

Policy Review

**Financing post COVID-19 business
revival and economic recovery: Stress
Testing of Banking Sector of Pakistan**

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July 2020



Abstract

The role of banking sector in post COVID-19 revival of business and economic recovery will be very critical which, in turn, depends on financial soundness of the sector. This study not only evaluates the financial soundness of the banking sector of Pakistan but also assesses the ability of banking sector to respond to financial pressures in the times of crisis, i.e. COVID-19 pandemic in this case. For this, IMF's Bankometer S-score model has been employed. Data for the financial assessment of all the banks in industry and top 10 banks with largest share in market for a period of six years (2014-2019) has been used for the stress testing. The findings suggest that banking sector in general and major banks of the country in particular are in exceptionally sound financial position. In other words, banking sector of Pakistan has the ability to fully finance post COVID-19 revival of businesses for economic recovery.

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1. Introduction

In the challenging times of COVID-19 spread in Pakistan, the banking sector in Pakistan, under the umbrella of Central bank, can play an integral role in offering direly-needed pandemic responsive financial products and services. The lockdown in the country caused the breakdown of enterprise and collapse of supply chains; it aggravated the prevalent poverty levels, leaving the disadvantaged even more vulnerable. The State Bank of Pakistan (SBP) has slashed the policy rate, from 13.25% to 7%, in response to COVID-19 to strengthen its measures to ensure liquidity in the market, but it may not suffice!

The impact of these SBP measures, to a large extent, depends on how commercial banks respond to the call for lending to businesses, particularly the ones which are risky but are most vulnerable to the pandemic. In the crises times, banking industry can facilitate economy by extending small, soft, and non-collateralized loans with frequent and small installments to the disadvantaged segments of society and SMEs struggling for liquidity and access to finance issue. A downside of this outreach by banks is to cater risky and non-credit worthy clientele, which normally does not make it through the credit criteria and stringent Know Your Customer (KYC) policy.

The banking sector plays a central role in economy by carrying out the prime activities of lending money, taking deposits and offering financial services. For the banks to effectively perform the essential function of liquidity provision, they must show stability. Fluctuation of the banking system is a point of concern and after the Global Financial Crisis (GFC), the intelligentsia of developing and advanced economies put forth the priority agenda of Banking Stability (Beck, Demirgüç-Kunt & Levine 2009). Number of countries prioritized financial sustainability over financial expansion, as instability fosters un-sustainable growth.

The COVID-19 pandemic has created an upheaval in the financial markets globally in the shape of credit market conditions contracting, credit spreads surging, central banks cutting cut-down rates substantially in reaction to measures taken to flattening the pandemic curve. The quantum of chaos could have reflected itself in the bank balance sheets if it wasn't for the measures taken by the central banks that ensured healthier capitalization of the banks overtime. However, the magnitude of pandemic is not exactly predictable, uncertainty prevails and in adverse scenario, the capital adequacy ratio (CAR) is likely to converge around the regulatory minimum of 8% or below. What is needed at the moment is the beforehand preparedness for such a stress testing of the banking system.

In this backdrop, stress testing is used for quantification of vulnerability of financial sector (Furfine 2002). Bankometer is one of the most widely used approach for stress testing of commercial banks. A number of studies applied Bankometer model. Qamruzzaman (2014) performed the stress testing of the Bangladeshi banks through Bankometer and Altman Z-score model for the period 2008-2012 and showed that similar results are obtained from both the models.

Shar, Shah, & Jamali (2010) investigated the financial soundness of the banking sector of Pakistan by solvency analysis for the period between 1999-2002. A comparison was made with Capital adequacy, Asset quality, Management, Earnings and Liquidity (CAMEL) and Credit Leona's Securities Asia

(CLSA) stress testing after which the study clearly depicted that for assessing financial vulnerabilities, S-score approach is relevant and good enough for global application.

In developing economies like Pakistan, commercial banks are the dominant financial intermediaries, whose stability is integral for the system. In this context, we attempt the stress testing of the banking industry to analyze whether banks are in a position to opt for this particular financial facilitation to masses in the time of crisis, to enterprises that lack the statistical demeanor required by the banks. Mainly, we assess how sound and solvent is the banking sector of Pakistan to facilitate the economy amid COVID-19. The assessment is made for full banking sector as well for top 10 commercial banks having largest share in market.

This study provides the urgently required assessment of banking sector capacity to respond to current pandemic crisis beforehand. Overall, the results indicate that the Pakistani banking sector is exceptionally sound and current levels of capitalization of the banking sector seem appropriate to deal with liquidity stress that may arise during the revival of businesses and economic recovery.

2. A quick clarification on Solvency vs Liquidity

There exists a distinction between solvency and liquidity. Liquidity can be termed as a short-term phenomenon whereas solvency is synonymous of long-term concept. Solvency refers to ownership of assets that exceed the liabilities, thus it is the prospective ability of the bank to meet/payoff its debts when they fall due. Hence, being solvent means that the bank has enough of liquidity. On the other hand, liquidity refers to accessibility of liquid assets like adequate cash in hand or cash equivalent at bank to honor its ongoing/current commitments comprising of depository payments, new advances, operational costs, salaries, etc.

Now, availability of cash does not ensure solvency as to be solvent the bank needs to have assets in excess of liabilities and liquid assets constitute only a portion of total assets under ownership. So, it's possible for banks to become insolvent due to decline in asset valuation or from general losses arising from operations despite having considerable liquidity.

Interestingly, there is a significant distinction between ex ante and ex post in banking. Ex ante, what is liquid is obvious! And assets and liabilities valuation are established easily. However, when it really matters is the time of crisis. In crisis, solvency and liquidity become very transient, whatever was liquid before may now become quite illiquid - that's why a crisis is a crisis! Likewise, in crisis, assets tend to fail to be as liquid as expected which results in significant drop in their value. So, both concepts are actually disturbingly closely associated - ex post.

3. Methodology

3.1. Data

The sample comprises of the entire banking sector of Pakistan, including all the commercial banks. Furthermore, National Bank of Pakistan (NBP) and nine other top private commercial banks are analyzed separately. These banks have the largest market shares and asset base. We use six-year

secondary financial data (2014-2019¹) for both segments of analysis, extracted from the Financial Statement Analysis² (FSA), State Bank of Pakistan (SBP), Statistics of the Banking System³ (SBP), as well as the annual reports and financial statements of the respective banks.

3.2. Bankometer Model

The Bankometer weights are derived from both the CLSA stress test and CAMEL parameters with slight modifications. The model⁴ uses six bank-specific variables with various weights attached to each of them (equation 1 below). The method is similar to Altman's⁵ celebrated Z-score for assessing the default probability of firms. The soundness of the bank is determined by evaluating the Solvency-score, which denote "ability of the company, bank in this case, to meet its long-term payment commitments (liabilities) from a static and dynamic point of view"⁶. The Bankometer model is given as:

$$S = 1.5X1 + 1.2X2 + 3.5X3 + 0.6X4 + 0.3X5 + 0.4X6 \dots \dots \dots (1)$$

Where

S = Solvency Score
X1 = Capital to Assets ratio (CA) ⁷ ≥ 04% ⁸ The CA ratio determines whether a bank has adequate capital to support its assets.
X2 = Equity to Assets ratio (EAR) ≥ 02% The EA ratio is the Bank's equity value divided by its total assets.
X3 = Capital Adequacy ratio (CAR): 40 % ≤ CAR ≤ 08% Capital ratio indicates a bank's ability to withstand risks. Generally, banks with higher CAR are considered safe; likely to meet their financial obligations and able to withstand unforeseen losses.
X4 = Non-performing loans to Gross Advances (NPL): ≤ 15% Also called the infection ratio indicates the portfolio of non-performing loans the bank carries on its books. Greater NPL ratios indicate higher bad loans disbursed by the banks.
X5 = Cost to Income ratio (CI): ≤ 40% CI ratio shows bank's costs in relation to its income. It is derived by dividing the operating costs by operating income. The ratio provides a clear picture of how efficient the bank is.
X6 = Loans to Assets ratio (LA): ≤ 65% It is generated by dividing the total loan by assets at a bank. The greater the loan to assets ratio, the riskier is the bank where the bank is extending more loans than it has in parked deposits.

¹ Annual reports of banks for 2020 and FSA (SBP) data of 2020 was not released at the time of analysis limiting the analysis to Dec 2019.

² <http://www.sbp.org.pk/departments/stats/FSA>

³ <http://www.sbp.org.pk/ecodata/fsi/qc>

⁴ Concerning the model, we build on the studies & reporting style of Shar et al. (2010) for Pakistan, for the period 1999-2002 & Rahman (2017) for commercial banks in Bangladesh for the period 2010-2015. However, the Bankometer model is widely used and replicated for number of countries like Nigeria, Indonesia, and Nepal etc.

⁵ Altman's Z-score model, developed by Edward Altman is considered an effective method of predicting the state of financial distress of any organization by using multiple balance sheet values and corporate income

⁶ <https://gradement.com/guides/solvency-score?locale=es>

⁷ Effective from June 30, 2015, Regulatory Capital, as defined under Basel requirements, has been used to calculate Capital to Total Assets Ratio. Prior to Jun-15, Balance Sheet Capital was used for calculation of this ratio.

⁸ The ratios given against X1---X6 denote threshold requirement for solvency in respective indicators

3.3 Assessment Criteria for Soundness of Banks

Bankometer Criteria		
i	$S < 50$	Bank is insolvent and facing high level of financial distress
ii	$50 < S < 70$	Bank in a moderate position, termed as gray zone
iii	$S > 70$	Bank is solvent and Super sound ⁹

All banks that exhibit 'S' value higher than 70 are essentially solvent and referred as Super sound Banks. On the contrary, banks exhibiting 'S' value less than 50 are solvent. The score range from 50 and 70 is termed as gray zone (Altman 1968).

4. Results and Discussion

Table 3 depicts the solvency scores of the selected local banks for the period between 2014-2019. The results show that throughout the period of assessment, the commercial banks maintained the Super sound status, rather solvency value remained far above the bench mark of 70%, S-score being 114.7 in 2014, decreasing slightly to S-scores of 112.1, 112.9 and 112.2 in the next three years and then picking up in 2018 with a value of 116.6. The recent solvency score is 115.8 for 2019. (Fig-2). Based on 2019 scores (Table 2), Faysal Bank is most solvent bank with a S-score of 128.64 followed by MCB (128.3) ABL (126.33), UBL (123.81) and Bank Alfalah (121).

Table 1. Bankometer Model Assessments & Results for Entire Banking Sector-Year (2014-2019)

Variables	Year	CA	EA	CAR	NPL	CI	LA	S-Score (Max 70% & Min 50%)	Classification
Criteria		CA≥4%	EA≥2%	40%≤CAR≥8%	NPL≤15%	CI≤40%	LA≤65%		
All Banks*	2014	10.00	8.53	17.1	12.3	53.3	36.73	123.2	Super Sound
All Banks	2015	8.40	8.36	17.30	11.4	47.8	34.05	118.0	Super Sound
All Banks	2016	7.80	7.38	16.2	10.1	53.1	34.74	113.1	Super Sound
All Banks	2017	7.10	7.02	15.8	8.4	57.1	35.50	110.7	Super Sound
All Banks	2018	7.10	7.57	16.2	8	60.2	40.42	115.5	Super Sound
All Banks	2019	7.60	7.85	16.1	8.2	55.8	42.08	115.7	Super Sound
Industry AVG		8.00	7.78	16.45	9.73	54.55	37.25	116.0	

*All Banks (overall) include: A. Local Banks: i) Public Sector Banks ii) Private Sector Banks iii) Specialized Banks B. Foreign Banks

Interestingly, all the banks scored above 100 for solvency. This S-score assessment clearly indicates the financial sustainability of Pakistani banks as no supply shock, structural change or financial disturbance that took place during 2014-2019 was able to affect the financial health of banks.

Table 2. Bankometer Model Assessments & Results for Top 10 Local Banks-Year (2019)

S = 1.5X1 + 1.2X2 + 3.5X3 + 0.6X4+ 0.3X5 + 0.4X6									
Variables	Year	X1 CA	X2 EA	X3 CAR	X4 NPL	X5 CI	X6 LA	S-Score (Max 70% & Min 50%)	RANK
Criteria		CA≥4 %	EA≥2 %	40%≤CAR≥8 %	NPL≤15 %	CI≤ 40%	LA≤ 65%		
MCB Ltd.	2019	10.80	11.15	18.86	9.15	43.4	35.64	128.35	2
United Bank Ltd.	2019	8.05	8.58	18.9	10.9	48.2	35.69	123.81	4
SCB (Pak) Ltd.	2019	8.94	11.76	16.94	8	30	37.95	115.79	6
Allied Bank Ltd.	2019	6.94	7.79	21.7	3.2	52	32.75	126.33	3
Bank Alfalah Ltd.	2019	8.89	8.27	16.88	4.23	54.01	49.78	120.99	5
Habib Bank Ltd.	2019	6.05	6.83	15.4	6.6	73.5	36.16	111.65	7
National Bank of Pakistan	2019	5.84	7.45	15.48	12.92	60.91	32.28	110.81	8
Askari Bank Ltd.	2019	5.88	5.07	13.38	7.06	62.21	44.76	102.53	10
Faysal Bank Ltd.	2019	7.69	7.95	18.45	8.33	58.7	50.96	128.64	1
Meezan Bank Ltd.	2019	6.39	5.26	16.58	1.78	45.69	44.04	106.32	9

Calculation by Author

Note: The Bankometer model results given in this section are: for Local banks-2019; for Local banks-2018, 2017, 2016, 2015, 2014 separately (see the Appendix-IA); for Local banks-total period (2014-2019) and for Entire banking industry for period (2014-2019) along with S-score graph plots.

Overall, the results indicate (Table 1) that the Pakistani banking sector is exceptionally sound and its current levels of capitalization seem appropriate to deal with liquidity stress tests. However, the approach to utilize this financial soundness should be holistic, user-friendly and free of structural and operational flaws, otherwise productive outcomes will be difficult to achieve. Amid COVID-

Table 3. Bankometer Model Assessments & S-scores for Top 10 Local Banks-Year (2014-2019)

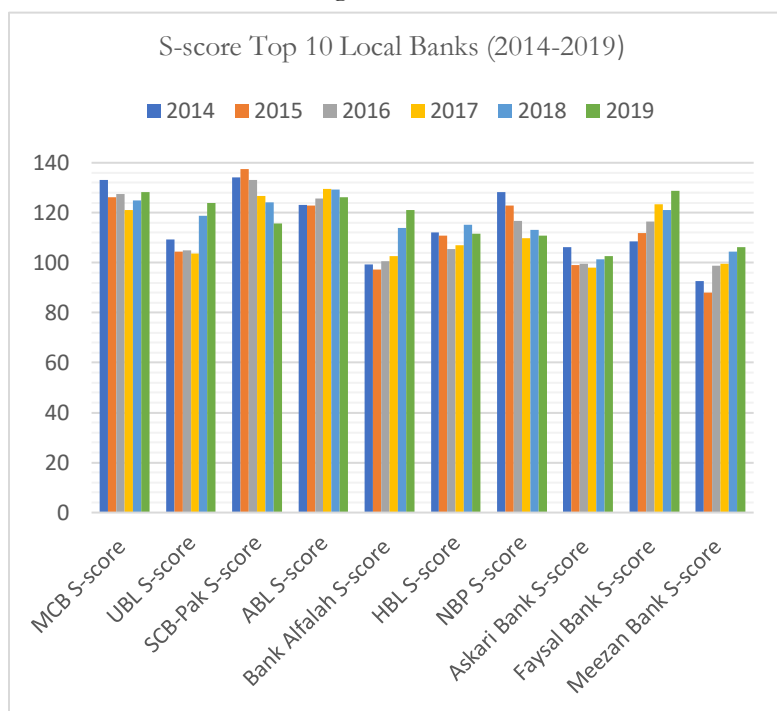
S = 1.5X1 + 1.2X2 + 3.5X3 + 0.6X4+ 0.3X5 + 0.4X6									
Local Banks	2014	2015	2016	2017	2018	2019	Mean	Classification	
MCB Ltd.	133.15	126.25	127.38	121.15	124.92	128.35	126.9	Super Sound	
United Bank Ltd.	109.32	104.37	104.92	103.65	118.71	123.81	110.8	Super Sound	
SCB (Pak) Ltd.	134.08	137.42	133.13	126.73	124.14	115.79	128.5	Super Sound	
Allied Bank Ltd.	123.08	122.77	125.57	129.64	129.20	126.33	126.1	Super Sound	
Bank Alfalah Ltd.	99.40	97.18	100.54	102.66	113.93	121	105.8	Super Sound	
Habib Bank Ltd.	112.20	110.94	105.42	107.08	115.25	111.65	110.4	Super Sound	
National Bank of Pak	128.25	122.87	116.77	109.89	113.24	110.81	117.0	Super Sound	
Askari Bank Ltd.	106.21	99.12	99.57	98.08	101.36	102.53	101.1	Super Sound	
Faysal Bank Ltd.	108.56	111.92	116.38	123.27	121.16	128.64	118.3	Super Sound	
Meezan Bank Ltd.	92.62	88.12	98.83	99.45	104.35	106.32	98.3	Super Sound	
Industry AVG	114.7	112.1	112.9	112.2	116.6	115.8			

Calculation by Author

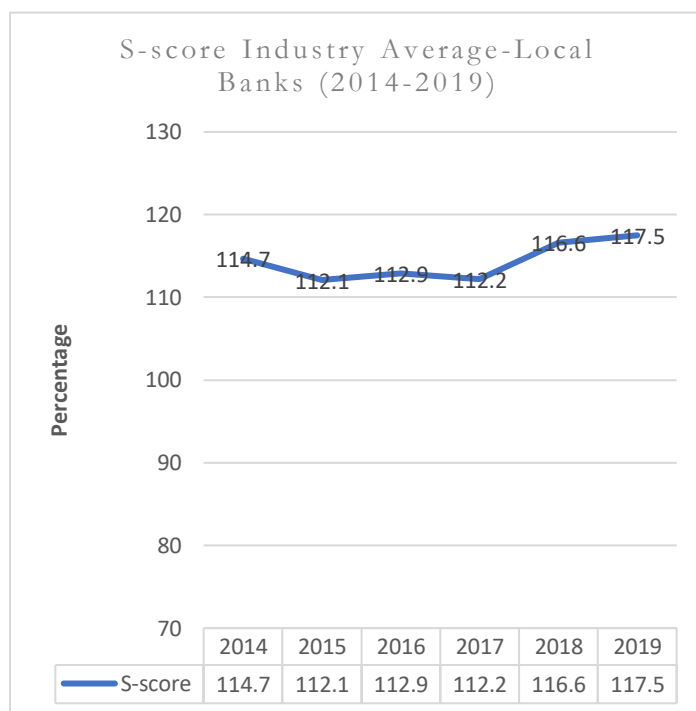
19 situation, for instance, the State Bank’s recently introduced Refinance Scheme has not provided relief to SMEs as desired. The scheme has lost its momentum due to rejection of firms’ loan applications by banks despite the government approved Rs 30 billion as risk sharing for the initial 40 % of non-performing loans when they occur, hence, leaving little justifiable grounds for banks to decline the applications by firms and Micro, Small and Medium Enterprises (MSMEs).

4.1 Capital to Assets (CA) ratio

The results¹⁰ for recent 2019 (Table 2) show that all the banks have cost to income ratios above the criteria of 4%. MCB achieved the highest CA ratio of 10.8 % while National Bank, one of the largest in terms of assets, and Askari Bank showed comparatively lower CA ratios of 5.8. For the over-all period of 2014-2019 (Table 1), the entire banking industry depicted a very sound CA ratio average of 8%. However, one trend is noticeable in CA ratio that it was continuously decreasing during the period between 2014-2019, which refers to the fact that adequate capital of the sector to support the assets is declining overtime.



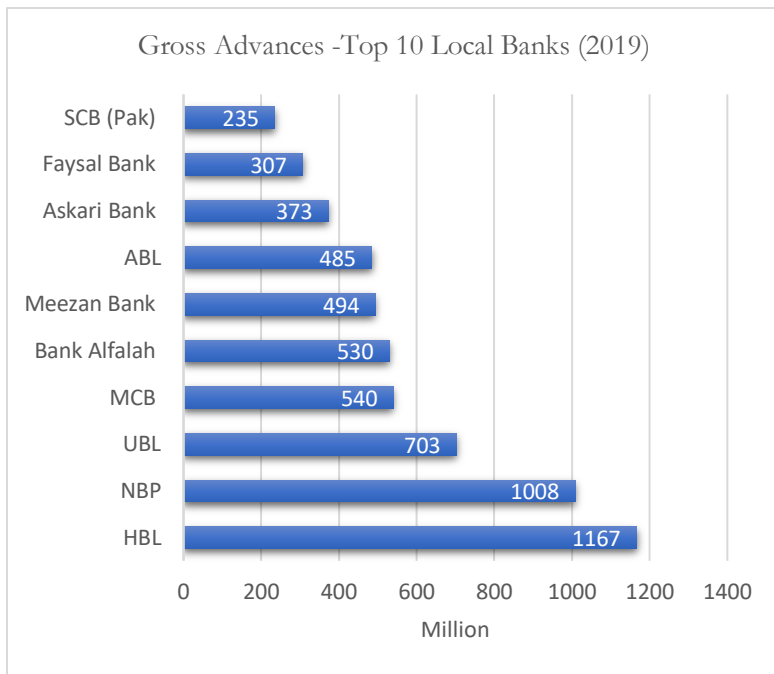
(Fig -1)



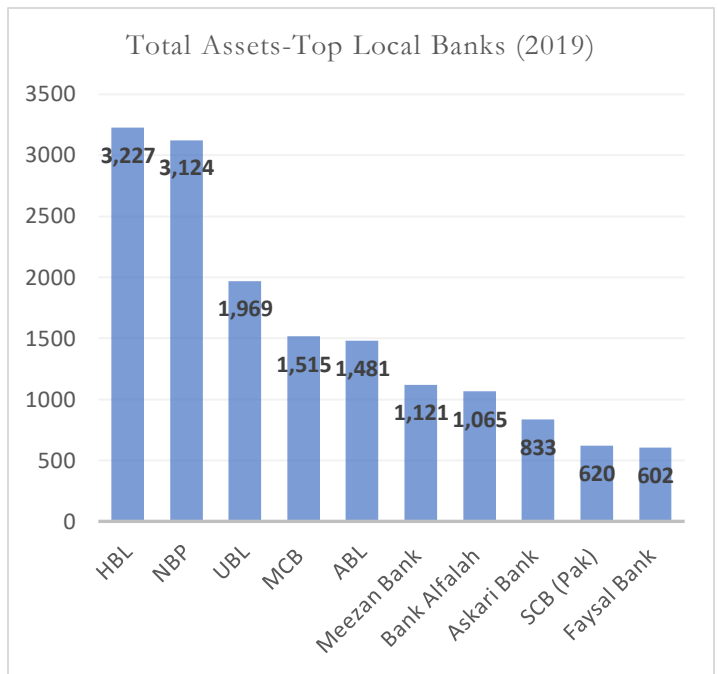
(Fig-2)

Figure-1 exhibits the S-Scores of 2014-2019 for top ten local banks. A sharp decline can be seen in the S-scores of National Bank, consistent with theory that public sector banks are normally not efficient due to heavy write-off, NPLs and funding loss making public enterprises. SBC also show comparative decline over the years. While Faysal, Alfalah & UBL showed consistent increase of solvency over the years. MCB, ABL & HBL soundness somewhat remained the same over the period. The S-scores of Askari & Meezan Bank remained lower as compared to other competing banks.

¹⁰ For our calculation, Regulatory Capital (Effective from June 30, 2015), as defined under Basel requirements, has been used to calculate capital to total assets ratio. Before Jun-15, balance sheet capital was used for calculation of this ratio.



(Fig-3)



(Fig-4)

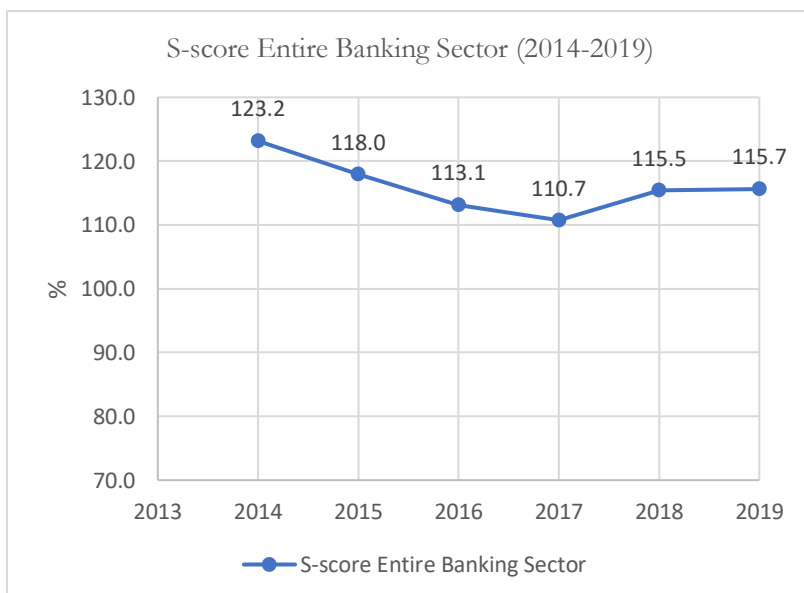
Figure-3 shows the gross advances of the ten local banks of Pakistan for the year 2019. The largest portfolios belong to Habib Bank Limited and National Bank Limited who disbursed loan amount of 1,167 and 1,008 Million PKR.

Figure-4 exhibits the asset base of these ten banks for 2019 where again HBL and NBP take the lead with asset value of 3,227 and 3,124 Million PKR. While UBL, MCB & ABL also show significant assets owned.

4.2 Equity to Assets (EA) ratio

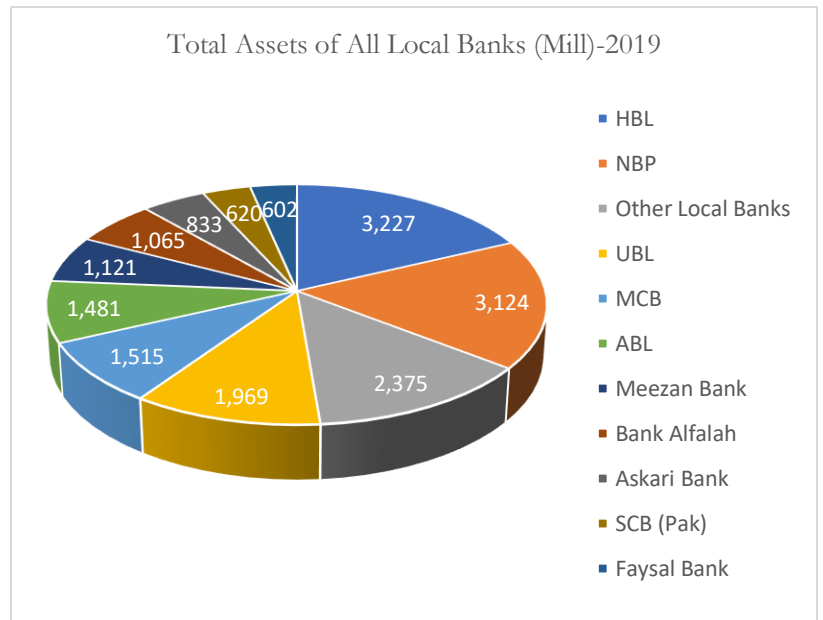
As per IMF guidelines, EA ratio must exceed 2%. Calculations show that all banks fulfilled the minimum criteria of 2% both for 2019 (Table 2) and for the entire period (Table 4, Appendix-IA). MCB and SCB both have the highest EA ratio of 11.15% and 11.76% and Askari bank and Meezan bank have the lowest EA ratios for 2019. For the overall period (Table 1), the banking industry operated at an industry average of 7.78% highlighting the aspect that shareholder equity and bank ownership comprise a significant part of capital structure.

(Fig-5)



“The S-score of the entire banking industry for the period between 2014-2019 signifies that Pakistani banking sector is exceptionally sound”

Local Banks	Gross Advances	Total Assets
Public Sector Banks	1,484,240	3,431,299
Private Sector Banks	6,131,975	14,270,324
Specialized Banks	139,606	231,397
Total (Millions)	7,755,821	17,933,020

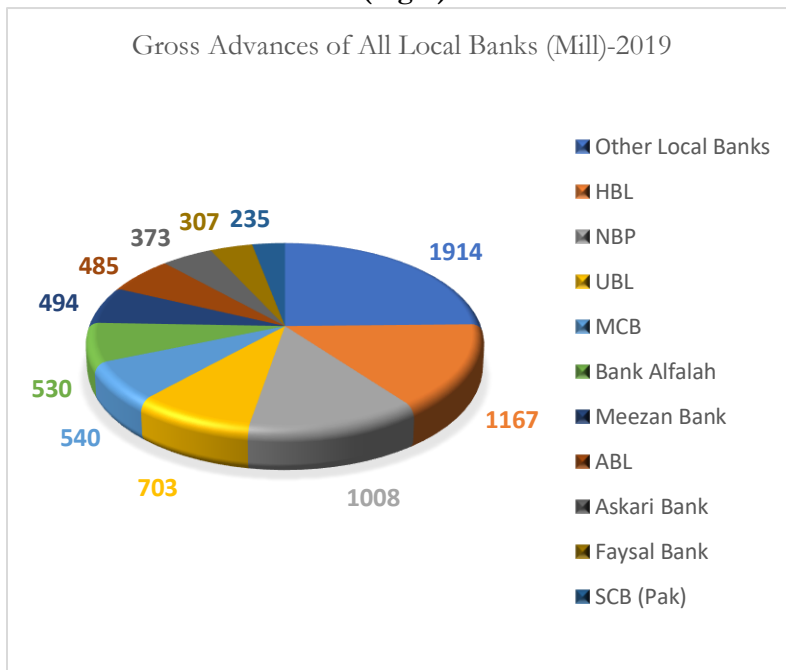


(Fig-6)

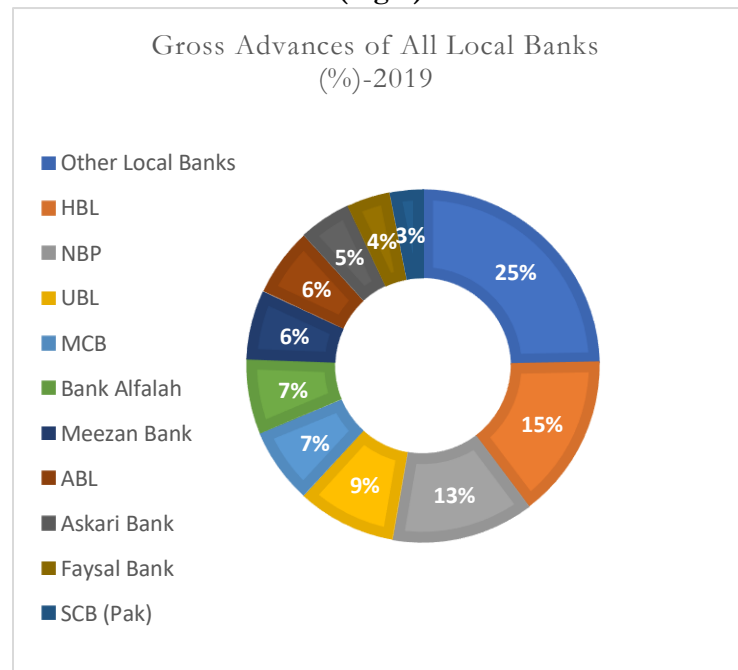
4.3 Loan to Asset (LA) ratio

Results show that the banks have maintained LA ratio below 65% and remained well below 50% - with only Faysal bank showing highest LA ratio of 51% in 2019 (Table 2), concluding that these banks did not extend excessive loans and maintained high liquidity. The industry average for loan to asset ratio for overall period remained 37.25% (Table 1).

(Fig-7)



(Fig-8)



4.4 Capital Adequacy Ratio (CAR)

CAR is of crucial importance for stress testing and financial soundness and is based on the following formula.

$$\text{Capital Adequacy Ratio (CAR}^{11}\text{)} = \frac{\text{Total Eligible Capital (Tier 1 + Tier 2)}}{\text{Total Risk Weighted Assets (RWAs)}}$$

The main aspects of CAR as per Basel guidelines are:

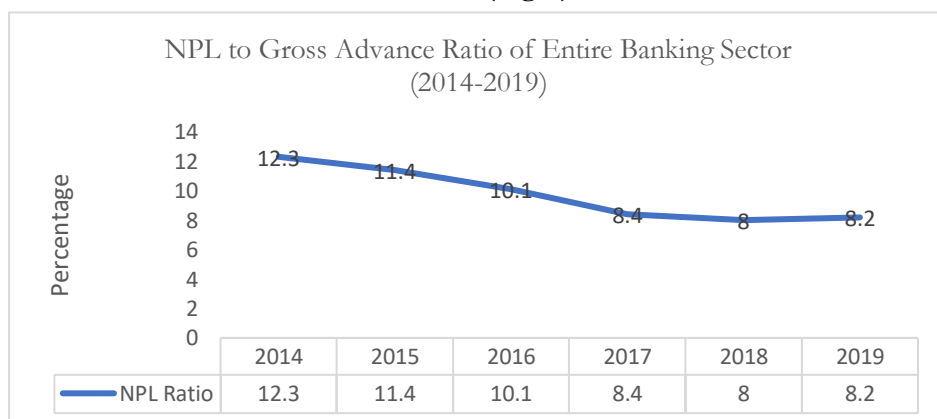
- As per State Bank, minimum paid-up capital (net of accumulated losses) for Banks to be raised to Rs.10,000 million
- Banks are required to maintain a minimum Capital Adequacy Ratio (CAR) of 10% plus capital conservation buffer of 2.5% of the risk weighted exposures of the Bank.
- Further, under Basel III instructions, Banks are also required to maintain a Common Equity Tier 1 (CET 1) ratio and Tier 1 ratio of 6.5% and 7.5%, respectively.

For Pakistani banking sector, it is evident that all the banks have higher capital adequacy ratios than the limit of 8% proposed by the IMF. The overall mean value of CAR remained 16.45% (Table 1) indicating that banks are ensuring financial stability by mitigating the risk of insolvency. However, the evidence shows that Pakistani banking sector reverts to humungous borrowing to government-in shape of investing in risk-free T-bills along with PIBs, FIBs (guaranteed by sovereign) for the purpose of improving CAR. There have been times when this approach actually compromised credit allocations meant for private sector.

4.5 Non-Performing loan to Loan (NPL) ratio

Greater NPL ratios indicate higher bad loans disbursed by the banks. For our banks, NPL has been a serious concern for a considerable period of time. In the past, the energy crisis and circular debt played havoc with manufacturing sector, which translated itself in massive NPLs for the banking sector. The results show that for the mentioned period the NPL ratios of nearly all banks lie below the limit of 15% (Table 1).

(Fig-9)



4.6 Cost to Income (CI) ratio

Based on results, it is very much clear that banking sector is struggling to meet the issues of cost. For 2019 (Table 2), CI ratios of banks are huge, nearly all exceeding and violating the benchmark of

¹¹ The CAR calculation approach for the local banks is given in the Appendix-IB

40%. Highest CI ratios belong to HBL, 73.5% and NBP, 61%, pointing to in-efficiency, while the only bank in the sample with effective CI ratio below the criteria is SCB with value of 30% < 40%. For the overall period (Table 1), the mean cost to income ratio of the industry turns out to be 54.5% - an evidence of how banks management is not optimal.

Evidence: Overall, the results indicate that the Pakistani banking sector is exceptionally sound. Equipped with this level of financial soundness, the banks can play a crucial role in up-lifting the economy. However, the approach to utilize this financial soundness should be holistic, user friendly and free of structural and operational flaws. In this context, a critical evidence is the recently announced SBP's Refinance Scheme, facilitating concessional loans to firms who refrained themselves from laying off workers for three months (April to June 2020) at a nominal interest rate of 3%. Contrary to this initiative by SBP the MSMEs are encountering with immense problems as collaterals are demanded by the banks and loan applications are rejected on the basis of weak audited accounts. This criterion of strong audited accounts is questioned by entrepreneurs as in the prevailing deteriorating conditions, if companies were in good financial shape there was no need to seek bank loans!

Despite the government has earmarked Rs 30 billion¹² for absorbing default, the banks are refraining from rescuing enterprises/firms under State Bank's Refinance Scheme¹³. One underlying reason for not undertaking the optimal facilitation can probably be that Pakistan banking sector has conventionally maintained a low advance to deposits ratio (ADR) and more so towards smaller businesses. Time and again any attempts by the Central bank to encourage banks to enhance credit deployments towards the smaller businesses more particularly the SME sector have met with little success.

5. Conclusion and Policy Recommendations

It is evident from the analysis that Pakistani banking sector is exceptionally sound. Now is the time to capitalize upon this soundness by uplifting the economy. Peculiar times call for peculiar actions, commercial banks, under the patronage of SBP must take the front role of aggressive financial facilitation, which is not only required to counter the devastating impact of COVID-19, but is also aligned with the national agenda of financial inclusion as stated in SBP's National Financial Inclusion Strategy 2015. Commercial banks have rescued economy in testing times, earlier as well, like Rs 180 billion borrowing to previous government to bring down circular-debt levels in energy chains (SBP starts campaign 2019).

Although, State Bank of Pakistan (SBP) has taken the initiative of slashing the policy rate, in intervals, from 13.25% to 7% in response to COVID-19, which is conducive for stimulating economy and announcing SMEs' interest based-loan facilitation program but it is not enough! the facilitation should be user-friendly as the latter has been under-availed due to design of interest

¹² As of June 12, 2020, SBP press release, Banks have approved loan applications worth Rs. 107.5 billion of which Rs. 23.5 billion is for SMEs and small corporates under the risk sharing facility.

¹³ The viewpoint is taken from multiple recently published newspaper articles and blogs by economists and researchers

bearing borrowing and demand for collateral by certain commercial banks, which impedes enterprise's access to finance.

Commercial banks should be flexible with the notions of rescheduling interest payments, NPL negotiations and requisite documentation of availing loans especially concerning the MSMEs and manufacturing sector. Globally, progressive Central banks have directed banking sector to ease up loan processes, suspend principal payments for few months and collect only interest payments as enterprise sector is grappling with liquidity issues. On similar lines, response by banking sector is needed in Pakistan.

Pakistani banking sector is financially sound, but is not financially efficient! It is well-depicted from our results of cost to income ratio where the CI ratio of entire banking industry, for all years, exceeded the benchmark of $CI \leq 40\%$, touching an industry average of 54.5% for period a period between 2014-2019, essentially highlighting potential problems that are faced by bank in its operations. Cost efficiency is particularly an internal feature of banks' management. The banks must manage costs effectively, curtail operating expenses, plug the leakages as it is much needed to deliver effectively in the long run.

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- Financial Sector Assessment (FSA), 2013-2017, State Bank of Pakistan.
 - Annual Reports: 2014-2019, Local Banks of Pakistan Banking Sector
 - Financial Statements: 2014-2019, Local Banks of Pakistan Banking Sector

Appendix-IA

Table 4. Bankometer Model Assessments & Results for Top 10 Local Banks (Year: 2014-2018)

$$S = 1.5X1 + 1.2X2 + 3.5X3 + 0.6X4 + 0.3X5 + 0.4X6$$

Variables	Year	X1	X2	X3	X4	X5	X6	S-Score (Max 70% & Min 50%)	RANK
Criteria		CA≥4%	EA≥2%	40%≤CAR≥8%	NPL≤15%	CI≤40%	LA≤65%		
2018									
MCB Bank Ltd.	2018	9.74	9.96	18.13	8.95	49.75	36.50	124.92	2
United Bank Ltd.	2018	7.99	7.73	17.7	8.8	47.8	39.68	118.71	5
SCB (Pak) Ltd.	2018	8.61	11.67	19.09	9	40	32.49	124.14	3
Allied Bank Ltd.	2018	7.12	7.94	22.2	3.5	54	32.45	129.20	1
Bank Alfalah Ltd.	2018	8.22	7.52	14.94	3.63	58.34	51.52	113.93	7
Habib Bank Ltd.	2018	6.31	6.45	16.2	7	76.2	35.71	115.25	6
National Bank of Pak.	2018	6.03	7.39	16.35	12.59	57.71	33.10	113.24	8
Askari Bank Ltd.	2018	5.63	4.74	12.51	7.22	65.58	48.56	101.36	10
Faysal Bank Ltd.	2018	6.17	7.25	16.8	8.33	65.48	49.41	121.16	4
Meezan Bank Ltd.	2018	6.02	4.30	14.55	1.34	55.21	54.65	104.35	9
2017									
MCB Bank Ltd.	2017	10.96	10.06	16.44	9.47	46.94	38.34	121.15	4
United Bank Ltd.	2017	7.29	6.46	15.4	7.8	45	32.22	103.65	7

SCB (Pak) Ltd.	2017	8.52	11.16	19.27	12	46	30.25	126.73	2
Allied Bank Ltd.	2017	7.60	6.41	22.4	4.6	56.5	31.11	129.64	1
Bank Alfalah Ltd.	2017	6.54	5.97	13.39	4.21	65.28	41.77	102.66	8
Habib Bank Ltd.	2017	6.89	6.11	16	8.2	52.9	31.58	107.08	6
National Bank of Pak.	2017	5.54	5.44	15.95	14.1	56.88	34.26	109.89	5
Askari Bank Ltd.	2017	5.01	4.18	12.09	9.41	67.54	43.30	98.08	10
Faysal Bank Ltd.	2017	8.45	6.9	15.9	10.68	65.26	51.69	123.27	3
Meezan Bank Ltd.	2017	5.53	4.65	12.89	1.54	59.34	54.35	99.45	9
2016									
MCB Bank Ltd.	2016	12.03	11.16	19.33	5.9	36.8	34.29	127.38	2
United Bank Ltd.	2016	8.56	7.45	15.1	8	39.6	34.02	104.92	7
SCB (Pak) Ltd.	2016	8.95	11.98	20.19	16	46	28.15	133.13	1
Allied Bank Ltd.	2016	8.05	7.06	20.8	5.9	52.2	32.56	125.57	3
Bank Alfalah Ltd.	2016	6.12	5.4	13.18	4.8	62.8	42.58	100.54	8
Habib Bank Ltd.	2016	7.47	6.73	15.5	9.2	48.3	29.71	105.42	6
National Bank of Pak.	2016	6.63	6.21	16.54	15.28	55.73	39.01	116.77	4
Askari Bank Ltd.	2016	5.34	4.12	12.5	10.89	64.66	42.34	99.57	9
Faysal Bank Ltd.	2016	7.06	6.56	14.6	13.07	62.13	50.84	116.38	5
Meezan Bank Ltd.	2016	5.71	4.69	12.91	2.14	62.89	48.28	98.83	10
2015									
MCB Bank Ltd.	2015	12.04	11.29	19.43	6.32	33.34	32.11	126.25	2
United Bank Ltd.	2015	8.51	7.66	14.6	9.4	39.7	34.41	104.37	7
SCB (Pak) Ltd.	2015	9.31	12.3	21.04	18	42	29.14	137.42	1
Allied Bank Ltd.	2015	7.90	6.93	20.9	6.4	39.6	34.32	122.77	4
Bank Alfalah Ltd.	2015	5.55	4.75	13.4	5.27	59.45	38.15	97.18	9
Habib Bank Ltd.	2015	8.12	7.14	17	10.9	42.2	28.73	110.94	6
National Bank of Pak.	2015	7.57	6.96	17.59	18.4	47.57	40.71	122.87	3
Askari Bank Ltd.	2015	5.35	4.1	12.51	13.78	56.88	42.63	99.12	8
Faysal Bank Ltd.	2015	6.38	6.06	14.41	14.82	55.41	47.81	111.92	5
Meezan Bank Ltd.	2015	4.97	5.2	10.98	3.3	59.7	40.27	88.12	10
2014									
MCB Bank Ltd.	2014	12.57	11.69	20.41	6.8	36.51	34.49	133.15	2
United Bank Ltd.	2014	8.98	8.63	13.90	11.2	45.2	41.42	109.32	6
SCB (Pak) Ltd.	2014	9.68	13.3	19.07	15	44	36.63	134.08	1
Allied Bank Ltd.	2014	8.57	7.44	19.8	7	41.4	38.45	123.08	4
Bank Alfalah Ltd.	2014	5.89	5.15	12.75	6.37	66.04	40.33	99.40	9
Habib Bank Ltd.	2014	8.40	7.88	16.2	11.9	44.8	32.18	112.20	5
National Bank of Pak	2014	8.80	7.36	17.39	16.6	54.74	47.44	128.25	3

Appendix-IB

Calculation Capital Adequacy Ratio (CAR):

A. Eligible Common Equity Tier 1 (CET 1) Capital	Amount A
B. Eligible Additional Tier 1 (ADT 1) Capital	Amount B
C. Total Eligible Tier 1 Capital	(A+B)
D. Eligible Tier 2 Capital	<u>Amount D</u>
E. Total Eligible Capital (Tier 1 + Tier 2)	(C+D)

Risk Weighted Assets (RWAs):

F. Credit Risk	Amount F
G. Market Risk	Amount G
H. Operational Risk	Amount H
I. Total	(F+G+H)
J. Common Equity Tier 1 Capital Adequacy Ratio	A/I*100
K. Tier 1 Capital Adequacy Ratio	C/I*100
L. Total Capital Adequacy Ratio	E/I*100

Askari Bank Ltd.	2014	5.82	4.37	13.03	15.79	64.54	44.48	106.21	8
Faysal Bank Ltd.	2014	5.97	5.63	12.22	14.31	68.02	52.73	108.56	7
Meezan Bank Ltd.	2014	5.44	5.32	11.88	3.8	58.55	41.64	92.62	10