Outstanding Domestic Private Sector Advances (PSA)



Source: SBP

[82] Policy rate increased by a cumulative 400 bps to 13.75 percent after review period up till May CY22.

Chart 3.3.2: Asset quality continued to improve



Source: SBP

Pandemic shock has introduced valuable lessons...

While the COVID-19 pandemic is not yet over, its shock has revealed certain lessons for financial system regulators and central banks across the globe. As a way forward, these lessons can help in dealing with any resurgence in the pandemic as well as any other similar stress situation.

The COVID-19 crisis has affirmed the significance of a resilient financial system especially the banking sector of the economy the pandemic posed some serious stability challenges for the banking sector. However, due to the resilience built over the years in the form of capital and liquidity buffers under the Basel framework and operational capabilities, the banking sector has largely emerged as a part of solution against the pandemic.

An associated lesson to financial system resilience is the need to regularly assess the supervisory, regulatory and legal frameworks in terms of the international standards and best practices to identify gaps for possible improvements.

The crisis has revealed that timely and targeted actions coupled with effective signaling proved key to navigating through uncertainty. Moreover, active coordination with industry and candid communication is pivotal for successful policy interventions.

Also, for devising and executing effective policy interventions, availability of adequately detailed and high frequency data with minimum lag is an important element. A related lesson is that it is also important to identify the relevant facts and understand how they are interconnected. Moreover, the flexibility on the part of policy makers is essential so that they must be prepared to adjust their views and actions as underlying facts change amid imperfect information.

In the wake of pandemic, the emphasis has emerged on a balanced policy mix (e.g. monetary, macroprudential and fiscal policies) to mitigate the risks.

Since pandemic has accelerated the pace of digitization across the world, cybersecurity risks have also risen in tandem. Accordingly, financial institutions need to enhance resilience by investing more in IT and human resources.

The crisis has underscored the significance of banks' Business Continuity Plan (**BCP**). Banks need to regularly update their BCP and also incorporate novel risks like pandemic scenarios in their plans.

The pandemic has not just posed challenges, it has offered opportunities to enhance the outreach of financial services as customers have become more receptive to innovative digital finance products. This change in paradigm is helpful in triggering the financial inclusion and quality and efficiency of financial services.

Finally, there is a need to proactively monitor the emerging situation and remain flexible in its response to challenges of the pandemic vis-à-vis macroeconomic dynamics. Further, a vast body of experience available domestically and elsewhere can be helpful should such a stressful situation occur in future.

Chapter 4: Resilience of the Banking Sector under Adverse Conditions

The stress scenario used in this assessment is not a forecast of macroeconomic and financial conditions. It is a hypothetical, coherent tail-risk setting designed specifically to assess the resilience of the banking sector to hypothesized deterioration in macroeconomic conditions. Under the baseline scenario (business as usual), the solvency level of banking sector remains stable and well above the domestic regulatory benchmark over three-year horizon. Under a more adverse scenario as well, the banking sector is expected to comfortably maintain its solvency against a downturn induced by adverse macroeconomic conditions associated with severe pressures in the global commodity prices, recurrence of extreme weather conditions such as flood and droughts and any assumed disruptions to the IMF program. In terms of size, the large banks with a potential to cause systemic disruptions carry sufficiently higher capital buffers and are expected to sustain the impact of the shocks over the assessment horizon. Similarly, the medium and small sized banks are also expected to remain resilient to the shocks. Under baseline, the credit is projected to grow at a decent average rate of 14 percent. However, under stress scenario, the credit growth decelerates but remains positive, averaging 12 percent but falling to 7 percent in third year. Therefore, the banking sector, with adequate capital buffers, is expected to continue catering to the credit needs of the economy in both the baseline and stressed conditions. That said, the exact severity, duration and path of the current and assumed global commodity market upheavals due to adverse geopolitical tensions remain highly uncertain. As a result, the stress-test results are also subject to a significant uncertainty. SBP, on its part, continues to closely watch the evolving situation and shall remain ready to take whatever actions necessary to safeguard financial stability.

4.1 Background

The banking sector provides the needed grease in the form of credit to run the engines of economy. However, during stressed periods when the sector suffers losses and the capital buffers shrink, the lending is also curtailed, which further amplifies the adverse economic impacts.[83] The feedbacks between the real and financial sectors have been most prominently highlighted by the **GFC** of 2007-08. Since then, supervisors have enhanced the level of oversight of the financial sector and have taken measures to strengthen the resilience of the sector to withstand shocks transmitting from the economy. At the same time, stress-testing frameworks are also being extensively used by supervisory authorities as well as multilateral agencies to assess the resilience of the banking sector to certain hypothetical adverse yet plausible event(s). The results of these stress tests depict the *projected* behavior of macro-financial variables and health of the banking sector under the different *assumed* scenarios.

SBP has been conducting this exercise internally on a quarterly basis since 2005. For external stakeholders, detailed stress-testing results and

[83] See e.g., (1) Aizenman, J., Pinto, B., & Sushko, V. (2013). Financial sector ups and downs and the real sector in the open economy: Up by the stairs, down by the parachute. *Emerging Markets Review*, *16*, 1-30.
(2) Peek, J., Rosengren, E. S., & Tootell, G. M. (2003). Identifying the macroeconomic effect of loan supply shocks. *Journal of Money, Credit and Banking*, 931-946.
(3) Jokipii, T., & Monnin, P. (2013). The impact of banking sector stability on the real economy. *Journal of International Money and Finance*, *32*, 1-16.

assessments are being published annually in the FSRs since 2007-08 and quarterly results are also shared via Quarterly Compendium: Statistics of Banking System. The stress-testing framework at SBP is being continuously revamped and strengthened. Besides, for the institutions falling under its supervisory ambit, SBP has also issued a comprehensive set of stress testing guideline for conventional bank, Islamic banks, Islamic branches of conventional banks, DFIs and MFBs. The guidelines require these institutions to assess their resilience on regular basis.[84] Importantly, the sample of **D-SIBs** are now required to conduct macro-stress testing under various scenarios to gauge their level of resilience to shocks.

4.2 Overview of Scenario Design

The current year's stress testing exercise consists of assessment of resilience of the sector under *baseline* and *hypothetical stressed* scenarios. Both scenarios are built on the basis of key internal and external risk factors including domestic future waves of pandemic, extreme weather conditions, evolving political dynamics, intensified geopolitical tensions leading to higher commodity prices, risks to possible continuation of IMF program, rising debt levels and tightening global financial conditions. The two scenarios differ in terms of assumptions regarding materialization and intensity of risk factors.

The *baseline scenario* traces the path of macro-financial variables under the current dynamics of the global and domestic economy.[85] On the other hand, the hypothetical *stress* scenario assumes recession on the back of vaccine-resistant variants, extreme weather conditions causing floods and droughts, elevated international commodity prices led by intensified geopolitical tensions (Russia-Ukraine war) and domestic political uncertainty.[86]

Against the backdrop of economic challenges, the impact of both scenarios for the domestic macro-financial stability is investigated over the projection horizon of next three years: Q1CY22 to Q4CY24.

The implications of assumed changes in macroeconomic indicators such as output, inflation, interest rate, current account balance and exchange rate on the health of the banking sector have been captured via non-performing loans, profitability and capital adequacy. Specifically, the assumed economic downturn can negatively influence the income levels of firms and households, affecting their debt servicing capacity and amplifying the credit risk for the banks. This in turn may put adverse pressures on the profitability of banks and negatively affect their solvency.

The feedback effects of weakened solvency of banks could spill over to the real economy, as the banks may be reluctant to provide credit for even potentially profitable investment opportunities, thus amplifying the economic downturn.

In both the scenarios, a similar methodology has been employed to evaluate the resilience of the banking sector and capture the inter-linkages among various sectors of the macro economy.

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[84] Recent review and enhancement in the stress testing guidelines has been made in September 2020 (FSD Circular No 01 of 2020).
[85] For a detailed discussion of key issues relevant to global and domestic economic environment, please see Chapter 01.
[86] Usually three types of shocks are considered in stress testing based on the length of the shock events i.e. V-shaped, L-shaped and U-shaped. The shapes are envisaged in terms of recovery. V-shaped assumes quick recovery; L-shape assumes protracted downturn while U-shaped assumes recovery towards the end of projection horizon. Under this terminology, stressed scenario is assumed to be L-shaped with slight recovery towards the end of projected period. Owing to high level of severity in the stressed scenario, recovery takes a longer time compared with the baseline scenario.

Given the interaction between real and financial sectors, a suite of vector autoregressive (**VAR**) and Bayesian VAR models has been employed.[87,88]

In terms of risk coverage, the resilience of the banking sector has been assessed against credit, market (interest rate and exchange rate) and operational risks. In addition to the aggregate assessment, cross-sectional heterogeneity has also been captured for the different segments of the banking industry in terms of size, i.e., small, medium and large banks.

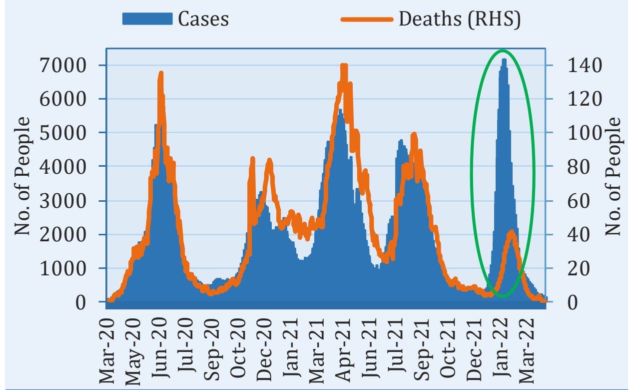
4.3 Baseline Scenario

The baseline scenario, *Scenario 0 - S0*, is built around three assumptions regarding global and domestic risk factors.

COVID-19 is likely to remain contained in terms of transmission and economic impact

First, assuming a low probability of new vaccine-resistant variants, COVID-19 is likely to remain contained in global and domestic setting. Moreover, enhancement in the testing capacity and increased vaccination rate (**Chart 1.11**) over the last two years have already brought down death rate in the country. During the recent wave that started in Jan-22, the death rate remained much lower relative to previous waves (**Chart 4.1**).

Chart 4.1: Daily Covid-19 confirmed cases and deaths



Source: Our World in Data

Global commodity prices are expected to remain elevated in near term before gradually declining by the end of assessment horizon

Chart 4.2: Commodity prices Index

Source: IMF

Second, the global recession caused by the pandemic in early 2020 led to a widespread fall in commodity prices. This fall was followed by a synchronized sharp rebound in prices starting in Apr-20 **(Chart 4.2)**. The oil prices increased primarily due to a quick recovery in demand, the disruptions in supply chain due to COVID and, more recently, due to geopolitical tensions in Eastern Europe.[89] According to the latest forecast

[87] For details, please see *'Box 4.1 Technical Details'* of Chapter 4: Resilience of the Banking Sector, Financial Stability Review 2016, SBP.

[88] One fifth of the authorities use VARs for macro stress testing. Bank for International Settlements (BIS) 2017. *Supervisory and Bank Stress Testing: A Range of Practices*, (December).

[89] World Economic Forum (2022). Why do oil prices matter to the global economy? An expert explains. *Cologny,*

of U.S Energy Information Administration (**EIA**), Brent oil prices may average USD102 per barrel in H2CY22 and may fall to USD 93 per barrel in CY23.[90] Based on oil futures, *S0* therefore assumes a gradual decline to USD 80 per barrel by the end of projection horizon, i.e., Q4CY24.

Domestic political environment is likely to remain stable, allowing successful implementation of reforms under IMF's EFF program

Third, after recent change of government in Apr-22, domestic political situation is likely to stabilize, allowing successful implementation of needed reforms under IMF's **EFF**. Against this backdrop, fiscal policy measures to contain energy sector subsidies may, however, push inflation up. On the other hand, recent monetary authority's measures are likely to moderate growth momentum as well. On positive side, successful implementation of reforms is likely to keep twin deficits and public debt under check while boosting investors' confidence.

Apart from the three major assumptions mentioned above, *S0* also incorporates impacts of reversal of monetary policy in advanced economies, but assumes availability of external financing avenues.

In this perspective, *S0* assumes GDP to grow by around six percent in FY22. However, growth is expected to slowdown in FY23 on account of assumed stabilization measures before regaining upward trajectory in FY24. Further, CPI inflation may stay at elevated levels during FY22 and FY23 before moderating during FY24.

Switzerland, February. Weforum.org. Accessed on May 1, 2022

[90] Energy Information Administration (2022). Short-Term Energy Outlook. *United States, April.* Accessed on May 27, 2022

4.4 Hypothetical Stressed Scenario

The stress scenario, *Scenario 1 - S1*, is built around following assumptions regarding global and domestic risk factors.

With a rise in geopolitical tensions, global commodity prices may soar up further

While *S0* assumes a gradual decline in global commodity prices, *S1* assumes the opposite. The ongoing Russia-Ukraine war and the resulting sanctions on Russia – the third largest oil exporter— may lead to disruptions in supply in world oil markets. Resultantly, *S1* assumes that the oil prices may rise to USD 130 per barrel by the end of CY22 before gradually declining to USD 110 per barrel by end of CY24. Additionally, Russia and Ukraine being major wheat suppliers, the supply disruptions may result in a rise in global wheat prices, which may also affect the domestic economy negatively.

A rise in domestic political uncertainty may also involve adverse economic impacts…

S1 incorporates the impact of a rise in domestic political uncertainty that can negatively affect domestic economy in several ways. First, it may dampen investor and consumer sentiments, thereby deteriorating aggregate demand, output and employment. Second, it may push up Pakistan's risk premium, making access to external financing costlier and more difficult. Finally, it may lead to a compromise on reform agenda agreed under IMF's EFF program.

Global financial conditions may tighten

Despite rising inflation in advanced economies and emerging markets (**Chart 1.4**), the global financial conditions remained accommodative until Dec-21. However, driven by persistently rising inflationary pressures and Ukraine-Russia conflict, Global Financial Conditions Index have lately been showing a tightening trend since Mar-22 (**Chart 4.3**). Additionally, the Federal Reserve increased policy rate by 25 bps and signaled multiple rate hikes during 2022 at its meeting in Mar-22.[91] *S1*, thus, also assumes that financial conditions will continue to tighten in the near term, making external financing for emerging markets more expensive.

Chart 4.3: Goldman Sachs Global Financial Conditions

Source: Bloomberg

Extreme weather conditions pose a risk to macro-financial stability

Global warming and the consequent climate change have been postulated to lead to extreme weather conditions causing droughts, floods, famine and cyclones. Historically, Pakistan has been a victim of a series of extreme weather related catastrophes such as, severe droughts (1998-2002), massive flooding (2010, 2020), extreme heat waves (2015), heavy rainfalls (2020), land sliding and glacier melting. These episodes have resulted in significant supply shocks and output losses.

Even though Pakistan does not rank as a top emitter of greenhouse gases, it has remained 8th most affected country by climate changes in terms of human and output losses. According to Long-Term Climate Risk Index (**CRI**) 2021, during last two decades (2000-2019), Pakistan experienced 173 climate related extreme events. It has thus been included in the category of countries that are recurrently affected by the catastrophes and continues to be ranked among the most affected countries both in the long-term index and in the index for each respective year. On production side, around one-fifth of the domestic production is directly contributed by agriculture sector. Further, the sector's interlinkages with industry and services sectors make it a key driver of the overall economic growth. However, agriculture sector is highly prone to global warming and natural calamities such as periodic floods, droughts, extreme temperatures and untimely heavy rainfalls.

Amid this backdrop, the adverse scenario (S1) assumes occurrence of extreme weather conditions during initial years of projection horizon alongside international commodity price pressures in the wake of intensifying geopolitical tensions. Consequently, the real growth is assumed to fall to around one percent in FY23 from around six percent in FY22. Growth is assumed to show a mild recovery in FY24. Under S1 the supply shocks are assumed to push inflation higher to around 12 percent in FY22 and 17.5 percent in FY23 before expected moderation to 13.9 percent in FY24.

4.5 Stress Testing Results: System Level

a) Impact on Credit Riskiness

The results of the stress test exercise indicate that the **GNPLR**, under *S0* is likely to remain on

[91] World Bank Global Monthly Newsletter – March 2022 issue

higher side over the three-year projection horizon, given slow recovery in domestic demand, reconciled supply conditions and fiscal consolidation under IMF-EFF stabilization program (**Chart 4.4**). The lending portfolio of banking sector may expand, on average, by around 14.37 percent over the projection period.

The GNPLR attains the peak of 12.43 percent and settles at 11.60 percent by the end of projection period CY24. This projection is 371 bps above than the recorded level of 7.89 percent as of end CY21. This is mainly in line with our assessment of the domestic economy, where gradual recovery in identified macroeconomic indicators may imply the slight buildup of the credit risk in the banking sector. A reasonable but decelerating growth in its denominator i.e. advances, also explains relatively higher GNPLR.

Chart 4.4: System-Level GNPLR

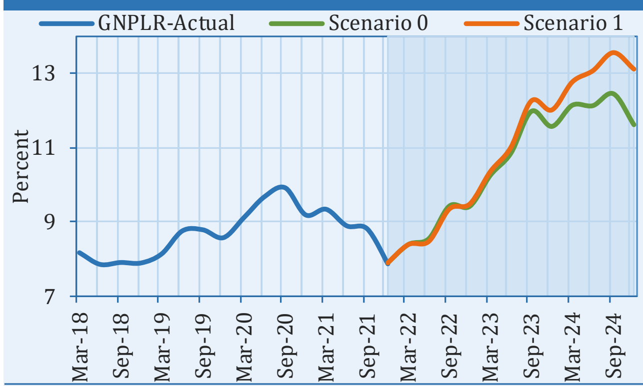
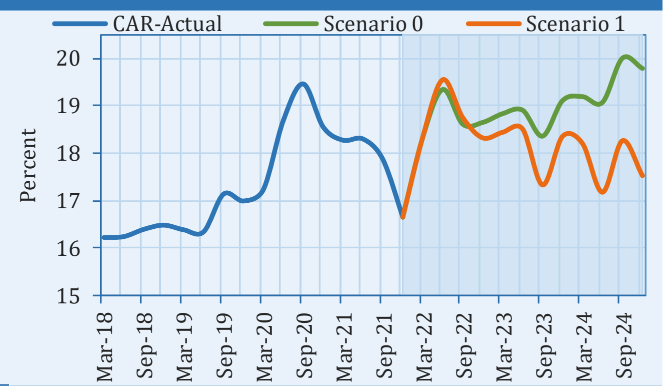


Chart 4.5: System-Level CAR



Source: SBP Estimates

The asset quality indicator, under hypothetical scenario, *S1*, on the other hand, follows an upward trajectory because of the assumed sharp slowdown amid elevated global commodity prices and domestic supply shocks, which may also significantly affect the credit supply of the banking system. Under *S1*, growth of lending portfolio is projected to decelerate to an average of 11.8 percent over the projection period, while the delinquency rate peaks at 13.56 percent before settling at 13.12 percent by the end of projection horizon (**Chart 4.4**).

b) Impact on Solvency

The impact on solvency is measured via the **CAR** of the banking system. As explained in the scenario design, besides credit risk, two other risks are likely to have an impact on solvency: market risk, realized via movements in interest and exchange rates, as well as operational risk. These three risks, therefore, have also been factored in while analyzing the impact of each scenario on capital as well as risk-weighted assets. Under the baseline scenario, the CAR of the banking system increases by 313 bps by Q4CY24 from the prevailing level of 16.7 percent. The major impact comes from the favorable gaps in risk sensitive assets and liabilities, which result in plough back of profits in the capital (**Chart 4.5**). However, in stress scenario the CAR remains higher than the current level, but 226 bps below the baseline.

Under both the scenarios, the banking industry maintains its CAR above the local minimum regulatory requirement of 11.5 percent and global benchmark of 10 percent during the entire period of projection horizon.

The resilience of the banking sector, despite substantial level of assumed slowdown in real economy, can be justified based on following facts. First, the banking sector is maintaining sufficiently higher capital buffers than the required regulatory benchmark of 11.5 percent. Second, the release of 100 bps capital conservation buffer during COVID-19 has not been reversed yet, which gives banks additional liquidity. Third, favorable overall repricing gaps amidst policy rate movements provide further cushion during the times of stress as the sector aggressively re-balances portfolio from riskier private sector loans to risk-free treasury investments. Finally, reasonably high credit growth even during stress period also supports the profitability and hence the capital. Moreover, the banks in general follow a conservative lending strategy and prefer to lend to borrowers with better credit worthiness as well as the capacity to withstand macroeconomic shocks.

4.6 Stress Testing Results – Banking Segments

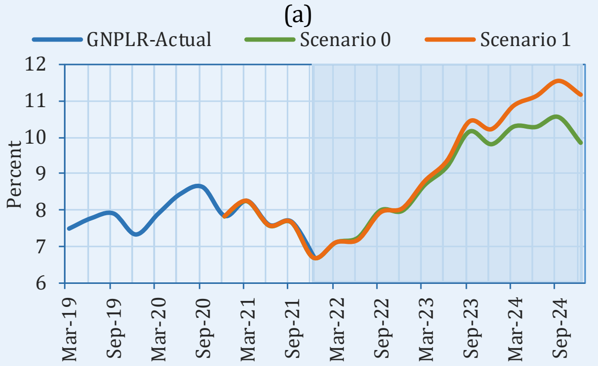
In line with the system-level credit risk analysis, infection ratios of banking segments (small, medium and large sized banks)[92] have also been projected. This aspect of the banking industry is included to assess how cross-sectional heterogeneity affects the resilience of banks against various macroeconomic risks.

For GNPLR, system-level projections of non-performing loans and gross advances are distributed proportionately based on the contribution of each segment to the loan portfolio of the entire banking system as of Dec-21. Similarly, capital is also distributed proportionately to compute segment level CARs.

[92] The categorization has been done based on balance sheet footing. The banks with assets above 70th percentile of the entire banking sector are termed as 'Large' while below 30th percentile are categorized as 'Small'. The banks falling in between these two thresholds are categorized as 'Medium' sized banks.

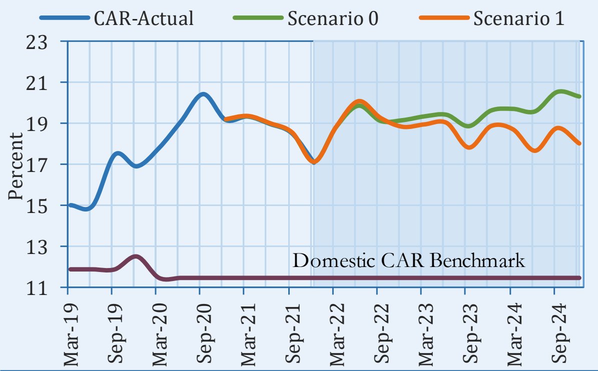
Chart 4.6: GNPLR and CAR: Large Banks

(a)



Source: SBP Estimates

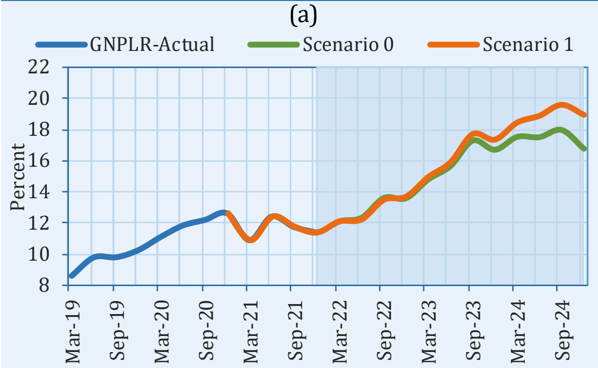
(b)



Source: SBP Estimates

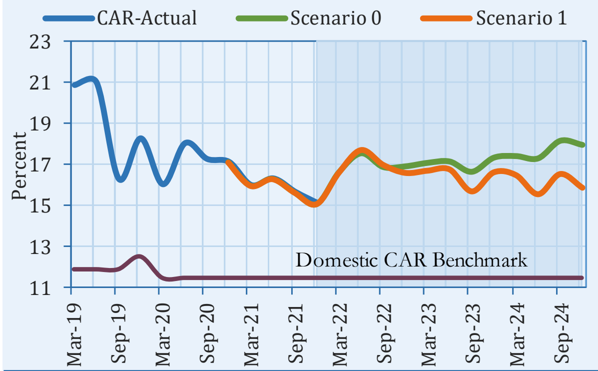
Chart 4.7: GNPLR and CAR: Medium-sized Banks

(a)



Source: SBP Estimates

(b)



Source: SBP Estimates

(a) Large Banks

The large banks segment - comprising 78.65 percent of the banking system – under *S0* witnesses an increase of 316 bps in GNPLR by the end of CY24 from its current level of 6.71 percent. Under stress (S1), however, the infection ratio rises by 445 bps by the end of projection horizon. The CAR also increases by 322 bps and 89 bps in the baseline and stress scenarios from the prevailing level of 17.11 percent over similar horizon (**Chart 4.6**), respectively. The CAR remains a hefty 883 bps higher than the local benchmark in *S0* while staying 650 bps above the minimum requirement under *S1*.

The large banks are generally well-placed to withstand stress over the simulation horizon (**Chart 4.6 (b)**). Sufficiently higher capital buffers available with larger banks are a likely factor behind this resilience. More importantly, the systemically important banks are also likely to remain well-capitalized and resilient to the shocks assumed in stress scenario.

(b) Medium-sized Banks

By the end of the projection period, the GNPLR of medium-sized banks (asset share 17.33 percent) increases by 535 bps and 754 bps in *S0* and *S1,* respectively, from existing 11.37 percent. The CAR, correspondingly, attains 284 bps and 79 bps higher levels under the two scenarios compared with prevailing reading of 15.10 percent. The medium-sized banks are, therefore, also expected to remain compliant to the regulatory CAR standards, even under the stress scenario (**Chart 4.7**).

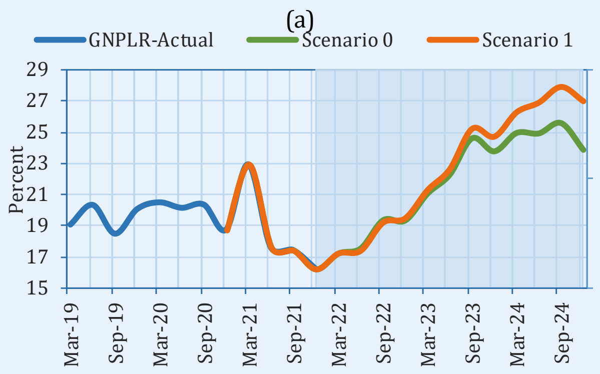
Their level of CAR remains 644 bps and 439 bps percentage points above the minimum regulatory requirement (11.5 percent) in *S0* and *S1*, respectively (**Chart 4.7 (b)**). Though their delinquency ratios are higher and pre-shock capital buffers are lower than the large banks segment, this segment carry sufficient capital buffers and have the ability to withstand the assumed shocks under stress scenario.

(c) Small Banks

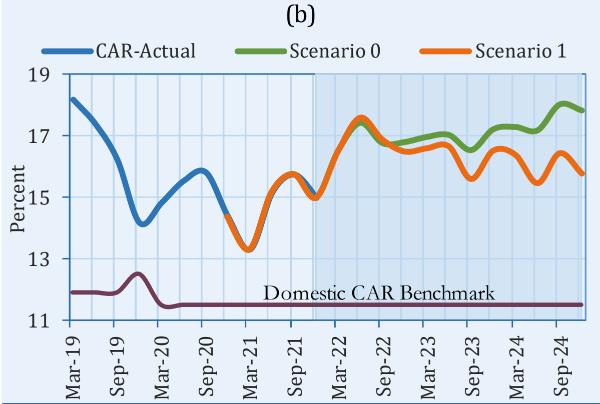
Small banks – constituting 4.02 percent of the banking system – are also found to be resilient against both scenarios. From its existing level of 16.22 percent, the loan delinquency rate of small banks increases by 764 bps in *S0*, whereas it rises by 1076 bps under *S1*, by the end of three-year horizon (**Chart 4.8 (a)**). This is the highest level of infections in any segment of banks under stress scenario.

Since small banks have comparatively lower lending exposure, the assumed increase in delinquencies does not have significant impact on their CAR, which rises by 282 bps in *S0* and 78 bps under *S1* from the prevailing 15.01 percent (**Chart 4.8 (a)**). Over the period of time, this segment has strengthened its resilience by substantially building the capital adequacy levels.

Chart 4.8: GNPLR and CAR: Small Banks



Source: SBP Estimates



Source: SBP Estimates

Overall, under the baseline scenario, the solvency of the banking sector portrays an encouraging picture with the delinquency ratio mostly hovering between 8-10 percent (current level 7.9 percent) with capital adequacy staying well above the domestic regulatory benchmark. Under the hypothetical stress scenario as well, the banking sector is expected to withstand a severe slowdown induced by adverse global and domestic macroeconomic conditions, including the global commodity market pressures. In terms of size, all the segments (small, medium and large) can withstand the stress conditions as well. Reassuringly, the large size banks whose stability has particular significance for economy and financial system, carry sufficiently higher capital buffers and are thus able to sustain the impact of hypothesized shocks for projection period of three years. Also, other two segments of banks never breach the solvency criteria during the projection horizon. If history is any guide, the domestic banking sector has generally performed quite well even during the severe downturns, e.g., external sector crises in 2008 and COVID-19 pandemic. This is clearly visible in the results of the stressed scenario (*S1*), as the sector remains well capitalized and resilient.

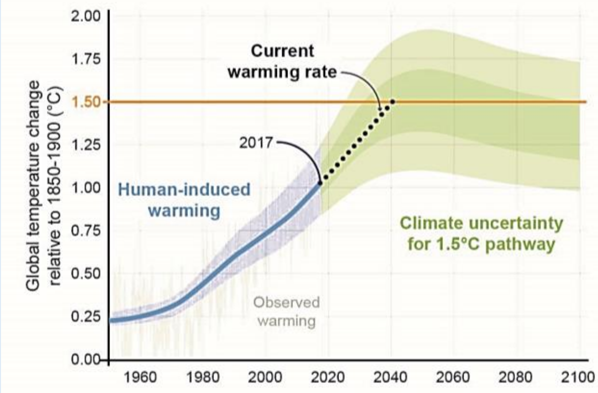
That said, the exact severity, duration and path of the current and assumed global commodity market upheaval due to adverse geopolitical tensions remains highly uncertain. As a result, the stress-test results are also subject to a significant uncertainty. SBP, on its part, continues to closely watch the evolving situation and remains ready to take necessary actions for safeguarding the financial stability.

Box 4.1 Climate Change and Financial Stability

Climate change is one of the greatest challenges faced by the world today; its implications embrace all spheres of human life including physical wellbeing and very survival of humanity as well as the economic and financial stability of nation states. Developing countries are more vulnerable to climate change and they could further be affected as they lack the capacity and technical infrastructure to cope with this threat. Adverse weather phenomena is a direct threat to financial stability as it causes destruction in business sectors to which banks are exposed such as agriculture, or the transition to a low-carbon economy could also impact certain economic sectors such as fossil fuel companies, energy-intensive sectors, utilities, transport and building companies. Banks therefore need to take adequate action to manage their exposures to such sectors. Many economists have also maintained that climate change will have direct consequences for macroeconomic stability through its impact on different sectors, e.g. food and energy prices. These factors will directly influence price stability, and therefore they warrant deliberation by central banks when considering long-term inflation.

The Earth is now in a period of rapid climate change, with global temperatures rising because of increase in greenhouse gas (**GHG**) emissions[93] caused by human activities. According to the report by Intergovernmental Panel on Climate Change (**IPCC**), the human-induced warming has already reached about 1.0°C above pre-industrial levels[94], and at the current warming rate, it is expected to reach the level of 1.5°C[95] in around 2040[96] (Chart 4.1.1). The IPCC report also highlighted that for the past 50 years most regions have been warming faster than the global average and many have already exceeded 1.5°C above pre-industrial levels. Over 20 percent of the global population live in regions that have already experienced warming that is greater than 1.5°C above pre-industrial levels (in at least one season).

Chart 4.1.1: Global Temperature Change relative to 18500-1900 (°C)



Source: IPCC Special Report Global Warming of 1.5C (SRIS - 2018)

Since climate change has direct consequences for macroeconomic and financial stability through its impact on different sectors, e.g. food and energy prices, performance of businesses, as well as soundness of the financial institutions, central banks needs to consider the climate change as a key factor in their long-term planning on inflation[97] and financial stability. Moreover, financial institutions need to take adequate set of actions to manage their exposures to sectors exposed to the climate

[93] A GHG is any gas in the atmosphere that absorbs and re-emits heat, and thereby keeps the planet's atmosphere warmer than it otherwise would be.
[94] The period 1850–1900 represents pre-industrial temperature because it is the earliest period with near-global observations and is the reference period used as an approximation by the experts.
[95] The 1.5°C target is an average of the rise in global temperatures. While different countries are warming at different rates and may fall below or above the target, the target is an ***average across the world***.
[96] FAQ Chapter 1 — Global Warming of 1.5 ºC (ipcc.ch). Accessed on April 30, 2022
[97] On The Role of Central Banks in Enhancing Green Financing - UNEP Inquiry Working Paper 17/01 (2017)

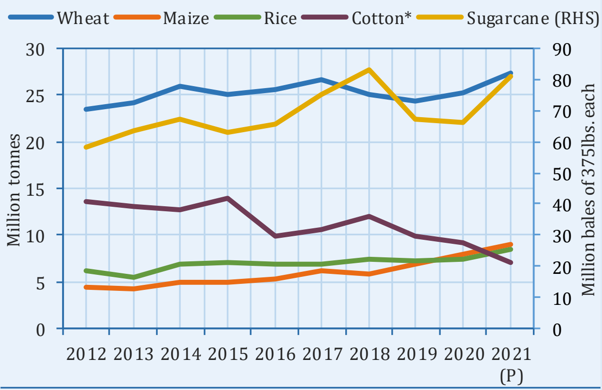
change and also adopt the lending and business practices which are environment friendly.

Climate Change and Pakistan – the country is one of the most vulnerable countries…

Although Pakistan contributes less than 1% to global emissions, yet it is one of the 10 most vulnerable countries because of its topography and geography.[98] Pakistan is ranked 151st on the ND-GAIN Country Index that ranks 182 countries using a score which calculates a country's vulnerability to climate change and other global challenges as well as their readiness to improve resilience. The country has faced catastrophic floods, droughts, and cyclones in recent years that have killed and displaced thousands, destroyed livelihoods, and damaged infrastructure and assets.

According to Pakistan Bureau of Statistics, agriculture contributes about one fifth of **GDP** and accounts for around 38 percent of employed labor force.[99] In the past few years multiple factors including climate related physical events such as floods and droughts have adversely affected the crops production with no major growth in the output (**Chart 4.1.2**).

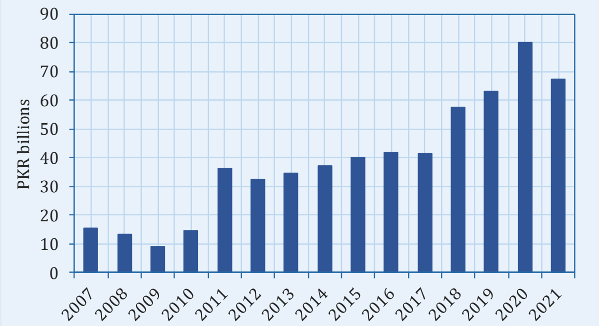
Chart 4.1.2: Production of Important Crops



Source: Pakistan Bureau of Statistics

The floods and droughts either completely damage the crops or affect their production as well as the processes of the dependent sectors which impact the borrowers' ability to pay their debts. This inter alia is also result in an increase in non-performing loans (**Chart 4.1.3).**

Chart 4.1.3: Agribusiness Non-Performing Loans



Source: SBP

Though agri-related loans constitute only 8.1 percent of the total exposure of financial institutions, , on average (CY19-CY21, the agri-dependent sectors such as textile, sugar and leather combined account for 17.8 percent of the entire loans portfolio and 28.2 percent of total NPLs, on average (CY19-CY21). Agriculture has significant forward and backward linkages with the manufacturing and service sector. It provides inputs for food processing and textile industries, conversely the industrial sector provides inputs like pesticides, machinery, fertilizers to the agricultural sector. As such, all sectors in turn have further high linkages with the rest of the domestic economy.

According to Asian Development Bank, Pakistan's annual mean temperature has increased by roughly 0.5°C in the last 50 years **(Chart 4.1.4)**, and the number of heat wave days per year has increased nearly fivefold in the last 30 years (Chaudhry, 2017).[100]

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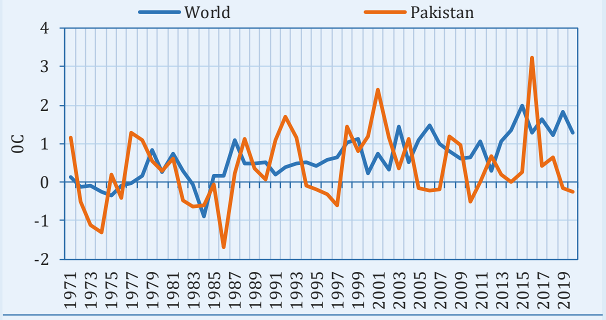
[98] Germanwatch. Accessed on March 31, 2022
[99] PBS' Labor Force Survey - Percentage Distribution of Employed Persons 10 Years of Age and Over by Major Industry Division, Occupation Groups and Sex 2020-21. Accessed on May 15, 2022
[100] Chaudhry, Qamar uz Zaman (2017); Climate Change Profile of Pakistan (ADB)

Chart 4.1.4: Mean Surface Temperature Change



Source: Food and Agriculture Organization Annual Mean Global Surface

The sea level along the Karachi coast has risen approximately 10 centimeters during the last 100 years, and it is likely to rise by a further 60 centimeters in the next 80 years. These fundamental climate change events have led to decline in agricultural land per capita, soil erosion, abnormal rainfalls and pest attacks (Ali et al, 2017).[101] Further, under future climate change scenarios Pakistan may experience increased variability of river flows due to increased variations in precipitation and the melting of glaciers. Demand for irrigation water may increase due to higher evaporation rates, and lack of water availability may result in decline in production of wheat and basmati rice. Pertinent to note that per capita water availability in Pakistan has reduced significantly from over 5,260 cubic meters per person per year in 1951 to 935 cubic meters per person in 2021.[102] The hydropower generation may also decline due to less water. On the other hand, demand for energy may rise due to increased air conditioning requirements, construction and chemical & metal industries. Increased air conditioning may, in turn, further increase average temperatures in Pakistan going forward.

Climate change impacts the businesses and soundness of financial institutions through two channels i.e. physical damages to assets and the impacts of transition to new technologies…

a) Physical Risks arises from the damages to the assets of economic agents due to severe weather events like torrential rains, floods, drought and other natural disasters. Damages in turn can incur losses on financial institutions such as banks, insurance companies, and other financial intermediaries. The mortgage, commercial real estate, business, and agricultural loans are prone to severe weather events and other environmental changes. Climate change events could decrease the value of damaged assets and put a pressure on borrowers' ability to repay—leading to defaults and losses on credit portfolios. This risk further increases where these same assets are used as collateral to secure the credit exposure of the financial institutions. Stress at a systemically important financial institution or correlated strain across smaller institutions could transmit the pressure throughout the financial system.

According to the Global Climate Risk Index annual report for 2021, Pakistan has lost 0.52 percent per unit GDP, suffered economic losses worth US$ 3772 million and witnessed 173 extreme weather events from 2000 to 2019.[103] Insurance companies are also most directly exposed to the physical risks of climate change due to the fact that their main business line requires them to guarantee losses on physical assets and property. Although insurance sector of Pakistan has one of the lower overall penetration in the region i.e. less than 1 percent of GDP, it still remains vulnerable to the climate change risk. Stress at a major insurance company due to an unexpected climate shock

[101] Foods | Free Full-Text | Climate Change and Its Impact on the Yield of Major Food Crops: Evidence from Pakistan (mdpi.com). Accessed on March 31, 2022
[102] Water proceeding Book August 2021.pdf (pcrwr.gov.pk). Accessed on March 31, 2022
[103] Global Climate Risk Index 2021 - World | ReliefWeb. Accessed on March 31, 2022

has the potential to transmit to other financial institutions.

b) Transition Risks are posed by changes in public policy (e.g. carbon tax[104]), technology, and investor and consumer sentiment towards greener environment necessary for transition to an ecofriendly economy. The transition will consequently lead to decline in the value of the carbon-sensitive assets and thus placing losses on the investors and financial intermediaries holding them. Losses could cascade throughout the financial system, creating instability and leading to severe knock-on effects to the real economy. This sudden drop in asset prices, triggered by the bursting of the carbon-price bubble, can have implications for overall financial stability.

Changes in regulatory policies, technology and customers' preferences drive the financial risks…

Regulatory Policies aimed at transition towards green economy may affect the corporations through changes in their production, sales and profitability, subsequently affecting creditworthiness of the firms. Empirical evidence suggests that following the 2015 Paris Agreement the firms with "high carbon footprints tend to have lower credit ratings and higher yield spreads, particularly when located in a state with stricter regulatory enforcement".[105] The carbon tax will cause the carbon-sensitive assets lose their value resulting in reduced balance sheets and income of firms, thereby increasing the likelihood of firm's default on its financial obligations to banks.

Technological changes play an essential role in mitigating climate change risks and achieve sustainability goals by target dates. The brown as well as and non-green technologies can become more expensive if carbon taxes or more stringent regulations are introduced by countries, consequently leading to the firms that use carbon-intensive technology become less competitive. For example, the companies that are unable to produce environment friendly vehicles efficiently may suffer decline in profitability in carbon-neutral economies. The financial institutions with exposures to such firms may experience higher credit-related losses.

Customers and investors' preferences are fast changing in the wake of rising threats of climate change and disasters happening around the world, as well as climate change advocacy and ambitious sustainable finance targets by central banks are influencing people to increasingly prefer greener products and investments. For example, consumers may prefer sustainable homes and buildings instead of concrete/cement, or prefer cars with lower GHG emissions. Consequently, traditional manufacturers may see the future demand of their products decline, irrespective of government regulations or technical initiatives. The depositors and investors of financial institutions may also ask them to invest the funds in projects with positive environmental impact.

The impacts of climate change reflects in the traditional financial risk

It is difficult to predict the magnitude of risks to banks from climate change, however it is certain to say that there will be more frequent and intense extreme weather events and higher average temperatures, which in turn are likely to reduce the value of banks' assets and income streams.[106] Climate change risks can transpire in the traditional financial risk categories of financial institutions; i.e. climate risk drivers

[104] A tax levied on the carbon emissions required to produce goods and services to offset environmental and social costs felt indirectly, for instance, more severe weather events and health problems.

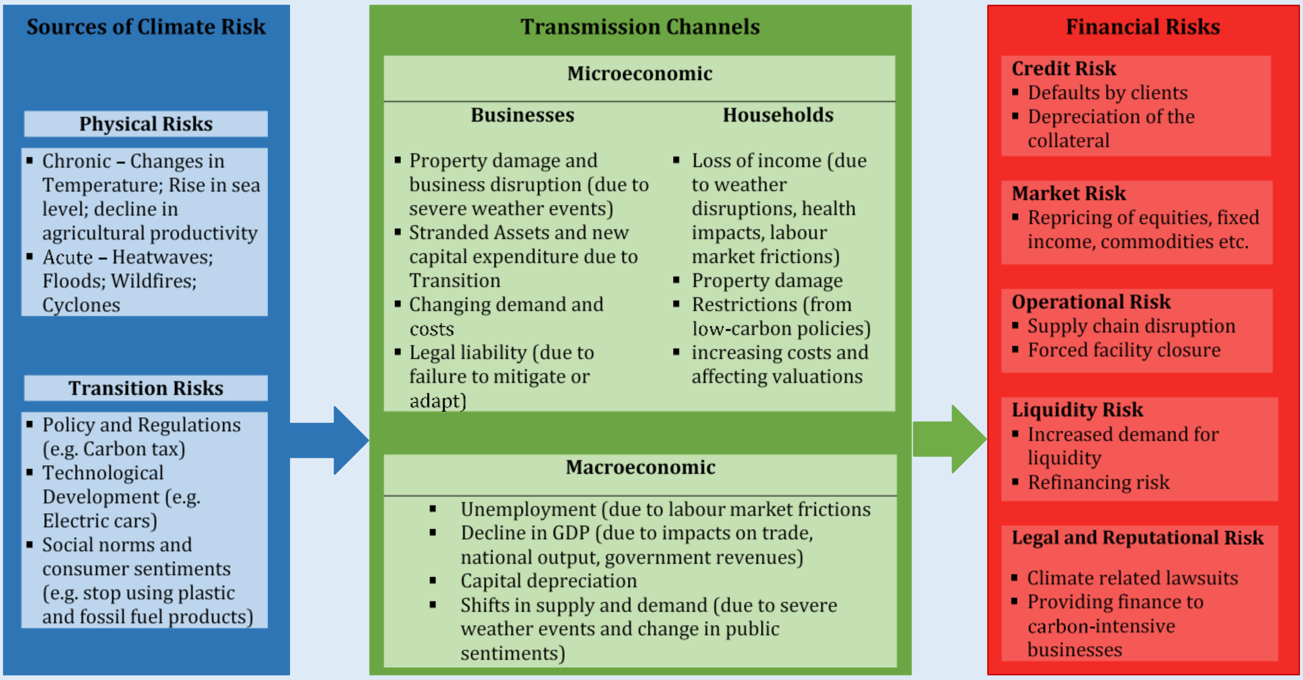
[105] Seltzer, Lee and Starks, Laura T. and Zhu, Qifei, Climate Regulatory Risks and Corporate Bonds (April 20, 2022). Nanyang Business School Research Paper No. 20-05, FRB of New York Staff Report No. 1014, Accessed on May 15, 2022.

[106] Climate related risk drivers and their transmission channels – (BIS, 2021)

can increase banks' a) credit risk through impacts on its borrowers and counterparties, b)- market risk through the change in the value and prices of financial assets, c)- liquidity risk through deposits withdrawal, funding costs and drawdowns of credit or liquidity lines, d)- operational risk by disruption in banks' operations, and e)- legal and reputational risk through climate related lawsuits and financing to carbon-intensive sector **(Chart 4.1.5)**.

The Financial Stability Board (**FSB**) notes that immense magnitude of estimated losses due to climate change risks could have a severe impact on financial institutions and markets. On the flip side, financial institutions can also exacerbate those risks by continuing to provide substantial financing to carbon-intensive activities.[107]

Chart 4.1.5: Financial Risks from Climate Risk Drivers through Transmission Channels



Central banks can play important role in achieving the policy objective on climate change by guiding and influencing the allocation of resources to environment friendly projects...

Central banks have important role in achieving the policy objectives on environmental and social sustainability. Finance is critical to achieving net-zero[108] emissions target, therefore it is vital that the financial industry contributes in transition towards sustainable finance. Besides using the direct powers to issue formal directions and limits, central banks can also use moral suasion to encourage financial institutions to consider climate and environmental risks in their operations and develop capacities to tackle them.

Central banks can take multiple actions such as developing roadmap for the financial industry, devising green credit allocation policies, developing green taxonomy, and issuing guidelines for FIs on disclosure requirements in line with Taskforce on Climate-related Financial Disclosures recommendations and integrating

[107] The Implications of Climate Change for Financial Stability (fsb.org). Accessed on March 15, 2022.
[108] Net-zero refers to the balance between the amount of greenhouse gas emissions produced by human activity and the amount removed from the atmosphere, targeted to be achieved by 2050.

Environmental, Social and Governance (**ESG**) into their business strategy.

Government of Pakistan is actively engaged in tackling the climate change risks

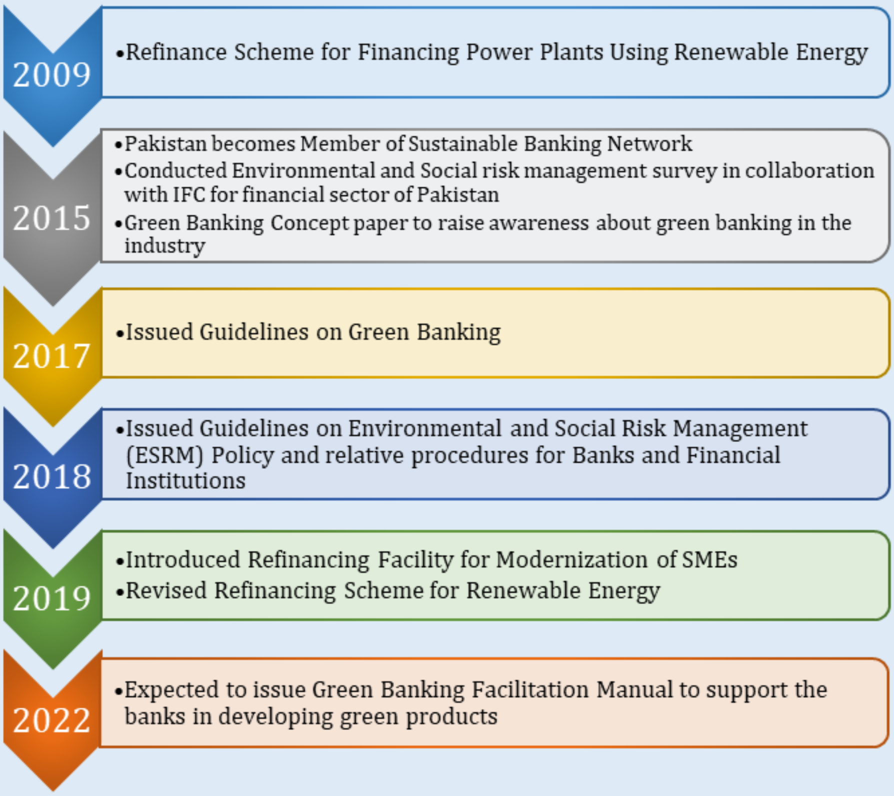
Since 1990s, the government has taken various measures to address environmental concerns including new legislation and institutions such as the Pakistan Environment Protection Council. The Ministry of Climate Change (**MoCC**), formed in August 2017, is a dedicated ministry in the Government of Pakistan concerned with climate change in the country. The government launched the 'Clean Green Pakistan Movement' on 8 October 2018 to help create a clean and green environment of Pakistan. The country has in place a number of acts, rules, regulations and policies to protect the environment and mitigate the adverse impact of climate change in Pakistan.[109]

In addition, Pakistan is also signatory to various multilateral environmental agreements, conventions and protocols, such as United Nations Framework Convention on Climate Change (**UNFCCC**), Kyoto Protocol, Paris Agreement, and Vienna Convention for the Protection of the Ozone Layer, and has ratified all of them.

SBP is endeavoring to promote sustainable finance and helps the financial institutions in coping with the climate change risk...

The State Bank of Pakistan has been playing a crucial role in successful implementation of green banking initiatives and achieve sustainable financing objectives in the country since 2009 **(Chart 4.1.6)**.

Chart 4.1.6: State Bank of Pakistan Green Finance Initiative



[109] For further details please refer to [Ministry of Climate Change]

SBP introduces schemes for renewable energy

Since 2009, SBP has introduced various conventional as well as Islamic refinance schemes, with varying scope, for financing the projects that use renewal energy.[110] The schemes aim at providing financing to address dual challenge of energy shortage and climate change through promotion of renewable energy. As of Feb-22, total disbursements of PKR 79.7 billion have been made under the SBP Financing Scheme for Renewable Energy.

The brick kilns affect urban and sub-urban settlements and are a major source of air pollution and smog. In 2019, SBP introduced refinance facility for modernization of brick kilns[111] with the objective to limit emissions from conventional brick kilns by adoption of the new zigzag technology.[112] The scheme refinanced purchase of plant and machinery for upgradation of existing conventional brick kilns and establishment of zigzag technology based brick kilns.

SBP issued guidelines for Efficient Water Management Financing

In 2011, SBP issued *Guidelines for Efficient Water Management Financing* to help farmers to adopt modern water management systems and ensure optimal water utilization to address the challenge of wastage of water and depletion of the underground water.

*SBP is a member of Sustainable Banking and Finance Network (**SBFN**)*

SBP joined SBFN in 2015. In collaboration with the International Finance Corporation, SBP conducted an environmental and social risk management survey for financial sector of Pakistan in the same year and published a Green Banking Concept paper to raise awareness about green banking in the industry.

SBP's Guidelines on Green Banking

In 2017, SBP issued *Guidelines on Green Banking* aimed at safeguarding the financial institutions against risks emerging from environment and climate change, also to facilitate the FIs to invest in energy-efficient projects and to re-engineer their internal controls to reduce adverse impact on the environment and society.[113] These Guidelines comprehensively covered three main areas of (i) risk management, (ii) business facilitation, and (iii) reducing impact on the environment and society.

SBP issued policies for Environment and Social Risk Management[114]

SBP issued policies and procedures for E&S Risk Management under the Financial Inclusion and Infrastructure Project in 2018. The main objectives of the policy for the participating financial institutions were to (a) set out applicable E&S requirements for all business activities, (b) strengthen their Environmental and Social Management Systems (ESMS), (c) fully implement and comply with national requirements for E&S risk management, and (d) promote greater transparency and accountability on E& S issues.

In addition, SBP has issued guidance for the banks to evaluate the resilience against adverse shocks from natural disasters in their stress testing models. SBP has also been advising the financial institutions to increase the use of digital channels for provision of financial services to their customers. This initiative will reduce the use of paper and make banking transactions fast and environment friendly. To minimize the use of paper and commuting, the

[110] SMEFD Circular No. 19 of 2009
[111] IH&SMEFD Circular No. 9 of 2019
[112] Stacking the bricks in a zig zag pattern instead of straight line. This method leads to better, more efficient fuel combustion and increases energy efficiency.

[113] IH&SMEFD Circular No. 08 of 2017
[114] AC&MFD Circular No. 01 of 2018 - Annexure 2: Environmental and Social Risk Management Guidelines

banks have commenced digital onboarding of customers since Sep-21.

Way forward…

According to SBN's Global Progress Report published in Oct-21, Pakistan falls among 22 countries who have progressed within the same sub-stage the 'Implementation Stage', the next and final stage will be the 'Maturing Stage'. Going forward, SBP aims to:

- Develop the capacity to assess:
    - possible impact of climate change on financial stability;
    - potential effect of its policies and procedures on climate change;
- Develop long-term strategic plans to identify, assess and manage financial risks arising from the climate change;
- Issue Green Banking Facilitation Manual to support the banks in developing green products that will address climate change in Pakistan;
- Develop policies for E&S risk management, requiring FIs to include climate risk into their disclosures and report on their carbon-intensive exposures;
- Conduct supervisory review of financial institutions' policies and practices for including climate risks into their risk frameworks;
- Assess the efficacy of measures taken so far, and use this assessment to set measurable goals for future and systematically monitor them;
- Develop climate-related financial risks literacy programs to educate the government, businesses and the public about how their policies, operations and consumption decisions affect the environment, monetary and financial stability.

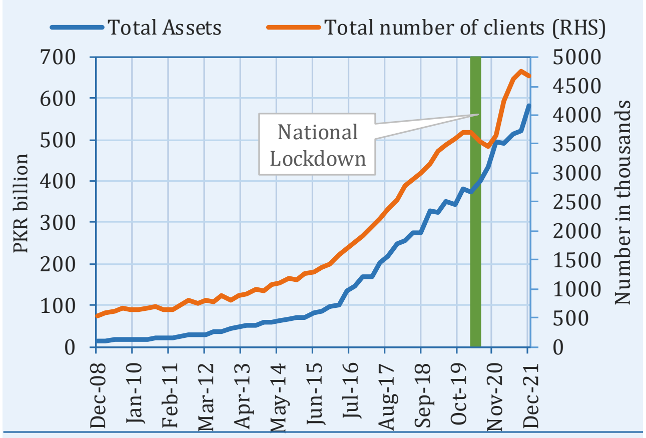
Chapter 5. Performance & Risk Analysis of Microfinance Banks (MFBs)[115]

In the second year of the pandemic, the MFB sector expanded asset base on the back of increases in advances and investments. However, asset quality indicators somewhat deteriorated due to the repayment capacity of borrowers and disruptions in institution-customer relationships which were caused by the pandemic- related lockdowns. Nevertheless, SBP's interim regulatory debt relief and support measures enabled the sector to ward off the buildup of risk, as the MFBs were able to maintain both their solvency and flow of credit and services during the pandemic. The sector posted losses due to higher provisions and administrative expenses. While various institutions are striving to improve their performance by rationalizing their business models, the overall performance and soundness indicators of the sector will be subject to the pandemic-induced challenges and implementation of IFRS-9

MFB sector plays a key role in the social and economic uplift though has nominal share in the financial sector ……

In Pakistan, MFBs' growth trajectory of recent years indicated that the sector may still be in the growth phase of its lifecycle: over last five years it grew with compound annual growth rate (**CAGR**) of 27.9 percent. Although they hold a small share in the financial sector i.e. 1.5 percent of total assets in CY21, the number of MFBs' borrowers at 4.7 million surpassed the 3.9 million loan borrowers served by banks in CY21 (in CY20, MFBs = 3.65 million borrowers, Banks = 3.8 million borrowers) (**Chart 5.1**).

Chart 5.1: Growth in MFB Sector



Source: SBP

Moreover, the sector was the driving force behind financial inclusion holding 83.3 percent of the total mobile banking accounts in the country. These statistics emphasized the growing importance of the MFB sector in the intermediation process as well as its role in the economic and social uplift of the financially excluded segments of the society.

MFB's growth during CY21 remained lower than the recent trend, due to pandemic related uncertainties …

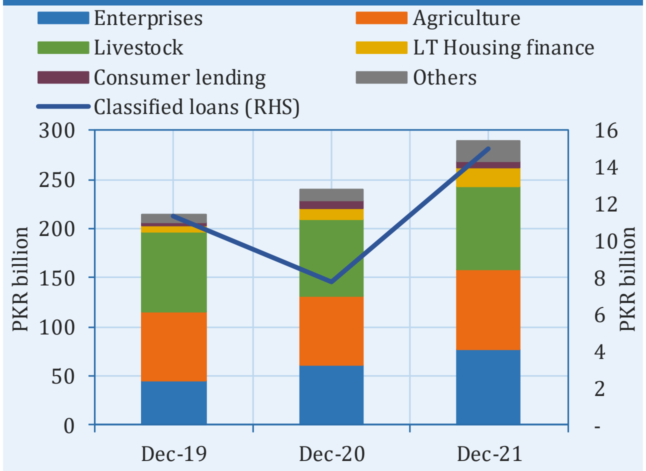
The asset base of MFB sector grew by 17.8 percent to PKR 582 billion in CY21, showing signs of slackness compared to the trend of recent years as the challenges posed by the pandemic impacted the performance of the MFBs and created uncertainties.

The growth during CY21 mainly came on the back of increases in advances and investments, which increased by 20.5 percent and 37.9 percent, respectively. The MFB sector particularly increased its holding of low-risk government papers capitalizing on the government's demand to meet budgetary needs from domestic resources. The growth in asset base was well supported by PKR 50 billion (13.4 percent) increase in deposits. However, some increase in borrowings was also necessary to finance the assets' growth; borrowings increased by PKR 32 billion (119.3 percent) over the year.

[115] Assets of MFBs are not part of the banking sector

Most segments showed an uptick in advances ...

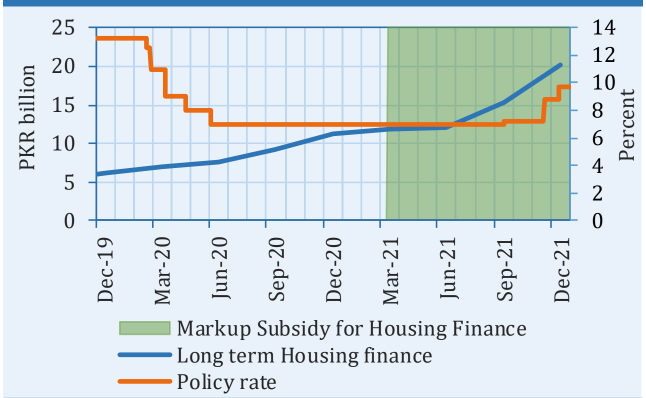
Chart 5.2: Breakup of Advances



Source: SBP

Detailed analysis of advances showed that barring consumer lending, all other segments recorded positive growth with a sizeable increase in enterprise loans, followed by Agriculture and Long-term Housing Finance (**Chart 5.2**).[116]

Chart 5.3: Impact of Government's Markup Subsidy for Housing Finance on MFBs' Housing Portfolio

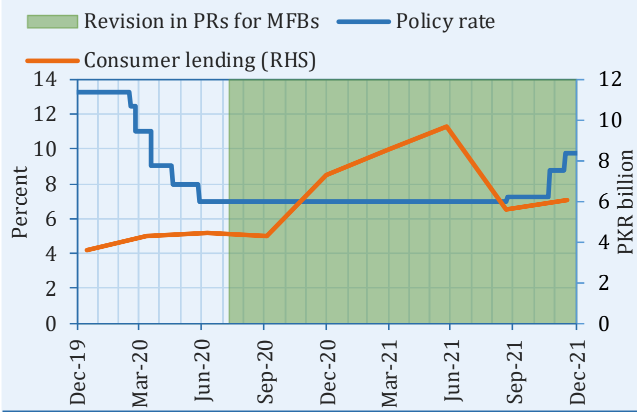


Source: SBP

Long-term housing finance's increase of 80.2 percent in CY21 was partly due to the Government's Markup Subsidy for Housing Finance introduced in Oct-20. The scheme was revised in Mar-21 to include MFBs as agents, subsequently the sector was also allocated mandatory targets (**Chart 5.3**).[117, 118]

In addition, financing to Enterprises and Housing surged due, in part, to revisions in PRs for MFBs, which enhanced the limit of loan size for microfinance borrowers.[119] Similarly, revision in borrowers' eligibility criteria facilitated lending against gold for consumption.[120]

Chart 5.4: MFBs' Consumer Lending Portfolio



Source: SBP

These revisions, along with the accommodative monetary policy that prevailed during most part of the year under review, also facilitated surge in the consumer finance portfolio which increased by 126.8 percent between Sep-20 and Jun-21 before declining steeply in Sep-21 quarter due to change in SBP's forward guidance and increase interest rates (**Chart 5.4**).

Repayment capacity of microfinance borrowers was affected by the pandemic related disruptions ...

The onset of the pandemic particularly affected microfinance providers (**MFPs**) across the globe as the pandemic impaired both earning capacity of clients as well as the strong repayment culture on which microfinance providers depend. In

116 Loans to Enterprises rose by PKR 17 billion to PKR 77 billion, to Agriculture by PKR 10 billion to PKR 82 billion, and to Long-term Housing Finance by PKR 9 billion to PKR 20 billion, respectively.

117 IH&SMEFD Circular No. 11 of 2020- Markup Subsidy for Housing Finance

118 IH&SMEFD Circular No. 03 of 2021-Government's Mark-up Subsidy Scheme for Housing Finance

119 For example the limits for Housing Finance and Microenterprise have been enhanced to PKR 3 million from PKR 1 million

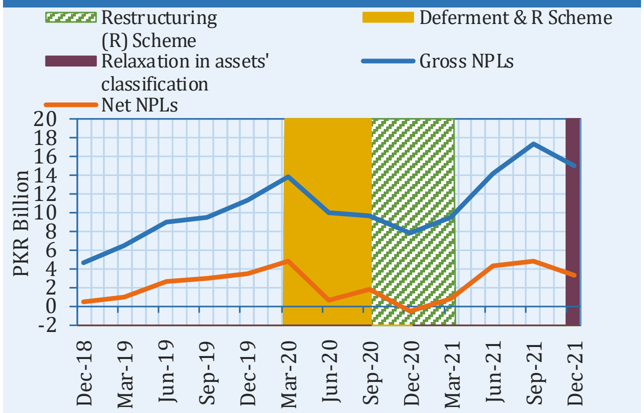
120 AC&MFD Circular No. 02 of 2020-Revision in Prudential Regulations for Microfinance Banks

response, MFPs around the world deferred and restructured loans, which eventually became difficult to collect. As repayments dried up, the MFP's reserves began to deplete as operational expenditures continued, which, in turn raised liquidity concerns.[121,122]

Over the last two years or so, the asset quality of the MFB sector came under stress in Pakistan also as the pandemic affected the repayment capacity of some borrowers and caused disruptions in the institution-customer relationships in the wake of social distancing and mobility restrictions. Any sudden increase in loan losses had the potential to cause solvency issues for MFBs that in turn could have affected the flow of credit and thus further added to the delinquencies.

SBP's debt relief scheme helped in thwarting the asset quality concerns and facilitating the flow of credit ...

Chart 5.5: NPLs and Debt Relief Scheme



Note: While the validity of the Deferment and Restructuring schemes have expired on 30-Sep-2020 and 31-Mar-2021, respectively, loans under the two schemes can exist beyond the validity period as loan principals could be deferred for up to twelve months and loans could be restructured for more than twelve months. This means that loans under deferment could exist till 30-Sep-2021 and loans under restructuring could exist beyond 31-Dec-2021.
Source: SBP

In order to prevent the pro-cyclical effects of the deterioration in the repayment capacity of micro borrowers and bolster the solvency of the MFB sector, SBP introduced a regulatory debt relief scheme (**DRS**) which comprised payment holidays (principal amount) and easy restructuring of advances. This scheme provided interim forbearance by delaying the recognition of loan losses and thus preserving both the solvency of MFBs as well as the flow of credit to borrowers. Under the scheme introduced in Mar-20, the principal repayment of performing loans were allowed to be deferred for one year and restructuring of COVID stricken loans was allowed with a relief that the loan can be treated as regular[123]. Under this scheme, MFBs extended relief of PKR 135 billion to over 1.8 million small borrowers, which enabled them to weather the harsh impacts of the pandemic and facilitated the MFBs in maintaining their capital cushions and sustaining the flow of credit and services (**Chart 5.5**). Accordingly, the NPLs remained in check and the NPLs ratio clocked in at 3.3 percent at the end of CY20.

However, the asset quality indicators remained under stress...

As compared to the borrowers of commercial banks, the impact of pandemic was relatively more enduring on MFBs' borrowers as their resources depleted over the course of the pandemic, which pushed certain borrowers further into poverty. Accordingly, the NPLs of the MFB sector started to witness increase in CY21 as the DRS also started to expire. Realizing the prevailing stress among the MFB borrowers, SBP amended the criteria for classification of assets and provisioning requirements in Dec-21 for the deferred and restructured portfolio[124]. This measure helped in checking the flow of fresh NPLs. Accordingly, the NPLs after peaking in Sep-21 (PKR 17 billion) again declined to PKR 15 billion by the end of CY21 and the NPL ratio fell to 5.2 percent.

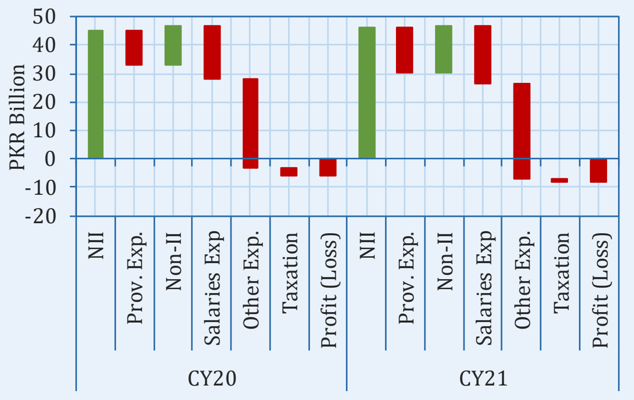
[121] CGAP's (2019) The Menace of COVID-19 for Microfinance. October. Accessed on April 15, 2022
[122] Meagher, P. (2020). Microfinance in the COVID-19 crisis: A framework for regulatory responses. *Insights for Inclusive Finance. CGAP, June*. Accessed on April 15, 2022
[123] COVID-19: Loan Extension and Restructuring Package of SBP
[124] That is, timeline for the classification of loans was extended by 30 days; please see: AC&MFD Circular Letter No. 1 of 2021-Regulatory Relief to Dampen the Effects of Covid-19

The business model of a typical microfinance bank generally involves higher financial risk which can be effectively managed through prudent and socially appropriate lending models …

The MFB sector has provided more than 75 percent of its loans to the borrowers without collateral e.g. loans secured through personal guarantees. Though this feature contributed to financial inclusion and improvements in the economic conditions of the impoverished segments of the society, it also involved relatively higher credit risk for MFBs. Furthermore, the concept of solidarity group lending – an important aspect of microfinance internationally which has an inbuilt check of moral suasion and community pressure for timely repayment of advances – has gradually lost ground within MFBs in Pakistan. Group lending has several advantages such as having internal rules of conducts (e.g. peer selection) on repayment performance.[125] It helps enhance informational symmetry by making it possible to co-manage risk with greater possibilities of offering credit to individuals previously thought to be non-bankable.[126] However, the solidarity loans' share in total loans has gradually come down over the years to only 10.2 percent in CY21 – it was 15.2 percent in CY20, 28.2 percent in CY18, and 48.8 percent in CY14. In value terms too, group lending has shown a decline since CY18. One reason for the decline is that it is considered onerous for borrowers[127] as well as the MFB to structure the solidarity loans. Moreover, due to relative flexibility in extending other forms of loans and the experience gained over the years, MFBs are focusing relatively less on the solidarity loans.

MFB sector on overall basis posted loss due to high provisioning and administraive expenses, though concentrated in a few institutions …

Chart 5.6: Composition of Profit and Loss for MFBs



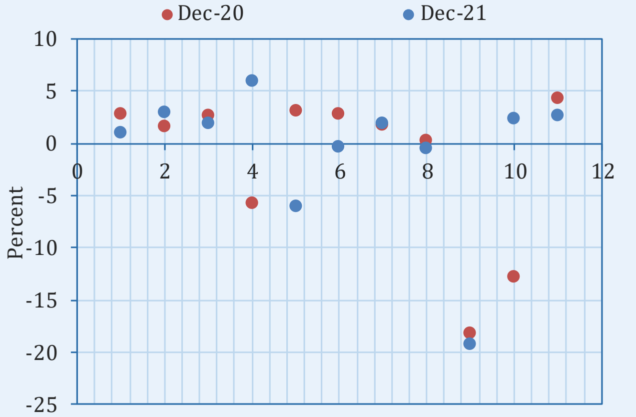
Source: SBP

Despite healthy growth in assets, the bottom line of the MFB sector on aggregate basis has been in the red since CY19 as the sector continued to face increased risk of delinquencies. The aggregate loss before tax stood at PKR 6.85 billion for CY21 (loss of PKR 3.4 billion in CY20). Consequently, overall ROE (before tax) of the sector deteriorated from -7.1 percent in CY20 to -12.7 percent in CY21, while Operational Self Sufficiency (i.e. ratio of financial revenues to all expenses) declined from 81.9 percent in CY20 to 76.8 percent in CY21 (**Charts 5.6 & 5.7**).

Incidentally, this loss was concentrated in a few institutions while majority of the MFBs posted profits. These loss-making institutions face higher incidence of delinquencies (due to some idiosyncratic factors and the pandemic)) accounting for 51.3 percent of Gross NPLs.

[125] Zeller, M. (1998). Determinants of repayment performance in credit groups: The role of program design, intragroup risk pooling, and social cohesion. *Economic development and cultural change*, 46(3), 599-620
[126] Marconatto, Diego & Barin Cruz, Luciano & Gressler Teixeira, Emidio & Moura, Gilnei. (2017). Why the microfinance institutions exist: lending groups as a mechanism to enhance informational symmetry and enforcement activities. *Organização & Sociedade*, 24, 633-654
[127] Attanasio, O., Augsburg, B., De Haas, R., Fitzsimons, E., & Harmgart, H. (2013). Group lending or individual lending? Evidence from a randomized field experiment in rural Mongolia. *Forthcoming in the American Economic Journal: Applied Economics, CentER Discussion Paper Series*, (2013-074)

Chart 5.7: MFB-wise ROA (before tax)



Source: SBP

The MFB sector also increased its share in investments – mainly government papers which carry relatively lower return vis-à-vis advances – as a percent of assets from 19.6 percent in CY20 to 22.9 percent in CY21. Furthermore, to cater to the growth of assets, reliance on borrowing increased towards the end of the year.

However, due to the accommodative monetary policy that prevailed during most of CY21, Return on Investments (**ROI**) and NIM declined in CY21. Similarly, the Cost of Funds (Deposits and Borrowings) ratio for the sector declined in CY21. These dynamics contributed to slower growth in both the interest income and expenses, resulting in a moderate increase in net interest income of 3.4 percent (10.5 percent growth in CY20). The non-interest income, which witnessed a contraction in CY20 due to economic lockdowns, posted an appreciable growth of 27.3 percent during CY21. However, the increase in provisioning expenses caused a drag on earnings.

Loan loss provisioning expenses increased over the last few years. These expenses[128] remained at an elevated level of PKR 12 billion in CY20 and PKR 16 billion in CY21. They dipped slightly in CY20 as the SBP's principal payment holiday and loan restructuring scheme stemmed the flow of fresh NPLs and associated provisioning expense. The provisioning expense again rose by 40.3 percent during CY21 as the MFBs increased their lending portfolio and part of the scheme's applicability lapsed during the year.

Administrative expenses – despite posting a contained growth this year-- remained at an elevated level during CY20 and CY21. Due to the pandemic induced slowdown in opening of new branches and curtailment of operations, administrative expenses remained almost stable in CY20 at PKR 49 billion, and despite relatively high rate of inflation in CY21, these expenses showed only a modest increase of 7.6 percent to PKR 53 billion in CY21.

MFBs continued to effectivley fund their liquidity needs despite slackness in liquidity indicators ...

Due to the faster increase in the asset base (including the extension of longer-term loans), a significant part of which was financed from borrowings, the liquidity indicators of MFB sector slightly deteriorated and the average maturity of the loan portfolio increased during CY21. The share of loans with maturity of more than 1 year increased from 18.9 percent in CY20 to 37.6 percent in CY21 of total loan portfolio (maturity) while Liquid Assets to Total Deposits decreased from 47.3 percent in CY20 to 43.1 percent in CY21. However, the MFBs continued to effectively manage their asset-liability positions because of the ample liquidity available in the market due to the accommodative monetary policy stance and ample fund-based liquidity cushions available with the MFBs (**Table 5.1**).

128 Provisioning expenses jumped from PKR 4 billion in CY18 to PKR 13 billion in CY19; from thereon, they have remained at an elevated level.

Table 5.1: Financial Soundness Indicators (FSIs) of MFBs					
Description	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
	Percent				
Capital					
Total Capital to Total RWA	21.4	22.6	20.9	19.0	18.3
Tier 1 Capital to Total RWA	19.5	20.2	17.8	15.3	14.3
Asset Quality					
NPLs to Total Loans	1.5	2.4	5.3	3.3	5.2
Provision to NPLs	124.6	92.1	70.0	106.5	78.1
Net NPLs to Net Loans	-0.4	0.2	1.7	-0.2	1.2
Net NPLs to Capital	-1.5	0.7	6.5	-0.9	5.4
Earnings					
ROA before Tax	4.3	2.9	-1.7	-0.8	-1.3
ROE before Tax	29.4	20.7	-12.4	-7.1	-12.7
Operational Self Sufficiency (OSS)	78.4	89.5	75.8	81.9	76.8
Liquidity					
Liquid Assets to ST Liabilities	45.2	37.0	47.5	50.9	42.4

Source: SBP

Solvency indicators of the MFB sector slightly declined, but still stayed well above the minimum requirement ...

The aggregate CAR of the MFB sector marginally declined from 19.0 percent in CY20 to 18.3 percent in CY21 due to faster growth in asset base (including growth in the lending portfolio) as compared to eligible capital. However, the ratio still remained well above the minimum regulatory requirement of 15.0 percent (**Table 5.1**). Incidentally, the sponsors of the few loss-making institutions continued to show their commitment by injecting further equity to meet the capital requirements and support their operations.

The results of the latest stress tests indicate that there is sufficient cushion available with MFBs to absorb the impacts of severe shocks to key risk factors, thus indicating that the sector and loss-making MFBs in general have ample opportunity to realign their business models to control losses and improve earnings to ward off stresses in the macro environment and maintain long-term sustainability.

Despite their minute share in the financial sector, MFBs lead the branchless banking segment, which has driven the policy initiative on financial inclusion ...

Microfinance banks have been instrumental in promoting Branchless Banking **(BB)**, as they hold more than 80 percent of the total BB accounts. Incidentally, these accounts provide the benefit of scalability and potential to reach the unbanked and underserved masses. Since their introduction, the numbers of BB accounts increased at a phenomenal rate to surpass conventional bank accounts.

During CY21, the number of active BB accounts recorded a significant increase (of 21.3 percent) to reach 45 million, and most key indicators recorded robust double-digit growth, which bodes well for enhancing financial inclusion in the country, and encouraging digital modes of payments and documentation of the economy (see **Table 8.3**).

Continuation of stresses and disruptions created by the pandemic and introduction of IFRS-9 may pose challenges on the asset quality and earnings front for MFBs ...

Going forward, the performance of the sector will be dependent upon the MFBs' ability to cope with the stresses and disruptions created by the pandemic in relation to the repayment capacity of their borrowers and institution-borrower relationships. Successful recovery of outstanding loans which were deferred and restructured under the SBP's DRS will be a key determinant of MFB sector's soundness and performance indicators. Besides, ongoing efforts by a few institutions to recapitalize and improve their performance will also be important.

Furthermore, given the increase in credit risk in CY21, MFB sector needs to monitor on a continual basis to address any solvency concerns in a timely manner.

IFRS-9 (which addresses recognition, classification, measurement, and de-recognition of financial assets and liabilities) involves new impairment model which requires realization of losses on prospective basis – instead of incurred basis. The applicability of this standard may add some burden to the earning and solvency position of MFBs in future.

Section B: Performance and Risk Analysis of Non-Banking Financial Sector

Chapter 6.1: Development Finance Institutions (DFIs)

DFIs witnessed expansion in asset base primarily driven by investments, which constitutes a major part of their assets. The appetite for long-term instruments remained intact owing to rising interest rate expectations during CY21. Revival in economic activities and higher input prices served as impetus for acceleration in advances, wherein growth remained broad based. Reliance on short-term borrowing remained the major source of funding. Asset quality of the sector improved on the back of contained growth in NPLs and borrowers' improved repayment capacity. However, deceleration in net interest income and non-interest income driven by low interest rates and losses on sale of securities squeezed profitability. DFIs still maintained strong solvency profile, though CAR declined due to utilization of capital for extension of credit. In order to fulfill their mandate and optimize the risk-return matrix, the DFIs may focus on developing and enhancing their investment banking capabilities and make concerted efforts to raise sustainable long-term financing to facilitate and finance the capital formation in the economy.

Growth momentum of DFIs continued during CY21…

The asset base of **DFIs** observed strong expansion of PKR 99 billion (22.6 percent growth YoY) during CY21, primarily driven by an increase PKR 51 billion (17.9percent growth YoY) in investments which form the major part of the asset base. Although investments continued to dominate growth in assets, there was a slight deceleration in investments as compared to last year while advances grew at an accelerated pace during the reviewed year. **(Table 6.1.1)**

Table 6.1.1: Key Variables & Financial Soundness Indicators

	CY17	CY18	CY19	CY20	CY21
			PKR billion		
Investments (net)	122	122	240	287	338
Advances (net)	77	82	92	111	140
Total Assets	228	238	377	439	539
Borrowings	101	111	229	261	348
Deposits	17	12	12	27	34
Equity	99	106	117	132	136
NPLs	15	15	15	16	15
			Percent		
CAR	47.0	47.0	44.9	43.1	38.7
NPLs to Advances	17.1	15.8	14.5	12.8	9.5
Net NPLs to Net Advances	5.5	5.3	4.2	3.1	1.6
ROA (After Tax)	2.4	2.2	2.7	3.3	2.4
ROE (After Tax)	5.8	4.9	7.2	10.7	8.9
Cost to Income Ratio	37.3	40.1	32.4	25.2	32.5
Liquid Assets to Short-term Liabilities	90.9	86.9	97.6	97.5	98.0
Advances to Deposits	447.9	707.1	763.8	405.1	412.6

Source: SBP

Funding composition of DFIs showed that they mainly rely on secured borrowings and shareholders' equity to fund their business operations. DFIs financed 90.0 percent of total assets through equity and borrowings from financial institutions while only 6.3 percent was funded by deposits. Notably, reliance on borrowings from financial institutions increased to 64.70 percent at end Dec-21 (59.31 percent in Dec-20).

Investment composition skewed towards long-term instruments…

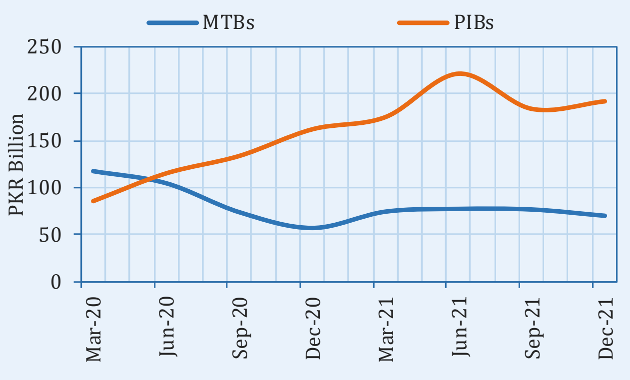
DFIs' appetite for investment in long-term instruments remained intact in CY21. The stock of investments in PIBs increased to PKR 192 billion in CY21 from PKR 162 billion in CY20. Most of the long-term investments were parked in floating rate category[129] reflecting rising interest rate expectations.[130]

As for investments in MTBs, a meager inflow of PKR 13 billion was recorded during CY21 – bringing the outstanding stock to PKR 70 billion, as DFIs shifted their portfolio from short-term investments to long-term floating PIBs, which were nevertheless less sensitive to interest rate risk as they carry variable rate and shorter-repricing period. (**Chart 6.1.1).**

Investment in shares and bonds also increased …..

Apart from investment in government securities, the other avenues of investments such as shares, TFCs, debenture etc. also observed some uptick. The lower interest rates and contained volatility in the equity market during most part of CY21 led to rise in DFIs' investment in equity stock by 11.8 percent to PKR 5 billion. On the other hand, investments in TFCs/ bonds/ debentures increased by 9.5 percent over the same period.

Chart 6.1.1: Appetite for PIBs remained intact in CY21

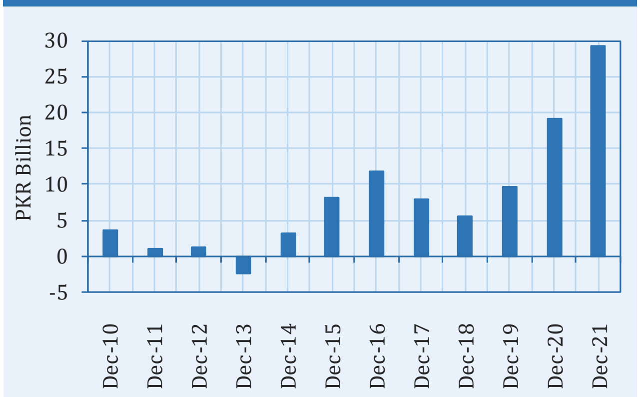


Source: SBP

Advances growth accelerated amid revival in economic activity and other supportive factors…

Advances witnessed notable increase of 26.3 percent during CY21 compared with 21.0 percent in last year**. (Chart 6.1.2).** The net inflow increase of PKR 29 billion was broad based across different economic sectors. Pick up in the financing activity was attributable to a number of factors such as revival of economic activities, accommodative monetary policy, higher input prices, disbursement under SBP's refinance schemes[131] and surge in lending by the newly formed mortgage refinance company.

Chart 6.1.2: High disbursement of advances



Source: SBP

[129] PKR 20 billion and PKR 15 billion were invested in floating rate and fixed rate PIBs respectively.

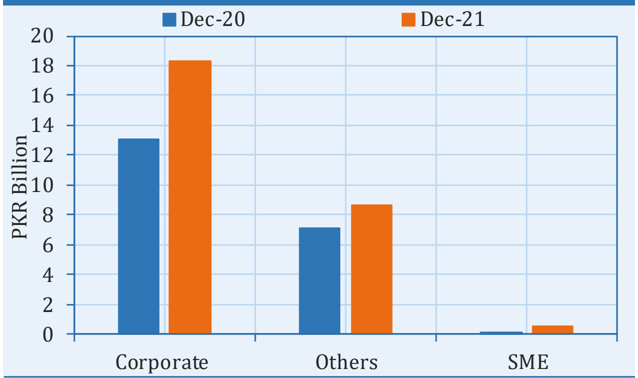
[130] In rising interest rate expectations scenario, financial institutions tend to lock their investments in short-term instruments (e.g. MTBs) and floating rate instruments (e.g. floating PIBs). In floating category, though investments are locked for a longer period, however, returns are re-priced with shorter frequency thus reduce re-pricing risks.

[131] PKR 18.6 billion, PKR 2.7 billion and PKR 1.8 billion were disbursed to DFIs under TERF, Renewable Energy (RE) and LTFF during CY21, respectively.

Corporate segment grasped major chunk of advances...

Segment-wise advances depict that corporate segment availed both long-term (fixed investment) and short-term financing (working and trade financing) during CY21. **(Chart 6.1.3)**. Fresh loans worth PKR 18.3 billion and 3.6 billion were disbursed to corporates on account of fixed investment and working capital, respectively.

Chart 6.1.3: A significant inflow of advances towards corporate sector



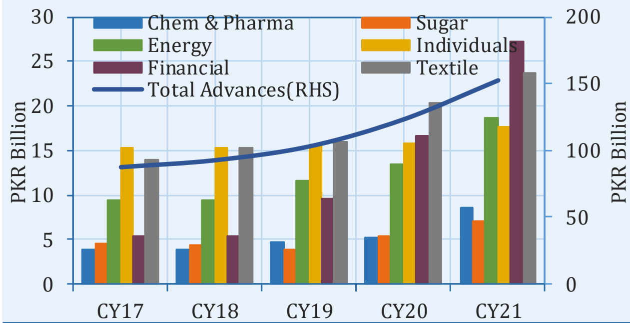
Source: SBP

and disbursement of loans remained borad-based and diversified....

The sector-wise analysis indicates that advances remained diversified across economic sectors. Particularly, financial, textile, energy, chemical and pharmaceuticals, and sugar sector availed major chunk of advances. **(Chart 6.1.4)**. The growth in advances to financial institutions maintained its momentum in CY21 as well, mainly on account of financing by the mortgage refinance company.[132]

The firms in energy sector availed additional financing of PKR 5 billion for working capital needs. Moreover, textile sector availed highest financing along with individuals, witnessing increase of PKR 24 billion and PKR 18 billion, respectively. The long-term loans for capacity expansion/ BMR explain the increase in textiles' advances during CY21, as the sector also benefited from SBP refinance schemes such as LTFF and TERF.[133]

Chart 6.1.4: Broad based growth in advances across sectors



Source: SBP

Deposits slightly inched up....

Share of deposits in DFIs' fund base remained minimal due to the limitation in both the scope and scale of business[134]. The share of deposits in total funding inched up to 6.3 percent during CY21 compared with 6.25 percent in CY20.

However, borrowings remained the key source of funding and their contribution in asset base further increased over the year...

As the capital markets remain underdeveloped with DFIs having limited access, they mainly rely on borrowings from financial institutions to finance their assets. Borrowings recorded a robust growth of 33.7 percent in the reviewed year against 13.8 percent rise in CY20 **(Chart 6.1.5).** It mainly reflected the effects of SBP refinance schemes which accounted for 88.0 percent of the increase in borrowings. Moreover, DFIs reduced their clean borrowing and increased secured borrowings from SBP and interbank market so as to improve their

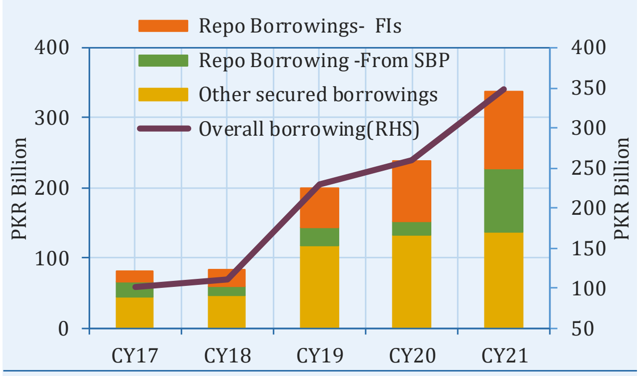
[132]The DFI with the mortgage refinance mandate is in an expansionary phase and has broadened customer base to conventional and Islamic banks, regional banks, microfinance bank, microfinance institution, Modaraba and NBFCs. Moreover, the DFI has developed a working model with banks where it will fund one of their fixed mortgage products.

[133] LTFF and TERF show a combined increase of around PKR 3 billion in textile related businesses of DFIs during CY21.

[134] DFIs can only raise term deposits through issuance of Certificates of Investments (COIs).

margin as the secured borrowings are generally economical.

Chart 6.1.5.Borrowings increased sharply in CY21

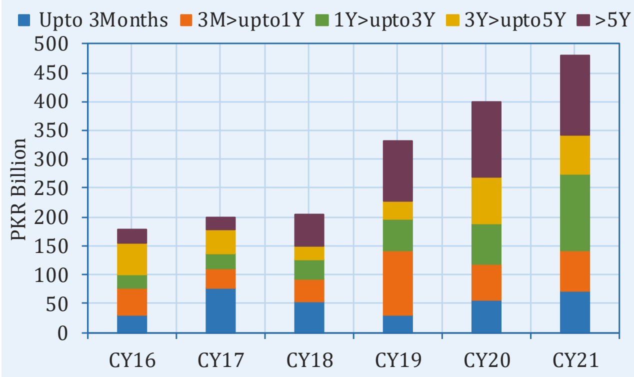


Source: SBP

The lack of stable funding sources result in wide maturity mismatches ….

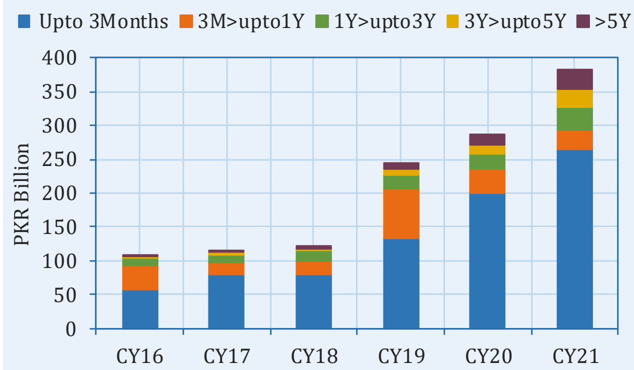
More than 75 percent of liabilities (borrowing and deposits) had a maturity of up to one year, whereas only 29.4 percent of assets (advances and investments) matured within a year, creating a huge maturity mismatch in up to one-year bucket. Moreover, 42.7 percent of assets maturing beyond three years were financed by only 14.2 percent of funds with similar maturity. The high cushion of equity though provided ample safeguard against rollover and refinance risks. However, the sector may need to make efforts to raise funding from stable sources including the capital market. The access to stable funding will also help the sector in efficient utilization of its capital, as the sector maintained quite high capital adequacy ratio. **(Chart 6.1.6 A & B).**

Chart 6.1.6A: Maturity wise breakup of earning assets



Source: SBP

Chart 6.1.6B: Maturity-wise breakup of funding sources



Source: SBP

Deceleration in interest as well as non-interest income squeezed profitability…

The profitability (after tax) of the DFIs amounted to PKR 12 billion in CY21 (PKR 13 billion in CY20). The contraction in profitability was mainly due to lower **NII** and non-interest income coupled with higher operating expenses[135] **(Chart 6.1.7).** The decline in NII reflected the impact of lower interest rate environment which prevailed in most part of CY21 that translated into slowdown in interest earnings on investments and advances.

Besides, non-interest income also decelerated mainly owing to losses on trading of securities[136] as the increase in interest rates (in

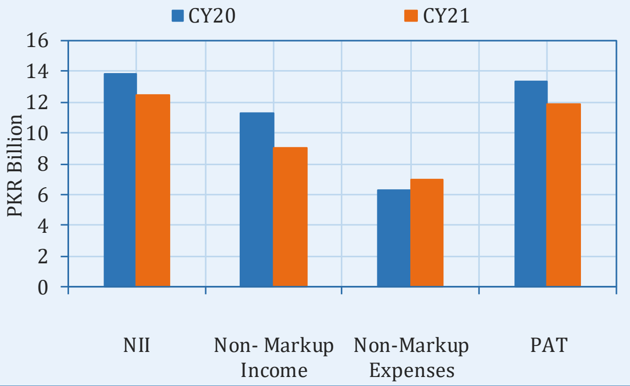
135 The cost to income ratio inched up to 32.5 percent in CY21 compared with 25.2 percent in the same period last year.

136 DFIs recorded PKR 2.3 billion gain on sale of securities in CY20 (when interest rate witnessed significant cut in the wake of COVID pandemic) against net loss of PKR 0.1 billion in CY21 due to rise in interest rates toward the end of the year.

Q4CY21) resulted in revaluation losses on fixed income securities while equity prices also came down towards the end of the year.

Accordingly, earnings indicators also moderated in CY21. The after-tax ROA of DFIs contracted to 2.4 percent in CY21 from 3.3 percent in CY20, while ROE declined to 8.9 percent from 10.7 percent a year earlier.

Chart 6.1.7: Profitability decelerated in CY21

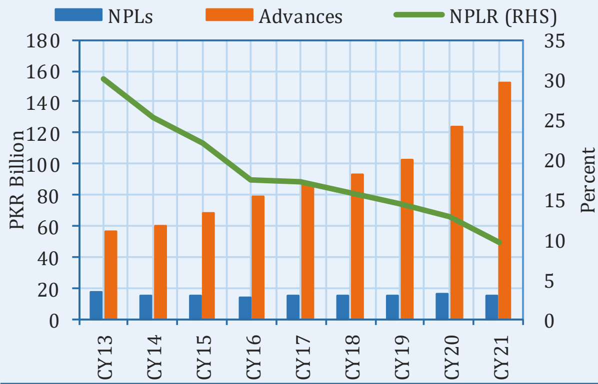


Source: SBP

Assets quality improved during the reviewed year…

The stock of NPLs decreased by PKR 1.2 billion to PKR 14.5 billion during CY21 (increase of PKR 0.8 billion in CY20). Resultantly, the infection ratio declined to 9.5 percent from 12.8 during the reviewed year due to relatively higher growth in advances and sluggish pace of NPLs. **(Chart 6.1.8)**. Moreover, improved earnings and repayment capacity of the corporate sector[137] and recovery of loans deferred /restructured under SBP's pandemic relief measures contributed to the decline in the infection ratio. Remarkably, provisions to NPLs ratio improved to 84.9 percent from last year's level of 77.8 percent.

Chart 6.1.8: Asset quality continues to improve



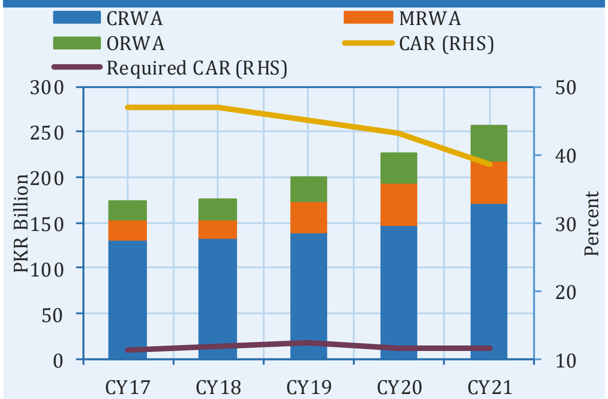
Source: SBP

Although CAR declined, however it remained far above the regulatory benchmark

The CAR of DFIs declined to 38.7 percent in CY21 from 43.1 percent in CY20. This contraction resulted from slow increase in Eligible Capital (2.08 percent growth in CY21) vis-à-vis noticeable expansion in **TRWA**.

Further analysis indicates that credit risk accounted for the major part of DFIs' regulatory capital requirement, as the **CRWA** constituted 66.6 percent of total RWA **(Chart 6.1.9).** CRWA increased significantly by 23.8 percent during CY21 due to pick up in financing activity.

Chart 6.1.9: CAR well above the required benchmark



Source: SBP

137 Corporate sector posted robust growth in earnings (46.5 percent growth in profit) and debt repayment capacity during CY21. Please refer Chapter 7 for details.

There is a need to redefine the role of DFIs in economic growth...

DFIs were created to finance long-term infrastructure projects and facilitate the capital formation process in the economy. However, due to a number of reasons - both demand and supply side- most of the DFIs remain focused on investment and trading in marketable securities. The absence of stable sources of funding due to multiple structural issues (e.g. limited outreach of DFIs to capital market, etc.) and resultant reliance on costly interbank funding is a major hindrance in DFIs' project finance prospects. Moreover, the DFIs have gradually lost their competitiveness vis-à-vis banks to attract and retain investment and project finance professionals. While there is a need to shift DFIs' focus from investing activities to sustainable private sector project financing and investment banking, there is also a need to redress the underlying structural issues including development of capital market and promotion of saving and investment culture in the society through effective financial literacy programs. In order to remain viable, it is of utmost importance for DFIs to explore and build economical sources of stable funding and develop necessary investment banking expertise. These initiatives will not only aid in reviving their core business but also help in efficient utilization of capital and optimization of risk-return matrix.

Chapter 6.2: Non-Bank Financial Institutions

As economic agents adapted to living with the pandemic in its second year, most Non-Bank Financial Institution (NBFI) sectors were able to expand their asset base. The money market funds continued to drive growth in the asset management (AM) segment, which has the predominant share in the NBFI sector. After facing stress in the wake of the pandemic last year, lending NBFIs too posted revived performance as their assets expanded rapidly while delinquencies in their credit portfolio declined. Going forward, the emerging macro financial conditions especially in terms of economic activity, interest rates, and exchange rate dynamics will determine the growth and performance of NBFI sectors

NBFI sectors registered strong and broad-based growth in CY21, as the economy continued its struggle against the COVID-19 pandemic ...

NBFI sectors posted an increase of 19.0 percent in asset base during CY21. In line with their dominant market share and performance of last year, mutual funds and portfolios were the main drivers of the increase in the asset base of the NBFI sector[138]. Moreover, unlike last year's contraction in their asset base, NBFIs involved in the financing business[139] grew with Non-Bank Microfinance Companies (**NBMFCs**) and Investment Finance Companies (**IFCs**) mainly contributing to the increase. (**Table 6.2.1**).

The **AM**[140] segment continued to dominate the NBFI sector, and the market share of assets under management (**AUM**)[141] inched up from 78.5 percent in CY20 to 79.3 percent in CY21.

Table 6.2.1: Asset Profile of NBFIs

	Dec-19	Jun-20	Dec-20	Jun-21	Dec-21
			PKR billion		
AMCs/IAs (own assets	**40**	**40**	**44**	**45**	**46**
Mutual Funds	724	802	985	1,087	1,192
Pension Funds	30	31	36	40	40
Portfolios	226	229	314	338	374
Total AUMs	**980**	**1,062**	**1,335**	**1,465**	**1,605**
RMCs	6	6	6	7	8
REITS	50	49	54	54	67
PE & VC Firms	0	0	0	0	0
PE Funds	7	7	8	7	10
Modarabas	54	51	51	54	57
Leasing Companies	11	11	6	5	5
Housing Finance Compa	-	-	-	-	0
IFCs	66	65	66	63	78
NBMFCs	126	122	129	137	146
Total Assets	**1,339**	**1,412**	**1,700**	**1,839**	**2,023**

Source: SECP

Asset Management (AM) Segment

Money market funds continued to dominate the Mutual Funds sector ...

The mutual fund sector is steadily growing as AUM grew by 21.0 percent in CY21. The growth in AUMs was due to both higher level of returns as

[138] NBFIs for the purpose of this analysis include NBFCs, Real Estate Investment Trusts (REITs), and Modaraba Companies. As per the surviving section 282A of the repealed Companies Ordinance, 1984 (wherein Part VIIIA – consisting of sections 282A to 282N – does not stand repealed under the Companies Act 2017 and continues to be applicable on NBFCs), Non-banking finance companies (NBFCs) include companies licensed by the Commission to carry out any or more of the following forms of business, namely: Investment finance services, Leasing, Housing Finance Services, Venture Capital Investment, Discounting Services, Investment Advisory Services, Asset Management Services, and any other form of business which the Federal Government may, by notification in the official Gazette specify from time to time. Non-bank Microfinance Companies (NBMFCs) are also included in NBFCs.

[139] NBFIs involved in the financing business (also referred to as the non-AM segment) include Leasing Companies, Modarabas, Investment Finance Companies (IFCs), NBMFCs, etc.

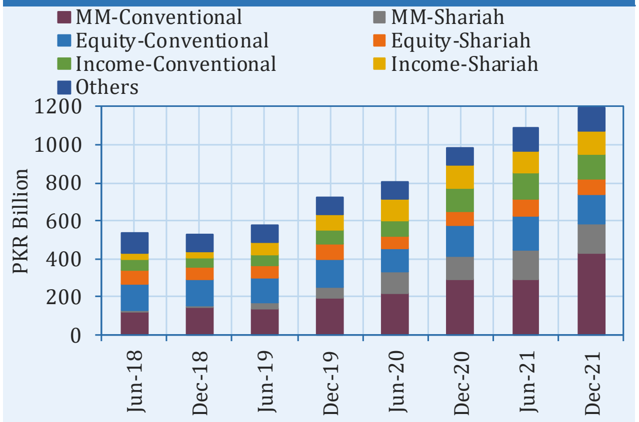
[140] The Asset Management (AM) segment includes: Asset Management Companies (AMCs), Investment Advisors (Ias), REITs, Mutual Funds, Pension Funds, Private Equity (PE) Funds, and Discretionary/ Non-discretionary Portfolios.

[141] Assets under Management (AUM) include assets of mutual funds, pension funds, and portfolios under management of AMCs/ Ias.

well as new investments as indicated by the increase in net sales in CY21. The sector still constitutes a relatively lower share of the overall financial sector (3.0 percent at end Dec-21) while the capital market has limited outreach, indicating that there is ample room for further growth.

The number of asset management companies/ investment advisors (**AMCs/IAs**) increased from 23 to 26 over the year under review and their own asset base grew from PKR 44 billion in CY20 to PKR 46 billion in CY21. On the other hand, a number of funds and plans, managed by these AMCs/IAs, increased from 227 to 285 in CY21 while the total AUM increased by PKR 206 billion to PKR 1,192 billion in CY21 mainly on the back of increases in money market funds. The trend of this growth was in line with the increased issuance of government securities to meet the fiscal needs as well as the beginning of monetary tightening in H2CY21. (**Chart 6.2.1**)

Chart 6.2.1: Composition of Mutual Funds

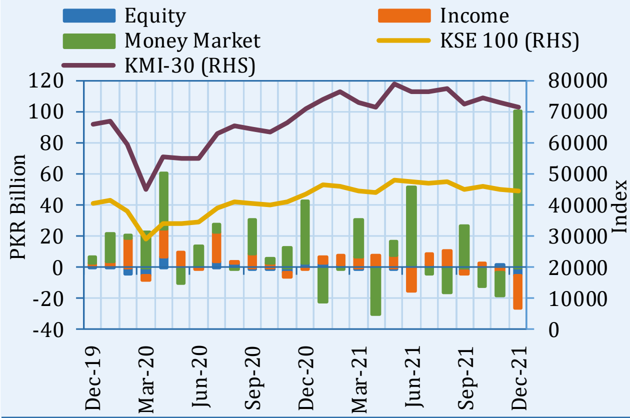


Source: SECP

Accordingly, the share of money market funds, in total AUM further increased to 49.2 percent in CY21 (41.9 percent in CY20).

While income funds also registered growth, equity funds declined by 2.7 percent (or PKR 6 billion) to PKR 235 billion in CY21 as indicated by its net sales. The fall in equity funds was consistent with trend of key indices such as KSE-100 index, which recorded upward movement in H1CY21 but declined in H2CY21. Even growth in Income Funds decelerated from 52.6 percent (or PKR 82 billion) in CY20 to 6.6 percent (or PKR 16 billion) in CY21; income funds stood at PKR 253 billion as of Dec-21. (**Chart 6.2.2**)

Chart 6.2.2: Net Sales of top three mutual funds

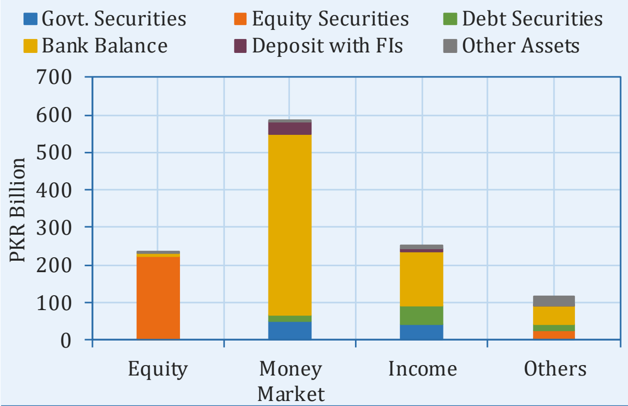


Source: MUFAP & PSX

The performance of KSE-100 Index remained mixed within CY21. While the market performance was encouraging in H1CY21, it declined in H2CY21 on the back of rising CAD and increasing inflationary expectation, which resulted in reversal in monetary policy by the central bank. Accordingly, as equity prices came under stress, equity funds registered a decline.

Overall risk profile of the mutual funds remained low...

Chart 6.2.3: Asset Allocation of Mutual Funds in CY21



Source: SECP

The asset allocation of mutual funds indicated that bank balances form a major portion of money market and income funds. Given the high share of bank balances, government securities, and fixed income bonds in money market funds, income funds, and other funds; the potential for buildup of systemic risk in the sector was minimal, as the domestic banking sector has strong capital and liquidity buffers to withstand stress scenarios (see the Chapter 3 and 4 on banking sector and its resilience against adverse situations for further details). (**Chart 6.2.3**)

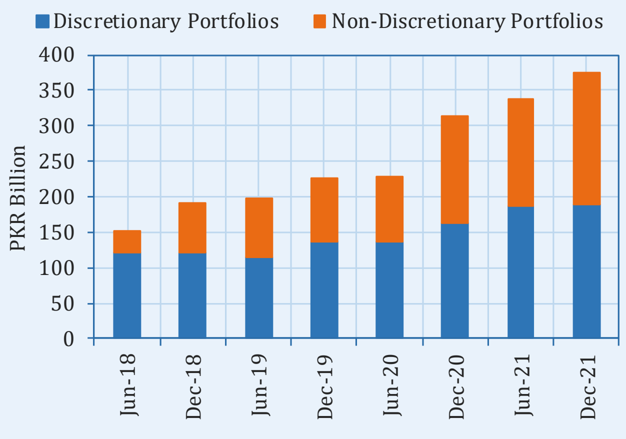
Furthermore, individuals constituted only 31.7 percent of total investments in the mutual fund sector during CY21; the rest was mostly contributed by institutional investors such as banks, insurers, other corporates, etc. Most institutional investors have a time-bound view on stocks along the investment portfolio is marked to market in their books. Thus, these investors can be more sensitive to the performance and stability of funds, implying that any unidirectional strategy on the part of such investors in the face of significant macroeconomic shocks may add to the volatility in the market. Nevertheless, mutual funds are subject to prudent concentration limits and risk management requirements from the regulators, which effectively check the buildup of concentrations and systemic risk.

The share of discretionary portfolios in total portfolios continued to decline…

Portfolios (Under Management)[142] increased by 19.2 percent to reach PKR 374 billion in CY21 (with increases in both discretionary and non-discretionary portfolios).

The rising momentum of economic activity after the pandemic again led to a decline in share of discretionary portfolios from 52.1 percent in CY20 to 50.4 percent in CY21. (**Chart 6.2.4**)

Chart 6.2.4: Portfolios classified by investment decision making



Source: SECP

Considerable activity was observed in the REIT sector ...

Due to prioritization of the construction and housing sector by the government, along with more favorable regulation and streamlining of tax rates, there were encouraging developments in the Real Estate Investment Trust (**REIT**)[143] sector. Six new REIT schemes have been approved since Jun-21, bringing the total number of approved schemes to seven by end of CY21. Besides a rental REIT scheme which was registered in 2015, two new development REIT schemes offered units to investors and acquired properties in CY21.

However, since the two new schemes are development REITs, they will take some time to generate distributable income. The aggregate fund size of the three REIT schemes stood at PKR 67 billion as of Dec-21.

[142] Portfolios (Under Management) are investments of eligible investors (person offering a minimum of PKR 3 million investment) managed by investment advisors. Under "Discretionary Portfolios", investment decisions are made and executed by the investment advisor on behalf of clients. While under a "Non-Discretionary Portfolio", investment decisions are executed as per the written instructions of the clients.

[143] REITs are investment schemes that own and most often actively manage income-producing real estate. Through such schemes, investors may own, operate or finance income-generating property across various categories of real estate. (For further details, please see: REIT FAQs). (Accessed on April 18, 2022)

Table 6.2.2: Key heads of REIT Earnings

Description	Jun-19	Dec-19	Jun-20	Dec-20	Jun-21	Dec-21
			PKR Billion			
Total Assets (Stocks)	47.0	49.5	52.0	54.4	58.1	60.0
Rental Income (HY)	1.7	1.7	1.1	1.4	1.5	1.7
Profit b/f change in fair value of Investment property (HY)	1.6	1.6	1.1	1.3	1.4	1.5
Change in fair value of property (HY Flows)	1.0	2.4	3.0	2.1	3.8	1.8
Profit b/f tax (HY)	2.5	4.0	4.1	3.4	5.2	3.2

Source: Financial Statements of REIT

The one rental REIT scheme navigated the pandemic successfully, which was reflected in the 23.2 percent increase in profit (before change in fair value of investment property) in CY21. This growth was in contrast to the 26.1 percent decrease in CY20 when management had to renegotiate tenancy contracts and offer rental waivers to their tenants to reduce turnover in the wake of mobility restrictions imposed to curb the spread of the pandemic (Please see previous FSR). Accordingly, the REIT was able to keep its occupancy levels above 90 percent in CY21 as well. In addition, the other key performance indicator i.e. weighted average lease expiry (**WALE**)[144] was around 3.2 years (3.3 years in the previous year). (**Table 6.2.2**)

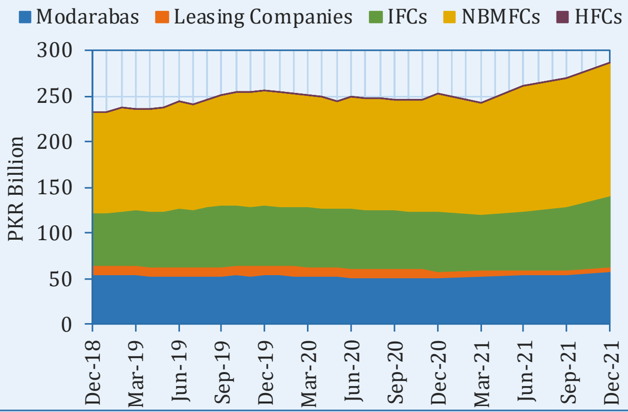
The REITs are prone to rising interest rate scenario, which makes yields competitive, delinquencies in the underlying rental portfolio, liquidity risks, and legal risks. Accordingly, the employment of effective risk management strategies remains important to contain the materialization of possible business risks.

Lending NBFIs Segment

The advances portfolio of Lending NBFIs was dominated by NBMFCs ...

Lending NBFIs are the other segment of NBFI sector, holding 14.2 percent market share in the sector. This segment increased its asset base by 13.6 percent to PKR 287 billion in CY21. NBMFCs and IFCs were the main drivers of growth; these sectors also hold the leading market share of lending NBFIs at 50.9 percent and 27.2 percent, respectively. (**Chart 6.2.5**)

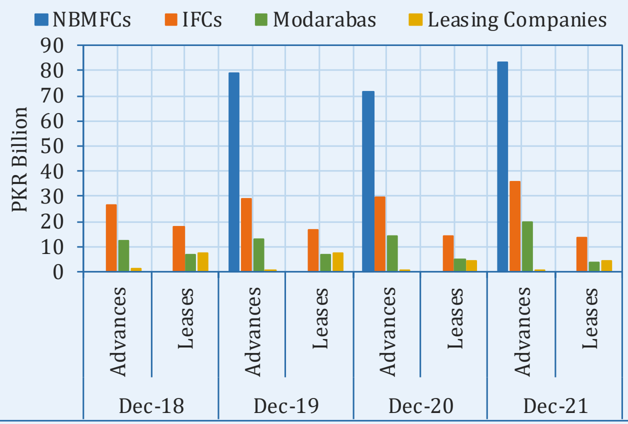
Chart 6.2.5: Assets of Lending NBFIs



Source: SECP

NBMFCs dominated the advances portfolio of lending NBFIs. The advances portfolio registered a growth of 19.7 percent in CY21. On the other hand, the leasing portfolio has been gradually tapering over the years. It may be noted that NBMFCs are not involved in the leasing business. (**Chart 6.2.6**)

Chart 6.2.6: Advances and Leases of Lending NBFIs



Source: Karandaaz and SECP

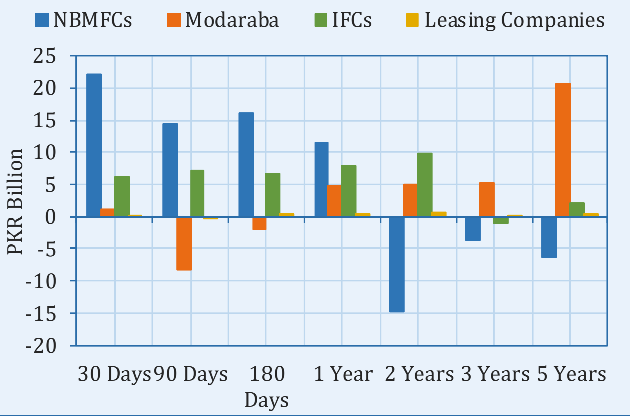
Lending NBFIs in general had comfortable liquidity profile ...

Since lending NBFIs generally have limited access to ready market funding for asset-liability management, liquidity risk remained an important factor for the stability of these firms.

144 Higher occupancy rates and longer average lease terms are two primary determinants of a quality REIT. WALE is a measure of a property portfolio's risk of going vacant. A longer WALE points to a stable tenant base and high satisfaction among tenants. A shorter WALE will lead to a quicker turnaround among tenants, with extra potential costs involved in managing and minimizing those turnarounds

However, the maturity profile of assets and liabilities indicated that most of the sectors had comfortable maturity profile. Amongst lending NBFIs, Modarabas faced negative asset-liability mismatch within 90 days tenor; however, the extent of this gap was quite contained. Moreover, the Modarabas which mainly faced the gaps have adequate access to financing and backing of financially strong associates. (**Chart 6.2.7**)

Chart 6.2.7: Maturity Gap of Lending NBFIs



Source: SECP

A closer look at maturity mismatches for NBMFCs and IFCs implied that they were following a relatively risk-averse approach to cope with liquidity risks. NBMFCs may be constrained in their investment decisions due to the restrictions imposed on certain funds made available to them.

Borrowings mainly financed the growth in NBMFCs...

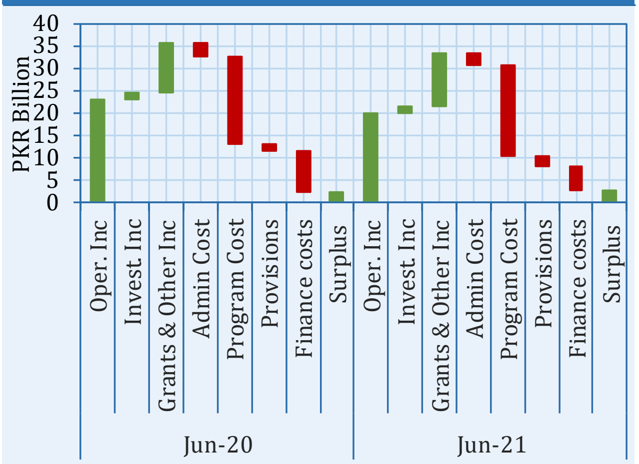
NBMFCs are non-deposit taking companies categorized under the Lending NBFI segment.

NBMFCs increased their asset base by 13.2 percent to PKR 146 billion in CY21. Their microcredit loans increased by 15.9 percent to PKR 83 billion aided by easing of lockdowns and other mobility restrictions in CY21, as economic activities resumed in the backdrop of effective pandemic control measures and promising traction in the vaccination drive during the year. As NBMFCs are unable to raise deposits, the increase in the asset base of PKR 17 billion was financed by an increase in borrowings and equity of PKR 11 billion and PKR 4 billion, respectively.

The classified assets of NBMFCs remained stable around PKR 5.2 billion in CY21; given the increase in credit over the year, the classified assets to outstanding financing ratio declined to 5.8 percent in CY21 (9.4 percent in CY20). The internal composition of the classified assets, however, changed over the year. The share of loss category - which requires 100 percent provisioning requirement - in classified assets increased to 56.3 percent (24.8 percent in CY20). Accordingly, NBMFCs provided higher amount of provisioning. Resultantly, the provisioning coverage ratio of the sector stood above 90 percent in CY21, thus indicating the reduced risk to the solvency of the sector from delinquent credit portfolio.

Despite the higher provisioning expense and program costs along with lower operating income, Surplus for the NBMFC sector remained stable at PKR 2.5 billion for the year ended Jun-21 (same for Jun-20) as it was supported by a decline in finance costs and increase in grants. (**Chart 6.2.8**)

Chart 6.2.8: Income & Expenditure for NBMFCs



Source: Financials of NBMFCs

The reversal in monetary policy stance towards the end of CY21 might have led to increased finance costs at the end of the year. If monetary tightening continues in the near term, it will lead to higher finance costs for NBMFCs, which may put pressure on the bottom line in the future.

In spite of the presence of around 30 companies in the NBMFC sector, it was heavily concentrated with three entities holding more than 60 percent market share (in terms of assets) in the sector. This difference in size of firms was, in part, due to the scope of the firms in terms of range of activities and extent of geographical outreach to various districts of Pakistan. Some entities were limited to one or two districts, others operated on a national level.

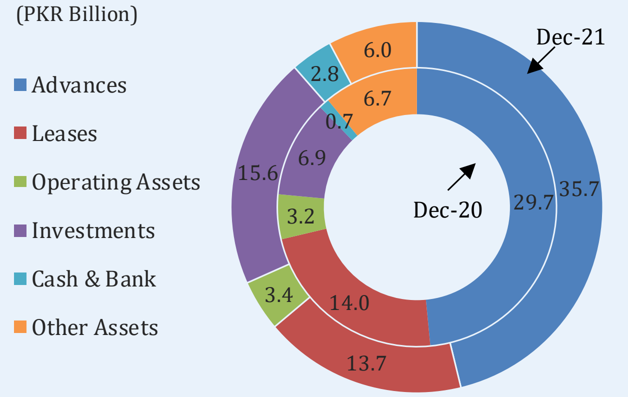
The SECP being the apex regulator continually strives to strengthen the regulatory framework for NBFMCs so that they can operate in a sustainable manner. In this regard, SECP issued enhanced guidelines on risk management for such large NBMFCs which have a gross loan portfolio of PKR 500 million or more. These guidelines, inter alia, included the requirement to formulate funding and liquidity management policies to ensure the achievement of NBMFCs' performance objectives in a sustainable manner, which, in turn, ensured financial soundness of the sector.[145]

IFC sector continued to be dominated by a couple of companies ...

The asset base of the IFC sector increased by PKR 16 billion (25.7 percent) to PKR 78 billion in CY21 (PKR 0.4 billion increase in CY20). Investments and advances, which increased by PKR 9 billion and PKR 6 billion, respectively, were the main contributors to the assets' growth.

While some new players entered the IFC sector, it was still dominated by a couple of firms, which hold around 80 percent of the market share of the sector. Accordingly, these firms were also the main drivers of growth in the sector during the reviewed year.

Chart 6.2.9: Break-up of Assets of IFCs



Source: SECP

Most of the sector's assets were concentrated in earning assets i.e. advances, investments, and leases, which together accounted for 84.1 percent of total assets. (**Chart 6.2.9**)

To finance their asset base, IFCs mainly relied on borrowings and equity, which increased by 50.5 percent and 20.5 percent to PKR 27 billion and PKR 38 billion, respectively. Their reliance on deposits remained quite limited as only one firm raised significant deposits over the years. Its deposit-to-equity ratio stood at 61.2 percent in CY21. Most other firms in the sector were not utilizing this funding option, which required regulatory permission that is only be granted after certain regulatory conditions are met[146].

Consequently, the debt-to equity (**D/E**) ratio was 0.96 times in CY21, signifying that the IFCs had lower leverage and faced lower risks as most activities were financed through shareholders' funds.

Modarabas[147]apprecaibly improved their performance over the previous year...

The Modarabas are Islamic institutions, which are permitted to conduct financing business, provided it is Shariah-compliant and approved by the Religious Board of Modarabas.[148] For example, Modarabas can undertake Ijarah (leasing), Murabahah (cost-plus sale), Musharaka

[145] SECP's SRO1605 (I) 2021 – Notification for amendments to NBFC&NE Regulations, 2008-NBMFCs and Housing Standards. (Accessed on March 16, 2022)
[146] Please see sections 4, 14, 15A, 17A of Non-Banking Finance Companies and Notified Entities Regulations, 2008

[147] The financial year for Modarabas ends on June 30
[148] JamaPunji's Knowledge Centre-Modaraba. (Accessed on April 26, 2022)

(partnership), Diminishing Musharaka, Salam (deferred delivery sale) and Istisna financing activities; invest in the stock market; trade halal commodities; conduct project financing activities; manufacture items; among other activities.

The asset base of the Modarabas increased from PKR 51 billion to PKR 57 billion in CY21 (growth of 11.4 percent), which was broad-based with increases in advances, operating assets, and bank balances.

In the second year of the pandemic, the Modaraba sector was able to turn around its performance. The financing portfolio climbed significantly by PKR 5 billion to PKR 19 billion in CY21. While classified assets for the sector declined from PKR 4 billion in CY20 to PKR 3.5 billion in CY21. Thus, infection ratio also lowered in CY21.

Revenue for the year increased from PKR 14.5 billion in Jun-20 to PKR 16.5 billion in Jun-21.

Along with better cost management and efficiency in operations, the increased revenue led to a turnaround in the bottom line. Expense-to-revenue ratio declined from 42.1 percent in Jun-20 to 36.0 percent in Jun-21 as operating and administrative expenses slightly declined during the year. Resultantly, as against a loss (before tax) of PKR 2 billion for the year ended June 30, 2020, the Modaraba sector posted aggregate pre-tax profit of PKR 1.4 billion for the year ended June 30, 2021.

Table 6.2.3: Key Financial Soundness Indicators of Modaraba sector

Description	Jun-20	Jun-21
	Percent	
Equity to Assets	34.6	47.9
Return on Asset (BT)	-3.9	2.6
Return on Equity (BT)	-10.8	6.3
Net Profit Margin	-14.0	7.5
Current Ratio	68.2	94.6
Debt to Equity Ratio	188.2	107.7
Expense to Revenue Ratio	42.1	36.0

Source: Financial Statements of Modarabas

Consequently, ROE (before tax) improved to 6.3 percent in Jun-21. (**Table 6.2.3**)

While not all Modarabas are subject to minimum equity or capital adequacy requirements, nevertheless, the aggregate equity-to-asset ratio of the sector increased further as some payables to associated entities were converted into equity,[149] indicating the strengthening in the Modarabas' cushion to absorb losses.

Going forward, the withdrawal of tax exemption on Modaraba sector in 2021will affect the sector's profitability and dividend distribution to the shareholders, which may have a bearing on the future outlook of the sector and possible implications for future investments in the sector's certificates.[150]

The government's initiatives to promote low-cost housing led to the introduction of housing finance companies ...

Given the unmet housing demand in the country and the government's initiative to promote the housing sector, three housing finance companies were established over the last two years to cater to housing finance needs. The asset base of the sector stood at PKR 0.2 billion as of Dec-21 as the companies gradually became operational. The government's supportive policies in this area can lead to significant growth in the housing finance sector over the coming years.

[149] See Regulation 17 of Modaraba Regulations, 2021

[150] Finance Act, 2021

Interconnectedness between the NBFIs and the banking sector remained contained…

Table 6.2.4: Asset Management segment's flow of funds & exposure to the banking sector

Description	Dec-19			Dec-20			Dec-21		
	Total Value (i)	Banks share (ii)	Banks share in Total* (iii= ii/i)	Total Value (iv)	Banks share (v)	Banks share in Total* (vi= v/iv)	Total Value (vii)	Banks share (viii)	Banks share in Total* (ix= viii/vii)
	PKR billion		Percent	PKR billion		Percent	PKR billion		Percent
1. Equity of AMCs/ IAs	29	14	50.5	32	17	53.4	33	17	53.0
2. Assets Under Management of AMCs/ IAs	980	762	77.7	1,335	1,026	76.9	1,605	1,257	78.3
3. Mutual Funds size	724	13	1.8	985	16	1.6	1,192	22	1.8
4. Mutual Fund exposure in Financial Institutions	358	343	95.8	541	510	94.3	724	674	93.0
5. Mutual Funds exposure in top 20 equity securities	81	6	7.9	76	9	12.1	75	9	12.5
6. Mutual Funds exposure in top 10 debt securities	17	6	32.2	20	6	29.6	20	7	36.7
7. Top 20 holders of mutual fund units	97	6	6.2	359	205	57.2	194	14	7.1

*Banks share for the respective head means:

1.Equity of Bank-owned AMCs /IAs

2.Mutual/Pension Funds and Portfolios being managed by bank-owned AMCs /IAs

3.Banks' investments in mutual fund units

4.Mutual Funds' investments in deposits, COD/TDR/COI and money at call/placements with banks

5.Mutual Fund investments in ordinary shares of banks

6.Mutual Funds investments in TFCs/Commercial Paper/Sukuk etc. issued by banks

7.Banks(investment value) in the top 20 holders of mutual fund units

Source: SECP

The Banking sector continued to have significant stake in the mutual fund sector in terms of equity in associated AMCs/IAs. Given the relative size of the banking sector and its ample equity to withstand shocks vis-à-vis the size of AUM of AMCs/ IAs and the nature of the mutual fund sector's risk profile, any probability of buildup and transfer of systemic risk from AM segment to banks remained minute.[151] On the other hand, given that banks owned controlling stakes in AMCs/IAs and a significant share of AUM was placed with banks, the stability of banks, along with their continued sponsorship support to their affiliated AMCs/IAs, remained crucial for the stability of the AM sector. Incidentally, since banks having associated AMCs/ IAs were adequately capitalized and the banking industry in general had ample capital and liquidity cushions (with CAR at 16.7 percent and liquid assets to deposits ratio of 76.7 percent as of Dec-21), the probability of emergence and transfer of any systemic risk to the AM segment was minimal. (**Table 6.2.4**)

The ratio of mutual funds' exposure in banks to total mutual fund assets rose from 51.8 percent in CY20 to 56.5 percent in CY21 – almost all of the exposure was in adequately capitalized banks. While the mutual fund exposure in NBFIs in terms of total mutual fund size was insignificant i.e. 0.5 percent in Dec-21.

Investments in mutual funds by their associated banks, DFIs and AMCs constituted 3.6 percent of total investments as of Dec-21. Similarly, Other banks/DFIs' investment in mutual funds as percentage of total investment in mutual funds was only 1.1 percent as of Dec-21.

In addition, concentration risk in terms of mutual funds reliance on a few large investors (gauged by the share of top 20 investors in MF units) was minimal (around 12 percent) in the AM segment.

One other channel of interconnectedness between NBFIs and banks was a microfinance intermediary, categorized as an IFC, which partly borrows from banks and provides financing to NBMFCs. Since the quantum of NBMFCs' classified assets as well as banks'

[151] Banks' asset size of PKR 30.0 trillion and equity base of PKR 1.7 trillion against AUM' total size of PKR 1.6 trillion

exposure on this intermediary IFCs was quite contained vis-à-vis ample capital cushions of banks, the possible transfer of cross-sectoral vulnerabilities to the banking sector was minimal. In addition, NBMFCs have adequate cushion to absorb losses (equity to assets ratio at 22.0 percent in CY21).

Going forward, the performance of NBFIs sector depends on the trajectory of global commodity prices, geo-strategic tensions in Eastern Europe, domestic political stability, and monetary policy changes in advanced economies (in response to rising inflation). These key factors will have discernable bearing on macro financial conditions such as interest rate and exchange rate as well as the level of economic activity in the county. In the face of elevated interest rates, the mutual fund business may continue to witness more activity in money market and income funds. Similarly, the performance of lending NBFIs will mainly depend upon the domestic economic conditions, especially the policy rate and level of economic activity which will influence the demand for credit as well as the repayment capacity of their borrowers.

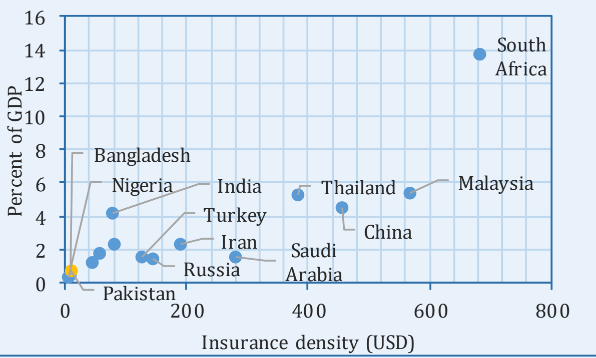
Chapter 6.3: Insurance and Takaful Companies

In 2021, insurance premiums for both the life and non-life sectors increased following a resumption of economic activities. Gross premiums for life registered a significant jump due to a doubling of group premiums as the national health insurance program expanded. With more health insurance policies being underwritten, claims for life also increased resulting in an overall increasing claims ratio. Nevertheless, the life sector posted higher profits on the back of increase in premiums. In the non-life sector, fire and property damage premiums drove the increase in non-life gross premiums, however, non-life claims did not register a significant increase as fire and property witnessed significant decline vis-à-vis the one-off spike in claims during the previous year caused by the urban flooding in the southern parts of the country. Accordingly, the profitability of the non-life sector posted appreciable increase in CY21. Despite a few insurers not meeting the solvency requirements in CY20, solvency indicators have improved for the insurance industry in CY21. Overall solvency indicators remain at a comfortable level. Given the challenging macroeconomic environment at both global and domestic front, growth and performance of the insurance sector will remain dependent upon the emerging macro financial conditions and business activity in the economy.

Pakistan lags behind peer countries in terms of insurance penetration…

Pakistan's insurance penetration[152] compared to some of its peer countries remained low at less than 1 percent of GDP. Similar was the case with Insurance density[153] which stood at USD 10 premium per capita in 2020. (**Chart 6.3.1**)

Chart 6.3.1: Country-wise Insurance Penetration and Density in 2020



Source: Swiss Re

While Pakistan's insurance premiums have grown in recent years (compound annual growth rate over last 3 years=10.1 percent), the small base means that growth of even 10 percent does not have a significant impact on insurance penetration in the country. Growth in the industry is inhibited by multiple factors including the country's low savings rate, religious sentiments, relatively lower returns offered by some insurance products, lack of awareness of insurance benefits, among other issues.

Overall Industry Snapshot

In the wake of the economic recovery from the pandemic, the insurance industry posted steady growth in CY21 …

In the second year of the pandemic, both advanced and emerging economies adapted to COVID-19. Pakistan performed relatively better in coping with the pandemic, and there was strong resumption in economic activities during CY21 amid spells of surge in infections. Accordingly, the insurance industry revenues posted decent growth and the overall asset base

[152] Insurance penetration is used as an indicator of insurance sector development in a country and is calculated as the ratio of insurance premiums to GDP.
[153] Insurance density is another indicator of insurance sector development of a country; it is calculated as ratio of total insurance premiums to the whole population of a given country.

increased by 11.0 percent to PKR 2,143 billion in CY21[154].

A few major players dominate the insurance industry, indicating the great potential for new players to explore the untapped potential ...

The insurance sector of Pakistan comprises of 10 life insurers and family Takaful companies, 30 active non-life insurers and general Takaful companies, and one reinsurer[155]. Life insurance and family Takaful companies (which have long-term business horizons) hold higher market share of around 84 percent in terms of assets in Dec-21.

The industry in terms of relative market share of players remained concentrated. The public sector enterprises (**PSEs**) i.e. two public life insurers, the large public non-life insurer, and the sole reinsurer contribute a major share of the industry. The dominant public sector life insurer constituted more than 50 percent of the insurance industry (in terms of assets). In a similar vein, the top five non-life insurers (including the public non-life insurer) made up about 70 percent of the non-life and General Takaful sector's assets. This high market concentration in the context of low insurance penetration and density represents the untapped potential of the industry, which can be explored by new and existing players. Besides improving the access to insurance products and services, there is also a need on the part of policymakers and industry to raise awareness about the importance of insurance in the country through extensive financial literacy campaigns.

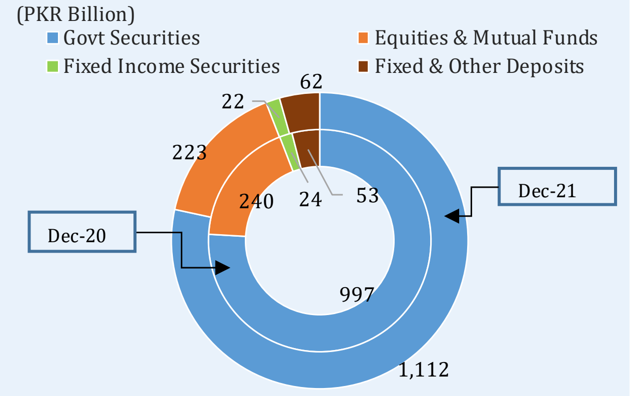
Life Insurance

The asset base of the life insurance sector grew at a slower pace in CY21...

Compared to last year's strong growth in the asset base of life insurance sector (14.7 percent in CY20), the asset base in CY21 grew at slower rate of 11.3 percent to PKR 1,805 billion in CY21.

Investment portfolio increased by 8.0 percent to PKR 1,418 billion in CY21. In the wake of increase in interest rates due to tightening in monetary policy towards the end of the year, life insurers increased their investments in government securities by PKR 114 billion and decreased their investments in equities and mutual funds by PKR 17 billion. (**Chart 6.3.2**)

Chart 6.3.2: Life Sector Investments



Source: Unaudited/ audited accounts of insurers

Group premiums drove the growth in gross premiums ...

Furthermore, with the gradual resumption of economic activities, there was an uptick of 20.3 percent in first year premium (against a 0.4 percent decrease in first year premium in CY20).

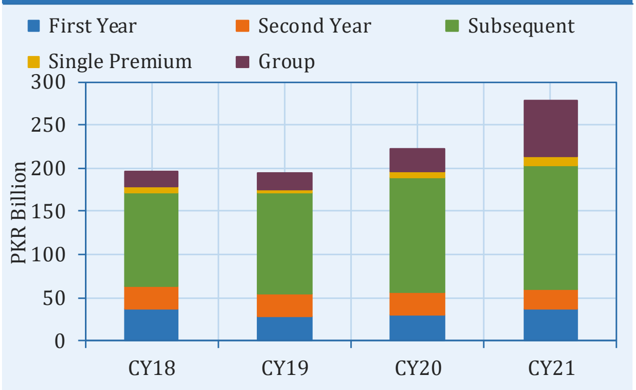
Overall, gross premium posted a strong growth of 25.0 percent to PKR 278 billion mainly due to increase in group premiums. Group premiums

[154] The analysis in the chapter is based on the data of 6 life insurers and 24 non-life insurers covering approximately 100 percent and 82 percent of the life and non-life insurance sectors' assets, respectively. The analysis also covers the two Family Takaful companies, the two active General Takaful companies, and the sole reinsurer, thus, covering the entire insurance industry. The analysis covers data up to period ending December 31, 2021. The financial close for insurers is December of the corresponding year. All growth ratios for flow items are on YoY basis.

[155] This assessment covers all the active insurance firms.

increased from PKR 26 billion to PKR 64 billion in CY21 as the national-level health insurance program took off. After the initial success shown by the provincial-level Social Health Program Initiative in previous years, the Sehat Sahulat Program was implemented where health insurance policies were underwritten on national-level through the dominant public life insurer. (**Chart 6.3.3**)

Chart 6.3.3: Gross Premiums for Life Sector

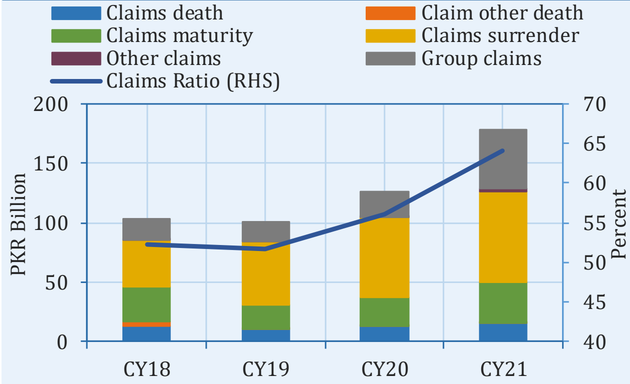


Source: Unaudited/ audited accounts of insurers

On the back of the increase in group premiums (mostly pertaining to health insurance business), group claims increased from PKR 22 billion to PKR 50 billion in CY21. This 132.0 percent increase was mostly expected as need-based individuals began utilizing their health policies to avail medical facilities. Overall, gross claims increased by PKR 53 billion to PKR 179 billion in CY21. (**Chart 6.3.4**)

In addition, during the second year of the pandemic, death claims showed a significant increase of 25.8 percent (against an increase of 20.7 percent in CY20). The increase in gross claims was also in line with increase in the insurance business.

Chart 6.3.4: Gross Claims for Life Sector

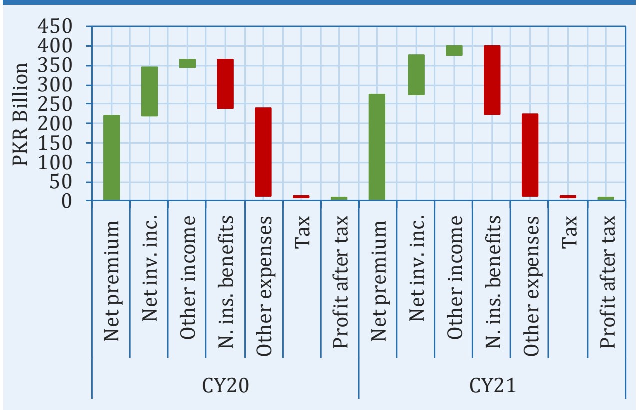


Source: Unaudited/ audited accounts of insurers

Consequently, profitability of the life insurance sector increased appreciably ...

The after tax profit of the sector increased by 8.9 percent to PKR 9.5 billion on the back of a spike in net premium revenue and a slight decline in other expenses. (**Chart 6.3.5**)

Chart 6.3.5: Earnings Components for Life



Source: Audited/ unaudited financial statements of insurers

Expenses declined over the reviewed year as there was a decline in net change in insurance liabilities. However, given the substantial increase in business underwritten, acquisition costs increased by 16.3 percent to PKR 40 billion in CY21, which slightly blunted the overall fall in expenses.[156] With the decline in expenses, key efficiency ratio i.e. expense ratio also improved.[157]

Net investment income decreased by 18.6 percent (PKR 23 billion) to PKR 103 billion over the year due to net fair value losses. A steeper

[156] Acquisition cost is cost incurred in obtaining and recording policies.

[157] Management expense to net premium ratio

decline in investment income was partially mitigated by an increase of PKR 4 billion in dividend income mainly due to the release of dividends by the banking sector in CY21. Initially, these dividends were put on hold for a significant period of CY20 due to the temporary restriction on distribution of dividends imposed by SBP.

Life insurers maintained most of their investments in government securities so as to ensure consistent flow of revenues and build reserves to meet their longer-term business commitments and asset-liability management (**ALM**) strategies. Though this policy led to an interim moderation in ROI as interest rates remained low during most of CY21.

Considering their longer investment horizons, which provides them opportunities to structure a diversified investment portfolio and maximize returns, life insurers have the capacity to provide long-term finance[158] for projects and contribute to faster economic growth, greater welfare, shared prosperity and enduring stability[159]. In Pakistan, the life insurance sector, however, has limited long-term avenues for investments due to a number of reasons including the limited scope and scale of capital market and dearth of long-term products.

Table 6.3.1: Soundness of Life Insurance

Description	Dec-18	Dec-19	Dec-20	Dec-21
	Percent			
Claims Ratio	52.2	51.8	56.1	64.1
Expense Ratio	26.3	26.0	22.9	21.6
Equity to Assets	2.0	1.9	2.1	2.2
Return on Investments	5.7	10.4	10.6	7.7
Return on Equity	41.1	31.7	40.9	36.6
Return on Assets	0.7	0.6	0.8	0.8

Source: Unaudited/ audited accounts of insurers

With the rise in health insurance policies under group claims, the claims ratio[160] for the sector began to rise but it still remained contained. On the other hand, the ROE with a slight contraction remained at comfortably high level. (**Table 6.3.1**)

Soundness indicators like the claims ratio indicated that the pricing remained significantly favorable for the insurance firms. The high margin also reflected the ample prospects for new players to enter the market and explore the untapped potential of the sector and infuse efficiency therein.

Non-Life Insurance

Non-life insurers increased their asset base mainly on the back of investments in equity securities ...

In terms of assets, non-life insurers and general Takaful companies constitute only 11.7 percent of the overall insurance industry. However, given the various barriers to entry in the sector such as the difference in the minimum paid-up capital requirements (PKR 700 million for life and PKR 500 million for non-life insurers[161]), there are around 30 active non-life insurers (including general Takaful companies) compared to 10 active life insurers (including family Takaful companies).

The non-life insurance sector increased its asset base by PKR 13 billion to PKR 246 billion in CY21 (against PKR 23 billion increase in CY20) on the back of increases in investments, cash & bank, and reinsurance recoveries, among others.[162]

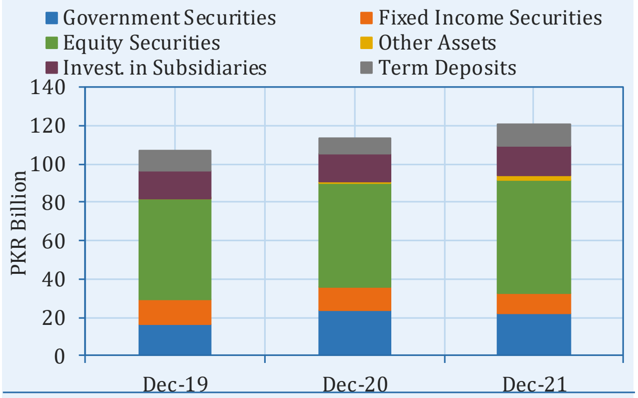
Investments increased by PKR 7 billion to PKR 121 billion in CY21 as non-life insurers increased their investments in equity securities and term deposits by PKR 5 billion and PKR 3 billion, respectively. Equity securities

[158] World Bank Blogs – Which financial intermediaries provide long-term finance? (Accessed on April 15, 2022)
[159] Caprio Jr, G., & Demirgü-Kunt, A. (1998). The role of long-term finance: theory and evidence. *The World Bank Research Observer*, *13*(2), 171-189
Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The journal of finance*, *53*(6), 2107-2137
[160] Net claims to net premium ratio

[161] See SECP's Insurance Companies – Pre-Requisites and Guidebook on Incorporation, Registration & Licensing for Insurance companies, Takaful operators, Insurance brokers, surveyors & third party administrators. (Accessed on April 15, 2022)
[162] Investments, cash and cash equivalents, and reinsurance recoveries increased by PKR 7.2 billion, PKR 2.4 billion and PKR 1.7 billion, respectively.

constituted 49.2 percent of the total investments & properties portfolio in CY21 (48.1 percent in CY20). Meanwhile, insurers divested their investments in government and fixed income securities worth PKR 3 billion. This may be due, in part, to the low interest rate environment that prevailed during most of CY21 as insurers sought higher returns to boost their investment income. However, the rise in the policy rate towards the end of the year may have revived the interest in government securities (**Chart 6.3.6**).

Chart 6.3.6: Non-Life Investments



Source: Unaudited/ audited accounts of insurers

The investments to assets ratio at 49.3 percent (49.0 percent in CY20) seems to be towards the lower end as most assets of insurers are generally expected to be part of the investment portfolio to support earnings.

Shareholders' equity continued to finance a substantial part of the non-life sector's asset base …

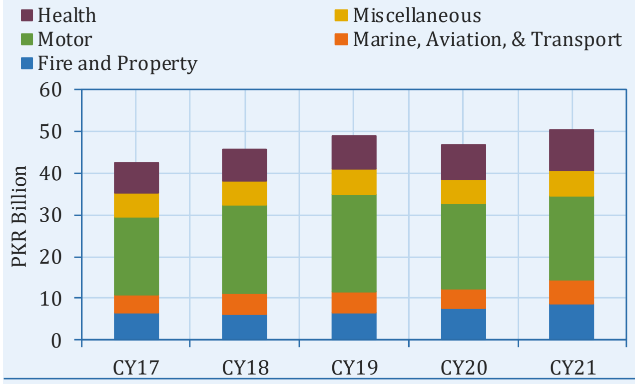
On the funding side, retained earnings and provisions increased by PKR 6 billion and PKR 3 billion to PKR 40 billion and PKR 87 billion in CY21, respectively. During the pandemic, profitability for the non-life sector declined only slightly during CY20 and then rose appreciably in CY21. Overall, equity increased by 8.4 percent over CY21 to PKR 106 billion, which came to 43.0 percent of the asset base.

The provision for unearned premium to gross premium ratio declined from 43.4 percent to 42.2 percent in CY21. Since it remained slightly higher than the indicative 'guideline' of 40 percent, there is a need to monitor the situation to ensure adequate coverage of underwritten risks[163]

Fire and property damage mainly contributed to the increase in gross premiums …

After a witnessing a slight 2.8 percent increase in gross premium and 4.5 percent dip in gross and net premiums during last year, these premiums increased by 10.2 percent (to PKR 103 billion) and 7.4 percent (to PKR 50 billion) in CY21, respectively, due to a broad-based resumption of economic activities (**Chart 6.3.7**).

Chart 6.3.7: Net Premiums for Non-Life Sector



Source: Unaudited/ audited accounts of insurers

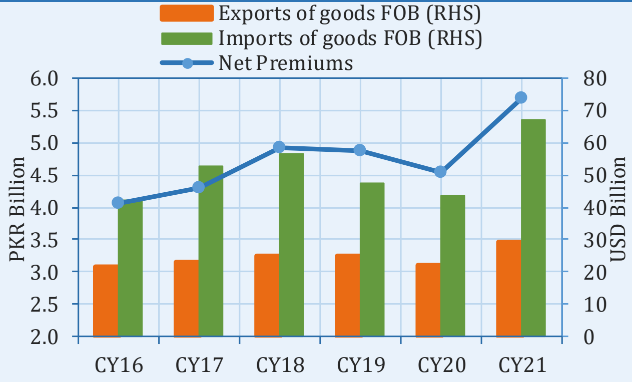
Fire and property damage premium followed by motor premium were the main drivers of growth in gross premiums. This was different from net premiums where marine, aviation, and transport premiums followed by health premiums illustrated the largest absolute increases. The difference in the drivers of growth for gross and net premiums was due to the difference in the opening and closing balances of unearned premium provision and reinsurance expense for different business lines.

The jump in foreign trade of goods led to a corresponding jump in net premiums for

[163] The 40 percent indicative 'guideline' assumes that 20 percent of the premium is used for expenses and the remaining 80 percent covers the risk over the year. Since policies are on average assumed to be halfway through their life, the ratio comes to 40 percent of gross premium.

marine, aviation, and transport business in CY21 (**Chart 6.3.8**).

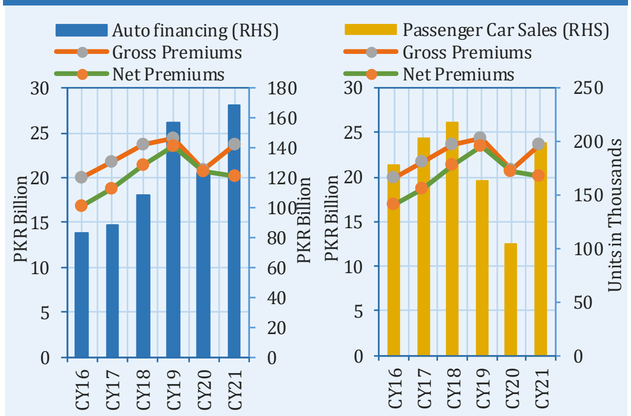
Chart 6.3.8: Trade in goods against Marine, Aviation and Transport Premiums



Source: SBP and Unaudited/ audited accounts of insurers

On the other hand, net motor premiums – the largest segment with market share of 40.0 percent in premiums - slightly declined by 2.2 percent in CY21 despite an increase of 13.6 percent in gross motor premiums. Gross premium increased in line with banks' auto financing as SBP's Prudential Regulations requires lending banks to ensure that vehicles (under auto financing) are properly insured and growth in the sale of automobiles during the year .[164] As noted earlier, the difference between the gross and net premiums was due to the larger reinsurance expense in CY21 (**Chart 6.3.9**).

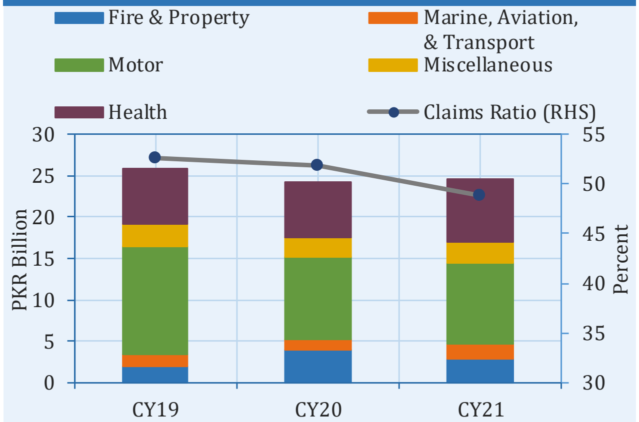
Chart 6.3.9: Passenger Cars Sales, Auto Finance & Motor Insurance



Source: SBP and Unaudited/ audited accounts of insurers

Due to the appreciable growth in premiums with net claims remaining stable compared to the previous year, the overall claims ratio declined from 51.8 percent in CY20 to 48.8 percent in CY21 (**Chart 6.3.10**).

Chart 6.3.10: Net Claims and Claims Ratio



Source: Unaudited/ audited accounts of insurers

With the decline in net motor premiums, there was a corresponding decline of 1.9 percent in motor claims. On the other hand, marine, aviation and transport claims increased in line with their associated premiums.

However, fire and property claims declined significantly in CY21 (despite an increase in associated premiums) as there was a one-off spike in CY20 when torrential rain caused urban flooding in the southern parts of the country particularly Karachi, which caused significant damage to the region's infrastructure.

Consequently, profitability for the non-life sector improved significantly during the year…

The increase in net premiums vis-à-vis stable net claims led to a boost in underwriting results for the non-life sector, which increased by 61.9 percent to PKR 6 billion in CY21. While management expenses increased only slightly, the recalibration of the investment portfolio and the increase in dividend income led to a spike of 23.7 percent in investment income to PKR 10 billion in CY21.

[164] See SBP Prudential Regulations for Consumer Financing

Accordingly, the after-tax profit of the non-life sector posted a healthy increase of 36.2 percent during CY21 to PKR 13 billion (PKR 10 billion in CY20).

Table 6.3.2: Soundness of Non-Life Insurance

Description	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21*
			Percent		
Capital to Assets	12.6	12.6	11.8	10.9	10.5
Claims Ratio	51.4	52.0	52.6	51.8	48.8
Combined Ratio	89.1	88.6	91.0	92.3	88.1
Premium Retention	55.1	54.4	54.0	50.1	48.9
Return on Assets	6.7	6.5	6.6	5.9	7.7

Source: Unaudited/ audited accounts of insurers.
*Estimated Figures

Moreover, the financial performance and soundness indicators also improved as return on assets (ROA) increased from 5.9 percent to 7.7 percent in CY21 while the combined ratio[165] declined from 92.3 percent to 88.1 percent in CY21 (**Table 6.3.2**).

General Takaful

*Underwriting results showed improvement for Dedicated Takaful Operators (**DTOs**) in the general Takaful segment...*

The general Takaful segment[166] consists of three DTOs and around 20 Window Takaful Operators (**WTOs**).

Table 6.3.3: Snapshot of Dedicated General Takaful Operators

Description	Dec-18	Dec-19	Dec-20	Dec-21	growth
		PKR million			Percent
Equity	899	911	819	1,248	52.4
Investment	810	951	1,203	1,355	12.7
Total Assets	2,290	2,834	3,615	5,669	56.8
Gross Premium	1,054	1,733	2,208	3,252	47.3
Net Premium	338	834	1,172	1,584	35.1
Net Claims	309	568	872	1,177	35.0
Underwriting Results	7	-7	39	65	69.1
Surplus before tax (PTF)	16	38	82	94	13.6
		Percent			
Claims Ratio	91.6	68.1	74.4	74.3	

Source: Unaudited/ Audited accounts of General DTOs

On a standalone basis, the two full-fledged active general Takaful operators increased their asset base by PKR 2.1 billion to PKR 5.7 billion at the end of CY21 (growth of 56.8 percent). It seemed that DTOs were benefitting from the acceptability and support of the faith-sensitive segments of society (**Table 6.3.3**).

Nevertheless, DTOs still constituted only 2.3 percent of assets of the consolidated non-life and general Takaful sector in CY21 (up from 1.5 percent in CY20).

The DTOs' investment portfolio mainly comprised equity securities (including mutual funds), fixed income securities (Sukuk), and term deposits. As was the case with the conventional non-life sector, due to the prolonged low interest rate environment during the year, DTOs shifted towards equity securities increasing their share in the investment portfolio from 20.7 percent to 31.4 percent in CY21. The share of debt securities and term deposits stood at 27.8 percent and 40.8 percent, respectively.

Net contributions and net claims for the DTOs increased by PKR 0.4 billion and PKR 0.3 billion to PKR 1.6 billion and PKR 1.2 billion, respectively.

Consequently, in CY21, Surplus for the Participants' Takaful Fund (**PTF**) increased from PKR 82.4 million to PKR 93.6 million. Moreover, profitability for the Shareholders' Fund (**SHF**) posted strong growth from PKR 35.4 million to PKR 159.8 million in CY21, as there was a surge in Wakala Fee.

Family Takaful

165 Net claims and expenses to net premium ratio
166 This section covers the two active full-fledged General Takaful companies/ Dedicated Takaful Operators only, as the new business of one dedicated General Takaful Company has been ceased. The performance of Window Takaful Operators (WTOs) of non-life insurers has been discussed on a consolidated basis under the non-life section.

Wakala fee helped sustain profitability for DTOs in the family Takaful segment…

The family Takaful segment is comprised of two DTOs and seven Window Takaful Operators WTOs.[167]

These DTOs in family Takaful increased their asset base by 6.7 percent to PKR 39.4 billion in CY21.

After a slight dip in CY20, the DTOs posted healthy gains of 22.8 percent to register gross contribution of 12.0 billion in CY21. While all the components registered healthy growth, the increase of 20.2 percent in first year contribution reflected that the DTOs attracted significant new business while growth of 9.2 percent and 32.8 percent in subsequent year and group contributions, respectively, indicated the sustainability of their operations.

However, the higher increase in net claims compared to that of net contributions (30.0 percent against 16.4 percent) pointed to slightly subdued underwriting results for the DTOs.

Consequently, surplus (before tax) for the PTF fell from PKR 0.3 billion to PKR 0.1 billion in CY21. Nevertheless, profit (before tax) for the SHF remained somewhat stable at PKR 0.3 billion in CY21 as the substantial increase in acquisition expenses was matched by a similar increase in Wakala fee.

Table 6.3.4: Soundness of Dedicated Family Takaful Operators

Description	Dec-18	Dec-19	Dec-20	Dec-21
	Percent			
ROA	0.7	0.5	0.9	0.7
ROE	10.5	7.6	16.2	13.8
Claims Ratio	43.6	50.2	55.6	62.1
Expense Ratio	26.9	30.6	31.6	31.3
Contribution Retention	95.4	95.1	94.9	89.9

Source: Unaudited/ Audited accounts of Dedicated Family Takaful Operators

Claims ratio for the family DTOs increased due to an increase in surrender and maturity claims.

Despite a decline in profitability indicators, they remained at comfortable level. (**Table 6.3.4**)

Reinsurance

The sole reinsurer in the industry witnessed significant growth in its gross premiums during the year …

There is one non-life reinsurer in the industry. Besides reinsuring the private sector's non-life insurance business, this sole non-life reinsurer also underwrites (as reinsurer) the business of a public non-life insurer. It is important to note that to cover its own risk, the reinsurer maintained reinsurance arrangements with some of the largest global insurers such as Hannover Re, Partner Re and Lloyd's Syndicate

The company improved its performance significantly in CY21. Its gross revenue from public sector business increased from PKR 10.3 billion to PKR 13.5 billion, whereas the overall gross premiums increased by PKR 4.1 billion to PKR 21.0 billion while net claims declined by PKR 0.1 billion to PKR 3.8 billion leading to an underwriting profit of PKR 1.7 billion in CY21 (PKR 0.8 billion in CY20). Accordingly, profitability of the reinsurer increased from PKR 2.0 billion in CY20 to PKR 3.6 billion in CY21.

Solvency indicators remained at a comfortable level on an overall basis …

The favorable pricing (which can be gauged by the claims and expense ratio) and conservative investment allocation decisions (most investments in government securities for life and blue chip equity securities for non-life) by most insurers contributed to the financial stability of the industry.

As per latest available data, the life sector on an aggregate basis had solvency ratio of around one in CY20 (which is the regulatory requirement).

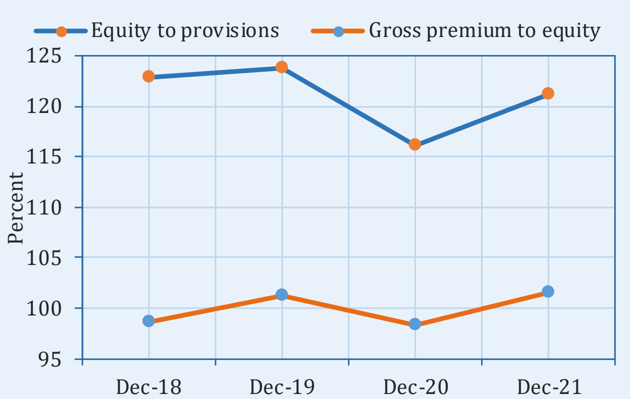
The solvency position of non-life insurance sector improved during CY21. The solvency

[167] This section cover the two full-fledged Family Takaful companies only. The performance of the WTOs of life insurers has been discussed on a consolidated basis under the life section.

indicators remained at comfortable levels on an aggregate basis as gross premium was around 1 times to equity with a slight dip in CY20 at the onset of the pandemic (**Chart 6.3.11**).

Out of the thirty active non-life insurers, only two insurers were not meeting the solvency ratio benchmark in CY20 (two insurers in CY19) out of which, one firm became solvent subsequently. The other deficient firm has a relatively small market share and sponsors of the firm were also striving to inject equity to meet the margin requirement.

Chart 6.3.11: Solvency indicators for Non-Life sector



Source: Unaudited/ audited accounts of insurers

Insurers operating in Pakistan generally have 'traditional' business models – with sufficient loss absorbency capacity, favorable pricing and low leverage utilization – indicating that they have adequate financial standing and are less likely to become a source of systemic risk.

It is important to note that due to the unique nature of insurance business i.e. inverted production cycles[168], longer-term investment horizons (especially for life insurers), built in checks and buffers (e.g. penalties on premature withdrawals), contained interconnectivity and low potential to create contagion effects in the financial system, insurers in general do not significantly contribute to systemic risk in the financial system.

However, since a few insurers operating in Pakistan dominate the market and they have systemic importance for the economy, enhanced supervision and regulation of these entities remains important.

Outlook

Going forward, growth in life premiums partly depends on the sustainability of the national health insurance program while macro financial conditions will be important for the performane of non-life insurers ...

Growth and performance of the insurance sector will remain dependent upon the level of business activities in the context of emerging macroeconomic conditions, dynamics of global commodity prices, and geo-strategic and political situation in the country.

Given the country's geopolitical situation and fiscal constraints, the sustainability of the national health insurance program which is underwritten by a leading insurer, will be a key determinant of growth in group premiums for life insurance sector.

In addition, Pakistan's macro financial conditions especially the level of economic activity and future trade scenario and growth in car sales and auto financing will remain important for the growth of marine, aviation, transport, and motor premiums.

[168] Inverted production cycle indicate that policyholders pay premiums upfront and contractual payments by the insurer are made only if and when an insured incident takes place.

Section C: Performance and Risk Analysis of Other Sectors

Chapter 7: The Corporate Sector

The overall performance and standing of non-financial corporate sector improved in CY21, as the global and domestic economy posted recovery. A sample of top-100 listed firms witnessed improvements in their profitability, liquidity and business turnover indicators while debt levels inched up due to lower interest rates, increased demand for working capital and fixed investment loans. Disaggregated analysis highlighted that automobiles, textiles and petroleum sectors faced notable expansion in sales. The investors' perception about these firms, i.e. how they value these firms and their share stocks, was reinforced with economic recovery; however this confidence oscillated towards the year-end due to building macroeconomic imbalances and consequent stabilization measures. Going forward, the dynamics of the ongoing geopolitical and macroeconomic conditions will be the key determinants of the corporate sector's performance. Nevertheless, the corporate sector seems to have adequate resilience to maintain its solvency and operating performance and continue to comfortably serve its obligations to financial institutions and banks.

Despite the recurring pressures of the pandemic, the overall performance of the corporate sector remained positive in CY21 as the government and SBP's efforts to cope with the pandemic remained effective ...

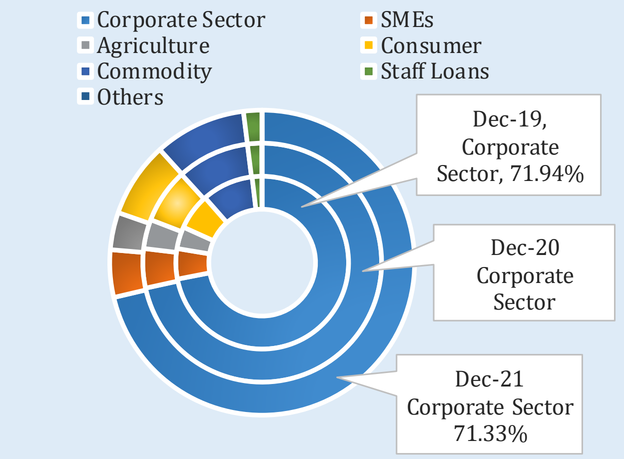
CY21 was marked by relaxation in pandemic restrictions, as global economies and businesses began transitioning towards normalcy on the back of improved pandemic management techniques and mass-vaccine rollout in most of the countries, including Pakistan. The country particularly performed well in managing and controlling the impact of COVID-19 on human life, economic activity and the financial system. For this purpose, SBP also introduced a number of support measures which helped in achieving the policy objectives against the pandemic (see **Box 3.3**).

Although, newer variants of coronavirus and couple of waves continued to emerge during the year, however, the economic recovery largely remained on track. All major manufacturing sectors witnessed robust turnaround including, textiles, food products, pharmaceuticals, chemicals, cement and rubber products. Growth in LSM index surpassed the pre-COVID level as output gap also witnessed a contraction and Business Confidence Index remained above its baseline.

Strong relationship between the non-financial corporate sector and banks continued...

Banking sector remains the major financier of non-financial corporate sector of the country as the depth and outreach of capital market remains limited in the country. The corporate sector utilized 71.3 percent (PKR 7.25 trillion) of the banking sector's domestic loan portfolio at the end of CY21 (**Chart 7.1**). Therefore, the performance and standing of these corporate firms and their underlying sectors remain crucial for the financial stability of the banking sector.

Chart 7.1: Segment wise distribution of domestic advances, as of end December 2021



Source: SBP

The listed firms have more formal and organized corporate governance and internal control frameworks and they also publically share their financials with external stakeholders. Accordingly, this assessment of the corporate sector's financial soundness and performance is based on the financial statements and market-based indicators of selected top 100 listed non-financial firms which belong to different economic sectors.[169] In aggregate, these entities comprise around 70 percent share in the asset base of all the listed companies. Thus, the insights gained from the analysis of this sample of firms present a fair view of the standing and performance of the overall corporate sector.

Corporate firms enjoyed revenue and sales growth though some downside risks remained around the corner…

The financial statements exhibited augmented sales and after-tax profits in CY21. The recovery on macroeconomic front played a vital role in uplifting the corporate sales volume which translated into bottom-line growth for the year. This was supplemented by the resumption of the IMF program and announcement of a pro-growth Federal Budget for FY22 (including subsidies and relaxation in regulatory duties).[170] However, rise in international commodity prices, soaring inflation, trade imbalances and consequent stabilization measures including monetary tightening towards the end of the year, ended CY21 for corporate sector on a slightly negative note in terms of future outlook.

Asset base of the corpporate firms grew at an accelerated pace and their borrowings surged during CY21. However, overall leverage slightly declined as equity rose at a higher pace…

There was acceleration in the growth of select firms' assets base: 18.4 percent growth in CY21 against 5.7 percent in CY20 **(Table 7.1)**.[171] Primarily, the current assets caused the acceleration, as the firms needed greater amount of working capital in the wake of increased economic activity and lifting of lockdowns. Inventory levels increased significantly due to increased aggregate demand and higher commodity prices, leading to overall assets growth for the year.

[169] The 100 non-financial listed firms were selected in such a manner to cover all the economic sectors. The 100 significant entities from all the sector were sampled out of 376 total non-financial listed corporates.

[170] Finance Division's Federal Budget 2021-22: [Budget in Brief](). Accessed on May 15, 2022

[171] The data of earnings and expenditure projected/annualized to arrive at annualized indicators of returns e.g. ROE, etc.

Table 7.1: Excerpt Financial Statements of PSX Listed Companies and Ratio Analysis

	Q3 CY19	Q4 CY19	Q1 CY20	Q3 CY20	Q4 CY20	Q1 CY21	Q3 CY21	Q4 CY21	*growth YoY*
					PKR billions				
Balance Sheet									
Non-Current Assets	3,344	3,522	3,555	3,710	3,757	3,753	4,023	4,132	*10.0%*
Current Assets	3,754	3,867	4,042	4,039	4,057	4,284	4,854	5,123	*26.3%*
Total Assets	7,098	7,389	7,597	7,749	7,814	8,036	8,878	9,255	*18.4%*
Shareholders' Equity	3,211	3,304	3,323	3,496	3,647	3,748	4,050	4,150	*13.8%*
Non-Current Liabilities	968	1,057	1,097	1,225	1,314	1,280	1,392	1,449	*10.3%*
Current Liabilities	2,919	3,029	3,177	3,028	2,853	3,009	3,436	3,656	*28.2%*
Total Equity & Liabilities	7,098	7,389	7,597	7,749	7,814	8,036	8,878	9,255	*18.4%*
Income Statement									
Sales	1,525	1,566	1,364	1,536	1,579	1,665	2,153	2,300	*45.7%*
Cost of sales	1,271	1,308	1,142	1,252	1,282	1,320	1,766	1,859	*45.1%*
Gross profit / (loss)	254	259	222	284	297	345	387	441	*48.4%*
General, admin. & other exp.	104	122	101	102	116	120	137	155	*32.9%*
Other income / (loss)	38	44	43	40	52	42	70	46	*-11.8%*
EBIT	188	181	164	222	233	268	319	332	*42.6%*
Financial expenses	46	51	57	32	30	33	35	41	*35.6%*
Profit / (loss) before tax	142	131	107	190	203	235	285	292	*43.6%*
Tax expenses	43	50	38	47	57	63	78	78	*36.2%*
Profit / (loss) after tax	99	81	69	142	146	172	207	214	*46.5%*
Financial Ratios									
Gross Profit Margin (%)	16.6	16.5	16.3	18.5	18.8	20.7	18.0	19.2	
Net Profit Margin (%)	6.5	5.1	5.1	9.3	9.3	10.3	9.6	9.3	
Return on Equity (%)	12.3	9.8	8.3	16.3	16.0	18.4	20.4	20.6	
Return on Assets (%)	5.6	4.4	3.6	7.4	7.5	8.6	9.3	9.3	
Current Ratio (units)	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	
Asset Turnover (%)	85.9	84.8	71.8	79.3	80.8	82.9	97.0	99.4	
Capital to Total Assets(%)	58.9	59.0	58.2	60.9	63.5	62.6	61.3	60.5	
Debt Equity Ratio (units)	1.2	1.2	1.3	1.2	1.1	1.1	1.2	1.2	
Interest Coverage Ratio (units)	4.1	3.6	2.9	6.9	7.8	8.2	9.2	8.2	

*Data of 100 companies were used that represent 73% of total assets of all listed non-financial entitles
Source: SBP

Over CY21, long-term borrowings augmented owing to reduced interest rates and funds borrowed under SBP's concessionary refinance schemes e.g. TERF which aim to support long-term investment. Whereas, short-term borrowings climbed due to higher demand for inventories, rise in input costs, and increased working capital needs amid acceleration in business activity and economic growth. This phenomenon was also reflected in the marked acceleration in the banking sector's domestic lending to corporate sector for fixed investment and working capital loans over the year (see **Chapter 3**)

Corporates reported accelerated growth in earnings during CY21…

The corporates were able to improve profits primarily backed by resumption of economic activities and accelerated sales. Economic recovery after the effective vaccination drive favorably influenced the sales performance of the corporates during CY21 (45.7 percent growth by the year end on YoY basis). Both domestic sales and exports witnessed tremendous growth in CY21. Besides the functioning of market-based exchange rate regime, the government measures boosted exports and production supported the recovery.

Profitability improved due to enhancement in asset use efficiency and increased leverage…

The ROE of selected large firms increased from 16.0 percent in CY20 to 20.6 percent in CY21 **(Table 7.2)**. The Extended DuPont analysis revealed that improvement in asset usage efficiency along with increase in leverage augmented the ROE. The leverage increased as the firms increased their borrowings and enhanced their other liabilities in line with expansion in business. On the other hand, interest expenses vis-à-vis revenues slightly declined as despite significant increase in borrowings, lower interest rates which prevailed during most part of the year benefitted the firms.

Table 7.2: Extended DuPont Analysis

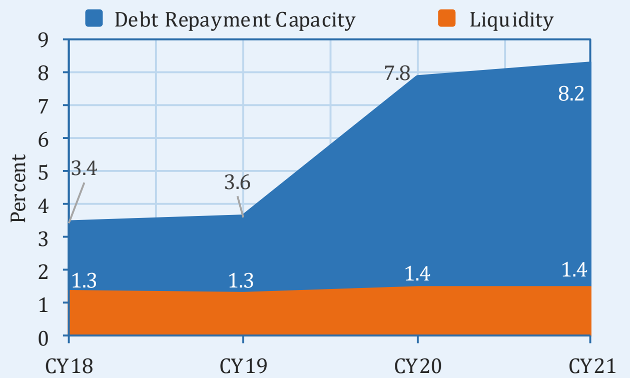
	CY18	CY19	CY20	CY21
Tax Burden (A)	0.55	0.62	0.72	0.73
Interest Burden (B)	0.71	0.72	0.87	0.88
Operating Profit Margin (C)	0.08	0.12	0.15	0.14
Asset Use Efficiency (D)	0.95	0.85	0.81	0.99
Financial Leverage (E)	2.16	2.24	2.14	2.23
Return on Equity (ROE) % (AxBxCxDxE)	**6.51**	**9.76**	**16.02**	**20.64**

Source: SBP

Debt repayment capacity improved immensely and remained in comfortable zone…

Despite the marginal increase in financing costs, the debt repayment capacity of the corporate sector improved throughout the year and remained in comfortable zone. Higher Earnings before Interest and Taxes (**EBIT**) was the primary reason for the improvement. The growth in EBIT was at a much greater pace than the growth in the finance costs of the corporates. The interest coverage ratio inched up from 7.8 in Q4CY20 to 8.2 in Q4CY21 **(Chart 7.2).**[172]

Chart 7.2: Key Financial Indicators - Debt Repayment Capacity and Liquidity



Source: SBP

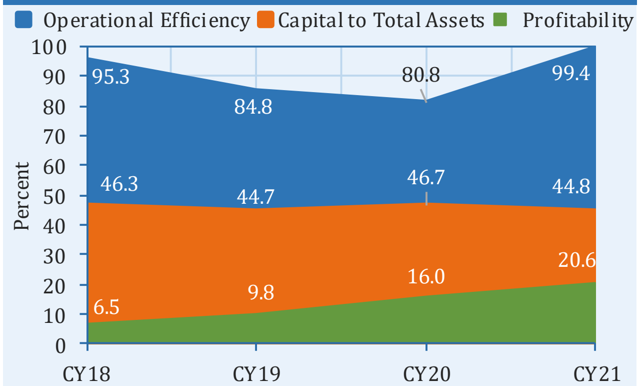
Liquidty indicators remained steady despite increase in short-term borrowings ...

Moreover, the liquidity indicators (e.g. current ratio) remained stable as the firms increased their reliance on long-term funding. There was also significant increase in short-term borrowings and current portion of long-term loans, however, enhanced short-term investments and inventories provided the cushion to absorb the impact of growth in current liabilities. The increase in short-term investments and assets hints at the tendency of the firms to maintain higher liquidity in the face of economic recovery.

Along with that, solvency indicators remained steady...

The funding strategy of the large firms in terms of long-term capital employed to total assets witnessed improvement during the reviewed year, indicating lowering in the risk to solvency due to any financial crunch. The financial leverage slightly increased as shareholder's equity to total assets ratio came off to 44.8 percent, however it remained in line with past trends i.e. 46.7 percent in CY20 and 44.7 percent in CY19. Similarly, total debt to equity ratio slightly inched up. Nevertheless, improvements in the operating efficiency, earnings and repayment capacity vis-à-vis increased leverage but more conservative funding strategy indicate steady solvency and strong financial standing of the firms to service their financial obligations (**Chart 7.3**).

Chart 7.3: Key Financial Indicators - Profitability, Capital to Total Assets and Operational Efficiency



Source: SBP

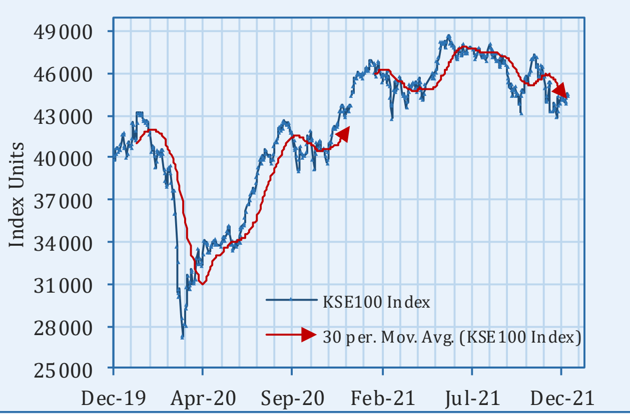
Market indicators reflected investors' mixed sentiments over the year mainly reflecting the uncertainities surrounding the pandemic and macroeconomic stresses vis-à-vis firms performance...

KSE-100 index reflected the market sentiments about the current and future performance of the corporate firms operating in Pakistan as well as the macro-financial conditions within both Pakistan and abroad **(Chart 7.4)**. CY21 commenced at the index of 44,434 points and gained due to the reopening of global economies and a slowdown in COVID infection ratios for the country. However, recurring COVID-19 waves, pressure on the external account, rising inflation, and downgrading of Pakistan Stock Exchange in the MSCI list etc., weighed on the market. With the tightening of monetary policy in the second half of CY21, the investors' preference switched from equity market into fixed income assets amidst this higher interest rate environment. The index, however, closed on 44,596 points generating a 1.9 percent return during the year. **(**see **Chapter 2)**

[172] Debt Repayment Capacity is measured by Interest Coverage Ratio and Liquidity is measured by Current Ratio.

The sectors which contributed to the increase in the index include technology and communication which benefitted from re-rating and foreign interest, followed by commercial banks which posted robust profits despite low-interest rates in most part of the year. On the other side, sectors which dragged down the index in CY21 include cement which was affected by multi-year high coal prices raising concerns about their profit margins and oil and gas marketing companies which were affected by rising circular debt.

Chart 7.4: KSE-100 Index



Source: PSX and SBP

The ongoing momentum of economic activity as reflected by some high-frequency statistics on consumption and production (e.g. POL and cement off take, LSM growth, etc.) reflect a positive outlook for corporate sector that will also drive the sentiments of investors in CY22. However, macro financial conditions in context of some key developments (e.g. dynamics of international commodity prices, political and geostrategic situation, traction on IMF program, and magnitude of monetary and fiscal stabilization measures) will remain important for the investors' sentiments in the period ahead.

Cement sector's overall performance and prospects turned positive by the end of CY21…

Cement sector remains a significant borrower of the banking industry. During CY21, this sector posted growth in profitability and operational performance. The fiscal year ended up with healthy growth as the government incentivized the construction activity to revive the economy thus increasing the demand for cement. However, demand remained relatively low in the second half of CY21 due to slowdown in construction activities on the back of higher input cost and cut of PKR 300 billion in Public Sector Development Program (**PSDP**) amid the government's drive to seek fiscal consolidation in the wake of emerging imbalances.

Regarding cement exports, the COVID related economic uncertainty around the globe along with the surging global freight costs affected the exports potential all across the globe. These factors also affected Pakistan's cement exports, which declined by 15.6 percent as the volumes reduced to 538,002 tons in Dec-21 from 637,511 tons in Dec-20.[173]

Besides, rise in interest rate towards the year-end coupled with higher inflation and depreciation in exchange rate further put pressure on profit margins of the sector. Most of the cement companies had planned expansion projects. Though the TERF has supported this initiative, the rise in interest rate may put some pressures on the expansion plans as well as the profit margins of the cement sector.

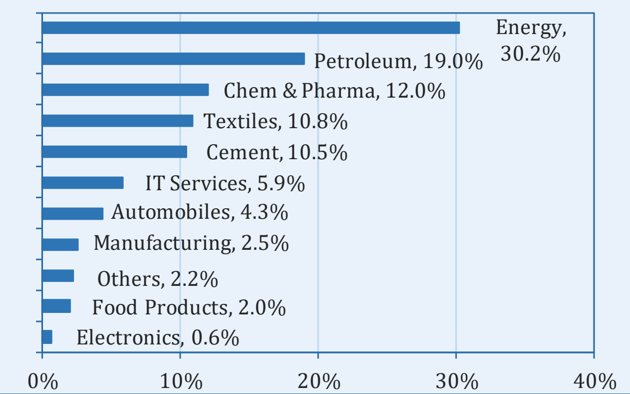
In the later half, the economic recovery started to gain pace strongly which led to increased global coal demand from multiple industries including cement, steel, and power generation. Resultantly, the coal prices witnessed historic highs in the international market. Historically it has been observed that with the surge in global coal prices, the prices of cement rise, on the contrary when coal prices decline, prices of cement show stickiness and remain relatively unchanged. Hence, any downward correction in coal prices may lead to significant margin recovery for the sector, thus being beneficial for the manufacturers.

[173] Cement exports volume data is taken from All Pakistan Cement Manufacturers Association (APCMA)

Power sector is under stress due to the issue of rising circular debt …

Power sector (power producers and exploration companies) is among the large borrowers of banks and it continued to hold the major share of assets among the sampled top firms selected for this assessment **(Chart 7.5)**. During the reviewed year, higher international oil prices and depreciation of PKR provided the support to the power sector in terms of operating performance. The power sector savored the inventory gains and elevated retail prices in terms of increased margins.

Chart 7.5: Share in total assets of selected 100 firms CY21



Source: PSX

The power sector's circular debt increased to PKR 2.47 trillion by the end of CY21. This mounting circular debt and attendant decline in production as well as increased financing costs and lower payout due to cash flow constraints are the major concerns for the power sector.

Petroleum sector enjoyed a boost in sales and revenue as the economic activity resumed…

Oil Marketing Companies or petroleum sector quickly recovered from the effects of the pandemic during CY21, as sales experienced double-digit growth during the first half and continued the momentum by the end of the year amid a short-term recovery in international oil prices, surging demand from the automobile sector, and resumption of economic activities.

Expansion of automobile sector in terms of increased demand leads to growth for the petroleum sector, especially motor spirit (**MS**). However, introduction of electric vehicles (**EV**) and Hybrid vehicles may dampen MS sales in the long run, but in the short run they do not pose any threat to MS sales because of low adaptability rate in Pakistan and scarce availability of charging infrastructure. Moreover, higher electricity demand and constraints in the availability of gas might also help in lifting up furnace oil (**FO**) sales. Besides this, biweekly price revision has proved beneficial for firms in terms of curtailing inventory losses and minimizing the price volatility driven from exchange rate and international oil prices.

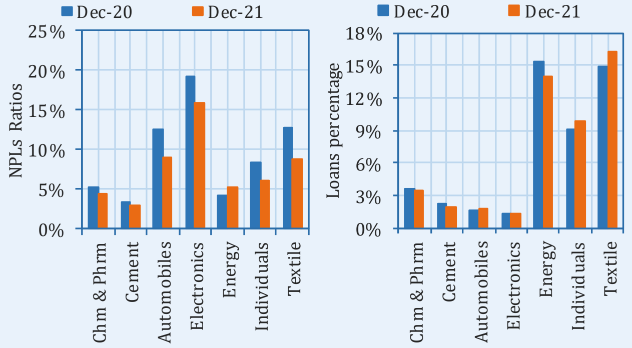
On the other hand, the economy faced the building pressures of CAD and inflation by the end of CY21 which necessitated stabilization measures. These measures coupled with resultant constraints on demand and high global commodity prices may impact oil consumption as well as sales volumes and earnings of OMCs. Moreover, the OMCs facing the circular debt issue may face increase in financing costs in the backdrop of higher interest rates.

Textile sector reported strong performance as its exports grew substantially…

Textile is traditionally the largest user of bank credit and a leading contributor in the economy. After taking a sharp hit during strict lockdowns in the last year, Pakistan's textile exports bounced back to post a noteworthy performance in the year under review. This revival resulted from the policy support measures of the government, effective management of the pandemic and continuity of business activities in the country, and robust economic recovery in the main export markets.[174]

During the year, ROE of textile sector firms (as selected for the instant assessment) jumped from 8.0 percent to 22.8 percent on YoY basis in year 2021. With boost in revenue and profitability, the debt repayment capacity (interest coverage ratio) improved by 2.5 times over the year to 6.9 times in year 2021. Strong performance of the textile sector translated in the increase in lending and decrease in the infection ratio for the sector in CY21 **(Chart 7.6).**

Chart 7.6: Sector-wise NPLs Ratio and Loans Shareholding



Source: SBP

The government provided incentives to the exporting sectors in the form of subsidized utility tariffs and interest rates (which shielded firms in a rising interest rate environment). These factors have increased competitiveness of the sector, whereas the market-based mechanism of exchange rate determination is likely to further boost growth as export competitiveness enhances in the global market.

Domestic cotton industry heavily relies on natural cotton fiber for which local production is subject to weather conditions and the decline in acreage under cultivation (due to multiple reasons farmers are compelled to shift their cultivated area to other competing crops). Hence any shortfall in the local production and supply of natural fiber and hike in the cotton prices might hurt the operating efficiency and profit margins of the textile sector.

Automobiles sector sales significantly increased during the year...

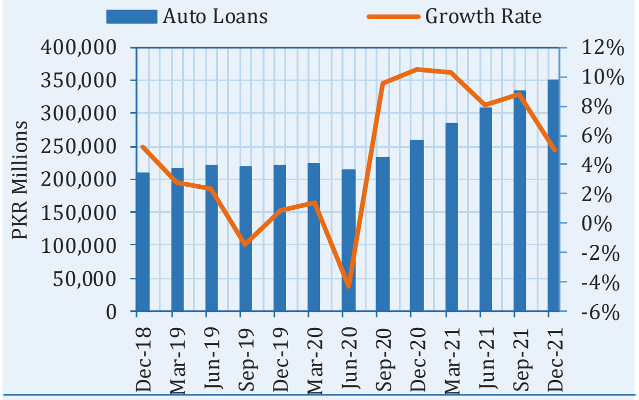
After facing a sharp fall in sales and production in last year due to the pandemic related challenge, automobiles sales volumes registered tremendous growth during CY21. Among various supply-side and demand-side factors, fiscal measures such as reduction in Federal Excise Duty (**FED**) and sales tax, penalty on late deliveries of vehicles and reduction in custom duties on auto parts in July 2021 remained the primary drivers of increased demand for automobiles and sales volume. Along with the backlog of demand due to the pandemic, introduction of new models by Korean and Chinese auto manufacturers coupled with low auto financing rates, drove up demand and sales.

However, towards the end of CY21, industry sales witnessed a gradual decline, attributed to longer lead times because of parts shortages and monetary tightening. In addition, SBP also introduced several macro prudential measures to address the vulnerabilities emerging from CAD and increase in consumer finance, including maximum facility limit of PKR 3 million on auto finance and complete ban on financing of imported Completely Built Units (**CBUs**) **(Chart 7.7).**[175]

[174] Government policies to support the export include concessionary utility tariffs, export refinance schemes and duty cutbacks.

[175] For further details about changes in prudential regulations for consumer financing, please refer Chapter 03.

Chart 7.7: Auto Loans and its growth rate

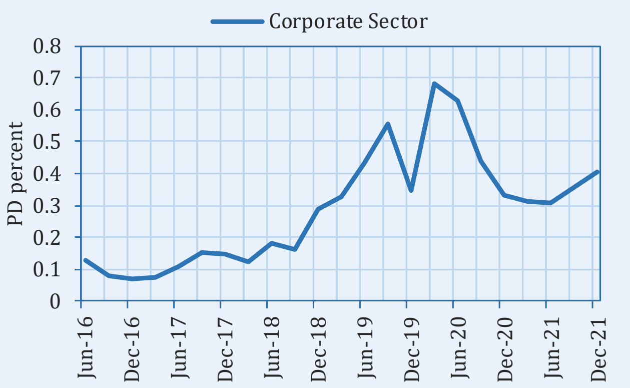


Source: SBP

*Probability of default (**PD**) for the corporate sector slightly increased in the second-half of CY21…*

The weighted average 1-year PD of selected firms of the corporate sector deteriorated to 0.41 percent in CY21 (0.33 percent in CY20) **(Chart 7.8)**.[176] During the first half of CY21, the PD lowered due to economic recovery and general improvement in the overall performance and outlook for these firms. Improvements in operating performance of these firms increased investors' confidence and led to relatively low volatility in stock prices —bolstered by the successful recovery of macro-economic variables — and contributed to the fall in default probabilities.

Chart 7.8: Weighted average 1 year PD



Source: Bloomberg, SBP

By the year-end, the PD however started to inch up mainly due to increased volatility in stock prices which emerged in the wake of building macroeconomic pressures and attendant stabilization measures. Emergence of the fourth wave of the pandemic and geopolitical situation in the context of Afghanistan further added to the uncertainty among investors. Nevertheless, the financial performance of firms remained quite encouraging over the period.

Incidentally, the general level of PDs of these selected firms is at the lower side and does not pose notable default risk to the lenders. As such, these large firms maintained strong financial soundness and decent operating performance despite challenging macro-financial conditions.

Repayment behavior and financial standing of the leading borrowing firms/groups of the banking sector remained strong…

In order to assess the credit risk of banks from large borrowers, a more granular analysis at borrower-level has been conducted, covering the top 30 borrowing firms. This analysis indicates that banks seem to prefer large and well-established borrowers which have better credit worthiness. In CY21 most of the top borrowing companies showed improvement in credit worthiness, better financial performance and steady investors' sentiments (**Box 7.1**).

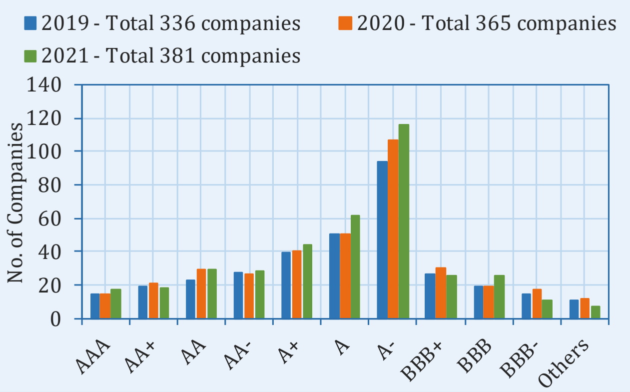
Growing number of rated firms indicate a general improvement in the governance and internal control mechanisms among corporate firms which bodes well for banks' credit risk as well as future growth of capital market and its instruments …

In recent years, the rating culture among large firms has shown improvement, as the firms with adequate governance mechanism and internal controls on financial reporting tend to get themselves rated. During the reviewed year, this trend got further traction as the number of rated non-financial listed firms further increased to 90.3 percent (88.8 percent in last year). However, in the universe of all incorporated public companies,

[176]The PD (1 Year PD) demonstrates firms' credit risk and ability to honor short-term obligations. The PD is calculated using Merton Model, which uses value of equity and volatility of equity to measure default probability.

the rated companies remain on the lower side. This is because many companies in Pakistan rely on indirect sources of financing like banks or their internal sources (profit plough backs, etc.) and rely less on capital market for their funding needs. Out of all the rated companies in the country, a major chunk of the companies lies in investment grades (AAA to BBB-), which advocates high credit quality in terms of long-term ratings **(Chart 7.9)**.

Chart 7.9: Long-term Ratings of Companies



Source: PACRA, VIS, SBP

Whereas, in terms of short-term ratings, majority of the companies were rated as A2 that represents satisfactory capacity for timely repayment.[177]

Outlook for the corporate sector rests on economic and political dynamics ...

CY21 ended with the building macroeconomic pressures and challenges compounded by domestic politcal developments as well as Russia-Ukraine conflict which have strong potential to disturb supply and prices of global commodities. . The operating enviroment might remain challenging for the corporate and real sector during the outgoing year. Inflationary pressures along with mounting CAD and exchange rate uncertainities might pose material risks for the corporate sector in terms of operational performance. On top of that, monetary tightening and fiscal measures to ward off the emerging economic imbalances may dampen the aggregate demand in the economy resulting in subdued sales for the corporate sector.

Nevertheless, the corporate sector has successfully weathered such challenges and posted steady performance in the past. The large firms in general have the adequate opertaional capabilities, established supply chains for their inputs and outputs, and strong financial cushions to maintain their finanical performane and continue to serve their obligations to banks and financial institutions.

177 PACRA. (2021). Rating Scale

Box 7.1: Financial Performance and Soundness of Top Borrowing Groups of Banking Sector

Introduction

The large private sector corporate firms are one of largest borrowers from the banking sector, as corporate segment uses 66.5 percent of the banks' total loans and advances. Most large borrowers are also part of business conglomerates, which in aggregate have even greater exposure thus further adding to element of concentration in credit risk of banks. SBP has set concentration limits on banks' exposure to single borrower and borrowing groups as well as aggregate limit on large exposures. Due to the large size of exposures and borrowings from multiple banks, any deterioration in the financial standing and delinquencies of large corporate borrowers and borrowing groups could have systemic repercussions for the banking sector. Therefore, sound financial health and stable performance of large borrowers and borrowing groups is critical for the stability of the banking system. In this box, repayment behavior and capacity as well as overall financial health of large borrowers and borrowing groups of the banking system have been analyzed based on the following:

a. Banks' own assessment of large borrowers and borrowing groups' credit worthiness as captured through ORR of borrowers assigned by banks.
b. Borrowers' repayment behavior in terms of any overdue in the payment of their obligations to banks.
c. Latest financial indicators of leading corporate borrowers as well as market-based indicators which show how investors value these firms.[178]

Assessment of Credit Worthiness

The credit worthiness was assessed for top 30 borrowing groups (comprising 247 firms) based on ORR assigned by banks. Identified firms of these groups hold around 20.03 percent of the corporate/commercial lending portfolio of banks as on December 31, 2021.

ORR framework: SBP requires banks /DFIs to compile both ORR (a kind of credit rating which is assessed by the lending institution itself) of corporate borrowers and Facility Rating of each financing facilities availed by them.[179] The ORR reflects the credit worthiness of the borrower and is one possible predictor of borrower's default or satisfactory performance. The rating continuum comprises 1 to 12, with 1 to 9 scales for performing categories and 10 to 12 for default categories.

Assessment of Results

Based on ORR of different borrowing entities of the groups, overall average rating (weighted by size of loans) of each group was compiled to assess the strength of these groups. Our assessment indicated that most of the top 30 groups have medium or good quality ratings. It is important to note that during CY21 top 30 groups of the banking system improved their credit worthiness in terms of ORR ratings as compared to CY20, which was marked by lockdowns especially during the first half of CY20. The internal credit rating profile of the large borrower groups has improved from CY20 to CY21 as reflected in the favorable shift in the frequency distribution curve of credit rating. In fact, overall frequency distribution curve of credit rating in Dec-21 is improved as compared to Dec-19 indicating that that top 30 borrowing groups in Dec-21 have better credit ratings than in Dec-19, the period just before COVID-19 **(Chart 7.1.1)**.

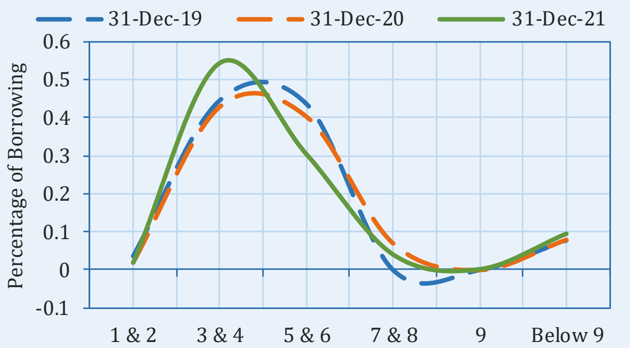
The shift in ORR also reflects a conservative approach on the part of banks to lend to better quality borrowers. As discussed in the following

[178] Fetched from Bloomberg utility which captures and compiles indicators of listed firms

[179] BSD Circular No. 8 of 2007

paragraphs, the financial and market-based indicators in CY21 show robust financial performance of the leading borrowing firms of the banking sector and stable market-based indicators which reflect investors' perception about these firms.

Chart 7.1.1: Internal Credit Rating of 30 Large Borrowing Groups



Source: SBP Estimates

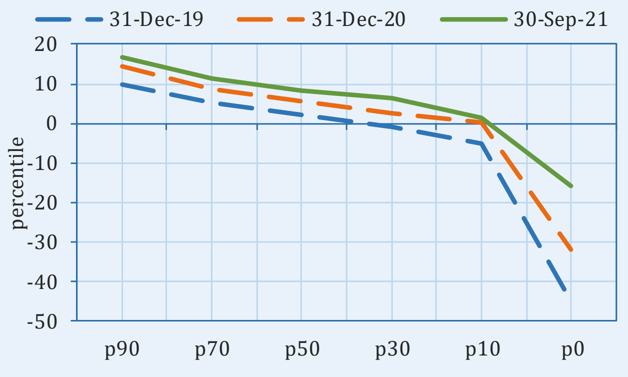
Financial Soundness and Market Performance of Listed Firms of Top 30 Borrowing Groups

As per Pakistan Stock Exchange (**PSX**) data, a total of 536 companies (including default companies) were listed in PSX as of end CY21. Based on the available information from diversified source, it has been identified that out of these 536 listed companies, 84 firms belonged to top 30 borrowing groups of the banking sector. To analyze the financial soundness of these firms and assess how they are valued by the market and general investors, a detailed assessment of these 84 listed firms was done using the financial and market-based indicators. Following analysis evaluates various indicators of these firms, including ROA, ROE, Current Ratio (**CR**), ICR, Gross Margin (**GM**), Earning per Share (**EPS**) and Price-to-Book (**P/B**) Ratio based on the latest available data for the period ended Sep-21 vis-à-vis data of end Dec-20 and Dec-19.

The analysis of data shows that in CY21 most of the top borrowing companies showed improvement in financial indicators which is in line with strong recovery in economic indicators in CY21. Various financial and market indicators show that in the first three quarters of CY21, top borrowing companies have shown resilient performance despite rising international commodity prices and inflation specially in the second half of CY21.

The ROA across the entire sample of these firms improved in the first three quarters of CY21 as compared to both Dec-20 and Dec-19 as firms saw higher profitability in CY21 as compared to the last two years **(Chart 7.1.2)**.

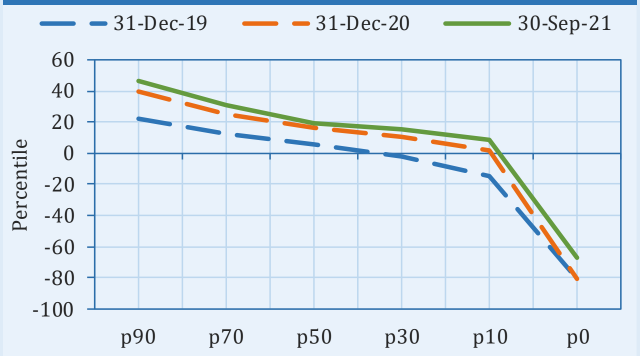
Chart 7.1.2: Percentile Distribution on ROA of Companies



Source: Bloomberg, SBP

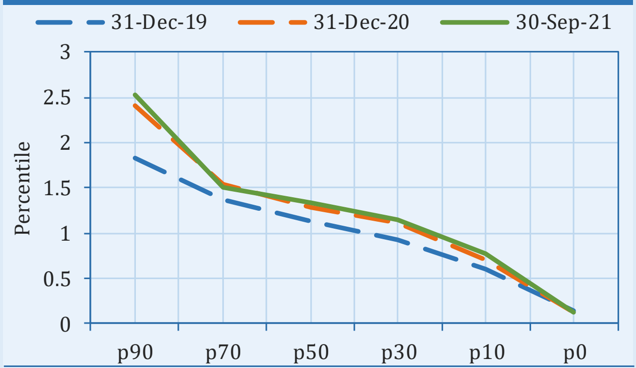
Similarly, the ROE in the first three quarters of CY21 shows appreciation across the entire sample of these firms due to higher profitability in CY21 as compared to the last two years **(Chart 7.1.3)**.

Chart 7.1.3: Percentile Distribution on ROE of



Source: Bloomberg

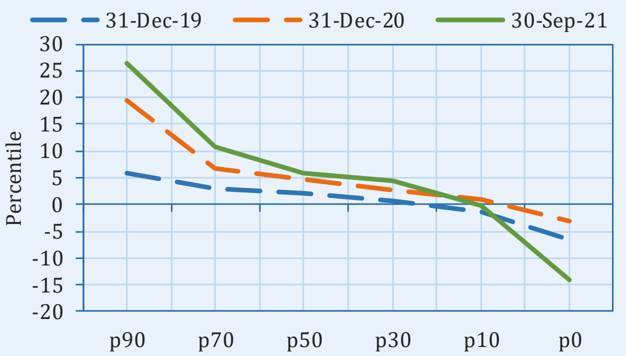
Chart 7.1.4: Percentile Distribution on Current Ratio of Companies



Source: Bloomberg

Firms maintained the same level of liquidity in terms of CR in Sep-21 as in Dec-20, though the corporate sector witnessed a significant revival in business activities and working capital requirements. The liquidity profile of these firms is however stronger than the pre-COVID-19 levels of Dec-19. This improvement bodes well for future resilience of these firms, and also reflects the effectiveness of SBP policies to ensure the adequate supply of liquidity in the market to support the business and economic activities in the wake of COVID-19 **(Chart 7.1.4)**.

Chart 7.1.5: Percentile Distribution on ICR of Companies

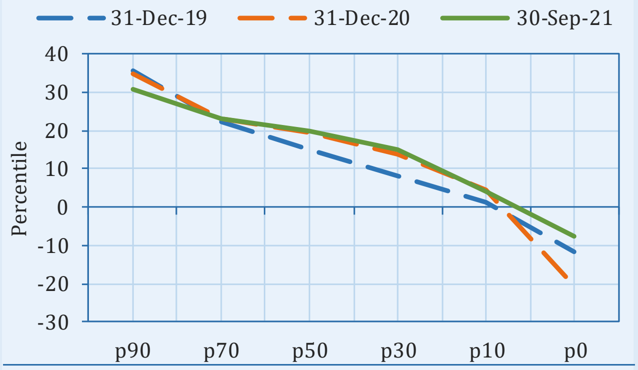


Source: Bloomberg

Top borrowing firms also improved their debt servicing capacity in terms of ICR during CY21 due to growth in earnings as well as reduced financial costs due to low interest rate which prevailed during CY20 and the first three quarters of CY21 **(Chart 7.1.5)**.

The policy rate has been increased from 7% in Sep-21 to 9.75% in Dec-21. The increase in policy rate may result in higher financial costs for businesses; however, the firms in general have reasonably strong margins which will aid them in absorbing the increase in financial cost of borrowing.

Chart 7.1.6: Percentile Distribution on Gross Margin

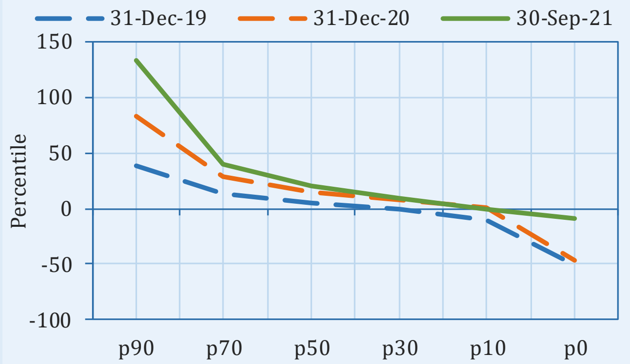


Source: Bloomberg

Core earnings of firms in terms of GM ratio more or less remained stable as the inflation and increase in global commodity prices affected the input and output pricing equally. However, depending upon the idiosyncratic dynamics of firms and their underlying sectors, the margins of some firms witnessed some change **(Chart 7.1.6)**.

In terms of market indicators, EPS of the sample firms improved as compared to both Dec-19 and Dec-20 due to high profitability of firms in CY21 (**Chart 7.1.7**).

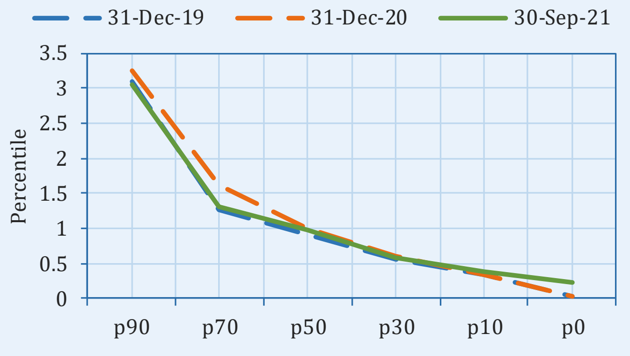
Chart 7.1.7: Percentile Distribution on Earning Per Share (EPS) of Companies



Source: Bloomberg

P/B Ratio of the sample firms remained more or less at the same level as the last two years, which shows that recent improvement in operating efficiencies and earnings have not been factored in the shares prices of the firms. Given the high profitability of listed companies in CY21, the low P/B ratio shows that there is room for appreciation in stock prices, which bodes well for investors (**Chart 7.1.8**).

Chart 7.1.8: Percentile Distribution on Price/Book (P/B) Ratio of Companies



Source: Bloomberg

Conclusion

The comparative position of ORR of top 30 borrowing groups of the banking sector shows that these groups have generally improved their credit worthiness (i.e. ORR) in CY21 as compared to CY20. The improvement in credit ratings also reflects a prudent and risk-averse approach on the part of banks to have higher exposure on large firms which have better credit worthiness. CY21 has been a year of revival of the economy with top borrowing firms reflecting improved credit ratings and overall stronger financial performance and more stable market indicators.

Chapter 8: Financial Market Infrastructures

As the pandemic entered into its second year, the resilience of Financial Market Infrastructures (FMIs) remained intact during CY21 amid significant growth in payments and settlement activity. Pakistan Real Time Interbank Settlement Mechanism (PRISM) operations observed a significant hike in transactions both in terms of value and volume. The consistent and strong growth in e-banking exhibited growing customers' preference to use digital channels for conducting financial transactions. SBP launched P2P and bulk payment under its flagship initiative Raast, an instant retail payment system and issued licensing and regulatory framework to establish digital banks as a separate and distinct category of banks in Pakistan. This will usher in a new era of banking and payment options with a whole range of affordable digital financial services under regulatory oversight. The performance of National Clearing Company of Pakistan Limited (NCCPL) and Central Depository Company (CDC) improved over the year under review and their resilience also remained intact. These institutions took a number of measures to further strengthen their operational resilience and risk management framework, and facilitate investors.

FMI is defined as a multilateral system among participating institutions, which are used for clearing, settling, or recording of payments, securities, derivatives, or other financial transactions.

FMIs of Pakistan consist of (i) a Large Value Payment System (**LVPS**) i.e. **PRISM**, (ii) a Retail Value Payment System (**RVPS**) or Instant Payment System i.e. Raast, (iii) an inter-bank and ATM switch i.e. 1-Link, (iv) a clearing house of paper-based instruments i.e. National Institutional Facilitation Technologies (**NIFT**), (v) a corporate securities settlement company i.e. **NCCPL**, and (vi) a corporate securities depository i.e. **CDC**.

Systemic nature of FMI institutions make them centric to the clearance and settlement of transactions in the financial institutions as well as in the flow of money and securities. Smooth functioning of payment systems is thus critical for the efficiency of the financial system with regards to uninterrupted provision of financial services, effective transmission of the monetary policy signals, and stability of the financial markets.

8.1 Payment Systems and their Performance

Provisions of the recently amended SBP Act, 1956 authorize SBP to *operate and exercise oversight over payment systems*.[180] Further, *The Payment Systems and Electronic Funds Transfer (**PSEFT**) Act*, 2007 empowers SBP to regulate, operate and facilitate the national payment systems of the country.[181] As such SBP is responsible for ensuring the sound and efficient functioning of the national payment and settlement systems.

Payment Systems witnessed robust growth as economic activity returned to normalcy with the pandemic receding …

The national payment systems witnessed robust growth in both PRISM and retail transactions showing increases in volumes and value of transactions during CY21. This highlights the return to normalcy and increased economic activity being generated in the country compared to the last year which was severely affected by the pandemic. Both PRISM and E-banking transaction volumes observed double-digit growth while paper-based volumes depicted mere growth of 0.9 percent.

[180] The SBP Act, 1956 (amended up to Jan-2022)

[181] The PSEFT Act, 2007

However, paper-based volumes still remained below pre-pandemic levels. E-banking transactions led the surge in retail payments, reflecting customers' growing inclination towards digital channels which is increasingly becoming ingrained into customers' behavior especially in the wake of the pandemic **(Table 8.1)**. Incidentally the pandemic played a key role in breaking the inertia in the preference of customers for traditional modes of payments.

Table 8.1: Profile of Payment System Mechanisms

Mechanism	CY18	CY19	CY20	CY21	Growth
	(Volume in millions and Value in PKR trillions)				(Percent)
a. PRISM					
Volume	2.2	2.4	3.4	4.4	28.9
Value	375.1	410.6	373.4	577.8	54.7
b. Retail Payments (i+ii)					
Volume	1281.6	1381.6	1382.7	1788.0	29.3
Value	198.7	207.3	209.3	272.9	30.4
i. Paper based					
Volume	464.8	467.5	389.6	393.4	1.0
Value	145.0	142.3	136.0	166.4	22.4
ii. E-Banking					
Volume	816.8	914.2	993.0	1394.7	40.4
Value	53.7	65.0	73.3	106.5	45.1

Source: SBP

PRISM efficiently handled the increasing transactons in both value and volume terms, while maintaining continuous availability …

PRISM handled higher volume and value of transactions during CY21 compared to decline in value witnessed last year. The robust growth in value depict the return towards normalcy and revival in economic activity. In aggregate, around 67.9 percent of total value of all transactions was settled through PRISM even though it accounted for a meagre 0.2 percent in terms of volume reflecting the fact that PRISM is a LVPS used by financial institutions.[182] PRISM's real time gross settlement (**RTGS**) system runs smoothly, limiting settlement and systemic risks in the interbank settlement process by using delivery-versus-payment (**DVP**) or payment-versus-payment (**PVP**) mechanisms in transactions.

Detailed analysis shows that the strong growth in value of PRISM transactions during CY21 was across all key heads of payments i.e. 70.5 percent growth in Securities Settlement, 20.4 percent in Clearing transactions pertaining to NIFT, NCCPL and 1-Link, and 26.6 percent in IBFTs with overall growth in PRISM transactions' value of 54.8 percent **(Chart 8.1a)**. This particularly large increase in Securities Settlement transactions can be attributed to the increase in the scale of SBP's OMOs, issuance of government securities for meeting the fiscal needs, and increase in interbank repo-lending activity. The growth in volumes primarily stemmed from the significant increase in number of IBFT transactions.[183] IBFT transactions contributed the highest share in total volume of PRISM transactions with increase of 30.0 percent during CY21 **(Chart 8.1b).**

SBP's measure to waive transaction charges on IBFTs and third-party customer transfers to promote the use of digital channels amid COVID-19 pandemic seems to have remained a factor in the recent surge of transaction volumes during CY20 and CY21.[184] However, this measure was revised in the month of Jun-21, withdrawing fee waiver for transactions exceeding PKR 25,000 per month per account.[185] All Intra Bank Fund Transfers as well as incoming interbank fund transfer services were kept free to incentivize digital transactions. Additionally, it was made mandatory for banks in Oct-21 to provide digital payments and facilitation of financial services to institutional clients.[186]

[182] As of Dec-2021, PRISM system has 57 Direct Participants, which include 36 Banks, 8 MFBs, 9 DFIs, and 1 Non-Bank and 3 Special Participants.

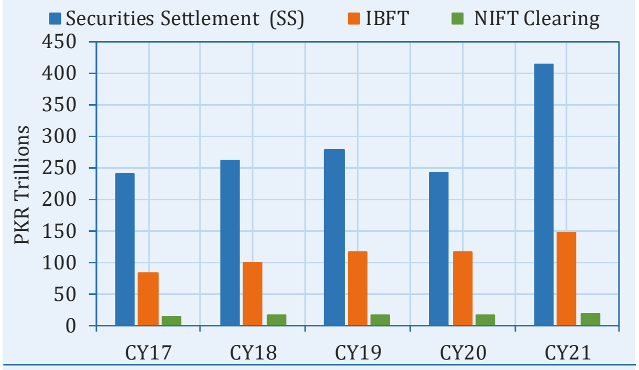
[183] IBFT transactions include bank-to-bank transfers and third party customer transfers. Third party fund transfers are processed via PRISM by direct participants on instructions of their customers/accountholders.

[184] PSD Circular No. 02 of 2020

[185] PSD Circular No. 02 of 2021

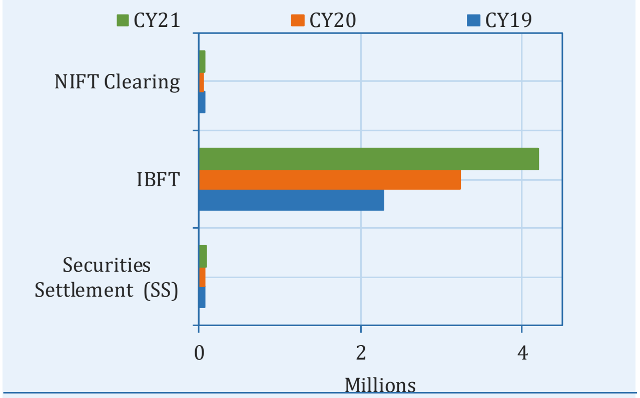
[186] PSP&OD Circular Letter No. 05 of 2021

Chart 8.1a: Value Profile of PRISM Transactions



Source: SBP

Chart 8.1b: Volume Profile of PRISM Transactions



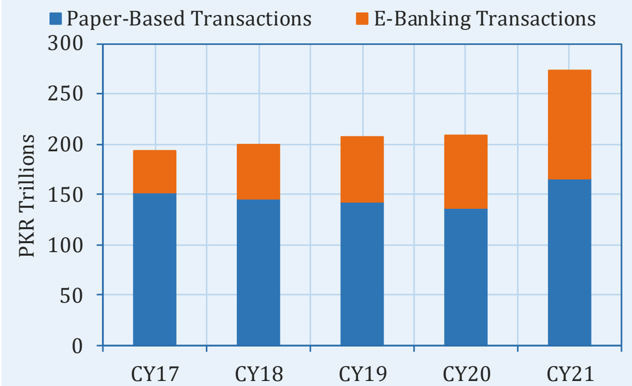
Source: SBP

Keeping in view the importance of PRISM, SBP ensured continuous availability of PRISM during the reviewed period by utilizing its business continuity planning framework depicting the resilience of the system to smoothly conduct its daily operations.

Retail transactions bounced back rapidly with e-banking modes of payments continuing to gain traction over paper-based modes of payment …

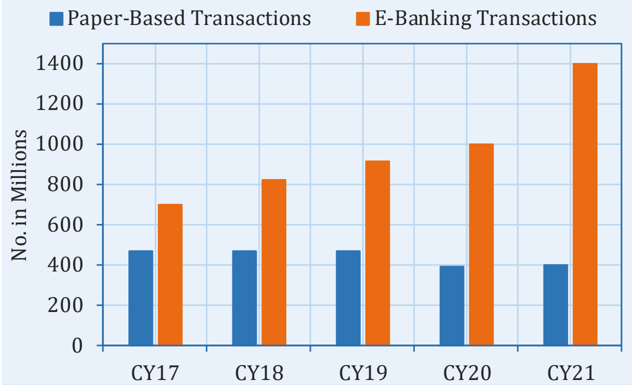
The retail payment system is divided into paper-based and electronic mode of transactions. The retail payment system observed a rapid growth of 30.4 percent and 29.3 percent in the value and volume of transactions respectively during CY21. The growth effect was also more profound this year due to relative stagnancy experienced last year due to the pandemic. The acceleration this year was mainly driven by faster adoption of e-banking transactions exhibiting growth of more than 40.0 percent in both volume and value terms. However, paper-based transactions still account for 61.0 percent share in terms of value of retail transactions though only 22.0 percent in terms of volume with a downtrend being exhibited over the years. **(Chart 8.2a and 8.2b).**

Chart 8.2a: Value Profile of Retail Transactions



Source: SBP

Chart 8.2b: Volume Profile of Retail Transactions

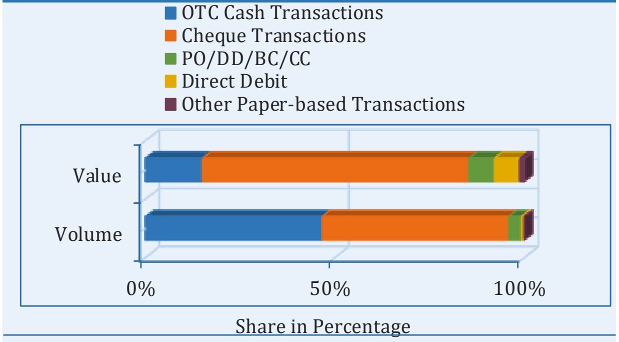


Source: SBP

*With static volumes, paper-based transactions remained dominated by cheques and Over-The-Counter (**OTC**) Cash transactions …*

Paper-based transactions showed muted growth in comparison to e-banking transactions reflecting increased digital preference of customers. Overall, paper-based transactions grew by 0.9 percent in volume and 22.4 percent in value terms in CY21 with cheques dominating the paper-based transactions, contributing 49.2 percent in volume and 70.3 percent in value of these transactions **(Chart 8.3).**

Chart 8.3: Volume and Value wise share of Paper-based



Source: SBP

SBP continued facilitating cheque clearing operations under COVID-19 relief measures …

SBP encouraged banks to adopt various cheque clearing facilities like direct-cheque deposit, doorstep and drop box cheque collection by banks during CY20 to facilitate the customers and reduce the social interaction so as to check the spread of COVID-19.[187] Use of these measure continued during CY21.

E-banking transactions continued upward trajectory …

Customers' inclination towards the use of e-banking continued to rise. During the reviewed year, e-banking transactions grew by 40.4 percent in volume and 45.1 percent in value terms. E-banking includes transactions conducted via electronic channels including Real-Time Online Branches, ATMs, mobile banking, internet banking, call center banking, Point of Sale (**POS**) and e-commerce.

Mobile banking spearheading the growth while doubling its share in e-banking every year …

As the consumers increasingly embrace digital channels, they have shown a clear preference for internet banking and mobile banking due to its ease of use, convenience and quick accessibility.

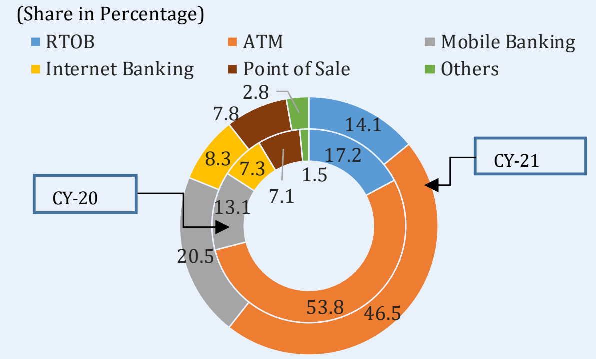
However, it is mobile banking which is outpacing other modes and exhibiting tremendous growth. Mobile Banking transaction volumes consistently crossed 100 percent annual growth for the last five years and exhibited 119.7 percent growth in CY21. The share of mobile banking volumes rose from 2.0 percent in CY17 to 20.5 percent in CY21 of e-banking transactions (volumes). From these trends, it is becoming apparent that mobile banking will be catalyzing the huge growth in e-banking in the coming years.

Internet-banking transactions' volumes also showed strong growth of 60.7 percent in CY21 and constituted 8.3 percent of the total e-banking transactions.

CY21 also saw significant growth in the number of registered users of internet banking reaching 6. 9 million users while mobile banking reached 11.9 million users displaying annual growth rates of 52.9 percent and 26.8 percent, respectively.

In terms of value, however, Real-Time Online Branches (**RTOB**) continued to be the biggest contributor **(Chart 8.4a & 8.4b).** This mode exhibited 38.6 percent growth with amount of transactions reaching PKR 81.4 trillion in CY21. Incidentally, double-digit percentage increases in value of transactions was witnessed in all categories of e-banking during CY21.

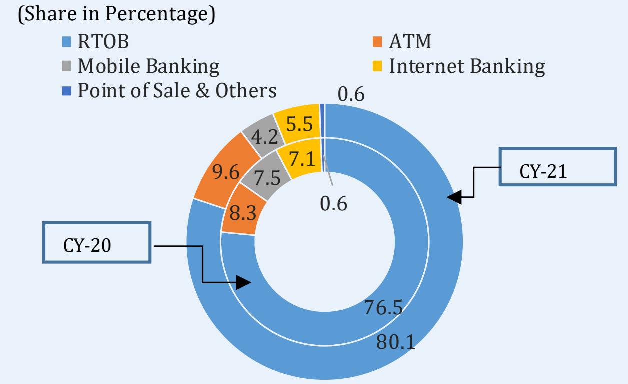
Chart 8.4a: Instrument wise share in total volume of E-Banking transactions in CY20 and CY21



Source: SBP

[187] PSD Circular No. 04 of 2020

Chart 8.4b: Instrument wise share in total value of E-Banking transactions in CY20 and CY21



Source: SBP

SBP encouraging the utilization of digital financial services as a preferred means of banking…

With the onset of the pandemic, SBP took various initiatives to facilitate customers. In addition rationalization of IBFT charges discussed earlier, SBP issued *Customers' Digital Onboarding Framework* (***CDO Framework***) to implement a seamless and standardized process for digital opening of bank accounts of resident Pakistanis.[188] Additionally, banks were asked to develop integrations to enable fully interoperable digital payment options for their customers, to facilitate repayments against consumer financing facilities.[189] Another key initiative launched by SBP included issuance of *Licensing and Regulatory Framework for Digital Banks* which provides details for setting up digital banks as a separate and distinct category in Pakistan.[190] This framework will usher in a new era of banking with a whole range of affordable digital financial services under regulatory oversight.

E-banking infrastructure continued to grow to cater the increased usage of digital channels …

In line with SBP's vision to promote digitization in the banking sector, the commercial banks and microfinance banks are increasing their outreach of e-banking infrastructure. SBP encouraged banks to deploy Interoperable Cash Deposit Machines (**CDMs**) and made it mandatory to issue a debit card per account while allowing banks to authenticate customers through chip-and-pin cards at bank counters.[191] These measures have resulted in rapid expansion in the growth of cards and e-banking infrastructure **(Table 8.2)**. POS machines posted a robust growth of 47.5 percent in CY21 primarily due to various facilitation measures taken by SBP in the previous year while social welfare cards exhibited rapid increase due to the Government's *Ehsaas* Program initiative.[192]

Table 8.2: E-Banking Infrastructure

Description	CY17	CY18	CY19	CY20	CY21
			Number		
Online Branches	14,610	15,346	15,930	16,165	16,571
ATMs	13,409	14,361	15,252	16,041	16,709
POS	52,506	49,621	47,567	62,480	92,153
			Number in Thousands ('000)		
Total Payment Cards	39,361	41,708	42,083	44,285	48,677
of which:					
Credit Cards	1,374	1,522	1,644	1,691	1,740
Debit Cards	19,848	23,303	26,440	27,592	30,934
ATM Only Cards	8,385	8,805	7,650	7,246	4,782
Social Welfare Cards	9,501	7,848	6,180	7,624	11,096
Pre-paid Cards	253	230	168	133	125

Source: SBP

SBP launched "Raast" for retail transactions as a potential game-changer for the rapid adoption of digital payments ….

To realize the objective of a modern and efficient national payment system, SBP launched its flagship initiative '*Raast*' – an instant payment system for retail transactions – at the start of 2021.[193] *Raast* would contribute

[188] BPRD Circular No. 02 of 2021
[189] PSD Circular Letter No. 01 of 2021
[190] SBP Press Release, January 3, 2022
[191] PSD Circular No. 01 of 2021
[192] PSD Circular No. 01 of 2020
These measures include, prescribed set range (1.5 to 2.5 percent) of Merchant Discount Rate (MDR) for all new and existing merchants, cap on Interchange Reimbursement Fee (IRF) for debit and pre-paid cards, and that, card issuers shall offer SBP approved Domestic Payment Scheme (DPS) Card as the default card at the time of issuance or renewal of debit cards.
[193] SBP Press Release, January 11, 2021

towards achieving the policy objectives of increasing digitization, convenience and affordable payments, and financial inclusion in the country.

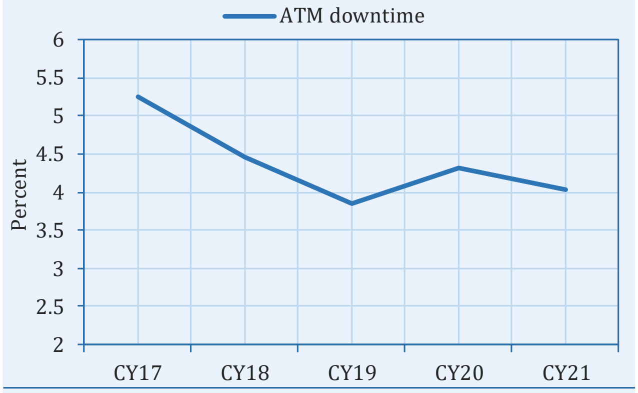
The '*Raast*' system would enable faster and cost effective payments, increase payment system efficiency, and support interoperability across payment services operating in the country. It envisages providing access to all players in the financial services industry (banks, Electronic Money Institutions (**EMIs**), etc.) and acting as a secure medium for transactions between customers, businesses and government entities. It would offer the features of real-time settlement of transactions, alias based payments, bulk transfer of funds, and the capability to on-board participants through Application Programming Interfaces (**APIs**).

The system aims to achieve end-to-end digitization of payment transfers between individuals, government entities and businesses. In the first phase, already implemented, bulk payment module enabled the digitizing of transfers including dividend payments, salaries and pensions of government departments, etc. Whereas, the second phase was recently launched in the start of 2022 whereby person-to-person payments were enabled.[194] This is expected to catalyze in ushering an era of digital payments usage in daily life by enabling person-to-merchant payments in future and hence developing an ideal ecosystem for the digitization of the whole economy by minimizing the use of cash for daily transactions.

ATM efficiency improved under the regulatory oversight of SBP…

Operational efficiency of ATMs remained under control and the yardstick for measuring efficiency i.e. the downtime slightly improved from 4.3 percent in CY20 to 4.0 percent in CY21. Since the ATM transactions take up the highest share in e-banking volumes therefore it is critical that ATMs are kept functioning 24/7 for the facilitation of public to manage operational and reputational risk of banks **(Chart 8.5).**

Chart 8.5: ATM Downtime



Source: SBP

Pandemic propeled Branchless Banking towards higher growth …

BB by providing increased convenience for customers has flourished in Pakistan as an easy conduit for offering financial services in the far flung areas of the country with its huge agent network as compared to bank branches. It has transformed the banking sector and emerged as the preferred way of banking by the low-income segment thus playing a key role in improving financial inclusion in Pakistan.

The onset of the pandemic acted as a catalyst in propelling the growth of BB. During CY21, the sector showed rapid growth as BB accounts surged by 25.6 percent, while, deposits surpassed the all-time high of previous year by reaching PKR 65.6 billion. The total transactions in volume and value terms increased by 37.5 percent and 32.2 percent, respectively. BB accounts seems to have reached a tipping point wherein a common person of low-income segment has become highly aware of the convenience offered by these services.

194 DI&SD Circular No. 1 of 2022

Table 8.3: Key Highlights of Branchless Banking

Description	CY19	CY20	CY21	Growth in CY21 (%)
No. of Agents	437,182	481,837	587,547	21.9
No. of Accounts (thousands)	46,103	62,755	78,810	25.6
No. of Active Accounts (thousands)	24,530	37,020	44,905	21.3
Deposits at period end (PKR million)	28,770	51,671	65,580	26.9
No. of Transactions (millions)	1,309	1,819	2,501	37.5
Value of Transactions (PKR billion)	4,505	6,786	8,971	32.2
Average Daily Transactions (thousands)	3,637	5,053	6,948	37.5
Average Size of Transactions (PKR)	3,445	3,715	3,577	(3.7)
Average deposit in accounts (PKR)	649	726	799	10.1

Source: SBP

Accordingly, average daily transactions showed robust growth of 37.5 percent during CY21. Despite strong growth in the number of active accounts, their share in total accounts slightly declined to 57.0 percent **(Table 8.3).**

With the increased digitization in financial services, cyber security risk has emerged as a leading risk requiring strenous efforts on the part of industry and policy makers…

Keeping in view the importance of cybersecurity and its attendant risks, a detailed assessment of the same is covered in the Box 8.1 i.e. "Cybersecurity – Emerging Trends, Challenges and Policy Response".

8.2 FMIs other than Payment Systems

NCCPL is a licensed clearing house which provides clearing, settlement and risk management services to PSX through fully automated National Clearing and Settlement System (**NCSS**). After assuming the role of Central Counter Party (**CCP**), the Company provides guaranteed settlement in respect of trades reported for clearing and settlement in the NCSS. Further, NCCPL also acts as a Centralized Know Your Customer Organization (**CKO**) for the investors of the capital market.

During CY21, NCCPL took various measures to improve the operational efficiencies and strengthen risk management regimes.

NCCPL implemented enhanced business continuity measures in the wake of COVID-19 pandemic …

NCCPL continued to provide robust business continuity measures in the second and third waves of the pandemic in order to ensure provision of seamless service to the capital market through provision of remote connectivity for staff to facilitate work from home, formation and distribution of teams critical for operations to separate physical locations and ensuring that all NCSS services can be rendered through fully operational alternative processing site.[195]

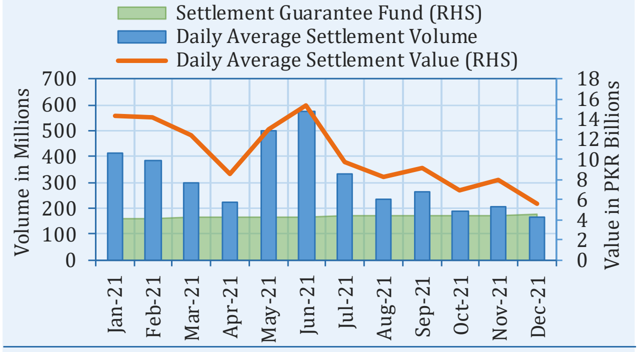
Mechanism to diminish Settlement Risk worked efficiently albeit daily settlement values started to trend above Settlement Guarantee Fund (SGF) values …

To mitigate the settlement risk arising from a potential default of any settlement party, NCCPL has in place mechanisms involving a **SGF** which stood at PKR 4.5 billion by end of Dec-21.

In CY21, the daily average settlement value stood at PKR 10.33 billion which was almost double the figure recorded for CY20. Similarly, trading volumes also showed an uptrend increasing from daily average settlement trading volume of 151.28 million in CY20 to 310.19 million in CY21 due to economic recovery and opportunities in the equity market. However, the SGF remained unutilized as the margins provided by clearing members, which are the first line of defense against default risk, worked efficiently **(Chart 8.6)**.

[195] NCCPL's Annual Report 2021

Chart 8.6: Comparison of Settlement Guarantee Fund with daily average of settlement



Source: NCCPL

Development of Cyber Security Solution to enhance its cyber security architecture ...

NCCPL collaborated with a local partner in developing a customized product i.e. Security and Threat Intelligence Platform (**STIP**). This platform is designed to cater information security related requirements of Pakistan's Capital Market. STIP will provide in-depth threat intelligence including Asset Discovery, Network Vulnerability, and Customized Workflows at a centralized location with interactive dashboards.

CDC performed its functions efficiently despite the pandemic ...

CDC acts as the sole securities depository in the country. It handles transactions like deposit of securities, transfer of securities, pledging of securities and handles electronic settlement of transactions carried out in the stock market. Number of investor accounts stood at 69,147 at the end of CY21, showing an increase of 15.4 percent from CY20. The CDC handled 170.29 billion shares with a market capitalization of PKR 5.51 trillion during the reviewed period.[196]

CDC took various measures to facilitate the investors ...

CDC introduced dividend disbursement through *Raast*, investment facilitation for RDA holders, and digital onboarding of customers through shared KYC. Furthermore, CDC was also granted the status of "Special purpose Primary Dealer" (**SPD**) by SBP. Accordingly, CDC clients can now directly participate in primary auctions of government securities. This facility can play an important role in the further growth of money market, and enable investors to optimize their returns by exploring the opportunities in both money and capital markets.

CDC and NCCPL conducted a joint exercise to ensure smooth continuity of operations in pandemic...

In line with this resolve to maintain readiness of operations, CDC and NCCPL jointly conducted the first ever Joint **BCP** and Disaster Recovery (**DR**) exercise from their respective alternate processing sites. The testing of business continuity plans helped in assessing the effectiveness of current BCP arrangements as well as the capability to activate the alternate plans and respond to events that can potentially disrupt operations. The effectiveness of these arrangements and the institutional effectiveness to implement these arrangements was also well reflected by the smooth continuity of operations during the pandemic.

Pakistan's first Professional Clearing Member (PCM) i.e. M/s EClear Services Ltd was launched as a subsidiary of CDC ...

To bring transparency and efficiency in the market, the new PCM regime was successfully implemented after the introduction of the relevant regulatory framework by SECP and capital market infrastructure entities, leading to the launch of M/s EClear Services Limited. Under the new broker regime introduced by SECP, trading only brokers can now avail the independent third party custodial, clearing and settlement services of PCM. This initiative aims to ensure adequate investor protection, enhance capital market outreach and further strengthen compliance with the FATF regime.

[196] CDC Newsletter, Oct-Dec 2021

Box 8.1: Cyber Security – Emerging Trends, Challenges and Policy Response

Technology is changing the landscape of various business sectors around the world including the financial services sector. It is helping the financial institutions (FIs) to grow faster than ever by minimizing their costs, improving their operational efficiency, and expanding their reach. COVID-19 also brought about a paradigm shift in consumers' preferences who are now increasingly realizing the advantages of digital finance products and services. However, as FIs are increasingly adopting technology for their operations, it also exposes them to various risks and challenges including unintended incidents and intentional attacks. This also raises concerns for the regulators as they have to continuously enhance their regulatory and supervisory frameworks to counter the emerging and evolving risks from these arrangements in a proactive manner. While these frameworks provide a minimum mandatory level of security standards and controls, FIs need to put strong internal controls in place to effectively identify, assess, and manage such risks and remain vigilant to the evolving nature of cyber-attacks and threats.

With the fast-paced innovation and adoption of digital finance products by customers, cybersecurity has emerged as a leading challenge for the security and stability of financial sector ...

The financial sector has been witnessing remarkable innovation in terms of adoption of technology in business processes and products; accordingly, the complexities and interconnectedness in the sector are on the increase. However, the widespread use of technology and innovation in products and services are accompanied by rising cyber threats across the world. Cyber-attacks can lead to different types of losses for the financial industry including business disruptions, financial and reputational losses, damage to integrity, and non-availability of assets and services, amongst others. From the perspective of systemic risk, any large enough cyber-incident in one major institution could potentially affect the financial system as a whole. Further, repeated cyber-attacks disrupting the business operations will also undermine the trust of public in the financial industry and could potentially lead to a panic in the market.

*Use of **Digital Financial Services (DFS)** are on the rise with an added impetus provided by COVID-19...*

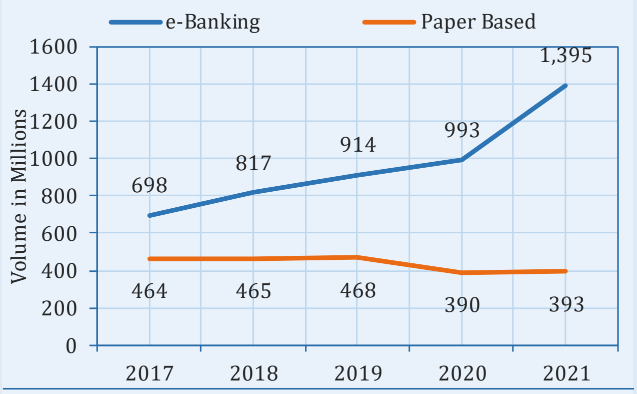
The COVID-19 pandemic has caused a paradigm shift in customers' preferences by exposing them to the benefits of digital finance products and services. Both financial institutions and policy makers are now increasingly realizing the potential of technology and digital finance, and they are endeavoring to explore their potential to achieve cost and operational efficiencies, enhance customer convenience, promote financial inclusion and facilitate documentation of the economy.

Pakistan has also seen a significant increase in use of digital modes of transactions since the start of the COVID-19 pandemic (**Chart 8.1.1**). In this regard, the SBP's special support measures and precautions against the cyber frauds also played an important role in promoting the use of digital modes and payments.[197] Of late, SBP has also taken a

[197] SBP waived all charges on funds transfers through online banking channels such as IBFT and SBP's Real Time Gross Settlement Systems in March 2020. SBP also advised banks to increase vigilance and monitoring on digital channels in the wake of rising digital transactions. For further details, read SBP Press Release dated March 18, 2020.

landmark step to introduce the first Instant Payment System (**IPS**) of Pakistan in the form of Raast, which is expected to exponentially increase the use of digital financial services. Raast facilitates bank account to bank account transactions (across the industry) at a relatively low cost and at near to real-time.[198]

Chart 8.1.1: Financial Transactions



Source: SBP

Digital transformation is accompanied by rise in cyber security risks and challenges…

However, digital transformation also exposes the financial sector to several new risks and challenges. As the financial sector is more digitized, it is exposed to different kinds of challenges including unintended incidents and intentional attacks. These cyber threats can be of varying nature including ransomware, phishing, data leakage, denial of service, malware propagation, or cyber extortion, etc. FIs are seeing a rapid rise in the cyber-attacks over the years as they have increasingly employed technology to improve their business operations. According to *The Global Risks Report, 2021* by World Economic Forum, cybersecurity failure ranks among the highest risks of the next ten years in terms of both likelihood and impact (**Chart 8.1.2 and 8.1.3**).[199] The *Global Risks Report, 2022*, published earlier, also notes that, among others, cybersecurity failure risk has also worsened since the start of the pandemic.[200] The *PwC 24th Annual Global CEO Survey* notes that cyber threats are fast becoming a major source of anxiety for the institutions and their top management around the world. Nearly 50% of the CEOs are concerned about cyber threats in 2021 as compared to only 33% in 2020. Cyber threat ranked second after pandemic and health crises in the list of threats that CEOs were extremely concerned about in 2021.[201] However, according to the PwC 25th Annual Global CEO Survey, cyber risks have surpassed health risks to become the top ranked threat to growth as per the CEOs.[202]

198 Under Raast P2P fund transfers and settlement services, bank customers can send and receive funds in their accounts using their bank's mobile application, internet banking or over the counter services. Banks allow their customers to create a Raast ID by linking their preferred International Bank Account Number (IBAN) with their registered mobile phone number. The customers can then share Raast ID with others to receive funds in their account. Bank customers can use Raast service for sending or receiving funds using their IBANs even if they do not have a Raast ID. For further details, visit SBP's Raast homepage.

199 The Global Risks Report 2021, World Economic Forum. Accessed on May 15, 2022

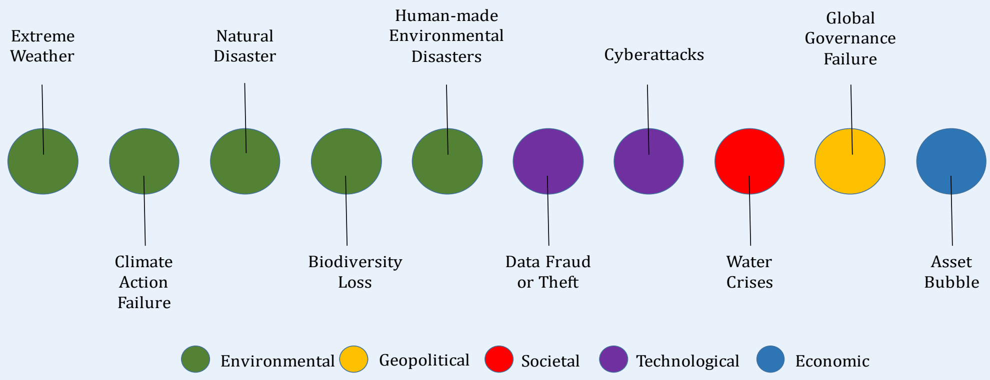
200 The Global Risks Report 2022, World Economic Forum. Accessed on May 15, 2022

201 PwC 24th Annual Global CEO Survey. Accessed on May 15, 2022

202 PwC 25th Annual Global CEO Survey. Accessed on May 15, 2022

Chart 8.1.2: Top 10 Risks Over the Next 10 Years

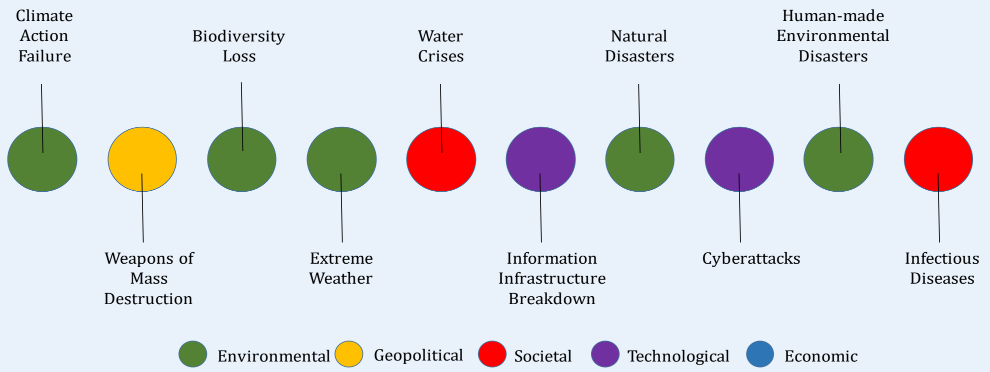
Long-Term Risk Outlook: Likelihood



Source: The Global Risks Report 2021, World Economic Forum

Chart 8.1.3: Top 10 Risks Over the Next 10 Years

Long-Term Risk Outlook: Impact



Source: The Global Risks Report 2021, World Economic Forum

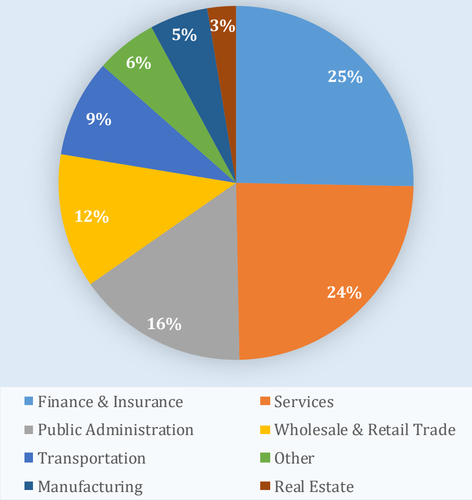
Financial sector is a preferred target for cyber-attacks across the world…

The financial industry has huge monetary and non-monetary resources including large databases of sensitive and valuable personal information of the public. As such, it offers multiple avenues of profit for hackers and fraudsters. Therefore, the industry is proving to be a special target for the unscrupulous elements across the world. The ensuing lockdowns following the pandemic necessitated remote working across the world, and the institutions had to employ remote access technologies to enable the employees to work from their homes. This phenomenon left the institutions more vulnerable to the risks of cyber threats and attacks. Furthermore, FIs use products and services from a wide range of third party service providers for delivering their services, which further increases their cyber risk exposure. In this regard, in the last couple of years, there has been an increase in number of cyber supply chain attacks, where the cyber criminals are able to compromise the supply chain of these products. Moreover, some of the IT products and services have systemic impact due to their concentration; hence, any issues with these products or their suppliers can have systemic impact on the larger financial system.

According to the Global Islamic Bankers' Survey, 2021 by General Council for Islamic

Banks and Financial Institutions, cybersecurity features in the top three risks faced by the Global Islamic Banking Industry.[203] Bank for International Settlements (**BIS**) has noted that the financial sector has been attacked by hackers relatively more often than other sectors during the COVID-19 pandemic (**Chart 8.1.4**).[204]

Chart 8.1.4: COVID-19 Related Cyber Events by Sector



Source: BIS

Pakistan has also witnessed increasing instances of cyberattacks especially after the onset of the pandemic…

Cybersecurity has emerged as one of the leading concerns also in Pakistan. Besides increase in the instances of cyber frauds, there have also been large scale cyber-attacks on the some of the state institutions and banks. Moreover, the latest SBP's SRS shows a significant rise in the participants' perception regarding the cybersecurity risks.

As such, **SBP has instituted a comprehensive regulatory and supervisory framework** to mitigate the cybersecurity risks (**Chart 8.1.5**).

Different aspects of framework have been discussed in the following paragraphs.

Chart 8.1.5: SBP Measures to Mitigate Cybersecurity Risks

Source: SBP

Cybersecurity measures by SBP – regulatory framework provides guidance and minimum standards of safety for managing cyber risks …

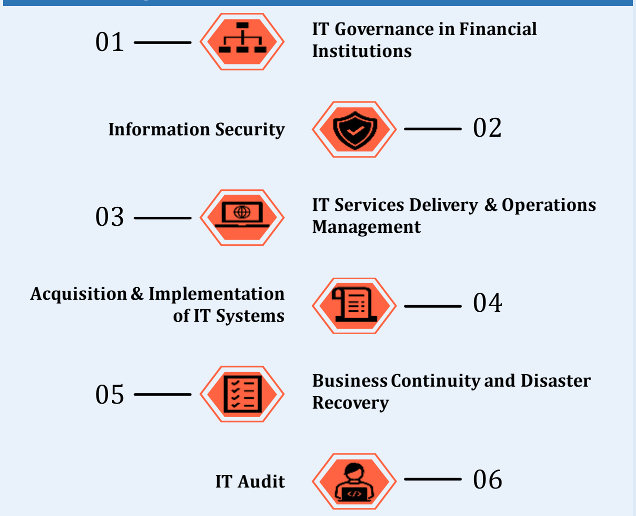
SBP's regulatory regime on cybersecurity of banks is based on National Institute of Standards and Technology's (**NIST**) Cybersecurity Framework and BIS's *Guidance on cyber resilience for financial market infrastructure*.[205, 206] SBP has taken several policy and regulatory measures to protect itself, the financial market infrastructure, FIs, and their customers from cyber threats. These measures aim to improve overall governance arrangements in FIs and at service providers' end that provide IT services to FIs, strengthen the operational resilience in SBP itself and the FIs it regulates, and promote a culture of collaboration and coordination in the industry to respond to cyber threats in real time. As technology becomes an integral part of the operations of FIs, such technology usage and dependence, if not properly managed, could heighten technology risks. Anticipating these risks, SBP developed a framework on *Enterprise*

[203] Global Islamic Bankers' Survey, 2021. Accessed on May 15, 2022
[204] BIS Bulletin No. 37 - Covid-19 and cyber risk in the financial sector. Accessed on May 15, 2022;
The sample in the graph excludes the health sector (57 COVID-related cases) and affecting health-related items of the manufacturing sector (163 cases)

[205] NIST's Cybersecurity Framework Accessed on May 15, 2022
[206] BIS's Guidance on Cyber Resilience for Financial Market Infrastructure. Accessed on May 15, 2022

Technology Governance & Risk Management Framework in Financial Institutions in 2017, with a vision to provide baseline technology governance and risk management principles to the FIs (**Chart 8.1.6**).[207] This framework is to be integrated with the FIs' overall enterprise risk management program to identify, measure, monitor and control technology risks. There are mandatory requirements for FIs to carryout full-scale vulnerability assessment and penetration testing of the digital infrastructure with the objective to identify potential weaknesses in their technology platforms. SBP has further advised FIs to adequately cover the cybersecurity threat intelligence and advisory services including update of the indicators of compromise (**IOCs**) and ensure immediate compliance with preventive actions. Since the technology landscape and the associated risks are evolving at a fast pace, SBP has enhanced its focus for continuous review and strengthening of its regulatory frameworks.

Chart 8.1.6: Overview of the SBP Enterprise Technology Governance and Risk Management Framework for Financial Institutions



Source: SBP

SBP has setup dedicated structure and mechanism to deal with its own information security risks ...

For the purpose of ensuring cyber resilience of its information assets, SBP has a dedicated office of information security, which takes strategic actions to ensure protection of network, infrastructure, and related IT systems of the bank. This office strategically manages organization-wide information security and provides cost-effective security services in support of SBP IT systems and infrastructure. It performs regular operational security activities in all three facets of cybersecurity covering people, process and technology. Recently, SBP invested in establishment of resilience capabilities of its key security systems and re-enforced its internal cyber resilience capacity by engaging relevant stakeholders in mock drills of cyber incident management. This capacity building along with round the clock cybersecurity monitoring of IT infrastructure has resulted in early detection of threats and improved overall effectiveness and response time of teams.

Keeping in view the future growth and direction of IT advancements and related emerging cyber threats, SBP has rolled out a new set of control requirements in its internal IT Security Policies and Risk Management Framework, and performs major risk assessments of IT business and support systems.

Further, in the wake of pandemic, SBP continued its efforts to bring cultural shift by arranging virtual sessions of cyber security awareness. The user capabilities are also measured through quizzes, and targeted trainings are imparted wherever required. All these efforts have augmented cyber security posture, maturity, and resilience of SBP and its hosted services for financial sector.

SBP's overall regulatory guidelines for cyber security risks are complemented by detailed guidelines on crucial areas...

FIs operating in Pakistan, over the years, have been cautiously increasing their usage of

[207] BPRD Circular No. 05 of 2017

outsourcing arrangements for some of their functions. This approach has increased their dependence on third party service providers and consequently their risk profile. SBP requires the banks to ensure that outsourcing neither should reduce the protection available to depositors and investors nor be used as a way of avoiding compliance with regulatory requirements. In view of an increasing use of outsourcing of a number of services by banks and the potential impact of associated risks on the banks, SBP first issued *Guidelines on Outsourcing Arrangements* in 2007.[208] Under these instructions, banks are only allowed to outsource their non-core functions and business support functions while the core functions are not allowed to be outsourced.[209, 210] SBP regularly reviews and updates these instructions in the light of emerging best practices and lesson learnt to facilitate the FIs in effectively managing the risks associated with the outsourcing arrangements (**Chart 8.1.7**). These instructions were broadly revised and updated in 2017 as *Framework for Risk Management in Outsourcing Arrangements by Financial Institutions*.[211]

Chart 8.1.7: SBP – Outsourcing Guidelines and Instructions

Source: SBP

Sustainable innovation is the crux of SBP's policy as SBP adopts measured approach to effectively balance the risks and benefits of technology and innovation ...

Mindful of the associated risks, SBP strives to encourage the innovation and use of technology for improvement in the service delivery of the FIs to their customers without compromising their safety and security. SBP is deploying its technology adoption policies in a phased manner. The purpose is to give sufficient time to FIs to develop and strengthen their cybersecurity systems before employing advanced technological systems in their business operations. For example, SBP first formulated and issued regulations for **EMIs** in 2019.[212] SBP then issued live licenses to two

208 BPRD Circular No. 09 of 2007

209 Non-Core operations and business support functions include HR Modules, Procurement Functions, Non-Production Environment, Sandboxing, Inventory Management, Supply Chain Management, Office Productivity, Customer Relationship Management Tools (WhatsApp, Facebook etc.), Communication Tools, Security Tools, Computation and Processing Services, Data Analytics and Risk Modeling, Middleware and Payments Processing Services/ Platforms etc.

210 Core operations and business functions include all banking applications and allied infrastructure, which are used to store and process customers' information relating to deposits, loans and credits and details of balances & transactions in ledger accounts of customers/ borrowers.

211 BPRD Circular No. 06 of 2017

212 EMIs are entities that offer innovative, user-friendly and cost effective low value digital payment instruments like wallets, prepaid cards, and contactless payment instruments. E-money has played a crucial role in

EMIs in 2021 to launch their commercial operations while four EMIs were granted pilot approvals during 2020 and 2021.[213] Furthermore, SBP recently launched licensing and regulatory framework for setting up digital banks in Pakistan as a separate and distinct category in the banking business while ensuring safety and soundness of the banking sector.[214] SBP also introduced the CDO Framework for opening accounts digitally by resident Pakistanis in 2021. This initiative will help bring efficiency and effectiveness in the account opening process using technology. SBP, earlier in 2020, had also enhanced the scope of its guidelines on outsourcing to Cloud Service Providers (**CSPs**) by FIs (**Chart 8.1.8**).[215] Previously, for all types of cloud services including Software as a Service (**SaaS**), Platform as a Service (**PaaS**) and Infrastructure as a Service (**IaaS**), the CSPs had to be located in Pakistan and all physical servers and services (data centers and allied infrastructure) had to reside and operate from Pakistan. Under the revised guidelines, FIs can now avail all types of cloud service models from domestic as well as off-shore CSPs for non-core operations based on certain conditions and ensuring satisfactory internal controls in these outsourcing arrangements. Going forward, SBP plans to review the proposal of allowing outsourcing of core services first to domestic CSPs and later to international CSPs after ensuring that FIs have satisfactory security systems and controls in place to ensure compliance with legal requirements and have the required capacity to manage such arrangements.

Chart 8.1.8: SBP Cloud Adoption Approach

Source: SBP

Supervisory framework complements the regulatory framework by addressing any gaps in FI's operational and risk management practices …

SBP has established a dedicated division in its Banking Supervision Group for continuous oversight and supervision of the cybersecurity risks. The prime objective of SBP's supervisory processes is to delineate supervisory activities for supervising the FIs according to their size, complexity, and riskiness. This risk focused approach, results in more rigorous oversight of FIs that pose enhanced risk to the financial system. The supervisory process for this purpose include both onsite and offsite assessments.

A Cybersecurity Supervision Framework based on **RBS** methodology was developed and implemented for effective supervision of the cyber risks emanating from the FIs. The framework was developed after considering related cybersecurity standards and best practices. This framework provides mechanism for assessing the emerging cyber risks and related controls. The major assessment domains include cybersecurity governance, information asset management, risk management, access controls, data security, cybersecurity awareness, incident detection

digitizing different types of payments in various countries. The EMIs in Pakistan are expected to offer interoperable and secure digital payment products and services to end users.

[213] SBP List of EMIs;
[214] BPRD Circular No. 1 of 2022
[215] BPRD Circular No. 04 of 2020

and response, etc. Cybersecurity inspection of the FIs are conducted using this framework.

Cyber Hygiene (**CH**) plays a prominent role in providing baseline fortification against the cyber incidents. In this regard, an exercise is being conducted to strengthen the CH of the FIs through self-assessment and ownership of their senior management.

Digital banking frauds is another important area of concern for SBP. In this regard, several measures ranging from awareness campaigns, and oversight to granular engagement with the FIs were taken. Further, SBP has been coordinating with Pakistan Telecommunication Authority **(PTA)** and FIA on the subject to curtail the digital banking frauds.

Way forward…

The world of technological advancement is evolving fast and so are the concomitant challenges arising as a result of these advancements. FIs are facing rising cyber-attacks with an increasing sophistication level. As such, FIs need to have robust cybersecurity measures and controls in place and constantly monitor and upgrade these protocols in order to cope with various types of cyber incidents. Besides the technological controls in place, human resources also constitute a major part of any defense protocol against cyberattacks. Social engineering attacks effectively use the people to breach the systems. Therefore, it is of utmost importance that resources be spent on building capacity within the organization. Moreover, all such efforts need to be supplemented by effective coordination between the industry members and the regulators. The flow of information between the stakeholders needs be robust and real-time so that cyberattacks can be responded in effective manner. On this point, SBP is working to establish a Computer Emergency Response Team in the financial sector (FinCert) under the mandate of National Cyber Security Policy 2021 by the Ministry of Information Technology and Telecommunication. Moreover, SBP has already issued instructions along with standardized formats to FIs to collect information on digital banking frauds or attempted frauds through call centers.[216] Considering that cyberattack on any one FI has the implication for the rest of the system, it is imperative that the industry as a whole put their resources for combating such attacks. Lastly, international collaboration is of immense importance in countering the risks arising from cyber-attacks. These attacks are mostly of global in nature and collaboration among states, regulatory and supervisory authorities, law enforcement agencies, and FIs is vital for effectively managing and mitigating the risks arising from the attacks.

[216] BC&CPD Circular No. 02 of 2021

Appendix A

SBP – Regulatory and Supervisory Developments in CY-2021

State Bank of Pakistan, as the regulator of key financial institutions and Payment Systems (i.e. Banks, MFBs, DFIs, Exchange Companies, Payment System Operators and Providers (**PSOs/PSPs**), and EMIs) plays a pivotal role in ensuring stability and development of the financial sector of Pakistan in a sustainable manner. With fast adoption of technology and new products, the financial sector has been growing in complexity and interconnectedness over the years. As such, this requires continuous efforts on the part of the regulator to mitigate the emerging risks from developments in the financial sector. To this end, SBP further strengthened its policy framework during CY21 and took various measures to mitigate the emerging systemic risks.

COVID-19 continued to pose challenges for various business sectors in Pakistan with multiple waves of infections from new variants of the virus –the financial sector was no exception to this. However, the financial sector proved resilient in the face of these challenges with effective policy support from the government and the regulator. Further, the financial institutions were also able to provide uninterrupted financial services to the customers despite the challenges caused by the pandemic. The challenges posed by the COVID-19 pandemic evolved over time and SBP revised its response accordingly. As the economy started on its path to recovery, SBP let some of its time-bound support measures to relapse. These measures included TERF, Loan Deferment and Restructuring Package, RFCC, amongst others.

However, COVID-19 also brought about a more permanent paradigm shift in the customers' preferences and pushed them toward digital financial services. This shift in preference as well as trend of fast adoption of digital finance services were also supported by SBP through various measures to enable the banks to cater to the changing and increasing needs of the customers.

Financial Stability – A Macro Perspective

SBP realizes the crucial role that technological advancement can play in the development of the banking sector. As such, it encourages sustainable innovation and application of financial technology in banking. SBP undertook various measures during the year under review to provide an enabling regulatory framework for FIs. These measures include the development and launching of *Licensing and Regulatory Framework for Digital Banks* in Pakistan as a separate and distinct category in banking business in order to provide an enabling regulatory landscape for nurturing digital innovations while ensuring stability, safety and soundness of country's banking sector. The framework provides complete guidance regarding i)- licensing requirements and eligibility criteria for sponsors of digital banks, ii)- regulatory capital requirements, iii)- guiding regulations for digital banks, iv)- business operations allowed during different phases and v) list of documents required with the licensing application. It is expected that digital banks will be able to offer all kinds of financial products and services primarily through digital platforms or electronic channels instead of physical branches. This will help in promoting financial inclusion by significantly improving provision of access to unserved and underserved segments of the society in a cost effective manner.

Further, SBP also issued *Customers' Digital Onboarding Framework* to enhance the coverage of digital onboarding process and bring efficiency and effectiveness in the account opening process using technology. This initiative is part of SBP's digitization efforts and it is expected to increase convenience for the customers to fulfil their financial needs through swift and secure digital infrastructure in Pakistan.

SBP always endeavors to update and enhance its supervisory regime to cope with emerging risks and challenges of the dynamic banking system. In this regard, SBP successfully rolled out *Risk Based Supervisory Framework* with the aim to align it with good international practices.[217] Being a forward-looking framework, it will help better understand the risk profiles of regulated entities with respect to both external and internal risks and controls. This will facilitate supervisors in early identification of problems, efficient deployment of supervisory resources and initiating prompt corrective actions. Accordingly, on-site and off-site supervisory departments were restructured to achieve the core objectives of RBS framework.[218]

SBP supports the Government of Pakistan's (**GoP**) economic policies to foster development and ensure fuller utilization of resources. Accordingly, SBP, in 2020, had supported GoP in providing markup subsidy for housing finance in order to provide formal financial services to the people of Pakistan at affordable rates. During 2021, SBP revised features of *Government's Markup Subsidy Scheme for Housing Finance* to align it with market dynamics. These revisions aim at significantly enhancing outreach of the scheme to individuals and households who currently do not own a house. SBP also developed a mechanism for payment of markup subsidy and shared it with FIs working as Executing Agencies (**EAs**) for the subject facility.[219] Furthermore, SBP assigned monthly mandatory targets of number of housing units and amount of disbursements to banks in proportion to share in total banking assets. SBP also issued *Guidelines for financing of housing units in under-construction projects*.[220]

SBP in collaboration with GoP launched *SAAF Scheme* during the year under review. The scheme provides a unique facility, wherein, refinance is provided by SBP while risk coverage of up to 60 percent is provided by the GoP. This scheme addresses the issue of lack of collateral, and also aims at increasing financial inclusion of SMEs. Under SAAF, SMEs can avail collateral free financing of up to PKR 10 million to meet their long term capital expenditures and short term working capital needs. SBP is providing liquidity to participating banks at 1 percent per annum (p.a.) for onward lending by banks to SMEs at a concessional end user rate of up to 9 percent p.a. The end user rate under SAAF is very attractive when compared with SMEs' financial cost for availing financing from informal sources.

The central bank conducts SRS on a biannual basis to gauge and assess the views of the market participants and independent experts about the emerging risks and effectiveness of its policy framework. In this regard, the 7th and 8th waves of the survey were conducted during the year under review, while the 9th wave of the survey was conducted in Jan-22 (results of the 9th wave are given in Box 1).

As part of its efforts to share information and contribute to various regional and international studies, SBP provided its feedback on various international surveys and questionnaires. SBP also participated in FSB Regional Consultative Group for Asia (**FSB RCG Asia**) conference calls where vulnerabilities and financial stability issues affecting Asia were discussed, along with other emerging issues. These issues included regulatory and supervisory challenges arising from COVID-19, and outsourcing and third party relationships for the conference calls held

217 SBP's Risk Based Supervisory Framework – July 2021
218 OSED Circular No. 02 of 2021
219 IH&SMEFD Circular Letter No. 03 of 2021
220 IH&SMEFD Circular No. 10 of 2021

in 2021. SBP also played the role of a lead speaker in one of the RCG Asia Conference Calls on invitation and shared its experience and insights on its policies on outsourcing to **CSPs** by the financial institutions.

Financial Stability – A Micro Perspective

Regulatory and Supervisory Oversight: SBP formulated a comprehensive *Corporate Governance Regulatory Framework (**CGRF**)* for financial institutions to further strengthen the corporate governance regime and to align the same with international standards/principles. The salient features of the CGRF include strengthening and rationalizing Fit & Proper Test (**FPT**) Criteria for all categories of persons subject to FPT assessment, enhancement of the role of financial institutions in FPT assessment by introducing the requirement of Standard Operating Procedures (**SOPs**) for self-assessment, empowerment of the Board of Directors through enhancement of their roles and responsibilities related to overall governance of the financial institution, and alignment of the corporate governance requirements with international standards/principles.[221]

The National ML/ TF Risk Assessment of Pakistan – 2022 (**NRA-22**) is currently underway and SBP is member of a national level core committee for review and guidance on NRA-22. With respect to NRA-22, SBP conducted a comprehensive assessment of inherent ML/TF (Money Laundering & Terrorism Financing) vulnerabilities of SBP regulated sectors i.e. Banks, MFBs, Exchange Companies and DFIs. Moreover, SBP updated its ML/TF risk assessment methodology in light of findings of the previous National ML/TF Risk Assessment. Correspondingly, penalty scale for AML/CFT delinquencies was also updated and made risk-sensitive.

SBP relaxed the criteria for assets and provisioning requirements for Deferred and Restructured Portfolio **(DRP)** in order to enable MFBs to extend relief measures to affected borrowers. As a result of this measure, DRP loans would be classified if overdue by sixty days instead of thirty days. However, this was a time-bound measure available for DRP only up till March 31, 2022.

With the economy recovering briskly from the severe shock of COVID-19 pandemic, there was a need to gradually normalize policy settings, including the growth of monetary aggregates. Real money supply growth had drifted above its trend following the COVID-19 shock. Accordingly, SBP decided to increase the average CRR, to be maintained during a period of two weeks by scheduled banks, from 5 percent to 6 percent and minimum CRR to be maintained each day from 3 percent to 4 percent.[222] This measure was taken to moderate the growth of real money supply as well as domestic demand, thereby helping to sustain the current economic recovery, achieve the government's medium-term inflation target, and reduce pressures on the Rupee.

SBP took various initiatives to enhance digitization initiatives in FIs. In order to shape a proper governance structure for digitization, FIs currently offering or planning to offer digital financial services were instructed to create a role of Chief Digital Officer or a similar role with a different designation. The officer should preferably be a Key Executive responsible for steering the digitization efforts of the organization. In addition, accelerated digitization should also be part of every CEO's Key Performance Indicators **(KPIs)** and the board of the FI should monitor the achievements at least on half-yearly basis. Other instructions, in this regard, include those regarding internet banking and mobile banking,

[221] BPRD Circular No. 05 of 2021
[222] CRR is the amount of money that banks are required to keep with SBP; it is applicable on demand liabilities and time liabilities with tenor of less than a year. Time liabilities with tenor of more than one year shall continue to be exempted from maintenance of CRR.

deployment of interoperable CDMs, a card per account policy, and digital means of authentication at bank counters.

SBP had developed and rolled out the Regulatory Approval System **(RAS)** in 2020 to strengthen the organizational efficiency and effectiveness.[223] RAS provides an online platform to Authorized Dealers (**ADs**) to interact with the regulator for submission of cases and receive regulatory decisions against them. In the first phase, the digitization process of Foreign Exchange Operations Department (**FEOD**) and Exchange Policy Department (**EPD**) were completed and they started functioning smoothly. After the successful launch of RAS for FX related cases, digitization of RAS for Banking Policy and Regulation Department was completed and rolled out for industry wide implementation in Nov-21.[224]

SBP also took several measures including, standardization of digital banking fraud reporting, awareness campaigns, issuance of regulatory instructions, close monitoring and engagement with FIs where digital banking frauds are in surge, thematic fraud inspections and improved collaboration with other regulatory bodies in the wake of rising number of digital banking frauds.

Financial Inclusion: SBP has been working on making financial services accessible to all including the poor and marginalized groups. Accordingly, SBP, in the year under review, prepared and launched *Banking on Equality Policy: Reducing the Gender Gap in Financial Inclusion* after consultation with relevant stakeholders to enhance women's financial inclusion. The policy is based on the premise that gender-neutral policies in the financial sector have been insufficient to reduce the gender gap in the financial sector and there is a pressing need to view financial sector policies through a gender lens.[225] Further, the presence of women BB agents is essential to aid women's adoption of digital financial services, especially in rural areas. However, currently only 1 percent of BB agents are women. Therefore, SBP also introduced various measures to improve ratio of women BB agents in FIs.[226]

SBP has been issuing instructions from time to time to make financial services accessible to Persons with Disabilities (**PWDs**). In order to better facilitate PWDs and provide detailed regulatory guidance, SBP, during the year under review, developed a comprehensive policy framework to promote financial inclusion of PWDs.[227] PWDs normally face severe limitations while accessing financial services offered by FIs because of a combination of physical constraints and perceptions about their abilities to handle financial matters. SBP undertook this initiative seeing the need to make banking easy and convenient for them through supportive physical infrastructure, accessible products and services, assistive technologies, and supportive staff interactions. Further, provincial and federal laws also prescribe a minimum percentage of PWDs to be employed which needs to be properly implemented in financial institutions.

SBP has also been working on accessible financial infrastructure for differently-abled persons as well. As part of this work, SBP, in consultation with stakeholders, decided to facilitate them with regard to opening and maintaining a bank account as per the applicable laws related to mental health. Accordingly, a new category of customer account was introduced for persons facing mental disorder in Jun-21 and the related requirements were made part of Annexure-II of the AML/CFT/CPF Regulations. The banks were advised to ensure compliance and provide

[223] EPD Circular Letter No. 08 of 2020
[224] BPRD Circular No. 04 of 2021
[225] AC&MFD Circular No. 1 of 2021
[226] BPRD Circular No. 03 of 2021
[227] BC&CPD Circular No. 05 of 2021

proper guidance to their customers so that the court-appointed managers of such persons do not face any difficulty in this regard.[228]

SBP also launched Asaan Mobile Account **(AMA)** during the year under review. The initiative was developed under the National Financial Inclusion Strategy with the objective of bringing further ease in remote account opening under branchless banking. The customers would be able to open and operate their accounts from the comfort of their homes, without having to visit the branches, with any of the participating branchless banking providers. The solution has been developed through collaboration of SBP, PTA, National Database and Registration Authority **(NADRA)**, 13 BB Providers, all Cellular Mobile Operators **(CMOs)** and Virtual Remittance Gateway **(VRG)**. For AMA, the branchless banking providers and cellular mobile operators are collaborating to deliver an interoperable platform, allowing any Pakistani to open an account with a bank. AMA will play a crucial role in reaching out to the low-income segments that do not have access to internet. Moreover, it will facilitate onboarding of women customers.[229]

Protection of Depositors: Deposit insurance system is a key element of any modern supervisory and crisis management framework. It protects the interests of small depositors in case of bank failures and supports financial stability by promoting general public's confidence in the banking system. In order to further safeguard depositors' interests and enhance their trust in the country's banking system, SBP (through its subsidiary Deposit Protection Corporation), decided to enhance the level of protected deposit from PKR 250,000/- to up-to PKR 500,000/- per depositor-per bank. Under the provisions of section 7(1) of DPC Act 2016, the Corporation shall guarantee full payment of funds held in depositor's account, up to an amount prescribed by the Corporation from time to time.[230]

Banking Conduct and Consumer Protection: An effective consumer protection and fair conduct regime is essential for preserving the trust in financial system and promoting its growth on a sustainable basis. In this regard, SBP recognizes that effective and efficient Consumer Grievance Handling Mechanism **(CGHM)** is a crucial element of Fair Treatment of Consumer **(FTC)** regime. As such, SBP has taken various measures and issued guidelines to enhance responsible complaint handling by the FIs over the time. Similarly, SBP had also formulated and rolled out the *Conduct Assessment Framework* **(CAF)** in 2016. During the year under review, SBP conducted a detailed review of complaint handling practices at financial institutions focusing on the qualitative aspects of 'ease of complaint lodgment', 'capacity and resources', 'recording and processing', and 'monitoring'. Following this exercise, SBP issued a number of instructions to further enhance consumer complaint handling mechanism in the financial institutions. These instructions included availability of mandatory modes (call centers, email, E-form, etc.) for complaint lodgment at all times, encouraging financial institutions to invest and focus on innovative modes of complaint lodgment, provision of complaint tracking number through SMS and emails among others. Further, the regulatory returns template prescribed earlier by SBP was also revised in light of the need for improved data quality and industry feedback.[231]

As financial institutions and customers move towards digital financial services, various unscrupulous elements looking for new avenues of profit are also turning their attention towards this sector. Digital banking frauds are mostly conducted by employing social engineering tactics including fake calls.

[228] BPRD Circular Letter No. 20 of 2021
[229] SBP Press Release dated December 12, 2021
[230] DPC Circular Letter No. 01 of 2021
[231] BC&CPD Circular Letter No. 02 of 2021

SBP, in consultation with various stakeholders, has taken various measures to curtail these frauds. Further, SBP also issued standardized formats to collect information on digital banking frauds through call centers. This information will help in successfully designing and deploying additional measures. FIs were advised to ensure that the call center agents are sufficiently trained to handle calls received for reporting digital banking frauds. They must be capable of identifying attempted digital banking fraud-related calls when a naive customer unaware of fraudulent attempt reports such instances. FIs were also instructed to report the relevant information to PTA for blocking SIM/device of the fraudsters used for committed/attempted digital banking frauds as soon as identified. Further, as a control mechanism to avoid any further financial loss, the call agents upon receiving calls for blocking digital channels/cards in case of fraud will immediately block all channels temporarily, under intimation to the customer, before seeking detailed verification from the customer. SBP also conducted a thematic review to assess the call center management of financial institutions and issued revised and consolidated regulatory instructions on call center management.[232]

Payment Systems: SBP took various measures to improve the digital payment services landscape and promote digitization of payment transactions in the country. SBP launched the first phase of Raast as Pakistan's first instant payment system to further promote digital financial services and financial inclusion. Raast enables end-to-end digital payments among individuals, businesses and government entities instantaneously. SBP believes that the launch of Raast-P2P service will not only provide a convenient and hassle free digital fund transfer service to customers but will also provide an efficient and enabling payments infrastructure that would pave the way for digitization of the economy. Bank customers can set their registered mobile phone number as their Raast ID and link it to their preferred IBAN using the bank's mobile application, internet banking, or visiting their bank branch. Once a customer has set her/his mobile phone number as the Raast ID, others can send money to her/him using her/his mobile phone number without the need to know the account number or any other details.

Since its launch on September 10, 2020, RDA has attracted significant interest from overseas Pakistanis. In line with SBP's commitment to transparency in its key policy measures, SBP started releasing regular data on the progress of RDA. Based on individual reports of banks that participate in RDA, the data has been consolidated and made available to the public through a new web page. This web page is updated on a monthly basis which was also requested by market participants.[233]

Foreign Exchange Policy and Operations: External account stability is a key point for both financial and economic stability of the country. In an effort to support the balance-of-payments, SBP decided to impose 100 percent CMR on import of further 114 items, taking the total number of items subject to Cash Margin to 525 by the end of CY21. The measure will help discourage imports of items subject to CMR and thus support the balance-of-payments. Earlier, SBP had also revised prudential regulations for consumer financing prohibiting financing for imported vehicles.

In an effort to enhance documentation and transparency and to further strengthen the foreign exchange regulatory regime, SBP amended the regulations governing sale of foreign exchange to individuals by exchange companies. This step, which is in continuation of other measures taken by SBP, is primarily to discourage speculative buying and selling of foreign exchange from the exchange companies

[232] BC&CPD Circular No. 03 of 2021

[233] SBP Press Release dated July 3, 2021

without affecting the ability of the market to serve the genuine needs of the public. Consequent to these amendments, exchange companies shall ensure that any individual shall not purchase foreign exchange from all exchange companies in excess of USD 10,000 per day and USD 100,000 (or equivalent in other currencies) per calendar year, in the form of cash or outward remittances. These limits have been set taking into consideration the individual's personal needs for foreign exchange.

Sohni Dharti Remittance Program was inaugurated during the year under review which is offered jointly by SBP, Ministry of Finance and financial institutions. SDRP is an innovative program designed to incentivize Pakistani workers abroad to send remittances through banks and exchange companies and earn reward points. These reward points could then be used to avail different benefits offered by partner organizations. The services offered include international tickets by Pakistan International Airlines (**PIA**) and the provision to pay for extra luggage on international flights of PIA. SDRP can be accessed conveniently from anywhere in the world through a mobile application. SDRP is another step towards digitalization and financial inclusion that would play a significant role in digital onboarding of Overseas Pakistanis and their beneficiaries in Pakistan.

Islamic Banking: As the size of the Islamic banking industry is increasing and now comprises of a significant share of the overall banking industry, SBP recognized the need to introduce Shariah compliant liquidity facilities for IBIs. With a view to bring IBIs at par vis-à-vis their conventional counterparts in terms of liquidity management avenues, and to enhance SBP's tools for managing market's liquidity as part of its monetary policy objective, SBP introduced *Shariah Compliant Standing Ceiling Facility-Mudarabah Based Financing Facility* and *Shariah Compliant Mudarabah Based OMOs-Injections* for IBIs.[234] SBP has also introduced regulations for LOLR facility, which also includes financing for Islamic banking institutions under Shariah-compliant mode.

SBP issued a set of exclusive instructions on SNCR management, aimed at enhancing the stability and soundness of Islamic banking sector. It is important to highlight that these instructions are in addition to the existing comprehensive Shariah governance framework, which is already in place for Islamic banking institutions.

SBP also made some amendments in the Shariah Governance Framework for Islamic Banking Institutions.[235] As per the amendments, the Shariah Board members, except Resident Shariah Board Member **(RSBM)**, may serve on the Shariah Boards of up to three IBIs in Pakistan. However, the IBI must ensure that its Shariah Board has at least two members (other than RSBM), who are not on the Shariah Board of any other IBI. Hence, each IBI will have at least three unique members in Shariah Board including RSBM. The revision - effective from July 1, 2021 - was aimed at enhancing pool of Shariah Scholars in the Islamic banking industry and providing flexibility to IBIs to have Shariah Boards with diversified experience and exposure.

[234] SBP Press Release i.e. SBP introduced Shriah Compliant Liquidity Facility dated December 29, 2021

[235] IBD Circular Letter No. 01 of 2021

Appendix B

Indicators used to derive Financial Sector Vulnerability Index (FSVI)

FSVI was first introduced in FSR 2016, and since then it has been modified and regularly published in the subsequent reviews. In FSR-2018, few modifications were made in terms of coverage, indicators and methodology (See Appendix A in FSR-2018).

To recall, FSVI is a composite index derived from averaging the sub-indices of macro-economy, financial markets, banking sector, Non-Banking Financial Institutions, Development Finance Institutions, Insurance Companies and Corporate Sector. The complete list of indicators used within each dimension is given in the table below:

Table 1: FSVI and FSHM: Risk Areas, Risk Dimensions and Indicators

Sr. No.	Risk Area	Risk Dimension	Risk Indicator(s)	Impact on Financial Stability
1	Macro-economy $\frac{1}{n}\sum Ex, R, F, In$ n = 4	External Sector (Ex) $Ex = \frac{1}{n}\sum_{i=1}^{n} ex_i,$ $n = 3$	ex_1 = *Total Liquid Foreign Reserve Position (with SBP) as percent of GDP* ex_2 = *Current Account Balance as Percentage of GDP* ex_3 = *Balance of Trade as Percentage of GDP*	Positive Positive Positive
		Real Sector (R)	*Real GDP Growth*	Positive
		Fiscal Sector (F)	Fiscal Deficit as Percentage of GDP	Negative
		Inflation (In)	CPI inflation	Negative
2	Financial Markets $\frac{1}{n}\sum FE, MM, CM$ n = 3	Foreign Exchange (FE)	*Mark-to-market Revaluation Exchange Rate Exponential Moving Weighted Average (EMWA) Volatility*	Negative
		Money Market (MM)	*Overnight Repo Rate Exponential Moving Weighted Average (EMWA) Volatility*	Negative
		Capital Market (CM)	*KSE-100 Index Exponential Moving Weighted Average (EMWA) Volatility*	Negative
3	Banking Sector $\frac{1}{n}\sum C, AQ, E, L, D, I$ n = 6	Capital Adequacy (C) $C = \frac{1}{n}\sum_{i=1}^{n} c_i, n = 3$	c_1= *Capital Adequacy Ratio(CAR)* c_2=*TIER 1 (CAR)* c_3=*Capital to Asset Ratio*	Positive Positive Positive
		Asset Quality (AQ) $AQ = \frac{1}{n}\sum_{i}^{n} aq_i,$ n =4	aq_1 = *NPLs to Total Loans* aq_2 = *Net NPLs to Capital* aq_3 = *Provisions to NPLs* aq_4 = *Loss to NPLs*	Negative Negative Positive Negative
		Earnings (E) $E = \frac{1}{n}\sum_{i=1}^{n} e_i,$ $n = 6$	e_1= *Return on Assets Before Tax* e_2=*Return on Equity(Avg. Equity and Surplus) Before Tax* e_3 = *Net Interest Margin* e_4 = *Net Interest Income/Gross Income* e_5 = *Cost to Income Ratio* e_6 = *Trading Income to Total Income*	Positive Positive Positive Positive Negative Negative
		Liquidity (L) $L = \frac{1}{n}\sum_{i=1}^{n} l_i,$	l_1= *Liquid Assets/Total Assets* l_2= *Liquid Assets/Total Deposits*	Positive Positive

5		$n = 3$	l_3= *Liquid Assets/Short term liabilities*	Positive
		Deposits (D) $D = \frac{1}{n}\sum_{i=1}^{n} d_i,$ $n = 2$	d_1= *Deposits to Assets* d_2= *Deposit growth (YoY)*	Positive Positive
		Interconnectedness (I) $I = \frac{1}{n}\sum_{i=1}^{n} i_i,$ $n = 2$	i_1= *Call lending and borrowing/Total Assets* i_2= *Financial Liabilities (SBP exclusive)/Total Assets*	Negative Negative
4	Non-Banking Financial Institutions $\frac{1}{n}\sum A, E$ n = 2	Assets (A)	*Asset Growth (YoY)*	Positive
		Earnings (E)	*Net Sales*	Positive
5	Development Finance Institutions $\frac{1}{n}\sum C, AQ, E, L$ n = 4	Capital Adequacy (C) $C = \frac{1}{n}\sum_{i=1}^{n} c_i, n = 3$	c_1= *Capital Adequacy Ratio(CAR)* c_2=*TIER 1 (CAR)* c_3=*Capital to Asset Ratio*	Positive Positive Positive
		Asset Quality (AQ) $AQ = \frac{1}{n}\sum_{i}^{n} aq_i,$ $n = 3$	aq_1 = *NPLs to Total Loans* aq_2 = *Net NPLs to Capital* aq_3 = *Net NPLs to Net Loans*	Negative Negative Negative
		Earnings (E) $\mathrm{E} = \frac{1}{\mathrm{n}}\sum_{i=1}^{n} e_i,$ $n = 4$	e_1= *Return on Assets Before Tax* e_2=*Return on Equity(Avg. Equity and Surplus) Before Tax* e_3 = *Net Interest Income/Gross Income* e_4 = *Cost to Income Ratio*	Positive Positive Positive Negative
		Liquidity (L) $L = \frac{1}{n}\sum_{i=1}^{n} l_i,$ $n = 3$	l_1= *Liquid Assets/Total Assets* l_2= *Liquid Assets/Total Deposits* l_3= *Advances/Deposits*	Positive Positive Positive
6	Insurance Companies $\frac{1}{n}\sum Li, NL$ n = 2	Life (Li) $\mathrm{Li} = \frac{1}{\mathrm{n}}\sum_{\mathrm{i}=1}^{\mathrm{n}} \mathrm{li_i},$ $\mathrm{n} = 4$	li_1= *Claims ratio* li_2= *Return on Assets before tax* li_3= *Return on Investment before tax* li_4= *Capital to Assets*	Negative Positive Positive Positive
		Non-life (NL) $\mathrm{NL} = \frac{1}{\mathrm{n}}\sum_{\mathrm{i}=1}^{\mathrm{n}} \mathrm{nli_i},$ $\mathrm{n} = 5$	nli_1= *Claims ratio* nli_2= *Premium Retention* nli_3= *Return on Assets before tax* nli_4= *Return on Investment before tax* nli_5= *Capital to Assets*	Negative Negative Positive Positive Positive
7	Corporate Sector	Corporate Debt	*Debt Burden (average of asset/equity and debt/equity)*	Negative

Annexure A

Annexure I - Balance Sheet and Profit & Loss Statement of Banks

PKR million

BALANCE SHEET	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
ASSETS					
Cash & Balances With Treasury Banks	1,303,914	1,574,551	1,987,096	2,014,703	2,276,963
Balances With Other Banks	156,332	147,829	232,671	277,988	253,008
Lending To Financial Institutions	604,990	909,754	978,640	1,079,071	1,095,663
Investments - Net	8,729,019	7,913,923	8,939,438	11,934,634	14,554,438
Advances - Net	6,512,485	7,955,195	8,248,973	8,291,572	10,120,509
Operating Fixed Assets	395,246	437,235	596,924	626,251	704,729
Deferred Tax Assets	72,354	81,082	74,052	91,820	133,061
Other Assets	567,205	662,485	933,542	807,816	919,931
TOTAL ASSETS	**18,341,545**	**19,682,054**	**21,991,337**	**25,123,855**	**30,058,303**
LIABILITIES	-	-			
Bills Payable	218,588	243,237	231,178	313,827	328,566
Borrowings From Financial Institution	3,125,432	3,001,186	2,932,082	3,216,866	4,738,036
Deposits And Other Accounts	13,011,778	14,254,210	15,953,489	18,518,525	21,719,885
Sub-ordinated Loans	64,703	111,713	123,218	121,854	122,815
Liabilities Against Assets Subject To Finance Lease	21	7	7,446	7,534	8,025
Deferred Tax Liabilities	44,684	34,557	43,602	46,549	29,319
Other Liabilities	495,549	631,529	1,042,073	1,036,267	1,170,116
TOTAL LIABILITIES	**16,960,755**	**18,276,439**	**20,333,089**	**23,261,422**	**28,116,763**
NET ASSETS	**1,380,790**	**1,405,615**	**1,658,248**	**1,862,433**	**1,941,540**
NET ASSETS REPRESENTED BY:	-				
Share Capital	516,013	541,040	556,886	556,131	568,000
Reserves	271,448	315,570	349,529	392,599	445,470
Unappropriated Profit	410,371	433,205	521,807	642,965	721,894
Share Holders' Equity	**1,197,832**	**1,289,816**	**1,428,222**	**1,591,696**	**1,735,364**
Surplus/Deficit On Revaluation Of Assets	182,958	115,799	230,026	270,737	206,176
TOTAL	**1,380,790**	**1,405,615**	**1,658,248**	**1,862,433**	**1,941,540**

PROFIT AND LOSS STATEMENT	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
Mark-Up/ Return/Interest Earned	998,671	1,153,383	1,851,790	1,924,328	1,831,650
Mark-Up/ Return/Interest Expenses	499,819	608,309	1,156,062	1,071,898	992,650
Net Mark-Up / Interest Income	**498,851**	**545,074**	**695,727**	**852,430**	**839,000**
Provisions & Bad Debts Written Off Directly/(Reversals)	3,706	36,201	67,855	123,039	50,405
Net Mark-Up / Interest Income After Provision	**495,146**	**508,873**	**627,872**	**729,391**	**788,595**
Fees, Commission & Brokerage Income	102,898	112,852	123,895	118,322	142,803
Dividend Income	17,875	13,589	12,325	10,810	18,003
Income From Dealing In Foreign Currencies	14,308	25,981	26,269	21,854	34,746
Other Income	52,565	25,698	19,628	65,920	43,161
Total Non - Markup / Interest Income	**187,646**	**178,121**	**182,117**	**216,906**	**238,713**
	682,791	686,993	809,989	946,298	1,027,308
Administrative Expenses	387,878	430,375	495,018	521,253	565,230
Other Expenses	4,417	5,068	10,517	13,690	10,987
Total Non-Markup/Interest Expenses	**392,295**	**435,444**	**505,535**	**534,943**	**576,216**
Profit before Tax and Extra ordinary Items	290,496	251,550	304,454	411,355	451,092
Extra ordinary/unusual Items - Gain/(Loss)	23,717.35	9,015.91	48.78	-	-
PROFIT/ (LOSS) BEFORE TAXATION	**266,779**	**242,534**	**304,405**	**411,355**	**451,092**
Less: Taxation	108,987	93,194	133,656	167,315	186,870
PROFIT/ (LOSS) AFTER TAX	**157,792**	**149,340**	**170,749**	**244,039**	**264,222**

Annexure II - Financial Soundness Indicators of the Banking Sector

percent

Indicators	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
CAPITAL ADEQUACY					
Risk Weighted CAR^	15.8	16.2	17.0	18.6	16.7
Tier 1 Capital to RWA	12.9	13.2	14.0	14.8	13.5
Capital to Total Assets	7.1	7.1	7.2	7.2	6.3
ASSET QUALITY					
NPLs to Total Loans	8.4	8.0	8.6	9.2	7.9
Provision to NPLs	87.2	83.8	81.4	88.3	91.2
Net NPLs to Net Loans	1.2	1.4	1.7	1.2	0.7
Net NPLs to Capital^^	5.8	7.8	8.9	5.3	4.0
EARNINGS					
Return on Assets (Before Tax)	1.6	1.3	1.5	1.8	1.6
Return on Assets (After Tax)	0.9	0.8	0.8	1.0	1.0
ROE (Avg. Equity& Surplus) (Before Tax)	19.5	17.4	20.1	23.2	24.0
ROE (Avg. Equity &Surplus) (After Tax)	11.5	10.7	11.3	13.8	14.1
NII/Gross Income	72.7	75.4	79.3	79.7	77.9
Cost / Income Ratio	57.1	60.2	57.6	50.0	53.5
LIQUIDITY					
Liquid Assets/Total Assets	54.0	48.7	49.7	54.8	55.4
Liquid Assets/Total Deposits	76.1	67.2	68.4	74.3	76.7
Advances/Deposits	50.1	55.8	51.7	44.8	46.6

^ Data for Dec-13 and onwards is based on Basel III, and data from CY08 to Sep-13 is based on Basel II with the exception of IDBL,PPCBL, and SME Bank, which is based on Basel I.

^^ Effective from June 30, 2015, Regulatory Capital, as defined under Basel requirements, has been used to calculate Net NPLs to Capital Ratio. Prior to Jun-15, Balance Sheet Capital was used for calculation of this ratio.

Annexure III - Balance Sheet and Profit & Loss Statement of MicroFinance Banks

PKR million

BALANCE SHEET	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
ASSETS					
Cash & Balances With Treasury Banks	12,207	16,279	17,624	23,900	28,991
Balances With Other Banks	21,824	24,912	40,777	53,236	57,931
Lending To Financial Institutions	4,693	10,533	6,242	12,387	1,052
Investments - Net	48,869	54,576	52,169	96,774	133,419
Advances - Net	133,707	185,346	206,965	231,047	278,318
Operating Fixed Assets	7,249	10,819	25,062	23,825	24,689
Deferred Tax Assets	964	1,237	1,768	2,531	4,687
Other Assets	17,705	24,239	29,404	50,283	53,017
TOTAL ASSETS	**247,218**	**327,940**	**380,011**	**493,984**	**582,104**
LIABILITIES					
Bills Payable	2,176	1,837	687	758	1,079
Borrowings From Financial Institution	13,563	21,495	19,808	26,909	59,022
Deposits And Other Accounts	185,827	238,561	266,195	373,084	422,998
Sub-ordinated Loans	672	1,672	8,472	8,672	9,041
Liabilities Against Assets Subject To Finance Lease	-	-	-	-	-
Deferred Tax Liabilities	-	0	-	-	-
Other Liabilities	12,403	15,404	34,428	34,384	33,262
TOTAL LIABILITIES	**214,641**	**278,970**	**329,590**	**443,806**	**525,401**
NET ASSETS					
NET ASSETS REPRESENTED BY:					
Share Capital	24,452	27,652	29,323	37,850	36,609
Reserves	252	11,015	21,634	23,747	41,401
Unappropriated Profit	7,836	10,238	(580)	(11,567)	(20,829)
Share Holders' Equity	**32,540**	**48,905**	**50,376**	**50,030**	**57,181**
Surplus/Deficit On Revaluation Of Assets	(5)	(6)	(19)	133	(487)
Deffered Grants/Subsidies	42	71	64	12	9
TOTAL	**32,577**	**48,970**	**50,421**	**50,175**	**56,703**
PROFIT AND LOSS STATEMENT					
Mark-Up/ Return/Interest Earned	35,667	50,564	66,841	75,284	78,436
Mark-Up/ Return/Interest Expenses	11,275	15,834	26,246	30,426	32,067
Net Mark-Up / Interest Income	**24,392**	**34,731**	**40,595**	**44,858**	**46,368**
Provisions & Bad Debts Written Off Directly/(Reversals)	2,285	4,135	13,089	11,612	16,291
Net Mark-Up / Interest Income After Provision	**22,107**	**30,596**	**27,506**	**33,246**	**30,077**
Fees, Commission & Brokerage Income	16,263	13,097	13,859	11,976	14,720
Dividend Income	-	3	14	14	-
Income From Dealing In Foreign Currencies	-	-	-	-	-
Other Income	1,131	865	1,501	1,294	2,195
Total Non - Markup / Interest Income	**17,393**	**13,965**	**15,373**	**13,284**	**16,915**
Administrative Expenses	31,638	36,082	48,098	49,246	52,990
Other Expenses	294	476	709	638	822
Total Non-Markup/Interest Expenses	**31,932**	**36,558**	**48,807**	**49,883**	**53,812**
Profit before Tax and Extra ordinary Items	7,568	8,003	(5,929)	(3,354)	(6,820)
Extra ordinary/unusual Items - Gain/(Loss)	-	-	-	-	-
Subsidies received	20.28	11.86	5.33	55.79	25.06
PROFIT/ (LOSS) BEFORE TAXATION	**7,548**	**7,991**	**(5,934)**	**(3,409)**	**(6,845)**
Less: Taxation	2,301	3,385	2,183	2,474	1,235
PROFIT/ (LOSS) AFTER TAX	**5,247**	**4,606**	**(8,117)**	**(5,883)**	**(8,080)**

Annexure IV - Financial Soundness Indicators of the MicroFinance Banks

percent

Indicators	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
CAPITAL ADEQUACY					
Risk Weighted CAR	21.4	22.6	20.9	19.0	18.3
Capital to Total Assets	13.6	15.5	13.9	11.0	10.4
ASSET QUALITY					
NPLs to Total Loans	1.5	2.4	5.3	3.3	5.2
Provision to NPLs	124.6	92.1	70.0	106.5	78.1
Net NPLs to Net Loans	-0.4	0.2	1.7	-0.2	1.2
Net NPLs to Capital^	-1.5	0.7	6.5	-0.9	5.4
EARNINGS					
Return on Assets (Before Tax)	3.7	2.9	-1.7	-0.8	-1.3
Return on Assets (After Tax)	2.6	1.7	-2.3	-1.4	-1.6
ROE (Avg. Equity& Surplus) (Before Tax)	27.1	20.7	-12.4	-7.1	-12.7
ROE (Avg. Equity &Surplus) (After Tax)	18.8	11.9	-16.9	-12.2	-15.0
NII/Gross Income	58.4	71.3	72.5	77.2	73.3
Cost / Income Ratio	76.4	75.1	87.2	85.8	85.0
LIQUIDITY					
Liquid Assets/Total Assets	30.6	23.5	28.2	35.7	31.3
Liquid Assets/Total Deposits	40.8	32.4	40.3	47.3	43.1
Advances/Deposits	72.0	77.7	77.7	61.9	65.8

^ Effective from June 30, 2015, Regulatory Capital, as defined under Basel requirements, has been used to calculate Net NPLs to Capital Ratio. Prior to Jun-15, Balance Sheet Capital was used for calculation of this ratio.

Annexure V - List of Banks

Dec-20		Dec-21	
	A. Public Sector Com. Banks (5)		**A. Public Sector Com. Banks (5)**
1	First Women Bank Ltd.	1	First Women Bank Ltd.
2	National Bank of Pakistan	2	National Bank of Pakistan
3	Sindh Bank Ltd.	3	Sindh Bank Ltd.
4	The Bank of Khyber	4	The Bank of Khyber
5	The Bank of Punjab	5	The Bank of Punjab
	B. Local Private Banks (20)		**B. Local Private Banks (20)**
1	AlBaraka Bank (Pakistan) Ltd.	1	AlBaraka Bank (Pakistan) Ltd.
2	Allied Bank Ltd.	2	Allied Bank Ltd.
3	Askari Bank Ltd.	3	Askari Bank Ltd.
4	Bank AL Habib Ltd.	4	Bank AL Habib Ltd.
5	Bank Alfalah Ltd.	5	Bank Alfalah Ltd.
6	BankIslami Pakistan Ltd.	6	BankIslami Pakistan Ltd.
7	Dubai Islamic Bank Pakistan Ltd.	7	Dubai Islamic Bank Pakistan Ltd.
8	Faysal Bank Ltd.	8	Faysal Bank Ltd.
9	Habib Bank Ltd.	9	Habib Bank Ltd.
10	Habib Metropolitan Bank Ltd.	10	Habib Metropolitan Bank Ltd.
11	JS Bank Ltd.	11	JS Bank Ltd.
12	MCB Bank Ltd.	12	MCB Bank Ltd.
13	MCB Islamic Bank Ltd.	13	MCB Islamic Bank Ltd.
14	Meezan Bank Ltd.	14	Meezan Bank Ltd.
15	SAMBA Bank Ltd.	15	SAMBA Bank Ltd.
16	Silk Bank Ltd	16	Silk Bank Ltd
17	Soneri Bank Ltd.	17	Soneri Bank Ltd.
18	Standard Chartered Bank (Pakistan) Ltd.	18	Standard Chartered Bank (Pakistan) Ltd.
19	Summit Bank Ltd	19	Summit Bank Ltd
20	United Bank Ltd.	20	United Bank Ltd.
	C. Foreign Banks (5)		**C. Foreign Banks (4)**
1	Bank of Tokyo - Mitsubishi UFJ, Ltd.	1	Citibank N.A.
2	Citibank N.A.	2	Deutsche Bank AG
3	Deutsche Bank AG	3	Industrial and Commercial Bank of China
4	Industrial and Commercial Bank of China	4	Bank of China Limited
5	Bank of China Limited		
	D. Specialized Banks (3)		**D. Specialized Banks (3)**
1	Punjab Provincial Co-operative Bank Ltd.	1	Punjab Provincial Co-operative Bank Ltd.
2	SME Bank Ltd.	2	SME Bank Ltd.
3	Zarai Taraqiati Bank Ltd.	3	Zarai Taraqiati Bank Ltd.
	All Commercial Banks (30)		**All Commercial Banks (29)**
	Include A + B + C		Include A + B + C
	All Banks (33)		**All Banks (32)**
	Include A + B + C + D		Include A + B + C + D

Annexure VI - Composition of Islamic Banking Institutions

	Dec-20		Dec-21
	Islamic Banks		**Islamic Banks**
1	AlBaraka Bank (Pakistan) Ltd.	1	AlBaraka Bank (Pakistan) Ltd.
2	BankIslami Pakistan Ltd.	2	BankIslami Pakistan Ltd.
3	Dubai Islamic Bank Pakistan Ltd	3	Dubai Islamic Bank Pakistan Ltd
4	MCB Islamic Bank Ltd.	4	MCB Islamic Bank Ltd.
5	Meezan Bank Ltd	5	Meezan Bank Ltd
	Conventional Banks having Islamic Banking Branches		**Conventional Banks having Islamic Banking Branches**
1	Askari Bank Ltd.	1	Askari Bank Ltd.
2	Allied Bank Ltd.	2	Allied Bank Ltd.
3	Bank Al Habib Ltd	3	Bank Al Habib Ltd
4	Bank Alfalah Ltd	4	Bank Alfalah Ltd
5	Faysal Bank Ltd.	5	Faysal Bank Ltd.
6	Habib Bank Ltd	6	Habib Bank Ltd
7	Habib Metropolitan Bank	7	Habib Metropolitan Bank
8	National Bank of Pakistan	8	National Bank of Pakistan
9	Silk Bank Ltd	9	Silk Bank Ltd
10	Sindh Bank Ltd	10	Sindh Bank Ltd
11	Soneri Bank Ltd	11	Soneri Bank Ltd
12	Standard Chartered Bank	12	Standard Chartered Bank
13	Summit Bank Ltd.	13	Summit Bank Ltd.
14	The Bank of Khyber	14	The Bank of Khyber
15	The Bank of Punjab	15	The Bank of Punjab
16	United Bank Ltd.	16	United Bank Ltd.
17	Zarai Taraqiati Bank Ltd.	17	Zarai Taraqiati Bank Ltd.
	Grand Total 22 (5+17)		**Grand Total 22 (5+17)**

Annexure VII - List of Development Finance Institutions (DFIs)

Dec-20	Dec-21
1 House Building Finance Company Ltd.	1 House Building Finance Company Ltd.
2 PAIR Investment Company Ltd.	2 PAIR Investment Company Ltd.
3 Pak Brunei investment Company Ltd.	3 Pak Brunei investment Company Ltd.
4 Pak Libya Holding Company Ltd.	4 Pak Libya Holding Company Ltd.
5 Pak Oman Investment Company Ltd.	5 Pak Oman Investment Company Ltd.
6 Pak-China Investment Company Ltd.	6 Pak-China Investment Company Ltd.
7 Pakistan Kuwait Investment Company (Private) Ltd.	7 Pakistan Kuwait Investment Company (Private) Ltd.
8 Pakistan Mortgage Refinance Company Ltd.	8 Pakistan Mortgage Refinance Company Ltd.
9 Saudi Pak Industrial & Agricultural Investment Company Ltd.	9 Saudi Pak Industrial & Agricultural Investment Company Ltd.

Annexure VIII - List of Microfinance Banks (MFBs)

	Dec-20		Dec-21
1	Advans Pakistan Microfinance Bank Limited	1	Advans Pakistan Microfinance Bank Limited
2	APNA Microfinance Bank Limited	2	APNA Microfinance Bank Limited
3	FINCA Microfinance Bank Limited	3	FINCA Microfinance Bank Limited
4	Khushhali Microfinance Bank Limited	4	Khushhali Microfinance Bank Limited
5	Mobilink Microfinance Bank Limited	5	Mobilink Microfinance Bank Limited
6	NRSP Microfinance Bank Limited	6	NRSP Microfinance Bank Limited
7	Pak Oman Microfinance Bank Limited	7	Pak Oman Microfinance Bank Limited
8	Sindh Microfinance Bank Limited	8	Sindh Microfinance Bank Limited
9	Telenor Microfinance Bank Limited	9	Telenor Microfinance Bank Limited
10	The First Micro Finance Bank Limited	10	The First Micro Finance Bank Limited
11	U Microfinance Bank Limited	11	U Microfinance Bank Limited

Annexure IX - List of Non-Banking Financial Institutions

Asset Management Companies (AMCs)/ Investment Advisors (IAs)

1 786 Investments Limited
2 ABL Asset Management Company Limited
3 AKD Investment Management Limited
4 Alfalah GHP Investment Management Limited
5 Alliance Investment Management Limited
6 Al-Meezan Investment Management Limited
7 Atlas Asset Management Limited
8 AWT Investment Limited
9 BMA Asset Management Company Limited
10 Faysal Asset Management Limited
11 First Capital Investments Limited
12 Habib Asset Management Limited
13 HBL Asset Management Limited
14 JS Investments Limited
15 Kifayah Investment Management Limited
16 Lakson Investments Limited
17 Magnus Investment Advisors Limited
18 MCB-Arif Habib Savings And Investments Limited
19 National Investment Trust Limited
20 NBP Fund Management Limited
21 Pak Oman Asset Management Company Limited
22 Pak Qatar Asset Management Co. Limited
23 Sarmuz Investments Limited
24 UBL Fund Managers Limited
25 Vision Capital Limited

Non-Bank Microfinance Companies (NBMFCs)

1 Agahe Pakistan
2 Akhuwat Islamic Microfinance
3 AMRDO Foundation
4 Balochistan Rural Support Programme
5 BRAC Pakistan
6 Cashew Financial Services Limited
7 Credit fix Financial Services Limited
8 CSC Empowerment & Inclusion Programme
9 Damen Support Programme
10 Farmers Development Organization
11 FFO Support Program
12 Ghazi Barotha Taraqiati Idara
13 JWS Pakistan
14 Kashf Foundation
15 Micro Options Support Program
16 Mojaz Support Program
17 National Rural Support Programme (NRSP)
18 OPD Support Program
19 Organization for Poverty Reduction and Community
20 Punjab Rural Support Programme
21 Rural Community Development Programme (RCDP)
22 Saath Microfinance Foundation Pakistan
23 SAFCO Support Foundation
24 Sarhad Rural Support Programme (SRSP)
25 Sayya Microfinance Company
26 Shah Sachal Sami Foundation (SSSF)
27 Sindh Rural Support Organization
28 Soon Valley Development Program
29 TEZ Financial Services Limited
30 Thardeep Microfinance Foundation
31 Union Microfinance Company Ltd

Leasing Companies

1 Grays Leasing Limited
2 Pak Gulf Leasing Company Limited
3 Primus Leasing Limited
4 Saudi Pak Leasing Company Limited
5 Security Leasing Corporation Limited.
6 SME Leasing Limited

Private Equity & Venture Capital Firms (PE&VC)

1 Ijarah Capital Partners Limited
2 PNO Capital Limited

REIT Management Companies (RMCs)

1 AKD REIT Management Company Limited
2 Arif Habib Dolmen REIT Management Limited
3 ISE Towers REIT Management Limited
4 SB Global REIT Management Limited
5 TPL REIT Management Company Limited
6 Veritas REIT Management Company Ltd

Investment Finance Companies (IFCs)

1 Escorts Investment Bank Limited
2 Finja Lending Services Limited
3 First Credit Investment Bank Limited
4 First Dawood Investment Bank Limited
5 Infra Zamin Pakistan Limited
6 Invest Capital Investment Bank Limited
7 LSE Financial Services Limited
8 Orix Leasing Pakistan Limited
9 Pakistan Development Fund Ltd
10 Pakistan Microfinance Investment Co. Ltd
11 Parwaaz Financial Services Limited
12 Qisstpay BPNL (Private) Limited
13 Security Investment Bank Limited
14 Seedcred Financial Services Limited
15 Taleem Finance Company Limited
16 Trust Investment Bank Ltd
17 WASL Investment Finance Limited

Modarabas

1 Allied Rental Modaraba
2 Awwal Modaraba
3 B.F. Modaraba
4 B.R.R. Guardian Modaraba
5 First Al-Noor Modaraba
6 First Elite Capital Modaraba
7 First Equity Modaraba
8 First Fidelity Leasing Modaraba
9 First Habib Modaraba
10 First IBL Modaraba
11 First Imrooz Modaraba
12 First National Bank Modaraba
13 First Pak Modaraba
14 First Paramount Modaraba
15 First Prudential Modaraba
16 First Punjab Modaraba
17 First Treet Manufacturing Modaraba
18 First Tri Star Modaraba
19 First UDL Modaraba
20 Habib Metro Modaraba
21 KASB Modaraba
22 Modaraba Al-Mali
23 Orient Rental Modaraba
24 Orix Modaraba
25 Popular Islamic Modaraba
26 Sindh Modaraba
27 Trust Modaraba
28 Unicap Modaraba

Housing Finance Companies

1 Assan Ghar Finance Limited
2 Pakistan Housing Finance Co. Ltd
3 Trellis Housing Finance Limited

Annexure X - List of Insurance Companies

Non-Life Insurance Companies

1	Adamjee Insurance Company Limited	19	PICIC Insurance Limited
2	Alfalah Insurance Company Limited	20	Premier Insurance Limited
3	Allianz EFU Health Insurance Limited	21	Progressive Insurance Company Limited
4	Alpha Insurance Company Limited	22	Reliance Insurance Company Limited
5	Asia Insurance Company Limited	23	Security General Insurance Company Limited
6	Askari General Insurance Company Limited	24	Shaheen Insurance Company Limited
7	Atlas Insurance Limited	25	Silver Star Insurance Company Limited
8	Century Insurance Company Limited	26	Sindh Insurance Limited
9	Chubb Insurance Pakistan Limited	27	SPI Insurance Company Limited
10	Continental Insurance Co. Ltd	28	The Asian Mutual Insurance Company (Guarantee) Limited
11	Crescent Star Insurance Limited	29	The Cooperative Insurance Society of Pakistan
12	East West Insurance Company Limited	30	The Pakistan General Insurance Company Limited
13	EFU General Insurance Limited	31	The Pakistan Mutual Insurance Company (Gte) Limited
14	Habib Insurance Company Limited	32	The United Insurance Company of Pakistan
15	IGI General Insurance Limited	33	The Universal Insurance Company Limited
16	Jubilee General Insurance Company Limited	34	TPL Insurance Limited
17	National Insurance Company Limited	35	TRAFCO Insurance Company Limited
18	New Hampshire Insurance Company Limited	36	UBL Insurers Limited

General Takaful Companies

1	Pak-Kuwait Takaful Company Limited	3	Salaam Takaful Limited (Formerly Takaful Pakistan Limited)
2	Pak-Qatar General Takaful Limited		

Life Insurance Companies

1	Adamjee Life Assurance Company Limited	5	Jubilee Life Insurance Company Ltd.
2	Askari Life Assurance Company Ltd. (Previously East West Life Assurance Company Limited)	6	State Life Insurance Corporation of Pakistan
3	EFU Life Assurance Company Limited	7	TPL Life Insurance Limited (Previously Asia Care Health & Life Insurance Company Ltd.)
4	IGI Life Insurance Limited	8	Postal Life Insurance Company Limited

Family Takaful Companies

1	Dawood Family Takaful Limited	2	Pak Qatar Family Takaful Limited

Reinsurance Companies

1	Pakistan Reinsurance Company Limited

Acronyms

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
ADs	Authorized Dealers
ADCs	Alternate Delivery Channels
AEs	Advanced Economies
AFS	Available for Sale
ALM	Asset-Liability Management
AM	Asset Management
AMA	Asaan Mobile Account
AMCs	Asset Management Companies
AML	Anti-Money Laundering
APIs	Application Programming Interfaces
ATMs	Automated Teller Machines
AUM	Assets Under Management
B2C	Business-to-Consumer
BB	Branchless Banking
BCP	Business Continuity Plan
BIS	Bank for International Settlements
BMR	Balancing, Modernization and Replacement
BPRD	Banking Policy & Regulation Department
bps	Basis Points
BSD	Banking Surveillance Department
BSSM	Banking System Stability Map
CAGR	Compound Annual Growth Rate
CAR	Capital Adequacy Ratio
CCB	Capital Conservation Buffer
CDC	Central Depository Company
CDMs	Cash Deposit Machines
CDNS	Central Directorate of National Savings
CDO Framework	Customers' Digital Onboarding Framework
CFT	Combating the Financing of Terrorism
CGRF	Corporate Governance Regulatory Framework
CiC	Currency in Circulation
CIS	Collective Investment Scheme
CISO	Chief Information Security Officer
COD	Certificate of Deposit
COI	Certificate of Investment
COM	Certificate of Musharaka
COVID	Coronavirus disease
COVID-19	Corona Virus Disease-2019
CPF	Countering Proliferation Financing
CR	Current Ratio
CRCs	Corporate Restructuring Companies
CRI	Climate Risk Index
CRWA	Credit Risk Weighted Assets
CSPs	Cloud Service Providers
D/E	Debt-To Equity
DFIs	Development Finance Institutions
DPC	Deposit Protection Corporation
DRP	Deferred and Restructured Portfolio
DRRL	Deferment and RRL
DRS	Debt Relief Scheme
D-SIBs	Domestic Systemically Important Banks
DSSI	Debt Service Suspension Initiative
DTO	Dedicated Takaful Operator
E&P	Exploration & Production
EAs	Executing Agencies
EBIT	Earnings before Interest and Taxes
EC	Eligible Capital
e-CIB	Electronic-Credit Information Bureau
ECL	Expected Credit Loss
EFF	Extended Fund Facility
EFS	Export Finance Scheme
EMDEs	Emerging Market and Developing Economies
EMIs	Electronic Money Institutions
EMs	Emerging Markets
EPD	Exchange Policy Department
ETFs	Exchange Traded Funds
ETGRMF	Enterprise Technology Governance & Risk Management Framework
EU	European Union
FATF	Financial Action Task Force

FCA	Federal Committee on Agriculture
FCY	Foreign Currency
FE-25	Foreign Exchange-25
Fed	Federal Reserve
FED	Federal Excise Duty
FIs	Financial Institutions
FMI	Financial Market Infrastructure
FPT	Fit & Proper Test
FRR	Fixed Rental Rate
FSB	Financial Stability Board
FSR	Financial Stability Review
FSHM	Financial Sector Heat Map
FSVI	Financial Sector Vulnerability Index
FTC	Fair Treatment of Consumer
FX	Foreign Exchange
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GFSR	Global Financial Stability Report, IMF
GHC	Global Health Crisis
GHG	Greenhouse Gas
GM	Gross Margin
GNPLR	Gross Non-Performing Loans Ratio
GoP	Government of Pakistan
HF	Housing Finance
IAs	Investment Advisors
IBD	Islamic Banking Department
IBFT	Inter Bank Funds Transfer
IBI	Islamic Banking Institution
IBWs	Islamic Banking Windows
ICR	Interest Coverage Ratio
IERS	Islamic Export Refinance Scheme
IFCs	Investment Finance Companies
IFRS	International Financial Reporting Standard
ILTFF	Islamic Long Term Financing Facility
IMF	International Monetary Fund
IPO	Initial Public Offering
IPP	Independent Power Producer
IRC	Interest Rate Corridor
ITAC	International Trade Administration Commission of South Africa

KFS	Key Fact Statement
KIBOR	Karachi Interbank Offered Rate
KPI	Key Performance Indicators
KSA	Kingdom of Saudi Arabia
KSE	Karachi Stock Exchange
LCR	Liquidity Coverage Ratio
LIBOR	London Interbank Offered Rate
LIPI	Local Investors Portfolio Investment
LSM	Large Scale Manufacturing
LTCE	Long Term Country Engagement
LTFF	Long Term Financing Facility
LVPS	Large Value Payment System
MFBs	Microfinance Banks
MFPs	Microfinance Providers
MoU	Memorandum of Understanding
MPPF	Macro prudential Policy Framework
MRWA	Market Risk Weighted Assets
MTB	Market Treasury Bill
MTS	Margin Trading System
NAPHDA	Naya Pakistan Housing and Development Authority
NARC	National Agriculture Research Centre
NBFCs	Non-Banking Finance Companies
NBFIs	Non-Bank Financial Institutions
NBMFCs	Non-Bank Microfinance Companies
NCCPL	National Clearing Company of Pakistan Limited
NFSC	National Financial Stability Council
NFSR	Net Stable Funding Ratio
NIFT	National Institutional Facilitation Technologies
NII	Net Interest Income
NIM	Net Interest Margins
NMM	Net Mark-up Margin
Non-II	Non-Interest Income
NPC	Naya Pakistan Certificate
NPF	Non-Performing Financing
NPL	Non-Performing Loan
NPSS	National Payment Systems Strategy
NRA-22	National ML/ TF Risk Assessment of Pakistan – 2022
NRPs	Non-Resident Pakistanis

NSS	National Savings Schemes
OAEM	Other Assets Especially Mentioned
OMCs	Oil Marketing Companies
OMOs	Open Market Operations
ONR	Overnight Repo Rate
OPEC	Oil Producing and Exporting Countries
ORR	Obligor Risk Rating
ORWA	Operational Risk Weighted Assets
OSS	Operational Self Sufficiency
P/E Ratio	Price Earnings Ratio
PAT	Profit after Tax
PBS	Pakistan Bureau of Statistics
PCI-DSS	Payment Card Industry-Data Security Standard
PCR	Provisioning Coverage Ratio
PCRCL	Pakistan Corporate Restructuring Company Limited
PD	Probability of Default
PE	Private Equity
PES-II	Pakistan Energy Sukuk-II
PIA	Pakistan International Airlines
PIB	Pakistan Investment Bond
PKR	Pakistani Rupee
PMEX	Pakistan Mercantile Exchange Limited
PMI	Purchasing Managers Index
PMIC	Pakistan Microfinance Investment Company
POS	Point of Sale
PRs	Prudential Regulations
PRISM	Pakistan Real-Time Interbank Settlement Mechanism
PSC	Private Sector Credit
PSEFT Act	Payment Systems and Electronic Funds Transfer Act
PSOs/PSPs	Payment System Operators and Providers
PSX	Pakistan Stock Exchange
PTA	Pakistan Telecommunication Authority
PTF	Participants' Takaful Fund
PWD	Persons with Disabilities
RAS	Regulatory Approval System
RBS	Risk Based Supervision
RCG Asia	Regional Consultative Group for Asia
RDA	Roshan Digital Accounts
REITs	Real Estate Investment Trusts
RFCC	Refinance Facility for Combating COVID-19
RFI	Rapid Finance Instrument
RMCs	Real Estate Investment Trust (REIT) Management Companies
ROA	Return on Assets
ROE	Return on Equity
RRL	Restructure and Reschedule Loan
RSBM	Resident Shariah Board Member
RST	Reverse Stress Testing
RTOB	Real-Time Online Branches
RVPS	Retail Value Payment System
RWAs	Risk Weighted Assets
SBP	State Bank of Pakistan
SC	Steering Committee
SECP	Securities & Exchange Commission of Pakistan
SHF	Shareholders' Fund
SIF	Social Impact Fund
SLR	Statutory Liquidity Requirement
SME	Small and Medium Enterprise
SNCR	Shariah Non-Compliance Risk
SOPs	Standard Operating Procedures
SRS	Systemic Risk Survey
STZ	Special Technology Zones
SVaR	Stressed Value at Risk
TDR	Term Deposit Receipt
TERF	Temporary Economic Refinance Facility
TFC	Term Finance Certificate
TSA	Treasury Single Account
TT	Telegraphic Transfer
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
VaR	Value at Risk
VAR	Vector Auto-Regressive
VC	Venture Capital
VIX	Chicago Board Options Exchange Volatility Index
VRR	Variable Rental Rate
WALE	Weighted Average Lease Expiry
WeBOC	Wed-Based One Customs
WEF	World Economic Forum
WEO	World Economic Outlook

WFH	Work-from-Home
WHO	World Health Organization
WTI	West Texas Intermediate
WTO	Window Takaful Operator
YoY	Year on Year