

Indian Banking Sector a Major Contributor to Economy: Constancy Major Concern



Namita Rajput, Anil Kumar Goyal

Abstract: Due to an intermediary role of banks in the economy, they hold a unique locus across all sectors with prudent lending policies, environmental impact analysis, and efficient credit approval systems. The banks play a vital role in the lending process which is dispatched along with the credit risk, that is, when the borrower fails to repay the money borrowed and fails to satisfy the obligations, then the asset is said to be bad or Non-performing. A poor financial performance in an economy creates a distress in the economic stability leading to an economic crisis. The banking stability has a direct impact on the real output and employability which revolves around the financial stability of an economy. With the global initiatives undertaken, the Reserve Bank of India (RBI) developed Banking Stability Map and published the Financial Stability Report in 2010. It is measured using five dimensions of Stability Map, which are, Soundness(s), Asset Quality (Q), Profitability (P), Liquidity (L) and Efficiency (E). With the upsurge in the deteriorating asset quality and the financial health of banking institutions, lack of adequate fund and pressure of capital regulation makes the balance of stability in the Indian banking sector a challenge. The main objective of the study is to conduct a comprehensive review of all the possible dimensions of financial stability in the country across the Public Sector, Private Sector and Foreign Banks through Statistical tools from a time period of 13 years from 2005-2018. The statistical data and figures will be beneficial for the upcoming researchers and policymakers, as it displays an overview of the banking stability across the three main tiers of the banking world.

Keywords: NPA, Public sector banks, Private Sector Banks, Foreign Banks, Financial Stability Map

I. INTRODUCTION

Every country's main objective is to attain a stable economic growth which revolves around the financial stability of an economy. The financial crisis left a strong imprint over the economy, there were diverse views over the analysis for the causes and policies to recover, which included the monetary policy, shadow banking, subprime mortgage market crisis and Global imbalances. But the main culprit was the banking sector which contributed to the financial crisis hence banking sector plays a central role in an economy. International organizations like World Bank, IMF, BIS and central banks of many countries took an active participation towards resolving the global crisis. Historical evidence clarifies that banking stability affects the financial stability, and has a strong influence on the real economy in terms of real output and labor market.

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* Correspondence Author

Dr Namita Rajput, Principal (OSD), Sri Aurobindo College (E), University of Delhi, India,

Anil Kumar Goyal*, Professor, Rukmini Devi Institute of Advanced Studies, New Delhi, India,

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So, in order to increase the monitoring and regulatory norms, banking stability map and indicators were presented as a yardstick to determine the capacity of an economy to fight the internal and external shocks. The Financial stability is achieved through the ambulation of banking stability, real economy and financial market, where the banking sector plays a major role. The stability of banks is depended on the positive and negative externalities from the financial market and real economy. The Banking stability is designed and predicted through Banking Stability Map and Banking stability Indicator. Banking stability shares a positive correlation with financial stability; therefore, it has a direct impact over the financial stability. Indian Banking stability is constructed using the five dimensions of banking stability indices. The impact of the banking stability can be studied using CAR framework. The movements in financial stability can be inferred due to the deterioration of asset quality.

II. HISTORICAL OUTLOOK

The Financial Crisis that originated in the United States reached out as a global crisis affecting the economic and financial performances, after which the policymakers and experts have developed and are still looking into various models to identify any early warnings. IMF presented the Global Financial Stability Map (GFSM) in the Global Financial Stability Report April 2007 and published the paper titled "Can you map global financial stability?" in 2010. The report was introduced to foresee the risks and factors affecting the financial stability in a graphical manner. The entire monitoring system was enhanced with GFSM and other financial surveillance in a systematic way. For the global financial stability assessment there were two pre requisites to analyze, that is, Judgment and technical adjustments. The numerical limitation of a model is taken care by the technical adjustments while the judgment is related to surveillance and to predict the location of the risk factors in the map. IMF also developed EWE (Early Warning Exercise) in collaboration with the Financial Stability Board. Early Warning List to detect the associated risks by the EWE rounds. Other Central Banks are also working towards finding better measures to maintain banking stability by mitigating risks. Bank of Canada attempted to develop a tool named "An Index of Financial Stress for Canada" to determine the macroeconomic factors causing stress in the form of an index. But, the financial stability remains in the distress of the combined from the banking, Forex market and debt and equity markets. The behavior of these four Markets reflects the stress in the household sector and non-financial business sector in Canada.

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India developed the Banking Stability Map and Indicators where the first copy as published in 2010 as Financial Stability Report (FSR) released by the Reserve Bank of India, which was enhanced in every subsequent years.

III. REVIEW OF LITERATURE

A. Global Context

Salas and Saurina (2002) talk about the bank level variables which could explain the loan problem in Spain during 1985- 1997, even after regulating the economic factors like GDP growth, indebt of family and firm using the Panel data.

Pain (2003) examined that, the loan problems led to a crisis in the UK banks during 1978-2000. Using Panel data regression analysis, it was found that both macroeconomic factors and Bank specific factors were responsible for the catastrophe. Macroeconomic factors like real GDP growth real interest rates and lagged aggregate lending growth and Bank specific factors like the loan portfolio to be the determinants.

Shu chang (2002) examines the determinants of the banks in Hong Kong and the impact of macroeconomic factors. The paper concluded that the current year increase in equity prices were found to bring down the NPA level in banks.

Salas and Saurina (2002) investigates the determinants for bank loan using Panel data across the Spanish Commercial banks from 1985-97. The paper concluded that if the interest income falls it gives an incentive for the managers to shift towards a rescue credit policy which might lead to non-performing assets in future.

Quagliariello M (2006) highlights that Exim Bank intent to impose higher credit interest rates which could be charged for the customers who have low creditworthiness, poses a shift towards NPLs. A higher lagged ROA can be associated with higher future non- performing assets.

Alper and Anbar (2011) talked about the determinants of bank's profitability in Turkey for the time period of 2002-2010. The paper talks about the positive and negative impacts on the bank profitability via Return on Assets (ROA) and Return on Equity (ROE). The size of assets and interest rates had a positive impact on the profitability of banks whereas the size of loan had a negative impact.

Roman and Danuletiu (2013) studied the factors affecting profitability of Romanian Commercial Banks from 2003-2011. The study reveals that the bank specific variables and external factors affect the profitability, like the assets quality, liquidity and management in the banks have a significant impact.

Islam (2014) examined the financial performance of National Bank Limited Bangladesh for the period 2008-2013 and divided the study into two sub-periods ranging from 2008- 2010 and 2011-2013. The study concluded that management and proper implementation of strategies could improve the profitability of banks.

Menicucci and Paolucci (2016) studied the relationship between bank specific factors and profitability from 2009-2013 for 28 European banks. The study revealed that the CAR ratio, higher deposit ratio and the bank size are positively related to the profitability. **Mehta and Bhavani (2017)** studied the impact of variables in profitability in 19 banks of UAE from 2006-2013. The results declare that the Capital Adequacy Ratio and improved asset quality has a huge impact on profitability of banks. The authors

recommended a profitability enhancing model for better performance in banks.

Islam and Hasan (2017) studied the performance and determinants of profitability for commercial banks in Kosovo. They used ROAE (return on Average Equity), ROAA (Return on Average Assets and NIM (Net Interest Margin). It concluded that the internal factors like the asset quality, Capital adequacy and Management Efficiency affect the profitability.

Mohamed and Soliman (2017) studied the impact of Basel III reforms for Egyptian banks. It has been found that there is a negative impact over the smaller or financially weaker banks and find it challenging to maintain their pace with lack of funds.

B. Indian Context

Cowley and Cummins (2005) explained the prominence of the SARFASI act enacted in 2002. The result unveils the importance of Securitization on the trajectory of the modern finance. It is a process which eases the process of liquidity of illiquid assets. Hence, facilitates risk management and reduces the liquidity risk.

Gerlach, S., Peng, W. & Shu, C. (2005) concluded that the NPA ratio surge with bankruptcies and nominal interest rate but declines with economic growth and the inflation rate.

Mario Castelino (2005) pronounced that the NPAs of the corporate sector have descended drastically, though there is a hype of NPAs in the retail sector and also the issue related to frauds in the mortgage loans.

Chaitalia, Rishab Bengani and Onkar Redkar (2006) explained the need for asset reconstruction companies and analysis of the regulatory framework and various issues plaguing the system.

Hernando De Soto (2007) states the advantages of Securitization using SARFASI Act 2002 and compares with the measures that prevailed before securitization. The process is preferred to improve capital return, raise finance, lower risk and manage the mortgage assets, etc.

Jain (2007) explained the reasons for the increasing level of NPAs and the prudential measures available for the same. He also stated that the problem for rising NPA is more acute in PSBs in comparison to Private sector banks.

Sahoo, P. and Nayak (2007) The study gives a conceptual review of green banking initiatives. The paper concludes by stating that the firms could attain higher return on environment friendly projects and banks should go green to ensure the flow of investment toward greener projects.

Vallabh, Bhatia and Mishra (2007) explored an empirical graft and study the analysis of NPAs across public, private, and foreign sector banks in India. The results reveal the transition of NPAs over the years which can be explained via macroeconomic factors and bank-specific factors. The linear relationship among the independent variables was processed using a test named "Durbin-Watson test" and VIF characteristic and concluded that public sector banks face more NPAs than private sector banks.

Karunakar (2008) highlights the concern of lower profitability due to NPAs and the liability discrepancy among the banks and the financial sector, which is dependent upon the risk associated with the management. The study concludes by advising proper credit assessment and risk management.

Karunakar and Mrs. K. Vasuki (2008) emphasis on various theoretical aspects oscillating from the factors causing NPA, magnitude of NPA and their impact on the Indian banking system and finally the measures to control the rise of NPAs.

Rajesham and Rajender (2008) described the causes and consequences of NPAs in Public Sector Banks. The result of study showed the efforts required at the headquarters of ministry of finance, RBI and Banks's to control the issue. It also parleys about the opportunity cost between profitability and social welfare.

Vadrade Kavita (2008) A case study on the green banking initiatives undertaken by three private and three public sector banks from 2010-2015. Green Banking Initiatives by Indian Public and Private sector banks.

Akhan (2009) highlighted the present level of NPAs of NBFCs and measures to control the same. NBFCs are found to be performing better in comparison to the Scheduled Commercial Banks in NPA management.

Dhanda and Rani (2009) presented the status of NPAs in different segments of public sector banks in India and to ascertain the relative importance of different causes of NPAs as per opinion of bank employees.

Uppal (2009) examined the priority sector lending and targets achieved by various bank groups in 2006 and 2007 of the Indian banking industry. The study resulted that the public sector banks did not achieve the target due to priority sector lending process in comparison to the Private and Foreign Banks.

Bahl S (2012) The Green banking practices via internal and external process can have a positive impact on the effectiveness. The results obtained from the primary data analysis conclude that the level of awareness among the respondents is quite low.

Rajput, Gupta and Chauhan (2012) studied the magnitude of NPA in the Indian banking sector and used empirical analysis to investigate the relationship between profitability and NPA. The paper depicts an inverse relationship of NPA and the profitability of banks.

Selvarajan and Vadivalagan (2012) analyzed the cost and factors causing non- performing assets in Indian Banks. And, concluded that the banks have given more loans to the borrowers and takes appropriate steps to recover the loan through proper follow up with the borrower.

Asha Singh (2013) observed that the NPA in the public sector is mounting every year. In contrary to this, the non-performing assets of private sector banks is plunging. Generally, the reduction in NPAs shows that banks have strengthened their credit evaluation process and the increased NPAs shows the necessity of provisions, which brings down the overall profitability of banks.

Kumar (2013) in his paper stated that the Non-performing Assets (NPAs) is a rising problem for the Indian banking sector for the past years. The major issue in the late 90s after the economic reforms was the challenging performance of the Indian banks due to the accretion of rising NPAs.

Samir and Karma (2013) highlighted the position of NPAs in selected banks and the policies used by the banks to face the problem of NPAs particularly in State Bank of India (SBI), Punjab National Bank (PNB) and Central Bank of India (CBI). It studied the policies brought in to resolve the rising issue of NPA from the year 2003 to 2012.

Singh (2013) analyzed the recovery performance of the

Indian banks through various recovery channels. He studied the factors affected by NPAs like the profitability, capital adequacy ratio, and employment generation, living standard of people and income level of the banks.

Devi and Reddy (2014) analyzed the classification of loan assets in Public Sector Banks to examine the causes and remedial measures. The study concluded that the amount of standard assets have shown increasing trend during the stated time period from 2004 to 2013.

Joseph and Prakash (2014) studied the trend in NPAs from the year 2008-2013. The study reveals that there are many internal and external factors found, which affect the NPAs of the bank. They concluded that NPAs was higher in the public sector Banks.

Deka G (2015) The study emphasizes on the positive effects of green banking practices and portrays a complete analysis of SBI and the level of awareness among customers in Assam. The study concludes that there is a strong need for diversification for the green banking initiatives and guidelines.

Narang D (2015) The study provides detailed analysis of the green banking initiatives by SBI, PNB, HDFC and ICICI bank. Banks have paved their way towards a digital economy by paperless banking.

Barhate, G.H and Tambol M.A. (2016) Green banking is beneficial for the economy as a whole. Green banking will guarantee an improvement in asset quality by green projects. Government should formulate green policy guidelines by proving financial incentives for going green.

Kumar and Kavita (2017) state that financially strong banks can cope up with the new international regulations while weaker banks will pose to face challenges for maintaining the capital requirements. The study concluded that a sound banking system is a major concern for shareholders and bankers else might end up with bankruptcy.

Laila M (2017) studied about the factors or determinants responsible for the non- performing loans and how these factors vary across private, public and foreign banks. He used the fixed effects model and random effects model to analyze the difference. He concluded that the average level of NPA is higher in the public sector banks followed by private and foreign banks.

Roy and Samanta (2017) find the substantial difference among the gross Non- performing asset and the Net Non-Performing Asset position of Public Sector Banks in India. The paper also endeavors the impact on the net profit of the selected banks due to GNPA from 2011 to 2016. The study discloses the declining trend of GNPA of all the banks.

Makkar and Hardeep (2018) measured the profitability of banks and identified the factors that influence the profitability of 46 Indian commercial banks from 2001-2016. The study used various indicators like ROA, liquid assets to total assets, CAR and Non- performing assets to total assets for profitability of banks.

Gayathri and Vikram (2018) in their research paper study the comparative analysis between public and private sector banks from 2010-2017. The paper concludes from the analysis that the NPA trend is greater in public sector in comparison to the Private sector.

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C. Gaps in the Literature

After an extensive review of literature, we conclude that no research has presented extensive wider constraints as far as the time period is concerned, as well as the number of banks. This piece of study will give a snapshot of all the above points and will be a unique study with extensive time period across all the scheduled commercial banks. Along with this, it will also highlight the stability indices across all scheduled commercial banks with graphical explanation and extensive comparative analysis under each dimension, which is a road not travelled.

IV. METHODOLOGY

Construction of Banking Stability Map (BSM) and Indicator

The stability Map and Indicator is constructed using five stability indices which are named as follows:

- Soundness
- Asset quality
- Profitability
- Liquidity and
- Efficiency

CAMELS are renowned international rating system to rate the banking institutions. Points greater than 3 are considered to be good financial institutes.

Weighted average of each of the ratios for each dimension given in the following table is used in the assessment. The weights are based on the CAMELS rating, where each index lies in range of 0 to 1. The following ratios are used for the construction of each index. Standardized Ratios are calculated for Banking Stability Map and Indicator for each dimension where the weights are based on the CAMEL rating, which is:

Standardized Value of particular Ratio	CAMELS Ratings
1	0-0.2
2	0.2-0.4
3	0.4-0.6
4	0.6-0.8
5	0.8-1.0

The banking stability Indicator is the average of composite to of all these five dimensions and the banking stability map is the graphical representation of all the ratios dimension wise. A strong financial stability will improve the stability of the bank hence, improving the capacity to absorb shocks in the economy. In this study, following dimensions are analysed to calculate the Financial Stability Indicator of the Indian Scheduled Commercial banks which is inclusive of the public, sector Banks, Private Sector Banks and Foreign Banks from 2005-2018.

Table 2 Financial Stability Ratios

DIMENSIONS	RATIOS		
Soundness	CRAR	Tier 1Capital/ Tier 2 Capital	Leverage Ratio
Asset Quality	Net NPA/Tot	Gross NPA/Tot	Sub-standard

	al Advances	al Advances	advances/ Gross NPA
Profitability	Return on Assets	Net Interest Margin	Profit
Liquidity	Credit-Deposit Ratio		
Efficiency	Cost/Income	Business per employee	Staff expense/ Total Expenses

Therefore, the following ratios are healthy for the banks which are positively correlated and negatively correlated. The ratios which are positively correlated contribute towards a healthy banking system, that is, higher the value better it is.

Table 3 Positive and Negative Correlation of the Indicators

Positive Correlation	Negative Correlation
<ul style="list-style-type: none"> • CAR • Tier I/Tier II Capital • Sub-standard Advances/Gross NPA • ROA • NIM • Profit • Business per 	<ul style="list-style-type: none"> • Net NPA/Total Advances • Gross NPA/Total Advances • Cost to income ratio • Staff expense/Total expense

V. ANALYSIS AND INTERPRETATION OF THE DIMENSIONS OF THE STABILITY INDICES

A. Soundness: The capital adequacy is above the required regulatory requirements. The CRAR ratios have shown an edge up after the phased implementation of Basel III

1. Capital Adequacy Ratio (CAR): It reflects the ability of a bank to meet the future capital requirements. It is calculated by the following formula:

$$\text{Tier 1+Tier 2+Tier 3 Capital/ Total Risk weighted Assets (RWA)}$$

The following is the Data is compiled from RBI data base, which depicts the CRAR ratios of the Scheduled Commercial Banks.

Insert Figure 1: CAR of SCBs

Insert Figure 2: Count of SCBs by CRAR

Insert Figure 3: Standardized value of CAR

Insert Figure 4: CAMEL Rating for CAR

Implication: It can be observed that the Capital Adequacy Ratio has fallen down drastically after the implementation of the Capital requirements of the Basel III norms which requires higher provisioning requirements, but it has shown an improvement from the preceding year.

2. Leverage Ratio: It depicts the degree up to which it can leverage its capital base. It is represented as a measure for bank's core capital divided by the total assets.

Tier I Capital (Equity + Reserves)/ Total risk-weighted assets



The tier 1 assets are the assets that can be liquidated when the banks need capital.

The following graph depicts the Leverage ratios of the Scheduled Commercial Banks:

Insert Figure 5: Leverage Ratio of SCBs

Insert Figure 6: Standardized Value of Leverage Ratio of SCBs

Insert Figure 7: CAMEL Rating for Leverage Ratio

Implication: Higher Leverage ratio means more capital to withstand any negative economic shocks. Under the implementation of Basel III requirements, Tier 1 and Tier 2 assets must maintain 10.5% of its risk weighted assets. The Tier 1 Capital depicts the bank's core capital and Tier 2 capital is known as the 'supplementary Capital'. The Ratio has shown a positive growth, but a sudden dip is observed from 2016-17 due to the implementation of Demonetization. By end of March 2018, the leverage ratio was 6.7 % for the SCBs, which is above 3 % as recommended by the Pillar 1 capital requirement by the Basel Committee. The Public sector banks represented a poor ratio, followed by the foreign banks in comparison to the private sector banks. The Annual Economic report by the Bank for international settlements stated that the Basel III requirement will help the banks fight against the risk factors. It also stated that, Tier 1 capital ratio and the leverage ratio share a complementary relationship.

B. Asset Quality: is a vital constituent to measure the financial health of a bank.

The deterioration of the asset quality is major ongoing concern in the Indian economy, which took its origination from the credit boom in 2006-11.

1. Net NPA/Total Advances

Insert Figure 8: Net NPA to Total Advances of SCBs

Insert Figure 9: Standardized value for Net NPA to Total Advances

Insert Figure 10: CAMEL Rating for Net NPA to Total Advances

Implication: Higher Net NPA/ Total loan given depicts fall in the quality of assets. The ratio has shown a sudden rise in the year 2016-2018, which is not a good signal.

2. Gross NPA/ Total Advances

Insert Figure 11: Gross NPA to Total advances for SCBs

Insert Figure 12: Standardized Value for Gross NPA to Total Advances

Insert Figure 13: CAMEL Rating for Gross NPA to Total Advances

Implication: The ratio has shown a sudden surge from 2016-18. Higher the ratio of Gross NPA to Total Advances, higher is the risk associated with it.

3. Sub-standard Advances/ Gross NPA: This ratio gives a measure for the amount of loan categorized into the sub-standard assets. Therefore, a higher ratio means that there is increase in Doubtful or loss assets.

Insert Figure 14: Sub-standard Advances to Gross NPA of SCBs

Insert Figure 15: Standardized Value for Sub-standard Advances to Gross NPA

Insert Figure 16: CAMEL Rating for Sub-standard Advances to Gross NPA of SCBs

Implication: Sub-standard/ Gross NPA have deteriorated. It means that more assets are falling into doubtful or loss assets and have pared the possibility of recovery.

C. Profitability: The weak profitability of the scheduled commercial banks is a very big concern in the Indian economy, as does it make the economy vulnerable to economic shocks.

1. **ROA (Return on Assets):** The Return on Asset also declined in the scheduled commercial banks, which resulted in the profitability of Scheduled commercial bank due to the loan loss provisioning, increasing cost and the declining revenue.

Insert Figure 17: ROA of SCBs

Insert Figure 18: Standardized Value for ROA

Insert Figure 19: CAMEL Rating for ROA

Implication: The Bank's Profitability has plunged drastically.

2. **Net Interest Margin:** It is difference between the amount of income generated by the bank (or interest received) and the interest paid to the lenders. Higher the NIM, higher is the Bank's profitability.

Insert Figure 20: NIM of SCBs

Insert Figure 21: Standardized Value for NIM

Insert Figure 22: CAMEL Rating for NIM

Implication: The NIM has declined in the current years due to the fall in Deposit growth. Therefore, demand for savings increased and the demand for loans decreased.

3. Profit

Insert Figure 23: Profit for SCBs

Insert Figure 24: Standardized Value for Profit

Insert Figure 25: CAMEL Rating for Profit

Implication: The Bank's Profitability declined drastically in 2017-18 due to the increase in NPA, fall in ROA and other profitability indices.

D. Liquidity: Credit-Deposit Ratio It depicts the amount of funds used for lending; a higher ratio shows that there is more dependence on the deposits for lending. An ideal credit Deposit ratio is considered to be around 65-75%.

Insert Figure 26: Credit Deposit ratio for SCBs

Insert Figure 27: Standardized Value for Credit Deposit ratio

Insert Figure 28: CAMEL Rating for Credit Deposit ratio

Implication: The C-D ratio declined due to the Demonetization in 2016, but it has shown as improvement from the preceding year.

E. Efficiency: Management of the Banking Sector with efficiency is a crucial measure. Better the Management lower will be the NPA.

1. **Staff Expense to Total Expense:** It gives the measure for the proportion of staff expenses from Total expense.

Insert Figure 29: Staff Expense to Total Expense for SCBs

Insert Figure 30: Standardized Value for Staff Expense to Total Expense

Insert Figure 31: CAMEL Rating for Staff Expense to Total Expense

Implication: The Staff expenses have decreased in the subsequent years, thereby, contributing in the reduction of the operational cost.

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2. Business per employee: gives a measure of productivity and efficiency of the banks. It means Revenue per employee and higher value is a positive sign.

Insert Figure 32: Business per employee for SCBs

Insert Figure 33: Standardized Value for Business per employee

Insert Figure 34: CAMEL Rating for Business per employee

Implication: The Business per employee has increased in the subsequent periods.

3. Cost to Income: It gives a measure for cost of running the system. Lower the cost better is the efficiency.

Insert Figure 35: Cost to Income for SCBs

Insert Figure 36: Standardized Value for Cost to Income

Insert Figure 37: CAMEL Rating for Cost to Income

Implication: The cost of running has decreased which is a positive indication.

VI. BANKING STABILITY ANALYSIS USING CAMEL

The following table gives the compilation of all standardized values of each indicator from 2005- 2018, which has been later converted into the CAMEL rating.

Insert Table 4: Average CAMEL Rating for Stability Indicators

The following Chart Depicts the Indian Banking Stability Map.

Insert Figure 38: Banking Stability Map

VII. OBSERVATION

From the above figure 38, it can be observed that soundness of the banking system has shown a positive surge, asset quality has deteriorated, profitability of the banking sector is a major concern, as it has taken a sudden dip in the financial year 2017-18. Liquidity of the banking sector is mediocre; it declined after the implementation of demonetization. Efficiency of the banking system is good and has improvised.

Insert Figure 39: BSM for 2018

Insert Figure 40: BSI compiled

VIII. CONCLUSION

The financial Stability of the banking sector plays a significant role in the policy making and identifying the key factors to resolve in case of any discrepancy. Financial stability is a phase or situation, where the banking system attains maximum efficiency and develops the capacity to absorb any economic shocks. The current banking developmental policies are paving their ways to strengthen and broaden the pathway for a more transparent system. As far as soundness, measured by capital adequacy ratio and leverage ratio, the mount improved from the year 2015-2018 due to the implementation of capital conservation buffer, which reduced the credit growth. The asset quality, measured by different ratios, has deteriorated over period of time during the study period. Profitability is the third measure of stability in banking system. There is a drastic decline in the profitability of scheduled commercial banks in the later stage of study period because of increase in NPAs and fall in return on assets. The fourth parameter of stability is liquidity which is satisfactory except the minor change in 2016 due to demonetization. The last pillar of checking stability is efficiency which is measured by various means like staff expenses, business per employee and cost to income. Overall efficiency is satisfactory but needs

improvement to perform better.

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London,las vegas etc. She is a keen researcher and has over 200 papers and conference proceedings to her credit in various reputed national and international journals. She has published 13 papers in SCOPUS listed journals and over 25 papers in ABDC (Australian Business Deans Council) listed journals. She has authored over 33 books and contributed chapters in over 25 volumes from many reputed publishers such as Bloomsbury Publishing, Springer,Taxman Publication, International book house, etc. She has also authored 34 modules for e-pathshala project of UGC. She has also contributed in various capacities in projects of University Grants Commission, University of Delhi and Ministry of Corporate Affairs, Govt. of India.She has also guided and supervised 5 doctoral students and 31 MPhil students.She is a life Member of numerous associations and foundations such as Indian Commerce association, Indian Management association (IMA), AIMA, DMA, ROTARY club, Paul Harris Fellow. she is on the Editorial/ Advisory board of many reputed International and national journals such as Iderscience Journal, Sage Publication, International Finance and Banking, MTL, USA, Global journal of Enterprise information Systems, ORIC publications, FIMT Journal, ASAAR journal, ELK Journal of finance and risk management. Despite being an renowned academican and researcher, she is also very active in the social welfare arena and is working for the upliftment of underprivileged, especially children and women from the last 15 years through her NGO- UNHAD. As a founding President of UNHAD Foundation, she spearheaded the whole working of the NGO in the field of child abuse, child Trafficking, child marriage, Alcohol and substance abuse and initiated many programs related to child and women education, skill training and enviornment protectionand awareness. She is the recipient of numerous awards and honors fron various government ,ministry of culture ,national academic and social organizations for her contribution in the area of education, research, social work and leadership such as Dr. S. Radhakrishnan lifetime Achievement National award 2018, Women Excellence Award in Education 2017 by YMCA, IRSD-Outstanding Researcher Award 2017, Best Women ICONIC Award-2018 by Earth Saviours Foundation, Mahatma Gandhi Ekta Samman-2013 by IIFS, Paul Harris Fellow by Rotary International, Best Citizen of India Award- 2012 by IPH. Indira Gandhi Shiromani Award- 2011, Prof. M.B.Shah memorial research award-2014 by ICA.



Second and Correspondence: Prof. (Dr.) Anil Kumar Goyal is currently working as Professor in Rukmini Devi Institute of Advanced Studies, affiliated to GGSIIP University, Delhi, India. He has more than Fifteen years of Academic Experience and winner of Best Teacher Award for Academic Session 2017-18 and 2018-19.

He is Doctorate from Dr. B. R. A. University, Agra. He is also UGC NET (Management) and UGC NET (Commerce) qualified. He is an approved research guide in some universities of repute. He is the Editor-in-Chief of “Effulgence” Bi-annual Refereed Management Journal of Rukmini Devi Institute of Advanced Studies. The Journal is, indexed in Crossref, J-Gate and Indian Citation Index (ICI). He is on the Editorial Board of National and International Journals. He has successfully organized conference in the capacity of convener continuously for three years and Edited Conference Proceedings with ISBN No. in hard as well as soft copy. He has vast experience in Financial Accounting, Cost Accounting, Management Accounting, Finance Management, Financial Analysis, International Financial management and Working Capital Management and has more than 50 research papers published in journals including Scopus and ABDC Listed journals and conferences of national and international repute to his credit. He is also an active participant in various workshops and faculty development programmes.

He has delivered sessions in Refresher Course organised UGC-Human Resource Development Centre and regularly conducting Guest Lectures and FDP/Workshops. **Expertise in:** Time Series, Panel Data and Financial Modelling.

AUTHORS’ PROFILE



First Author: She is presently Principal (OSD) in Sri Aurobindo College Evening, University of since April 2017,before that she was associate Professor in Department of Commere in Sri Aurobindo College (M) since 1 december !995. She is doctrate from Delhi School of Economics and post doctoral fellowship in commerce from Department of Financial Studies, University of Delhi. She has academic experience of over 27 years. Her main area of research interest are Banking and Finance, Human Resourse Management, Sustainability. She has presented papers in over 150 International and national Seminars and Conference in India and abroad. She has also chaired sessions and given invited lectures in many International/ National seminars and conferences both in India and abroad like Brunel University

Indian Banking Sector a Major Contributor to Economy: Constancy Major Concern



Figure 1: CAR of SCBs

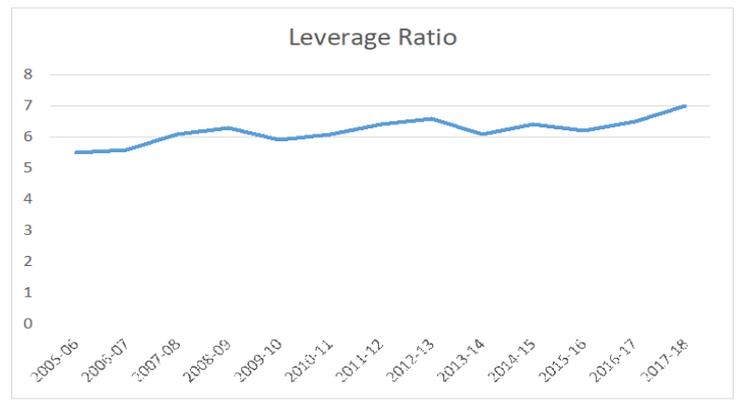


Figure 5: Leverage Ratio of SCBs

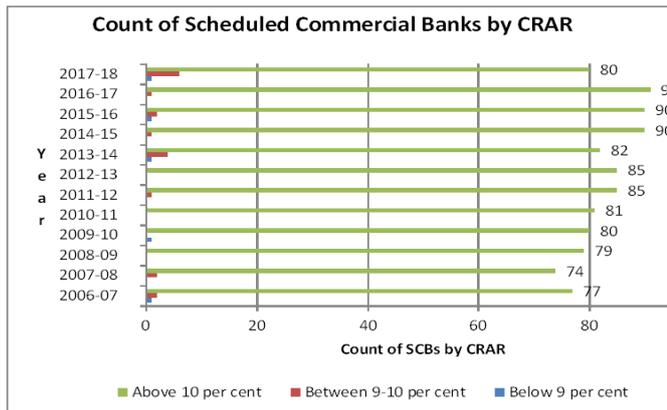


Figure 2: Count of SCBs by CRAR

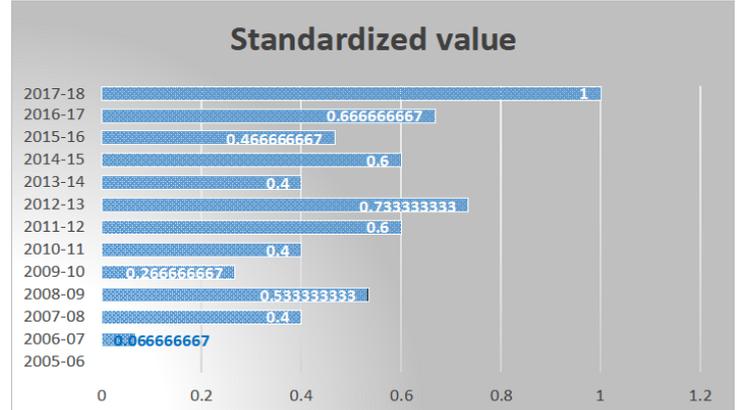


Figure 6: Standardized Value of Leverage Ratio of SCBs

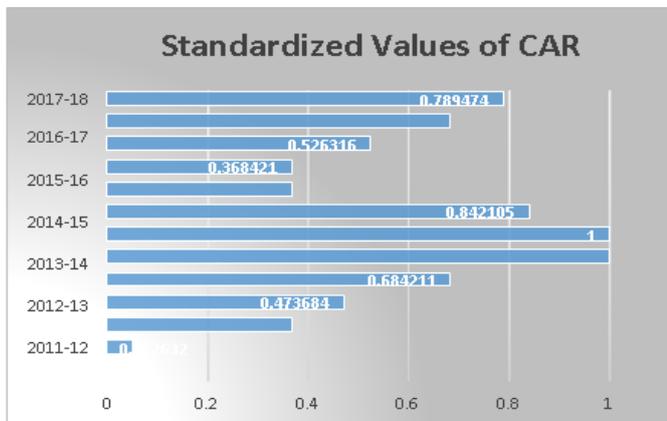


Figure 3: Standardized value of CAR

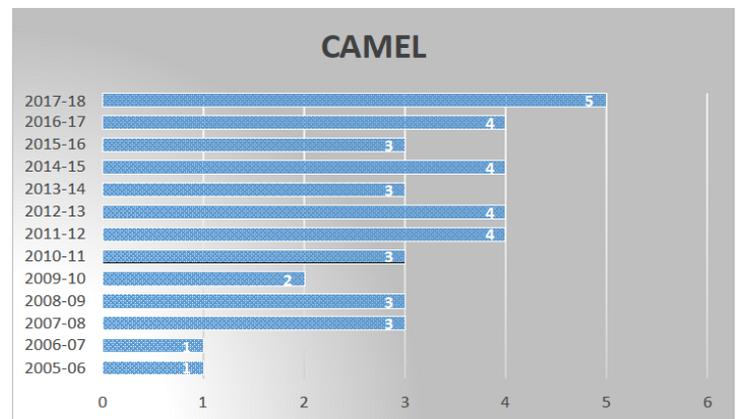


Figure 7: CAMEL Rating for Leverage Ratio

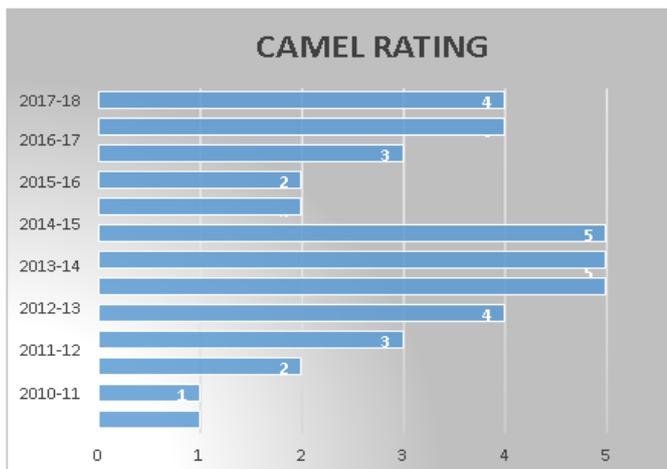


Figure 4: CAMEL Rating for CAR

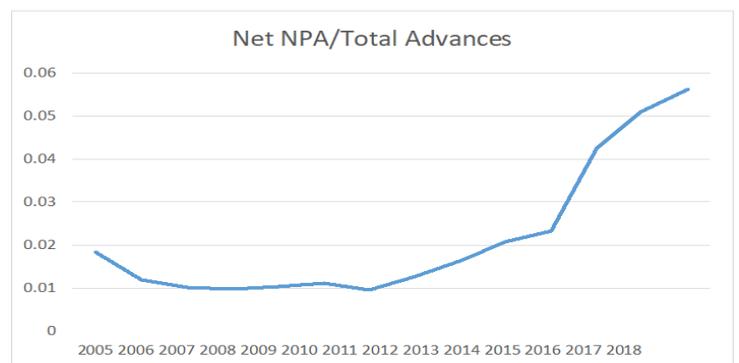


Figure 8: Net NPA to Total Advances of SCBs

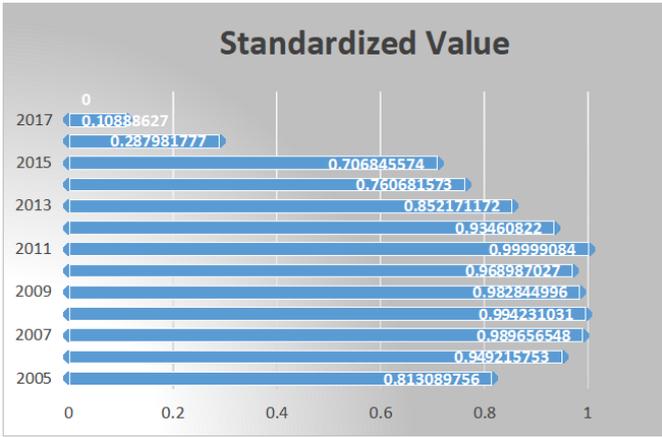


Figure 9: Standardized value for Net NPA to Total Advances

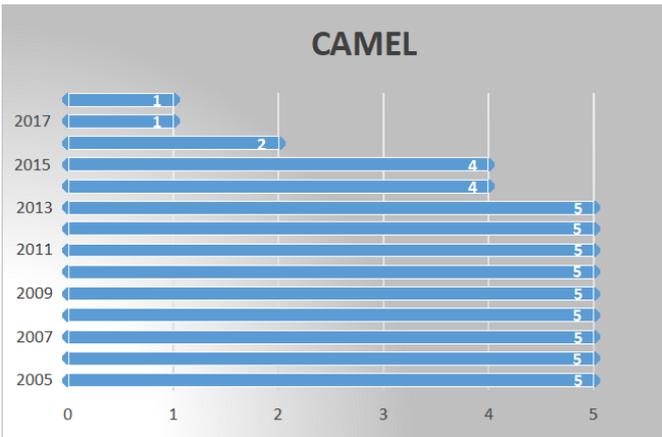


Figure 10: CAMEL Rating for Net NPA to Total Advances

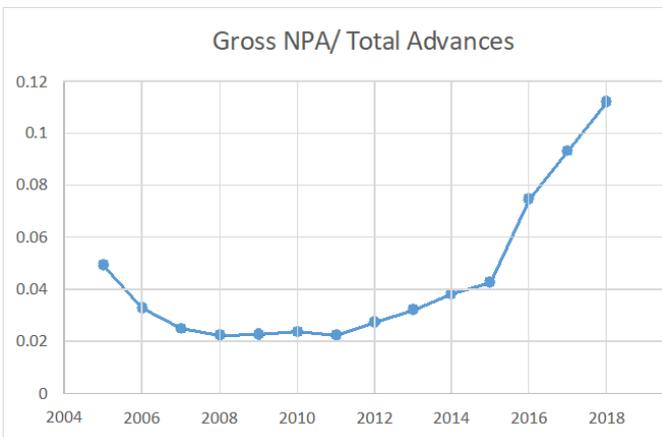


Figure 11: Gross NPA to Total advances for SCBs

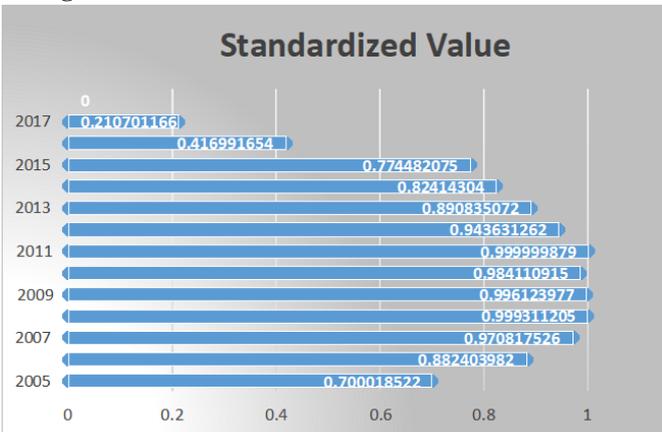


Figure 12: Standardized Value for Gross NPA to Total advances

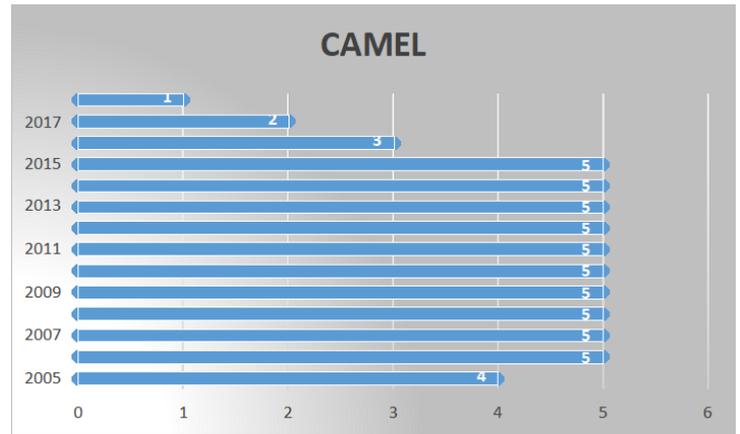


Figure 13: CAMEL Rating for Gross NPA to Total advances

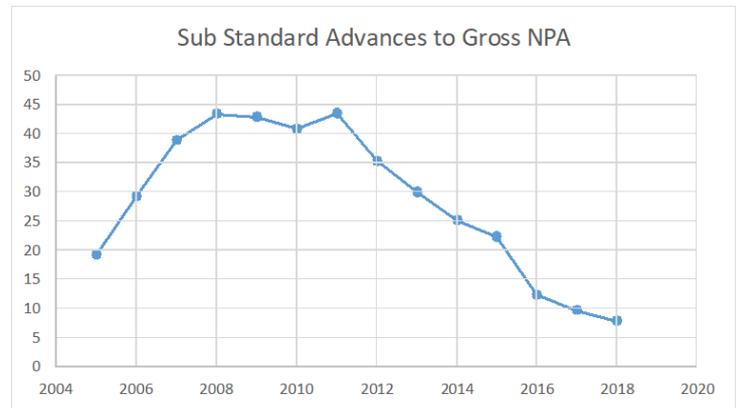


Figure 14: Sub-standard Advances to Gross NPA of SCBs

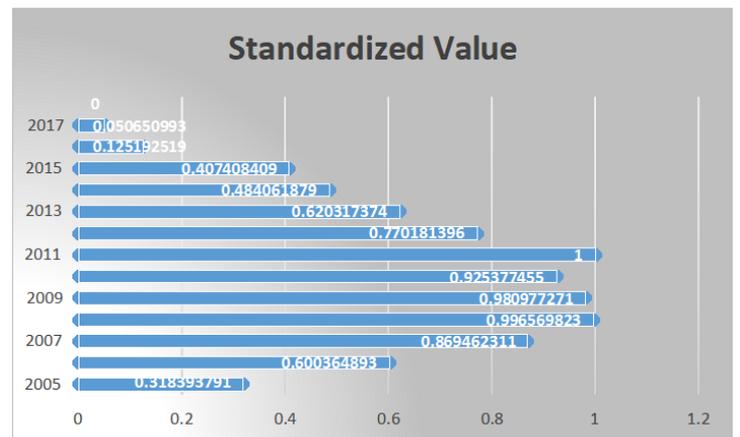


Figure 15: Standardized Value for Sub-standard Advances to Gross NPA

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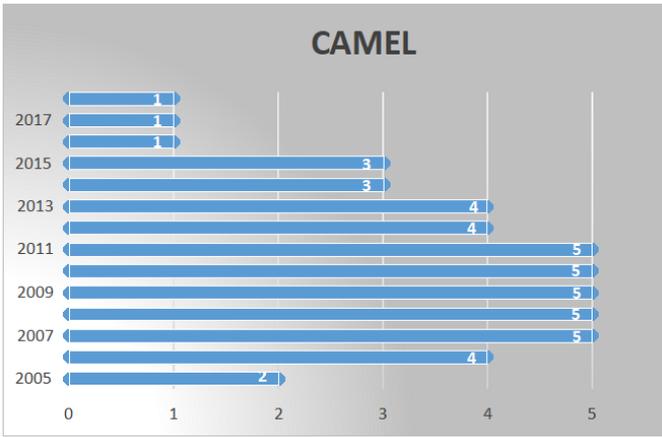


Figure 16: CAMEL Rating for Sub-standard Advances to Gross NPA of SCBs



Figure 20: NIM of SCBs

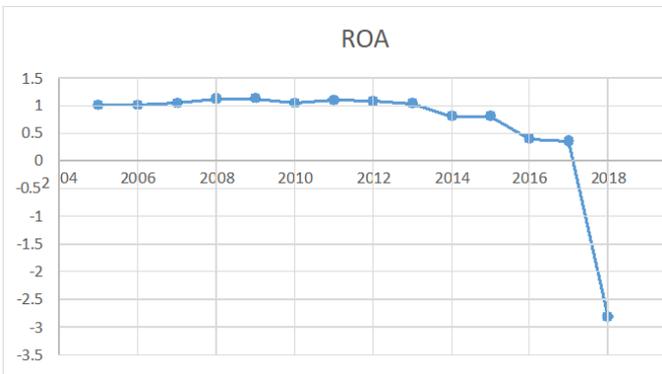


Figure 17: ROA of SCBs

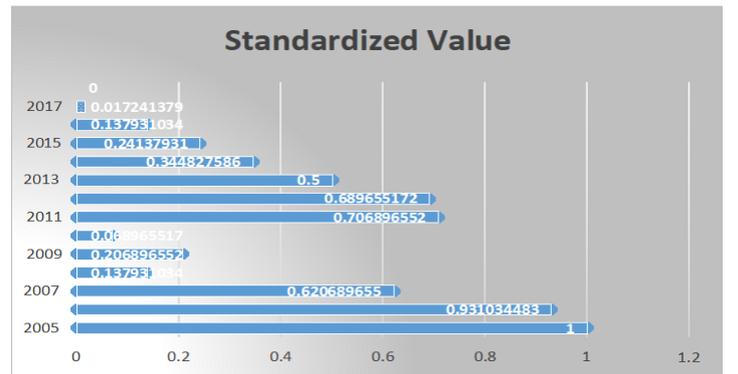


Figure 21: Standardized Value for NIM

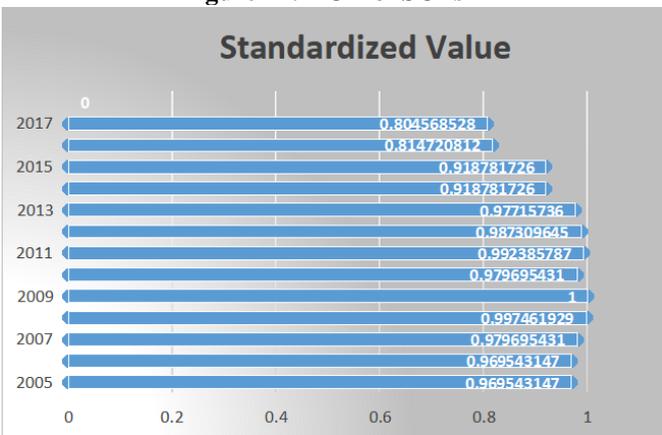


Figure 18: Standardized Value for ROA

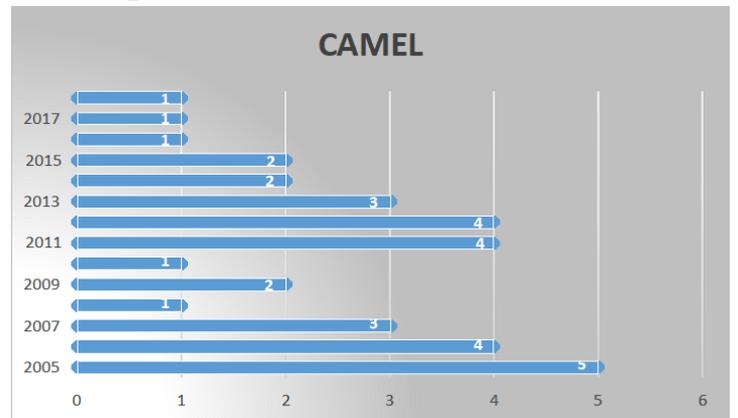


Figure 22: CAMEL Rating for NIM

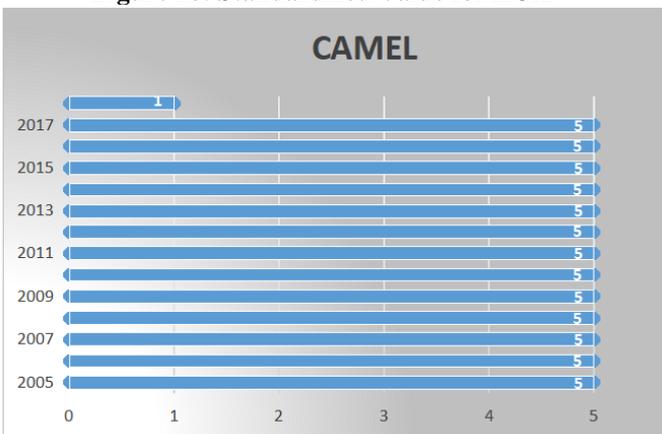


Figure 19: CAMEL Rating for ROA



Figure 23: Profit for SCBs

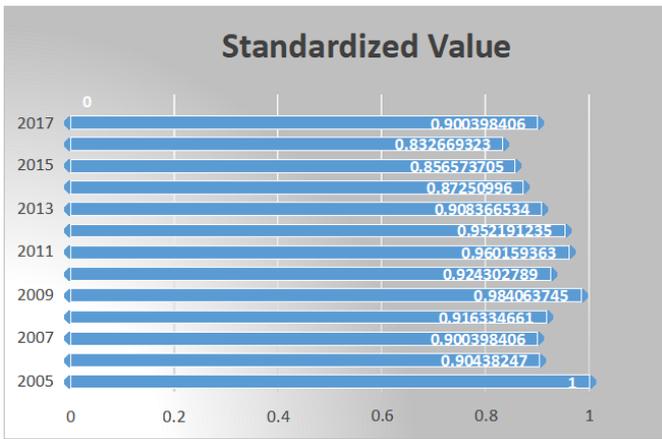


Figure 24: Standardized Value for Profit

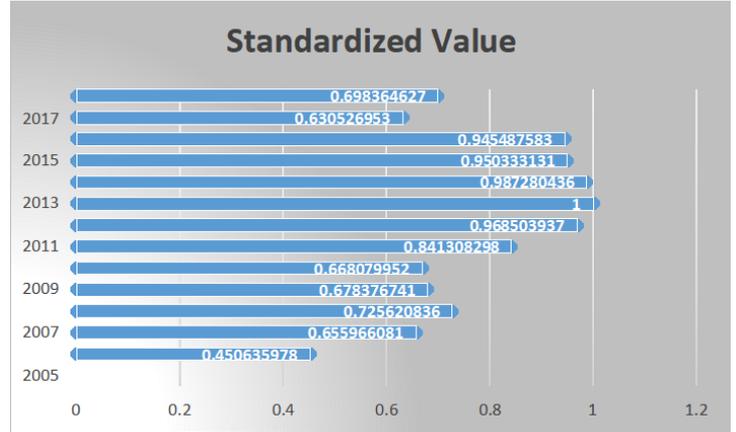


Figure 27: Standardized Value for Credit Deposit ratio

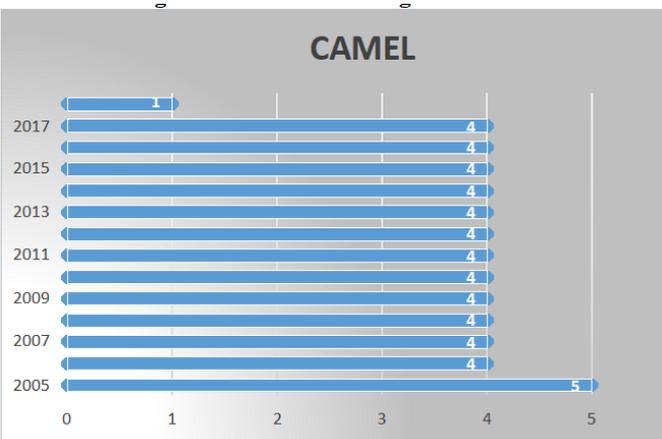


Figure 25: CAMEL Rating for Profit

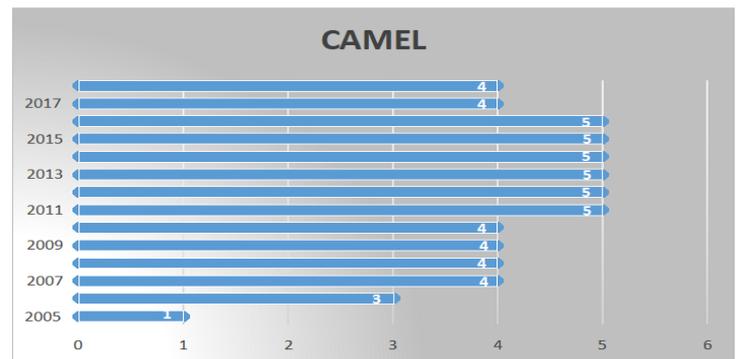


Figure 28: CAMEL Rating for Credit Deposit ratio

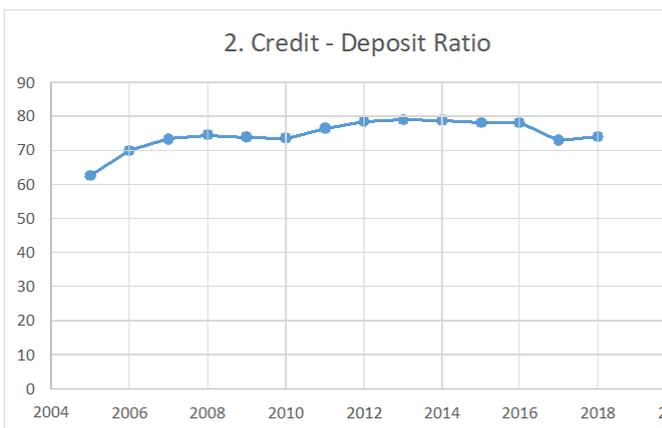


Figure 26: Credit Deposit ratio for SCBs



Figure 29: Staff Expense to Total Expense for SCBs

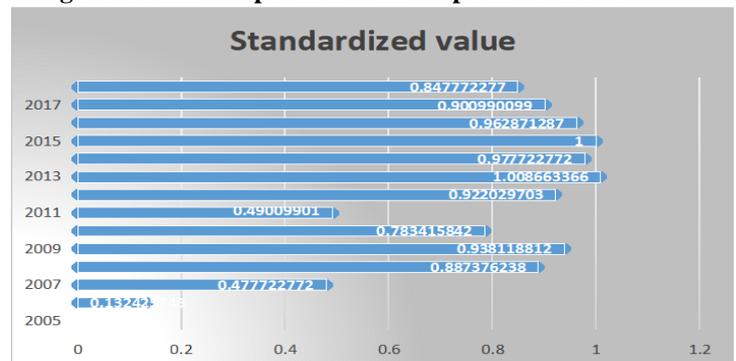


Figure 30: Standardized Value for Staff Expense to Total Expense

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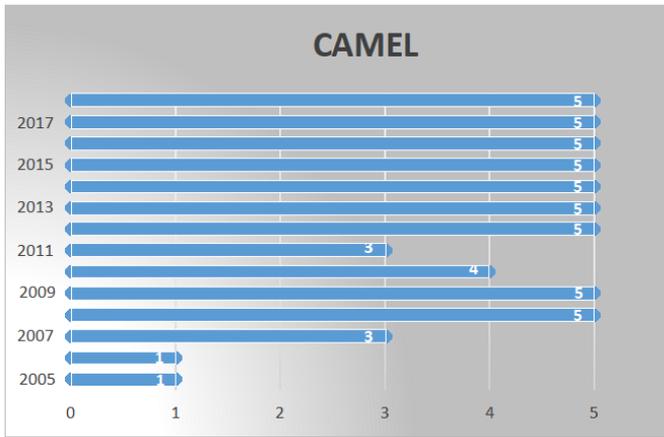


Figure 31: CAMEL Rating for Staff Expense to Total Expense

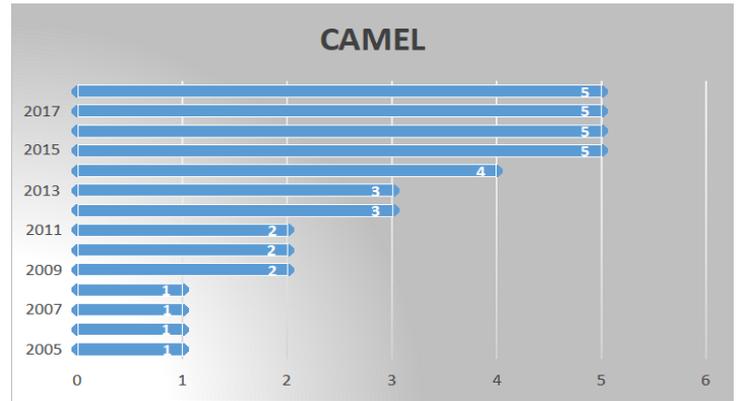


Figure 34: CAMEL Rating for Business per employee

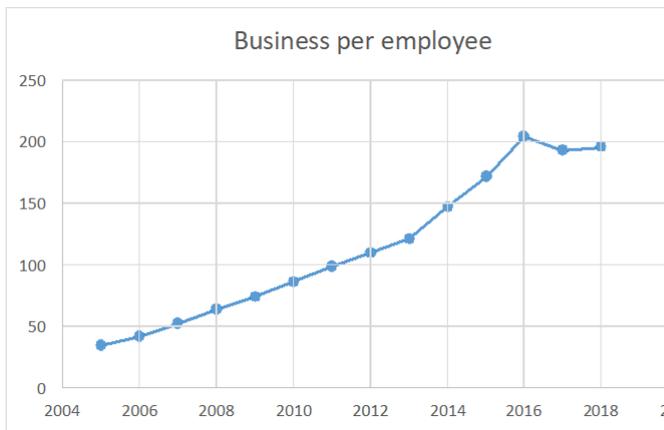


Figure 32: Business per employee for SCBs

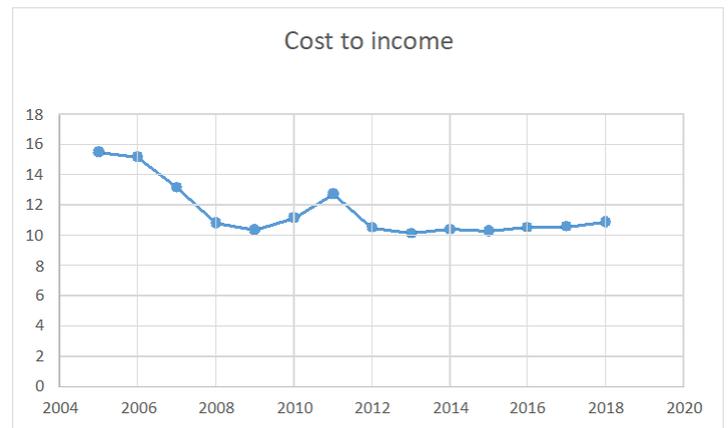


Figure 35: Cost to Income for SCBs

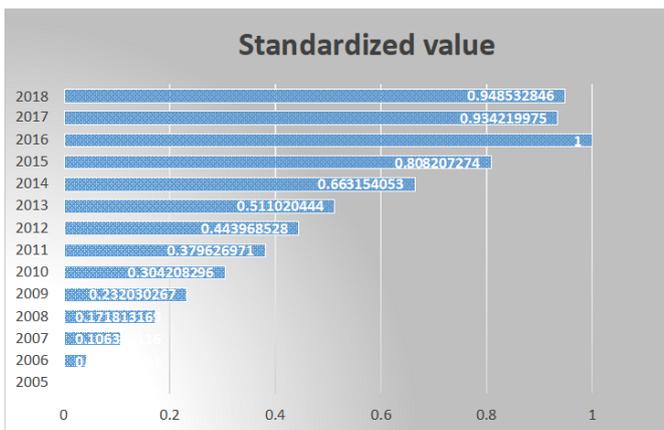


Figure 33: Standardized Value for Business per employee

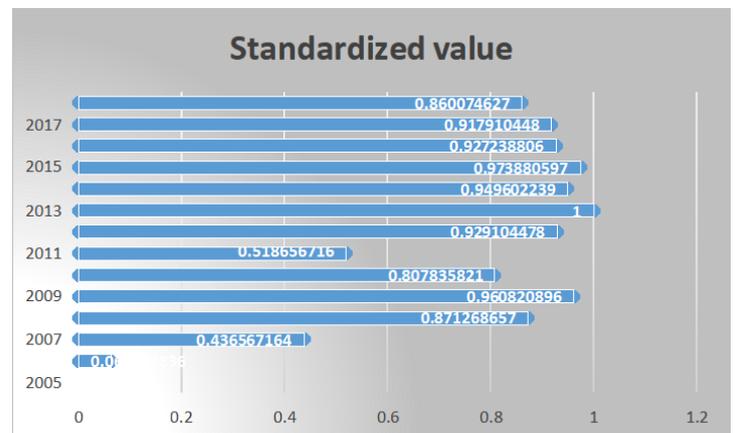


Figure 36: Standardized Value for Cost to Income

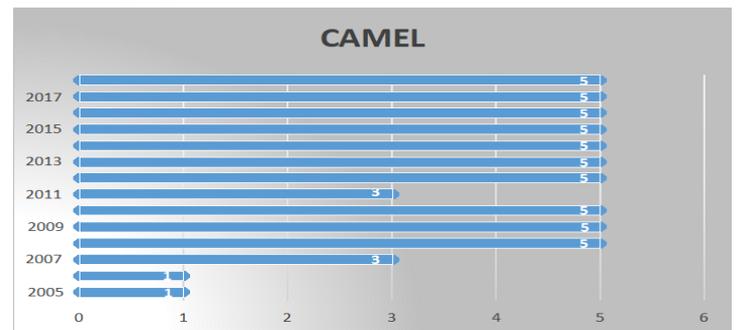


Figure 37: CAMEL Rating for Cost to Income

Table 4: Average CAMEL Rating for Stability Indicators

YEAR	SOUNDNESS	ASSET QUALITY	PROFITABILITY	LIQUIDITY	EFFECI
2005	1	2	5	1	4
2006	1	2	5	3	4
2007	1	2	5	4	2
2008	2	2	4	4	1
2009	2	2	4	4	1
2010	2	2	4	4	2
2011	3	2	5	5	3
2012	3	2	5	5	1
2013	4	2	4	5	1
2014	2	2	4	5	2
2015	3	2	4	5	2
2016	4	3	3	5	2
2017	4	3	3	4	2
2018	5	4	1	4	3

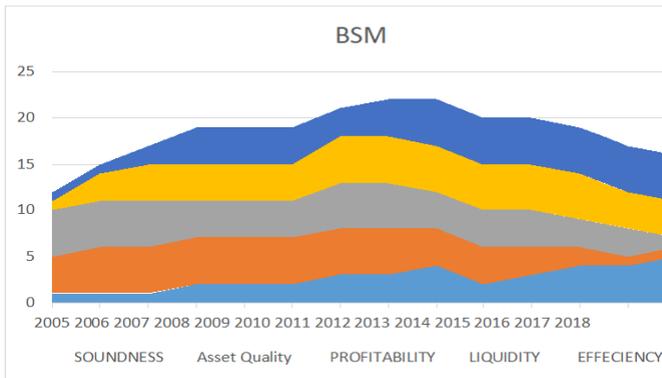


Figure 38: Banking Stability Map

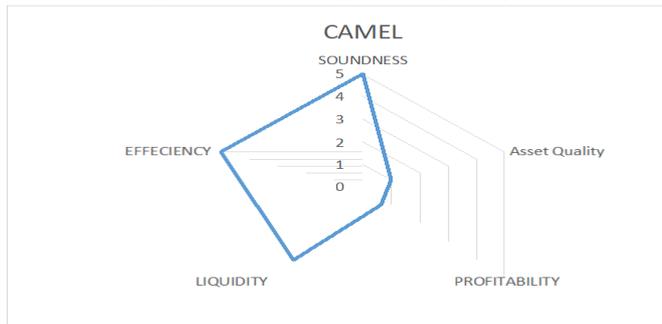


Figure 39: BSM for 2018



Figure 40: BSI compiled