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Chapter - 1

A Study on the Impact of Demonetization on the Banking Sectors

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Abstract

Demonetization was a milestone in Indian economy history. The banking industry makes up the majority of the Indian economy, and the demonetization decision made by the Indian government has had a substantial impact on financial services. As a result, one of the most significant avenues for the services related to money circulation is the banking sector, which is also the one most negatively impacted by the decision to demonetize. This study focuses on the effect of demonetization on commercial banks' positions regarding banking loans and advances.

Keywords: Demonetization, Banks, Loans, Money.

Introduction

The history of the Indian economy was changed by demonetization. On November 8, 2016, Indian Prime Minister Mr. Narendra Modi made the unexpected decision to implement demonetization. The phrase "Demonetization" describes the process through which a certain currency note's circulation ends when it becomes legal tender. Money that is acceptable as legal currency can be used to settle obligations such as debts. In an effort to combat the shadow economy and eliminate the funding of unlawful activities, the Indian government announced that the 500- and 1000-rupee notes had lost their status as legal tender as of midnight due to demonetization. The Indian government wanted to reduce the use of counterfeit money, take decisive action against tax fraud, control inflation, stop the flow of black money that is used to finance terrorism, and encourage a cashless society. The Indian rupee also hopes to become more respected on the global market. A maximum of 86% of the entire value of the currency in circulation in the nation is represented by these notes. On December 31, 2016, people had plenty of time to check out, deposit their old notes, and exchange them for the new 500 and 1000 rupee notes. Demonetization has disrupted bank operations and forced workers to endure longer shifts while experiencing constant stress. The majority of banks found themselves unable to exchange the demonetized currency notes while also offering other banking services. The post-demonetization impact on banks and their operations is highlighted in this report.

Literature Review

Demonetization's effects on the Indian economy were examined by Kumar and Sharmila (2016). They discovered that the demonetization of different economic sectors has short-term negative effects that are remedied when the new currency notes are extensively used throughout the economy. Gajjar (2016) conducted research on black money in India and examined current conditions, potential problems, and demonetization. She discussed the framework, policy alternatives, and methods that the Indian government should use to address this problem as well as the upcoming difficulties that the government will encounter. Kaur (2017) conducted a study on demonetization and impact on the Cashless Payment System. He claimed that the cashless system in the economy had several advantageous features, including being less expensive, time- consuming, and requiring less paper for transactions, and he predicted that all industries will use cashless systems for transactions in the future. Singhal (2017) conducted research on demonetization and electronic banking in India. It was a case study to see how much more aware Indians in rural areas are of e-banking options and how much that awareness has grown since demonetization. The study found that urban male youth were more to use and more conscious of e-banking. Rohan and Mallesha (2021) compared the public and private sectors over a period of 12 days prior to and 15 days following demonetization. The test's findings indicate that following demonetization, private banks perform better than the public sector. Ganesan and Gajendranayagam (2017) discussed the experience and effects of demonetization on the Indian economy in their paper, which addressed issues relating to demonetization and its connection to the implications of various sectors in the Indian economy both before and after demonetization.

Objectives

1. To study the influence of demonetization on bank operatives.

2. To assess the impact of demonetization on the liquidity position of scheduled commercial banks

Research Methodology

The research is supported by secondary data. The information was gathered from academic papers, books, journals, and the internet. The necessary government websites and the RBI website were used to get the data.

Findings

There are positive and negative results of Post Demonetization on Bank operations. Both have influenced Banks‟ liquidity and profitability and employees too.

1. Free flow of deposits: After demonetization, banks have significantly increased their deposit base, which they can use to make investments to increase their liquidity and profitability.
2. Improved digital Interface: Cash loss from various causes, such as theft, dacoits, and misappropriations, has been averted because to advancements in digital tools and equipment used to conduct bank operations.
3. People's surplus at Bank: Cash is a non-productive asset that, unless held in a bank, generates no income. Demonetization forced people to deposit their extra cash in banks in order to generate some form of revenue.
4. Increased number of Customers: The people has been persuaded by demonetization to visit banks and complete transactions. Even non-income group members visited banks and opened accounts as a result of it. It boosted the total amount of deposits while also expanding the number of bank account holders.

Similarly, Demonetization has brought some operational issues to Banks. It disturbed Banks‟ Employees, Operational Costs and Profitability.

The follows are negative influences of Demonetization.

1. Cash Reserve Requirement: Banks did not get interest on deposits totaling Rs. 3 lakh crore for nearly a fortnight due to 100% CRR on incremental deposits.
2. Waived off ATM Charges: During the prohibited note exchange, ATM fees were abolished, but banks still lost Rs. 20 on each transaction.

3. Waived off Merchant Discount Rate: On each card transaction, banks lost 1% in discount fees from the retailer.
4. Non-Selling of Loans: Banks were unable to market any credit products since they were preoccupied with exchanging currency notes. This forced banks to scale back their lending operations.

Balance Sheet Effects of Scheduled Commercial Banks:

Demonetization had the effect of reducing the amount of cash in circulation, which increased bank deposits. Banks accepted the demonetized cash at bank counters till December 30, 2016. The amount of cash in circulation fell sharply by around Rs. 8800 billion between October 28 and January 6, 2017. (i.e., days exactly prior to and later demonetization for which banks usually supply publication data).

As a result, it significantly increased total banking system deposits, which were in and around the range of Rs. 6720 billion.

Re-monetization has made significant strides during this time at a faster rate. Between the final week of December 2016 and the first week of March 2017, there was a 2600 billion rupee increase in the amount of money in circulation. Bank deposits had a modest drop throughout this time. As a result, it significantly increased total banking system deposits, which were in and around the range of Rs. 6720 billion.

The information regarding a bank's notable assets and liabilities is often provided on a publication basis. The total deposits of scheduled commercial banks increased by Rs. 5549 billion between October 28, 2016 (before demonetization), and January 17, 2017.The majority of the funds deposited in banks were used for (a) reverse repo transactions of different maturities with the Reserve Bank of India; (b) investments in government securities through the issuance of cash management bills; and (c) an increase of Rs. 1,008 billion in bank loans and advances. The incremental credit deposit ratio (ICDR) was only 18.2% at this time.

Liquidity Concerns

Following the announcement of demonetization, bank customers gave their banks back some bank notes (SBN) (i.e., Rs. 500 and Rs. 1000 notes). This unexpected move raised the amount of deposits, which heightened concerns about surplus liquidity in the banking industry. As shown in chart 1, the Reserve Bank of India has handled the issues with excess liquidity in 4 stages.

(a) During the first phase, which lasted from November 10 to

November 25, 2016, the RBI reduced banks' surplus liquidity by switching reverse repos with varied time durations ranging from 15 to 91 days.

(b) The second phase, which ran from November 26 through December 9, 2016: With variable reverse repos and a 100% additional cash reserve ratio on the rise in net demand and time obligations from September 16 to November 11, 2016, the surplus liquidity was eliminated. Overflowing liquidity was reduced by around Rs. 4,000 billion throughout the seven-day period that concluded on December 9, 2016.

(c) Third phase, which runs from December 10 to January 13, 2017 The Indian government increased the cap from Rs. 300 billion to Rs. 6,000 billion on December 2, 2016, which allowed for the management of the excess liquidity through a combination of several reverse repos and the issuing of cash management bills. The greatest surplus, Rs. 7,956 billion, was managed on January 4th, 2017, with Rs. 2,568 billion handled through reverse repos and Rs. 5,466 billion handled by cash management bills.

(d) Starting on January 14, 2017, the fourth phase, reverse repo operations were used to manage the excess liquidity, particularly the liquidity made available by maturing cash management bills.

Additionally, the government mandated that we deposit a minimum of Rs. 50,000 in Pradhan Mantri Jan Dhan Yojna accounts on November 15, 2016. Although the balances fell to Rs. 643 billion on March 1, 2017, they were still 41% higher than on November 9, 2016. In the post- demonetization period, the accounts opened under PMJDY contributed 4.6% to the total accumulation of the aggregate deposits of the scheduled commercial banks.

Conclusion

Demonetization has had a mixed bag of beneficial and negative effects on many industries, but in the long run it will help limit money laundering and the use of counterfeit currency, making it a "short-term plan" that will nevertheless lead to future growth. The majority of transactions are handled electronically, which increases system openness. Consequently, it is advantageous for the development of the Indian economy. Although it may not directly affect the amount of black money in the country, it is nonetheless advantageous for the Indian economy going forward. According to the study's findings, demonetization enhanced the scheduled commercial banks in India's liquidity situation, and banks utilized the extra funds in a variety of investment options to help the banking industry increase its profitability. It is also concluded that the goal of opening Pradhan Mantri Jan Dhan Yojna Accounts was achieved and that others used PMJDY Accounts during the demonetization period, which may have changed people's attitudes toward using physical currency and caused them to switch to digital banking services, which may once again be beneficial to both customers and the banking industry.

The study further suggests that the action will aid the banking sector in maintaining adequate liquidity, minimizing non-performing assets, and improving the efficiency of electronic banking services, all of which will lower the cost of banks' goods and services and increase the profitability of the banking industry. Additionally, this action will contribute to decreased fiscal deficit, inflation management, decreased corruption, greater tax compliance, a ban on fake money, and overall sustainable economic growth. The amount of money in circulation is lower than it was during the "pre-demonetization" period. According to experts, demonetization has helped to a certain extent to lessen the flow of black money.

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Chapter - 2

Effect of NPAS on the Profitability of Selected Banks in India

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Abstract

NPA means a borrower's asset or account, which has been rated as a substandard, doubtful or loss asset by a bank or financial institution in compliance with RBI’s asset classification directions or guidelines. An amount owed under any credit facility shall be treated as "past due" if it is not paid within 30 days from the due date. Because of the development of payment and settlement processes, recovery environment, upgradation of technology in the banking sector, etc., it was agreed to dispense with the principle of 'past due,' with effect from 31 March 2001. Banking sectors are exposed to a range of risks such as market risk, interest rate risk, liquidity risk, borrower risk, and among those many risks the bank faces one of the most important is the risk of borrower – the risk of non- payment of the loans and advances disbursed. As a significant chunk of deposit fund is invested in loans and advances of this kind. Consequently, criteria for measuring bank efficiency have also changed. This research offers an analytical approach to the review of profitability metrics, with an emphasis on public and personal- sector banks' nonperforming assets (NPAs). NPAs reflect the Banks' results. The banks' earning potential and productivity are significantly affected by the presence of NPAs. A high NPA level indicates that there are large numbers of credit defaults that affect banks profitability and net worth. This three letter virus NPA heavily affects private and public sector banks.

Keywords: NPAS, financial, productivity, bank.

Survey of Existing Literature

It's the foremost preliminary step for proceeding with any research work writing. While doing this go through a complete thought process of your Journal subject and research for it's viability by following means:

1) Read already published work in the same field.
2) Searching on the topic of your research work.
3) Use the scientific terms and jargon related to your research work.

Research Methodology

Scope of the Study

This research offers an analytical approach to the review of profitability metrics, with an emphasis on public and personal-sector banks nonperforming assets (NPAs). NPAs reflect the Banks results. The banks earning potential and productivity are significantly affected by the presence of NPAs. A high NPA level indicates that there are large numbers of credit defaults that affect banks profitability and net worth. This three letter virus NPA heavily affects private and public sector banks.

Sampling Design

The study was conducted for the past 6 years data i.e., from 2015-2020 (72 months). The data for five public sector banks and five private sector banks are used for the analysis of their profitability in relation with their NPA's. The public sectors banks are State Bank of India, Punjab National Bank, Bank of Baroda, Canara Bank, Bank of India, The private sectors banks are HDFC, ICICI, Axis bank, and Kotak Mahindra Bank, Yes Bank:

Data Collection Method

Descriptive research approach is followed in this research. Secondary data was collected from reports of the company. Secondary Data: Data is collected from various websites such as ibef.org, economic times, indiatimes.com, financialexpress.com, moneycontrol.com, etc. Journals, research papers, published company details to understand more about the effect on NPAs.

Statistical Tools Applied for Data Analysis

SPSS and Excel (Data Analysis) are the tools which are used to find the correlation and p-value between profitability and NPA's of the banks using correlation and regression analysis.

Limitations of the Study

- The study does not cover the whole aspect of NPA as it is focused on only selected banks.
- The information is collected only based on secondary data.
- The study is limited to the analysis of data of private and public sector banks only for six years (2016-2019).
- The profits of the banks may be affected by various elements but, this study focuses only on the NPA.

A. Bits and Pieces Together

In this approach researcher can take the reference of already accomplished work as a starting building block of its paper.

B. Use of Simulation Software(IF RELEVANT)

SPSS and Excel (Data Analysis) are the tools which are used to find the correlation and p-value between profitability and NPA's of the banks using correlation and regression analysis.

Findings

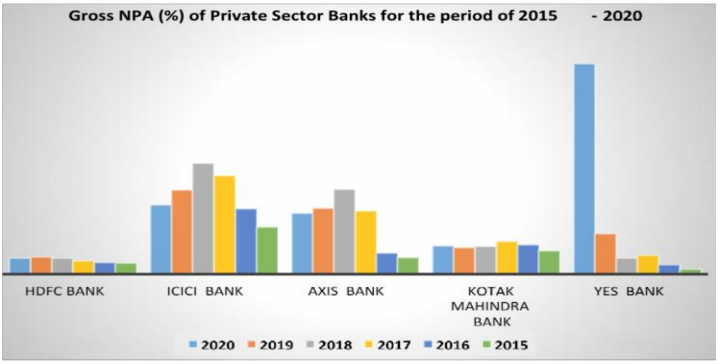
Gross NPA (%) of Private Sector Banks for the period of 2015 to 2020

PRIVATE SECTOR BANKS					
Year	**HDFC Bank**	**ICICI Bank**	**Axis Bank**	**Kotak Mahindra Bank**	**YES Bank**
2020	1.26	5.53	4.86	2.25	16.8
2019	1.36	6.7	5.26	2.14	3.22
2018	1.3	8.84	6.77	2.22	1.28
2017	1.05	7.89	5.04	2.59	1.52
2016	0.94	5.21	1.67	2.36	0.76
2015	0.9	3.78	1.34	1.85	0.41

Source: Secondary Data

Analysis

The above table shows the gross NPA of the private sector banks, Yes banks show the highest NPA in the year 2020 (16.8%), Axis bank had the highest NPA in the year 2019 – 5.26%, ICICI bank showed the highest NPA in the year 2018- 8.84, 7.89% NPA of ICICI bank was highest in the year 2017, again in the year 2016 and 2015 ICICI resulted in the higher NPA rate of 5.21%(2016) & 3.78%(2015) compared to other private sector banks.



Source: Secondary Data

Interpretation

Gross NPA (%) of Private Sector Banks for the period of 2015 to 2020

The above graph depicts the evolution of NPAs in the private sector banks from 2015 to 2020. As seen above Yes bank and ICICI bank possess the highest percentage of NPAs in the private sector. The NPAs in private sector is growing drastically which in turn is curbing the profit percentage for the banks. The banks have managed to not only maintain but instead have reduced the NPAs in the year 2019 except the HDFC Bank and Yes bank, they in turn had increased NPA for the year. In the year 2020 Yes bank had the highest

NPA and even Kotak Mahindra Bank's NPA was increased whereas all the other banks NPA seems to be reduced for the year.

SD & Mean of Gross NPA for the Private Sector Banks for the period 2015-2020

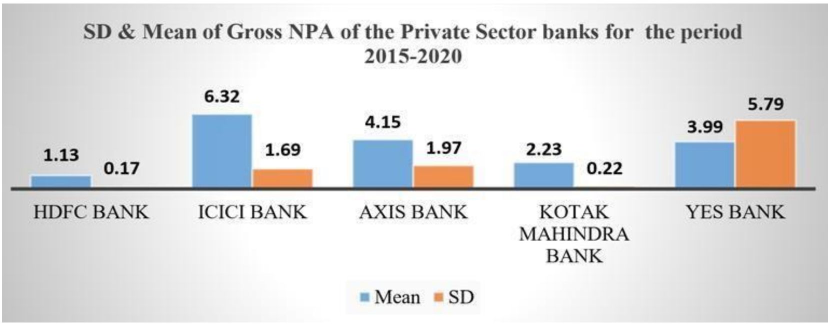
	HDFC BANK	ICICI BANK	AXIS BANK	KOTAK MAHINDRA BANK	YES BANK
Mean	1.13	6.32	4.15	2.23	3.99
SD	0.17	1.69	1.97	0.22	5.79

Source: Computed

Analysis

From the above table we can analyze that ICICI bank has the highest mean value- 6.32% and Yes bank has the highest SD- 5.79%

SD & Mean of Gross NPA of the Private Sector Banks for the period 2015-2020



Source: Computed

Interpretation

From the above graph we can see that ICICI bank had the highest mean value i.e., 6.32 and HDFC has the lowest mean value (1.13) when compared to other banks. The Standard Deviation of HDFC is lowest (0.17), ICICI is having highest SD (6.32) when compared to other banks.

Gross NPA (%) of Public Sector Banks for the period of 2015 to 2020

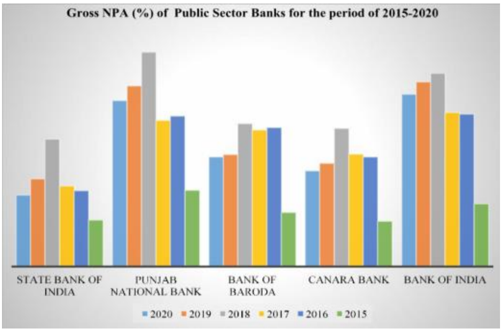
Public Sector Banks					
Year	**State Bank of India**	**Punjab National Bank**	**Bank of Baroda**	**Canara Bank**	**Bank of India**
2020	6.15	14.21	9.4	8.21	14.78
2019	7.53	15.50	9.61	8.83	15.84
2018	10.91	18.38	12.26	11.84	16.58
2017	6.90	12.53	10.46	9.63	13.22
2016	6.50	12.90	9.99	9.40	13.07
2015	4.25	6.55	3.72	3.89	5.39

Source: Secondary Data

Analysis

The above table shows the gross NPA of the public sector banks, Bank of India resulted in having highest NPA in the year 2020(14.78%), Bank of India had the highest NPA in the year 2019 – 15.84%, Punjab National bank showed the highest NPA in the year 201818.38%, 13.22% NPA of Bank Of India was highest in the year 2017, again in the year 2016 Bank of India resulted in the higher NPA rate of 13.07%, and Punjab National Bank resulted in higher NPA in the year 2015-6.55%

Gross NPA (%) of Public Sector Banks for the period of 2015 to 2020



Source: Secondary Data

Interpretation

The above graph illustrates how the NPAs have emerged in the public banks in recent years from 2015 to 2020. 2018 was a big hit for most of the banks as the NPAs have raised in all of them. In the year 2019 the banks have managed to reduce their NPA to a small extend but still it needs to reduce the same and again gradually reduced in the succeeding year too i.e., 2020.

SD & Mean of Gross NPA for the Public Sector Banks for the period

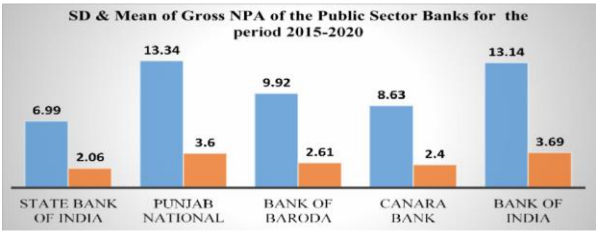
	State Bank of India	Punjab National Bank	Bank of Baroda	Canara Bank	Bank of India
Mean	6.99	13.34	9.92	8.63	13.14
SD	2.06	3.6	2.61	2.4	3.69

Source: Computed

Analysis

From the above table we can analyze that Punjab National Bank has the highest mean value- 13.017% and Bank of India has the highest SD- 3.96%

SD & Mean of Gross NPA of the Public Sector Banks for the period 2015-2020



Source: Computed

Interpretation

From the above graph we can see that Punjab National Bank has the highest mean value i.e., 13.34 and State Bank of India has the lowest mean value (6.99) when compared to other banks. The Standard Deviation of State Bank of India is lowest (2.06), and Bank of India is having the highest SD when compared to other banks i.e., (3.96).

Comparison of SD & Mean of NPA for the Public Sector and Public Sectors Banks

Public Sector	**Mean**	6.99	13.34	9.92	8.63	13.14
	SD	2.06	3.6	2.61	2.4	3.69
Private Sector	**Mean**	1.13	6.32	4.15	2.23	3.99
	SD	0.17	1.69	1.97	0.22	5.79

Source: Computed

Comparison of SD & Mean of NPA for the Public Sector and Public Sectors Banks

Public Sector	**Mean**	6.99	13.34	9.92	8.63	13.14
	SD	2.06	3.6	2.61	2.4	3.69
Private Sector	**Mean**	1.13	6.32	4.15	2.23	3.99
	Mean	1.13	6.32	4.15	2.23	3.99

Source: Computed

Interpretation

The above graph and table show the comparison of public sector and private sector banks.

NPA's, which depicts that public sector banks have greater NPA's when compared to private sector banks.

Conclusion

The Non-Performing Assets (NPAs) issue is one of the paramounts and most formidable problems that have shaken India's entire banking industry like an earthquake. It has been killing the banking system from inside, like a canker worm, for a long time now. It has spread like a cancer and invaded the banking system's every limb. At the macro level, NPAs have cut off the credit supply line to the potential lenders, thus having a deleterious impact on capital accumulation and halting the country's economic activity. At the micro level, the unsustainable NPA level has eroded banks profitability by rising interest income and providing requirements, In addition to restricting the recycling of funds leading to significant discrepancies in asset liability. Sadly, the high level of bank NPAs adversely affects the banking sector's profitability, liquidity, and solvency status. The study showed that public sector banks have higher NPAs when compared to private sector banks Therefore, NPA should be taken down to agreed international standard. The banks whose NPAs are low are the one which can sustain in the long run, as these NPAs have negative impact on the profit and reduce them. the impact is not just on profits but also has various aspects which will get affected.so banks should make sure that the NPAs are at the lowest or try to even reduce it to zero as it brings out the maximum output level of the banks.

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Chapter - 3

A Study on Covid-19 and the Rise in Npa's in Banks

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Abstract

The impact of COVID-19 on the Indian economy, notably the banking industry and non-performing assets, has been enormous (NPAs). At the macro-level, it has impacted all sectors across the country. The economy was already in a tumultuous state before the outbreak of COVID-19, and the closure has further exacerbated the situation. With the suspension of economic activity and the statewide lockdown, the economy may see a long-term downturn. Because of the country's enormous population, reliance on casual labour, and uncontrolled banking, the economy is experiencing a period of disruption as a result of the lockdown. The economic harm exceeds current projections, according to the present article, which depicts the impact of the COVID-19 scenario on India's economy and financial industry. The research is based on different research articles released on the outbreak of the COVID-19 pandemic and is a subordinate data analysis. The report also examines the various planning strategies implemented by India's government and Reserve Bank to improve the country's economic situation at both the national and state levels. This research paper examines the relationship between NPAs, advances, and profitability in the Indian banking sector as a result of COVID-19, as well as the impact of RBI and government actions on the Indian banking sector. From 2014-15 to 2019-20, Axis Bank was the subject of a 5-year case study. To investigate the influence of NPAs and advances on profitability, the secondary data was studied using statistical methods such as the correlation coefficient. Experts predict the banking system, particularly in India, would take a long time to recover from the pandemic's consequences.

Keywords: Covid-19, Indian economy, Banks.

Introduction

Non-performing assets (NPAs) are a scourge for India's banking system. When a borrower fails to pay interest or principal on a loan for 90 days, it is classified as a non-performing asset. The term "non-performing asset" is used by financial organisations to describe assets that aren't functioning as expected. It occurs as a result of non-payment of a loan. The loan issued to him is termed as non-performing asset when the borrower does not pay interest or principal for 90 days. In layman's terms, non-performing assets (NPAs) are assets or projects that do not generate cash flow to the amount or for the length expected. The bank may not be able to reclaim the whole amount of the loan issued in time if the funds are transferred, therefore it makes plans for it. NPAs, on the other hand, arise in the actual world due to genuine reasons, miscalculations/inefficiencies, and malfeasance.

Many banks in the country have recently expressed fear that the number of non-performing assets (NPAs) in their portfolios may rise in the coming days as a result of the COVID-19 shutdown. On March 24, 2020, the Indian government ordered a nationwide lockdown for the next 21 days in order to control the spread of COVID-19. Almost all sorts of activities (traffic, industry, etc.) were then outlawed in the country, with the exception of vital services.

Reasons for the Increasing Trend of Non-Performing Assets

NPAs occur in the actual world as a result of legitimate causes, such as miscalculations/inefficiencies and wrongdoings, the causes of which can be divided into two categories: external and internal. Global recession, domestic demand slowdown, policy gridlock, and disputed contracts are all part of the external environment. In the internal environment – banks: government deficit, bad credit assessment, weak risk management, full debt – no equity, infra finance, particularly motorways – 'gold plated' contracts, power-fault FSAs, pass through arrangements, deferred payments, etc. Corporate India: Complicated Web Holding Company, Step Down NTTs, Over Leverage, Overseas Acquisitions, Unhesitating Access, Adoption, Changes, and Other Reasons. Threat Selling vs. Selling Price The Minsky Financial Instability Hypothesis - Outside the corporate world, three types of borrowers (hedges, speculative, and ponzi), Kisan Credit Cards and crop insurance against agrarian distress, lack of timely support for small/medium firms, and payment delays. Industry receives 80% of loans from public sector banks, and this portion of loan distribution accounts for the majority of NPAs. When Kingfisher was going through a financial crisis last year, SBI granted them a large loan to help them get through it. One of the main causes of the rise in NPAs is the loosening of the regulations for lending to corporations without a thorough examination of their financial situation and credit rating. In addition, in order to compete, banks are issuing huge amounts of unsecured loans, which leads to the rise in nonperforming assets (NPAs). If the Indian economy suffers, it would have an impact on the banking sector, which will result in a rise in nonperforming assets (NPAs). Banks in the public sector cannot be faulted alone for this. The current status of the banking industry is also due to the government's economic policy and the politician-corporate partnership.

Review of Literature

The research papers that were considered when drafting this research paper include:

The T. Singhal Coronavirus "Disease-2019 (Covid-19) Aside from keeping the virus from spreading, this new virus has posed major threats to China's economic, medical, and public health structures, particularly in neighbouring nations. The economy has been severely harmed by the four phases of a nationwide lockdown that lasted more than two months and resulted in a global slowdown and significant disruption in the demand-supply chain."

Anya Kumra Impact on the Indian Economy Covid-19 "The Covid pandemic has had a negative influence on nearly every one of the full-scale level elements of the Indian economy, but it is ludicrous to expect to know the particular effect of the infection on the economy until the pandemic is over." In fields such as agribusiness, value can rise, thus precautions should be taken to maintain adequate collection and keep the inventory network running smoothly. The danger of a rating decreases, and an increase in the monetary shortfall makes it more difficult to obtain and spend later on, so the government and strategy producers in India should painstakingly assess strategy options and select only those that have the highest payouts in the short run as well as the long run.

"Effect of Covid 19 on the Indian Economy," said S. Mahendra Dev and Rajeshwari Sengupta in an interval evaluation. According to S. Mahendra Dev and Rajeshwari Sengupta's interval evaluation, Covid 19 has a substantial impact on the Indian economy and financial sector. The country's vast population, the economy's unsound state, and over-dependence on informal labour, as well as lockdown and other measures, have turned the economy into a more difficult state. According to him, the economic damage is expected to be greater than the present estimate. The Indian government must alter the pay support required to ensure that the monetary situation does not spiral out of control, and strategy developers must be ready to move forward with the response to lessen the impact of the infection and protect the economy from long-term harm.

"Coronavirus severely affects two areas in India," S. Mahendra Dev and Rajeshwari Sengupta said. "One is the wellness area, and the other is the Indian economic and banking region." This has turned India's economy into a troubled situation, with a large population and an over-reliance on temporary labour, as well as the post-Covid-19 monetary area. India's financial sector, notably public sector banks, has been severely harmed. These financial institutions are struggling to adjust to the rising losses from their non-performing assets on their asset reports. This type of issue has had a negative impact on credit development in India, and when the pandemic struck, this issue began to hurt the Indian credit market. Because of indisputable levels of non-performing assets (NPAs) in a poorly promoted banking framework, India has been managing twin monetary records for the past year. The Reserve Bank of India (RBI) took some positive steps to solve the monetary crisis, putting the 10 most troubled banks on a temporary restorative activity regime.

Objectives of Study

- To determine the principal impact of COVID-19 on the Indian banking sector's nonperforming assets (NPAs).
- To learn about the policy actions implemented by the Indian government and the Reserve Bank of India to alleviate the COVID economic crisis.
- To determine the significant impact on Axis Bank's non performing assets (NPAs) during COVID-19.

Research Methodology

As previously stated, the momentum importance research is entirely based on auxiliary data for assessing the impact of COVID-19 on the Indian financial sector, as well as AXIS Bank's appraisal and contextual analysis. This supplementary data is acquired from rumoured English journals, publications, various websites, and other widely disseminated examination diaries in this sector, as well as from authorities of public and international institutions such as the RBI, IMF, Axis Bank, and others. While making appropriate decisions for this essay, the information available on various sites and journals, magazines, and other locations was carefully viewed. The review's concept is just unique. The study is solely descriptive in nature.

Sampling Frame

Sample Size: AXIS BANK, a public bank, serves as the study's sample population.

Sampling Unit: The public bank AXIS BANK serves as the study's sample population.

Research Line

The current study is a descriptive investigation of the link between non performing assets (NPAs), advances, and net profit. Because it dealt with numerical, applied statistics, and the use of graphs and tables, the research was classified as quantitative.

Data collection: Secondary data will be used to plan the study.

Increase in non-performing assets due to COVID-19

According to one estimate, the amount of such mortgages may rise as a result of the Indian Banking Sector's shutdown, which is already strained by significant nonperforming assets. "Banks have voiced fear that even after the lockdown is lifted, it will be difficult for some enterprises to return to normalcy and resume production." There is a risk of a significant increase in NPA, particularly in the Micro, Small and Medium Enterprises (MSME) sector, the manufacturing sector, and the energy sector.

Despite the Reserve Bank of India's support, banks have expressed their concerns to the government about the sensitive sector. Micro, Small, and Medium-Sized Businesses (Micro, Small and Medium Enterprise- MSME) The Micro, Small, and Medium Enterprises Development Act of 2006 divides micro, small, and medium enterprises into two categories:

1. **Manufacturing Enterprise:**

Micro: For whose establishment an investment of not more than Rs 25 lakh is required.

Small: Investment limit between Rs 25 lakh to Rs 5 crore.

Medium: Investment limit between Rs 5 to 10 crores.

2. **Service Enterprise:**

Micro: The total investment in the equipment required for its installation does not exceed Rs 10 lakh

Small: Investment limit between Rs 10 lakh to Rs 2 crore. Medium: Investment limit between Rs 2 to 5 crores.

Reasons for increase in NPAs:

Experts say that in recent years, Indian products have struggled to meet market demand, so resuming normalcy after the statewide lockdown will be a major issue. Covid's full or partial effect can still be felt in India, as well as many other countries throughout the world. Those industrial units that rely on other countries for raw materials will be severely harmed as a result of the disruption in supply service. Due to the migration of workers from the MSME and unorganised sector as a result of the lockdown, there are concerns that production may be disrupted in such industrial units for some time after the restrictions are lifted. Aside from that, demand for capital-intensive industries such as air transportation, real estate, and jewellery may take some time to recover.

Data Analysis & Interpretation

Financial sector and bank equities, according to financial sector analysts, have suffered more in the stock market than 'fast moving consumer goods' (FMCG).

Due to constraints in the Indian economic sector in the next days, the US rating agency 'Moody's Investors Service' has recently placed the Indian banking sector in the negative category instead of stable, as per the institution's estimations. The value of banks assets may decrease. Experts estimate that 44 percent of loans in India's banking sector come from high-resilience industries including pharmaceuticals, telecommunications, fertilisers, oil refineries, power and gas distribution, and so on, while 52 percent come from the Moderate Resilience group. Automobile manufacturing, power generation, road and construction companies have all been awarded. Only 4% of the loans were issued to Least Resilient Sectors, such as airlines, jewelry-related businesses, and real estate, which are likely to be the hardest hit by the lockout.

NPA rules may change, borrowers will get additional time of 60 days.

The Reserve Bank is preparing to change the rules for resolving non-recoverable loans (NPA), under which it will be able to provide borrowers an additional 60 days to repay the debt, reducing the suffering of honest borrowers. This information was obtained from reliable sources. He stated that, following the Supreme Court's quashing of the Reserve Bank's circular of February 12, 2018, work on the updated rules is continuing and that they will be issued soon. Various possibilities are now being evaluated under the new NPA framework. These include the option of extending the present 90-day clearing process for NPAs by 30 to 60 days. He stated that the mechanism of classifying poor loans as nonperforming assets (NPAs) after 90 days will continue, but that the Reserve Bank is considering giving bodies other choices for repaying the loan. He believes that by allowing additional time for payment, the MSME problem will be alleviated to some level.

India has been asked by the IMF to increase capitalisation in public sector banks.

Let us remind you that on February 12, 2018, the Reserve Bank released a circular. According to this, if the loan is not repaid within one day, the procedure of declaring the company insolvent will be initiated. This law, however, does not apply to debts of more than 2000 crores. The Reserve Bank’s circular was overturned by the Supreme Court. In its financial stability report, the RBI predicted that bank non performing assets (NPAs) would rise to 12.5% by March 2021, up from 8.5 percent in March 2020. S&P Global Ratings had previously predicted that India’s non performing assets (NPAs) would rise to 13.2 percent by next year. Under the comparable scenario, banks gross non performing assets (NPAs) could reach 12.5% by the conclusion of the current fiscal year. In March 2020, it was 8.5 percent. This is indicated in the Reserve Bank’s Financial Stability Report. In a particularly severe stress scenario, gross NPAs might reach 15% by March 2022, according to the research.

According to the Covid-19 stress test, all scheduled commercial banks gross non performing assets ratio could rise from 8.5 percent in March 2021 to 12.5 percent in March 2021. This evaluation was carried out using a comparison scenario. “If the macroeconomic environment worsens, the percentage might rise to 14.7 percent in a very severe stress scenario,” according to the paper.

The country banks strength was put to the test in the face of macroeconomic shocks, according to the report. A massive pressure test was used to conduct this test. It was determined that whatever shocks or pressures occur, what influence will they have on bank balance sheets. The Gross Non Performing Assets (NPAs) and the Capital to Risk Weighted Asset Ratio (CRAR) were also calculated. The scenario was calculated on a comparison basis under three conditions: moderate, severe, and very severe. According to the research, “the comparative prognosis has been appraised based on estimated values of various macroeconomic indicators such as GDP (Gross Domestic Product) growth, gross fiscal deficit as a ratio of GDP, and consumer price index inflation.”

This estimate for gross non performing assets is the highest in the recent two decades, according to Live Mint. The number of nonperforming assets (NPAs) peaked in 1999.

At the same time, RBI's estimate is similar to that of S&P Global Ratings, a global rating organisation. According to S&P Global Ratings, India's nonperforming assets (NPAs) will rise to 14.6 percent by 2022.

Table 1: Non-Performing Asset of Banks

Items	Amount Outstanding (As at end-March Month)	
	2019	2020(P)
Net NPA's	3,55,068	2,89,531
Gross NPA ratio (Gross NPA's as % of Gross Advances)	9.1	8.2
Net NPA ratio (Net NPA as % of Net advances)	3.7	2.8
Provision Coverage Ratio (Not write-off Adjusted) (%)	60.5	66.2

Source: RBI website

Table 2: Bank Wise NPAs Distribution

(Values in Crores)							
Bank	Gross NPA's					Net NPA's	
	As on March 31 (previous year)	Addition during the year	Reduction during the year	Write-off during the year	As on March 31 (current year)	As on March 31 (previous year)	As on March 31 (current Year)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Public Sector Bank	717849.76	238464.08	99691.53	178305.31	678317.00	276936.83	230917.59
Private Sector Bank	183603.66	131248.99	51335.43	53949.08	209568.14	67308.89	55745.87
Foreign banks	12242.26	6750.76	3832.03	4952.67	10208.32	2051.44	2084.03
Small Finance Bank	1659.64	1764.43	1045.81	668.93	1709.32	872.58	783.63

Source: RBI website

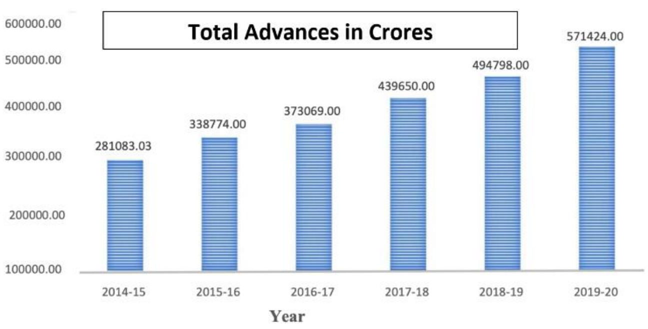
This Table, on the other hand, appears to be Banks gross non-performing assets (GNPA) numbers have yet to reflect the COVID-19's impact. According to the RBI's Trend and Progress Report on Banking (2019-20), gross non-performing assets will have decreased by 7.5 percent by the end of

September 2020. In March 2020, the unemployment rate will be 8.2 percent. The RBI's COVID-19 relief measures on relaxed Income Recognition and Asset Classification (IRAC) norms contributed to this drop. However, because to the economic disruption caused by COVID-19, it is projected that the banking system's asset quality will deteriorate substantially in the future. When various policy supports are gradually withdrawn, it can have a significant influence on the financial health of Indian banks.

Table 3: Data Interpretation & Analysis of AXIS BANK

I. Axis Bank

Year	NPAs (CR)	Net Profit (CR)	Total Advances (CR)
2014-15	1316.71	7357.82	281083.03
2015-16	2522.14	8223.66	338774.00
2016-17	8626.55	3679.28	373069.00
2017-18	16591.71	275.68	439650.00
2018-19	11275.60	4676.61	494798.00
2019-20	9360.41	1627.22	571424.00



Explanation:

"The NPA for the year 2014-15 is Rs. 1316.71 Cr and Net Profit for the year is 7357.82 Cr," according to the Table and Chart above. The bank's net profit and nonpperforming assets (NPA) both increased in the next year, to Rs.7357.82 crore and Rs.1316.71 crore, respectively. The reason for this is that the bank's net profit is substantially higher than its nonperforming assets (NPA). Thus, in the years 2014-15 and 2015-16, NPAs had a nominal or no influence on bank profitability. In 2016-17, the bank's net profit fell to Rs 3679.28 crore, and the bank's nonperforming assets (NPA) exceeded its net profit. The total amount of non performing assets (NPA) has risen to Rs.8626.55 crore. As can be observed, the bank's unexpected surge in nonperforming assets (NPAs) had a significant impact on profitability in

2016-17. The unexpected surge in non performing assets (NPAs) in 2016-17 was due to strong liquidity and a lack of business loan demand. Despite this, the company was able to boost loan advances in 2016-17, but the increase in nonperforming assets (NPAs) ate up all of the profits.

The bank's nonperforming assets (NPAs) more than doubled in 2017-18 compared to 2016-17. This had a significant impact on the bank's earnings for the year. The bank's profit has been lowered to Rs 275.68 crore. In the fiscal year 2018-19, NPAs reduced and net profit climbed. As can be seen, the number of non performing assets (NPAs) and the bank's net profit are inversely proportional.

Findings, Suggestions and Conclusions

Findings-

In the year 2019-20, both net profit and NPA are on the decline.

1. The number of nonperforming assets (NPAs) is decreasing.
2. Loan disbursements are also on the rise.

The metrics above both suggest that the net profit should rise, however this is not the case. The explanation behind this is as follows:

1. Non-performing assets (NPAs) outnumber net profit.
2. It has a significant impact on India's economy.
3. As a result of the pandemic, the bank increased its provisions for nonperforming assets for the year.

For the year 2019-20, Axis Bank's profitability was lowered due to the three factors listed above.

Findings Result

Due to the COVID-19 epidemic, Axis Bank has seen an increase in advances but a decline in profits in 2020-21 compared to previous years.

Conclusion

Despite the actions taken, banking institutions anticipate a long-term negative impact on their economic activity. If borrowers are unable to generate adequate cash, banks are at risk of bad loans or a rise in non-performing assets (NPAs). Furthermore, S&P Global Ratings predicts that the Indian banking sector would only start to recover after 2023. After the exception has been revoked, provisions and losses may rise. Most deposits may be deleted if the outbreak does not stop fast, potentially replacing low-cost deposits with high-cost borrowings, reducing net interest income, margins, and spreads. As a result of banks inability to find adequate lending opportunities as a result of the crisis, extra funds are either left idle or invested in low-yielding assets. Naturally, the banks will have to overcome various obstacles. Nonetheless, if banks have solid risk management capabilities and can work with potential borrowers and react to the new normal, there will be considerable positives and benefits. Both the money and financial markets require constant activity to function properly. Actual NPAs are projected to be suppressed for the duration of the extended moratorium period. Covid-19 has had a significant impact on the Indian economy and financial sector. The problem will become clear after the pandemic has passed. In this pandemic situation, strong and resilient leadership is necessary to protect the Indian economy from long-term damage.

Suggestions

- RBI should now emphasis on the financial system and its context to maintain liquidity in the post COVID-19 situation.
- After the lock down is lifted, all small and medium enterprises should have the facility of giving loans to keep them on track.
- Government of India must reduce the insecurity and economic stress in the economy.
- Both money market and capital market should be correctly run.
- Reducing Risk Weights on Incremental Bank Credit Granted.
- Reduction of Capital Adequacy Ratio.

Weekly Report

Sl. No.	Contents	Date	Sign
1	Introduction Submitted	April 29	
2	Literature Review Submitted	May 6	
3	Research Methodology Submitted	May 13	
4	Reasons for Increase in NPA Submitted	May 20	
5	Data Interpretation Submitted	May 27	
6	Findings Results Submitted	June 3	
7	Conclusion Submitted	June 10	

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June 27, 2019

RBI releases June 2019 Financial Stability Report

The Reserve Bank of India today released the 19th issue of the Financial Stability Report (FSR). The FSR reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC) on risks to financial stability, as also the resilience of the financial system. The Report also discusses issues relating to development and regulation of the financial sector.

Overall assessment of systemic risks

India's financial system remains stable in the backdrop of improving resilience of the banking sector, even though the emerging trends in global economic as also geopolitical environment pose challenges.

Global and domestic macro-financial risks

- Global economic activity continues to face significant headwinds since the second-half of 2018 culminating in a lower global growth forecast of 3.3 per cent in 2019. Adverse geopolitical developments and trade tensions are gradually but predictably taking a toll on business and consumer confidence.
- Advanced economies' (AEs) central banks have eased their monetary policy stance. While asset prices and global capital flows initially recovered in response, the markets appear to be deeply conditioned by the implied 'Fed put' and any significant reassessment would require re-rating of a host of issues relating to emerging market and developing economies (EMDEs) with a risk of sharp adjustments.
- Domestic economy hit a soft patch recently as private consumption, the key driver of GDP, turned weak. This along with subdued new investment pipeline and a widening current account deficit have exerted pressure on the fiscal front.
- Reviving private investment demand remains a key challenge going forward while being vigilant about the spillover from global financial markets.

Financial Institutions: Performance and risks

- Credit growth of scheduled commercial banks (SCBs) picked up, with public sector banks (PSBs) registering near double digit growth. Capital adequacy of the SCBs improved after the recapitalisation of PSBs.
- With the bulk of the legacy non-performing assets (NPAs) already recognised in the banking books, the non-performing asset (NPA) cycle seems to have turned around.
- Provision coverage ratio (PCR) of all SCBs rose sharply to 60.6 per cent in March 2019 from 52.4 per cent in September 2018 and 48.3 per cent in March 2018, increasing the resilience of the banking sector.

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December 27, 2019

RBI releases December 2019 Financial Stability Report

The Reserve Bank of India today released the 20th issue of the Financial Stability Report (FSR). The FSR reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC) on risks to financial stability, as also the resilience of the financial system. The Report also discusses issues relating to development and regulation of the financial sector.

Overall assessment of systemic risks

India's financial system remains stable notwithstanding weakening domestic growth; the resilience of the banking sector has improved following recapitalisation of Public Sector Banks (PSBs) by the Government. Risks arising out of global/domestic economic uncertainties and geopolitical developments, however, persist.

Global and domestic macro-financial risks

- The global economy confronted a number of uncertainties – a delay in the Brexit deal, trade tensions, whiff of an impending recession, oil-market disruptions and geopolitical risks – leading to significant deceleration in growth. These uncertainties weighed on consumer confidence and business sentiment, dampened investment intentions and unless properly addressed are likely to remain a key drag on global growth.
- As regards the domestic economy, aggregate demand slackened in Q2:2019-20 further extending the growth deceleration. While the outlook for capital inflows remains positive, India's exports could face headwinds in the event of sustained global slowdown but current account deficit is likely to be under control reflecting muted energy price outlook.
- Reviving the twin engines of consumption and investment while being vigilant about spillovers from global financial markets remains a critical challenge going forward.

Financial Institutions: Performance and risks

- Scheduled commercial banks' (SCBs) credit growth remained subdued at 8.7 per cent year-on-year (y-o-y) in September 2019, though Private Sector Banks (PVBs) registered double digit credit growth of 16.5 per cent.
- SCBs' capital adequacy ratio improved significantly after the recapitalisation of public sector banks (PSBs) by the Government.
- SCBs' gross non-performing assets (GNPA) ratio remained unchanged at 9.3 per cent between March and September 2019.

प्रेस प्रकाशनी PRESS RELEASE

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July 01, 2021

RBI releases the Financial Stability Report, July 2021

Today, the Reserve Bank released the 23rd issue of the Financial Stability Report (FSR), which reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC) on risks to financial stability and the resilience of the financial system in the context of contemporaneous issues relating to development and regulation of the financial sector.

Highlights:

- Sustained policy support, benign financial conditions and the gathering momentum of vaccination are nurturing an uneven global recovery.
- Policy support has helped in shoring up financial positions of banks, containing non-performing loans and maintaining solvency and liquidity globally.
- On the domestic front, the ferocity of the second wave of COVID-19 has dented economic activity, but monetary, regulatory and fiscal policy measures have helped curtail the solvency risk of financial entities, stabilise markets, and maintain financial stability.
- The capital to risk-weighted assets ratio (CRAR) of scheduled commercial banks (SCBs) increased to 16.03 per cent and the provisioning coverage ratio (PCR) stood at 68.86 per cent in March 2021.
- Macro stress tests indicate that the gross non-performing asset (GNPA) ratio of SCBs may increase from 7.48 per cent in March 2021 to 9.80 per cent by March 2022 under the baseline scenario; and to 11.22 per cent under a severe stress scenario, although SCBs have sufficient capital, both at the aggregate and individual level, even under stress.
- Going forward, as banks respond to credit demand in a recovering economy, they will need to reinforce their capital and liquidity positions to fortify themselves against potential balance sheet stress.

(Yogesh Dayal)
Chief General Manager

Press Release: 2021-2022/467

Chapter - 4

A Study of Green Banking Practices in Domestic and International Banking Sectors

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Abstract

Industrialization across the globe has set off of the increasing needs and demands of the population has become a significant representation of the development of an economy which in turn is developing at a cost of environment depletion, Global warming, ecological imbalance and depletion in the natural environment as well as its resources. As a result, there is a growingconcern around the world. Henceforth, Environmental sustainability and Environmentdevelopmental Goals has taken part to be a crucial strategies that most company/organizations adapt to. Banks can also act upon reducing various paper works by adopting online and mobilebanking systems as well as install solar systems that could save electricity thereby sustaining the available natural resources.

This paper aims to direct a study on Green Banking and different green banking products, benefits and problems that green banking faces. The paper also highlights about the green ratingstandards given by RBI and the varied initiatives taken by several banks in India as well as International banks in the adoption of Greening of the banks with the help of different Green banking practices.

Keywords: Green Banking, Green coin ratings, Green Brand Image, Green trust, Domestic Green Banking, International Banking.

I. Introduction

Industrialization across the globe has set off of the increasing needs and demands of the population has become a symbolic representation of the development of an economy. At the same time, Industrialization has also resulted in the exploitation & depletion of the natural environment and its resources that has further resulted in the ecological imbalance. Environmental sustainability is a combination of social, Economic and environmental sustainability which is what makes the development sustainable. Therefore, environmental sustainability and sustainable development have become a crucial agenda in the global association. Due to this concern, environment sustainability and sustainable development has become a crucial strategy in most of the organisation in the developed countries. These organizations have started taking an action on offering green products and services to the consumers as well as invest in the same. Companies like Cisco, HP and Walmart have announced to go green and adopt eco-friendly practices and have successfully adopted the green business innovation into their business practices.

This growing concern towards the environment has resulted in a shift towards green economy, and businesses must be environmentally conscious in all practices of their operations. The banking sector is one of the important and main sources of funding for investing in commercial projects, and is considered one of the most important economic activities for the economic growth. Therefore, the banking sector can play an important role in promoting environmentally sustainable and socially responsible investment (SRI). The bank on itself might not be a pollutant, but they may have banking relationships with other corporates or investment projects that are currently a pollutant or may become pollutants in the future. The banking sector is generally considered an environmentally friendly in terms of emissions and pollutants. The effects on the internal environment of the banking sector, such as energy, paper and water consumption, is relatively small and clean. This environmental effects of the bank is not physically considered to be related to the bank's activities, but to the customer's activities.

Green Banking is one of the initiatives taken for this concern. It is a new trend that is followed under the banking sector. Green banking comes under a particular group of banking practices that considers all the social and ecological factors that focuses on safeguarding the environment. Green Banking is also referred as ethical banking.

What is Green Banking

Green Banks are similar to normal banks but except they give more importance on adopting practices that includes social and environmental/ecological factors which aims to protect the environment, as well as reduce depletion of the natural resources. They are managed by the same authorities except they give more importance towards environment protection.

It is also called as an ethical bank or a sustainable bank. It demands that banks encourage greeninvestment and prioritize in lending to industries that have already implemented go green practices or are about to green, thereby helping to restore the natural environment. Banks can minimize the use of paperwork by eliminating paperwork and choosing digital banking (also known as online banking instead.

In the beginning, banks significantly looked into their financial performance alone, but now currently, with technology advancement and industrialization changes that are happeningrapidly, it has become a necessity that they look into their social and environmental performance also. These financial institutions must encourage products, processes, technology and investments that reduce carbon impact and their emissions significantly.

Green Banking should not just be considered as a CSR accountability rather be taken serious in ensuring to safeguard the society from any environmental harm. Promoting Green Banking in uplifting Environmental friendly practices and reducing carbon footprint practices in banking activities can be done in various ways which includes:

- Online Banking in the place of Branch banking.
- Using Online banking for fund transfers.
- Green Housing Loans
- Green Car Loans
- Green Cards.
- Green channel counters.

History of Green Banking

Green banking is a concept that was first initiated/borne in Western countries. Originally, it was introduced in 2009 in Florida, on Mount Dora, Florida, USA. US Congressman Chris Van Hollen sponsored the Green Banking Act in March 2009 with the aim of creating a green bankowned by the US government.

Importance of Green Banking:

Up until recently, environmental issues has never been taken into consideration in the operationof banks and other financial institutions. Despite the fact that, the banking and other financial institutions does not really suffer from the environmental degradation, the banks undergo someindirect costs. Due to strict environmental disciplines imposed by the governments of differentnations, it has become a primary reason that various industries and banks to abide by these guidelines. According to the UNEP statement made by Financial Institutions on the Environment and Sustainable development in 1992 revealed that almost 80% of the financial institutions attempted some kind of assessment on the environmental risks of investment the projects before actually financing.

Outcomes of Green Banking Initiatives:

Green Brand Image: According to Chen (2010), Green brand image is when a product is perceived by the customers as having green commitment and green concerns. It is accepted via its competence in green reputation, success in sustainable achievement and trustworthiness of environmental promises.

Green Trust: Lal *et al*. (2017) defined green trust as "a willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance". Rotter (1971) defined trust as the extent to which a party can entrust on another party’s word, statement or promise.

Green Coin Rating

Reserve Bank of India (RBI) has established Institute of Development and Research and in Banking Technology (IDRBT) (IDRBT) and introduced a standard evaluation of eco-friendly and efficient banking and banking operations amid the Indian banks. Both infrastructure and bank operations are examined. IDRBT has coined the term of Green Rating Standard as “Green Coin Rating”. Making money must not be the only main business of banks. However, the socialand environmental aspects associated with its operation must also be considered.

The evaluation of green coin rating is Compliant with the Appliance's Energy Star rating. Banksare calculated based on their Carbon emission rates, Amount of reuse, refurbishment and recycling plans used in their operations, their building facilities and the systems used in the banks, such as computers, servers, networks, printers, etc. Banks are also judged by the numberof green projects they fund and the amount the amount of rewards and awards they pay in making their businesses green.

II. Literature Review

Chen, J.; Siddik, A.B, Zheng, G.-W, Masukujjaman, M, Bekhzod, S (2022)- Primary intention of the study is to identify the impact that green banking practices have on the banks environmental performance and highlights the sources of green financing of private commercial banks in Bangladesh. Primary data was collected and they used CFA, EFA and SEM analyticaltechniques to understand if the Banks performance influences the sources for green financing. The findings resulted that the daily operations of banks, their employees and the policy related Green Banking practises all have major positive effects on green financing while customer related Green banking practices did not really influence the sources for Green financing.

Meenakshi Sharma and Akanksha Choubey (2021) attempts to understand about the green banking initiatives that would contribute towards the creation of Green trust and Green Brand Image. They also gave an overview about the challenges of implementing green banking initiatives. They conducted a primary research to know the green initiatives taken by various public and private sector banks in India and found that many banks have now recently adoptedto green technologies, however many of the Indians are still skeptical in adopting the same butotherwise the educated group of people have been shifting and got adjusted towards this technology.

The paper also highlights on various topics like green product development, green corporate social responsibility, green internal process and which further leads to two outcomes of Greenbanking initiative- Green brand image and Green trust.

Khairunnessa (2021) studies about the advancement of green banking in Bangladesh along withconcentrating on the financial regulation for greening the financial sector. It also highlights about the contribution and the involvement of financial and non-financial institutions inencouraging green banking practices. Study shows the trend of green finance from 2016-2020.

E G Shershneva and E S Kondyukova (2020) - The authors believe that in the modern society,the financial institutions which benefit financially from exploration of the environment, do not analyses their actions in the perspective of improvement of the environment. The studyhighlights about the different elements of Green Banking and the Comparative characteristics of the "green" banking practices followed in BRICS.

Syed Asim Ali Bukhari, Fathyah Hashim, Azlan Amran (2019) outlines about the evolutionof green banking and how it affects the determinants of the Green Banking including the Top management pressure, customer pressure for green banking adoption, competitors pressure andcommunity pressures in adopting Green Banking practices.

Dr. Amita Charan, Dr. Rekha Dahiya, Ms. Manpreet Kaur (2019) This study is a primary research done to examine the, at present green banking practices and the customer’s awareness about Green banking and understanding their perceptions towards green banking practices in India.

Shakeela Cholasseri (2016) studies the ideal benefits of Green banking, the different methods/activities that can be used to implement green banking practices, videos Green bankingproducts and services and the challenges that Banks go through in order to adapt to Green banking practices. She also presents a SWOC analysis on Green Banking.

Dipika (2015) gave an overview of Environmental sustainability, Green banking and their products. The study also focused on the emerging trend of green a scope of green bankalong with the scope of Green banking in India. The author given overview of the various green banking strategies that were adopted by the various Indian banks including the initiatives takenby the domestic banks to promote environmental sustainability. There is a shortage in the awareness of Green banking hence the author suggested that Banks could help create awarenessby promoting the practises via their websites as well as through media.

Pravaakar Sahu and Bibhu Prasad Nayak (2014) highlights on the importance of green banking as well as the risk that the bank and economic and avoid through Green Banking. Theyalso gave an overview on green banking International initiatives and domestic green banking in India, environmental management by the banking institutions and the enforcing of environmental management and role of the Government to implement proper legislation rules for the enforcement of banks.

Vikas Nath, Nitin Nayak and Ankit Goel (2014) also did a study on the overview of Green banking and their strategies as well as the initiatives taken by the public sector banks and the private sector banks within the domestic area of the country. The study gave an outline about Green buildings that promotes in generating lesser waste, optimization of energy and usage of lesser water compared to regular buildings. The authors also highlighted on the principles of environmental and social policies for financial intermediaries given by the (IBRD 2014).

Jaggi (2014) highlight on the various initiative taken by the SBI and ICICI Bank on Green banking. While SBI initiated Green channel counter, no long use in the bank and increase dedication towards achieving carbon neutrality and promoting online money transfer as well asinstallation of windmills in three different cities in India. ICICI Bank promoted insta banking and have also taken steps for energy conservation like duplexing (two sided printings), recyclingand carpooling etc.

Raghupati. M and Sujatha. S (2013) The study suggested about the various steps that can be taken to go green in banking sectors and also gave a detailed green initiatives taken by both thepublic sector and private sector bank in India.

Ahmad, Z., Jegadeeshwaran, M. (2013): The study is on NPA and the factors that contribute to it. Over the course of six years, secondary data was collected and evaluated using mean, standard deviation and coefficient of correlation and ANOVA. The banks were graded according to how well they managed nonperforming assets. The ability of nationalized banks to manage nonperforming assets was tested.

Objectives of the Study

- To study the concept of Green Banking and their products.
- To explore the benefits and challenges that Banks face to implement the Green practices.
- To highlight the Green Banking Activities operated in Domestic Banks.
- To understand the different Green Banking initiatives taken by the International Banks.

Research Methodology

This paper analyses the green banking initiatives taken by the top performing Indian banks in both the public and private sectors, as well as international banks, using secondary data collected from sources such as articles, research papers, annual reports, sustainability reports, company's official websites, and so on. The bank's official website was used to compile this information about performance.

Research Gap

Many studies have looked into different aspects on green banking, its benefits and challenges, the varied Green products and the green initiatives taken by Indian banks. However, those studies used outdated data and were not updated. There was also less information about the Green initiatives taken by the International banks.

Findings:

Green Banking Initiatives in Indian Banking

India being a developing country, have shown remarkable performance in adapting to green banking practices. There has been a significant development in reducing costs, increasing the profitability in various banks, controlling and management of the banks, handling the ever changing interest rates & foreign exchange rates variations and managing various risks that occurs in the economy. Few of the banks has now initiated bio-metrics ATM systems, solar ATMs etc. Some of the initiatives taken by India's top 5 banks to promote Green practices are:

Table 2: Implementation Year of Green banking in various Domestic Banks. (Dipika, 2018)

Green Banking implementation year	Names of the banks operating in India
1996	Union Bank of India
2003	Citi Group INC, HSBC, ING Vyasa, RBS, Royal bank OfCanada, Syndicate Bank, Standard Charted
2005	Yes bank, Corporation Bank
2006	Bank Of America, JP Morgan
2007	ICICI, OBC, SBI
2008	Bank Of Baroda, Karnataka Bank, Industrial Bank, Dena Bank
2009	HDFC, Indian Overseas, Indusland Bank, PNB, ABNAmro, Karur Vyasa, Andhra bank
2010	Axis bank, Kotak Mahndra, South Indian Bank
2011	Canara Bank, IDBI, EXIM
2013	IDFC

1) SBI

- SBI was the first bank in India to initiate in investing into the generation of electricity by installation of windmills. As a part of green banking initiative, SBI has installed around 10windmills each having an average capacity of 5 MW in states of Maharashtra, Tamil Naduand Gujarat. SBI set up the windmills with a view to reduce the depletion of resources usedon thermal power and not with a mindset for economic gains.
- It has become a witness to the Carbon Disclosure Project wherein they adopt numerous environmentally and socially sustainable projects via its branches all across the country (WWF-INDIA, 2014).
- Export Import Bank of India (EXIM) and SBI has entered into a settlement to collaborateand provide long term loans upto 14 years to Spain based company Astonfield RenewableResources and Grupo T-Solar Global SA for building solar plant in India (Yadav & Pathak, 2013).

- Over the years, the Bank has devised products and services to incentivize and ease the transition to environment-friendly technologies. The Green Fund's contribution is utilizedfor activities like tree plantation, water conservation, sanitation, renewable energy and waste management.
- A green loan of worth €50 million was raised in FY 2020-21.
- According to the Sustainability report released by SBI for the financial year 2020-2021, SBI sanctioned certain amount to invest into the practice of Renewable Energy:
    - SBI invested around 9,137 crores on the installation of windmills.
    - 18,565 crores was allocated to install Ground mounted Solar PVs.
    - 2093 crores was allotted for Small Hydro projects.
    - SBI has invested around 1,864 crores on Rooftop Solar Panels.
    - The bank has assigned 165 crores for Biomass Energy.
    - SBI allocated 94 crores to invest on Waste-to-Energy.
- SBI has been certified with 8 Green Building certifications.
- Almost 30,000 crores+ have been sanctioned for renewable energy.
- State Bank of India took to planting almost 2.65 lakh+ Trees.

2) Axis Bank

- In 2013, started implementing several initiatives under the green banking sector, by collecting all dry waste that is generated from the corporate offices and other branch officesin Mumbai. These were later recycled into notepads, notebooks and envelopes. Up until today, more than 1,00,000 kgs of paper have been recycled and converted into 12,000 notebooks, notepads and envelopes that are further used in the corporate offices and otherbranches of the bank.
- The corporate banks, located in Mumbai is designed and constructed as Platinum LEED certified as green building.
- They have also increased customers to use e-statements and electronic communication to reduce paper consumption as well as employees are asked to carpool to reduce carbon footprint.

- The organization also started setting up solar based ATMs in Coimbatore.
- They remained committed to help India transition into low carbon economy by channelinginvestments towards low carbon sector like
  - Renewable energy
  - mass transport
  - electric mobility
  - Green infrastructure.
- The total outstanding Green Portfolio was over 9750 Crores in 2021 and 6447 in 2020.
- Axis Bank procured 4,975 MWh of Green energy through power purchased agreement.
- Almost 10,058 MWh of energy was saved through Continuous Emission MonitoringSystem (CEMS) initiative.

3) Kotak Mahindra

- Through the "Think Green" initiative, Kotak bank have taken many initiatives, including:reduction of paper usage, the bank have been encouraging their customers to opt for e- statements.
- They have also partnered with GrowTrees.com to plant one sapling for every customer that opt for e-statement. By FY 2012-2013, this resulted to planting of 16,623 saplings.
- Based on IFC's sustainable framework and performance standards, this organization has created a social, environmental management system plan (SEMSP) to assess the environmental and social risks of borrowers.
- Following the guidelines of the Ministry of Corporate Affairs (MCA), banks advised shareholders to use electronic copies of their annual reports instead of physical copies.
- KMBL's strategies for managing environmental performance can be grouped as follows:
  - Use of digital banking solutions
  - Energy saving measures in KMBL offices and their branches

- Using clean energy substitutes for example, wind energy
- Resource efficiency measures.

- Kotak Mahindra Bank avoided almost around 1,188 tonnes of Carbon dioxide emissionsaccording to their report in the FY2020-2021.
- KMB had nine LEED - certified large office buildings spread across six cities – Mumbai,Bengaluru, Chennai, Ahmedabad, Delhi (NCR) and Pune (as on 31st March, 2021).
- In FY 2020-21, KMB installed Organic Waste Convertors (OWCs) at our Gurgaon and BKC, Mumbai offices for efficient and responsible management of food wastage at office canteens and also created awareness among their employees.

4) HDFC

- HDFC Bank has undertaken several steps to minimize emissions (include air-travelled,rail-travelled and railways) and includes wide adoption of digital banking channels.
- They started implementing automated energy management solutions to reduce energyconsumption.
- Reconstructing existing high energy consuming devices to maximize performance andreduce electricity consumption.
- Incorporating Energy Efficient Buildings
- Adopting solar energy in different offices and premises.
- 64 eco-friendly li- ion batteries replaced 380 lead acid batteries.
- Eco friendly NOVEC 1230 was installed as new fire suppression system.
- As on 31 March 20220, HDFC installed 145.5 KWP solar capacity across Jaipur, Pune,Bhubaneshwar and Chandigarh.
- They successfully saved 17.23 Lakhs KWH of energy in the fiscal year 2019-2020.
- 261.92 MT E-Wastage dispose of through authorized recyclers.
- 96 Kgs of plastic was removed from the system by encouraging single use bottles.

5) ICICI

- ICICI outstanding portfolio for renewable energy was about 31.50 billion as of March 31,2021.
- 97.5 KWP of new solar power capacity were added at branch and premises taking the totalon-site renewable energy capacity to 2.9 MWP.
- 30% of energy required at banks offices were met through renewable energy in fiscal year2020-2021.
- Lithium Ion Batteries storage system were installed at Delhi branch.
- The bank has been ensuring that water consumptions per day in its large offices is lower than 45 litres per person/per day as per the (Bureau of Indian Standards) BIS for large offices.
- ICICI Stack, Whatsapp banking, Video KYC, for on boarding of customers and cardless cash withdrawal facilities at ATM was some of the digital initiatives launched to provide customers a safe and secured transaction.
- The bank supports reuse of electronic devices and uses remanufactured toners which gets recycled at least 2-3 times, it also recycles IT assets which are then donated.
- The data centre is the first to be awarded Platinum by IGBC.
- In the fiscal year 2021, the banks won 16 awards for energy efficiency and management.

Green Banking Initiatives in International Banks

In 2015, the World Wildlife Fund (WWF) released a brief report on the BRICS countries' financial markets in the context of sustainable development. WWF experts have identified five key elements of environmentally responsible banking (Shershneva, Kondyukova 2020):

A. Adoption of environmental and social criteria in banking
B. Existence of "green" investment criteria in banking practice
C. Assessment of environmental and social risks in the credit process
D. Environmental and social information in commercial bank official reports
E. Existence of regulatory environmental and social norms in banking legislation.

1) **Berkshire Bank**

- The corporation, which had set a goal of lowering paper consumption by 10% by 2018,exceeded that goal, reducing usage by 15% a year ahead of schedule.
- As a result of these practices, 32 percent of office items are made from recycled materials,and 228,000 pounds of paper are recycled each year.
- In addition, client use of e-Statements has climbed by 21% since 2015, as more customersopt for more secure and ecologically aware methods of doing business.
- •To encourage environmentally friendly behaviors, the corporation introduced energy-savinginnovations, recycling, and environmental requirements.
- Employee comments sparked the AMEB Green programme, which was formed by a cross- functional committee that looked at policies, products, operations, and habits to identify goalsand essential actions for becoming a more ecologically sustainable organisation.
- The Foundation contributes $2 million to NGOs across the Bank's territory each year, and allbank employees participate in the XTEAM corporate volunteer programme, where they provide service to them for almost for 40,000 hours.

2) **Citi Bank**

- CITI bank financed and facilitated 222 billion in sustainable finance activity in 2020 & 2021.
- It planned to reach net zero emission by 2050 including 2030 target for energy and powerloan portfolio.
- They co-founded net zero banking alliance to help establish and industry framework for de-carbonizing banking sectors.
- In 2021, they pledged to achieve net zero greenhouse gas emissions by 2050. They committed amount of 1 Trillion sustainable finance by 2030 to address impact of climaticchange and social issues that aligned with UN sustainable development goals.
- CITI bank was the sole coordinator on 75 million transactions to expand access off-grid solar energy in Kenya.

- Their financing hopes to support green light planets ambition to reach an additional 0 million households with low income off grid communities over the period of 5 yrs.
- CITI Bank partnered up with UN Frameworks conventions on climate change and issued one billion social finance bonds in 2021.
- They also joined rocky mountains institutes centre for Climate aligned finance in 2021
- They achieved 100% renewable electricity for all their facilities in 2020.
- CITI joined European clean Hydrogen alliance and issued 1.5 billion of green bonds.
- They joined partnership for carbon accounting financial and launched sustainable progressstrategies along with 200 million impact fund.

3) JP Morgan Chase

- In 2021. JP Morgan Chase financed and facilitated 106 Billion in support of sustainable transportation and renewable energy.
- The firm took under writing green bonds for corporate users capital raising and advisory services for electric vehicles company and leading to emerging renewable energy companies.
- In 2021, they characterised strong market factors including record breaking global MNA activities and significant growth of sustainable bond market.
- They provided 117 billion for development finance and 61 billion for community development total of 106 billion was used for green objective.
- They set that first portfolio level emissions intensity reduction targets for oil and gas, electric power and auto manufacturing and published carbon compass methodology.
- Company joined industry lead United Nations convened net zero banking alliance and netzero asset management initiatives.
- Issued a 1.25 billion green bond in August 2021.
- Finance and facilitated 106 billion in support of green objective of sustainabledevelopment target.

- They met their goals to maintain carbon Neutral operations for second year in a row.
- They reduced scope 1 and scope 2 greenhouse gas emissions by approximately 15%.

4) Wells Fargo

- They pledged to provide 200 billion in financing to sustainable businesses and projects by 2030 and 50% towards low carbon opportunities.
- Around 200 suppliers were engaged on sustainability and climate change through servicecustomised training and one on one debriefs.
- Wells Fargo signed multiple renewable contracts in 2020 bringing total contracted energy from net news sources to 26% of their electricity use.
- They made a contract of 600 acres 58 megawatt solar farm in North Carolina where theconsume 100% of solar energy to supply 50% of electricity need in the state.
- The Bank achieved carbon neutral operations for scope one and scope 2 emissions in 2020
- They allocated 1918 million dollars for clean transportation.
- Around 3208 million dollars were assigned to construct green buildings.
- Wells Fargo invested around $3335 for the installation of renewable energy.
- Contributed around 78% finances to low carbon economy.
- They committed to progress to build 200 billion sustainable finance commitment by 2030.

5) Development Bank of Southern Africa (DBSA):

- They have total of 8 developed, 16 research and development projects as well as 31 investments project in various stages of project life cycle under Green Fund Portfolio.
- There are 3 active projects and 6 working projects under Green climate fund Portfolio.
- The climate finance facility will de-risk and increase bank ability of

Climate projects in order to crowd private sector investments.

- EGIP programs collected about total of 200 Million dollars to provide BBBEE funding to local communities and MSMEs in renewable energy.
- In February 2021, the Development Bank of Southern Africa issued its first green bond. The €200 million bond was issued through a private placement with a French developmentfinance agency and was supervised by French law.
- The Climate Finance Facility (CFF) was built with the project pipeline in consideration, and even the pipeline's viability was confirmed early on by direct contact with significantdeal sources such as banking institutions in target regions.

Conclusion

With a growing increase rate in the pollution in the environment, it is high time that we as humans rather take this into a serious note and safeguard the available natural resources, and use it efficiently.

Banks, being a medium for obtaining the source of funds to many institutions and organisations has a high potential to promote and create awareness in protecting the environment and to practice eco-friendly practices in different sectors of businesses as well asbanks itself.

Although, Green banking have been introduced recently there is still a long way to in order to attain the desired goals to achieve a sustainable environment. Many people are still on aware of green banking and the benefits it possess in the long run of the organisations. The few others (especially uneducated people) still needs to get adopted to Green banking practices.

Both, Indian and international banks have been participating in different activities, programmes and practices to promote in following the eco-friendly practices. The Covid-19 pandemic has force many of the customers to shift to Green banking practices like mobile banking and online banking.

Green banking will do turn out to be a great success if given sufficient training, awareness andorganising educational and training programs.

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Chapter - 5

Digital Payment: Present Scenario and Scope for Improvement

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Abstract

Digital payment is based on online systems. The commencement of e-commerce has given birth to new financial requirements as the traditional payment method at times fail to fulfil the needs of modern-day users. Therefore, in order to satisfy these needs five categories of virtual payment systems have been curated; Unified Payments Interface (UPI), Electronic Cash System, Smart Card based e-payments, Online Credit Cards, E-cheque systems. Reserve Bank of India (RBI) looks after the entire digital payment system. The Government of India as well as RBI is constantly trying to promote electronic payments and cashless payment methods in order to ensure safety and efficiency of transactions. It can be ascertained from the present that the e-payment systems have a wide scope of growth in the future.

Keywords: Digital Payments, Unified Payments Interface, Electronic Cash System, Smart Cards, Reserve Bank of India, Cashless Transactions.

1. Introduction

Transactions are extremely important. In today's world, no economic activity would be possible without payments and receipts. Banking services are available 24x7, one carries more of cards then cash in their wallets. The banking sector has seen drastic development due to advancement in information technology. Hence, such development has given birth to digital banking and digital payment systems. Casually, we perceive e-payments as online transactions through internet, there are various types of electronic payments. As technology is evolving new digital processes of transactions are being developed and usage of cash and cheques are decreasing.

Digital payments are an increasing day by day, in today's internet driven world with businesses expanding in international markets. E-payments are extremely crucial element of e-commerce. E-commerce involves buying and selling of goods and services or transfer of data and funds over the internet. Firms involve in commercial exchange through various means of digital mediums like internet, tele-marketing etc. E-commerce facilitates buying and selling of goods, services and information over the internet. In the e-commerce business environment transactions happen in the form of money exchange in digital form and therefore is known as Digital Payment. Digital payment systems also known as electronic payment systems should be secure, a user should not face any threat in sharing his personal and bank details, the transactions should be carried out with complete end to end encryption.

Future of Digital Payment Systems

There are several payment systems available to customers nowadays. Businesses are constantly trying to adapt to new technologies in order to grow their operations, cut costs and increase their profits. However, a need for a single payment system that can facilitate all payments arises. In order to address this issue an organization named Joint Electronic Payment Initiative has been brought in action. The main aim of this organization is to set up conventions that can uplift the usage of a wide range of payment systems to facilitate e-commerce.

E-commerce facilitates buying and selling of goods, services and information over the internet. In the e-commerce business environment transactions happen in the form of money exchange in digital form and therefore is known as Digital Payment. Digital payment systems also known as electronic payment systems should be secure, a user should not face any threat in sharing his personal and bank details, the transactions should be carried out with complete end to end encryption.

However, there are no protocol currently present for electronic cheque payments. Financial service technology syndicates are working towards curating such standard for digital cheques.

2. Objectives of the Study

- To analyse the growth of Indian banking sectors in adapting to e-banking
- E-payment systems through different parameters such as ease of Electronic Transaction Methods, Automated Teller Machines (ATM), usage of technology in their branches etc.

3. Review of Literature

1. Rachna Joseph (2013) describes that electronic payment system is the basis of online payments and it make electronic payment at any time through the internet directly to manage the e -business environment. The risk to the online payments are theft of payments data personal data and fraudulent rejection on the part of customer.
2. Aastha Arathoon Gupta (2013) describes that RBI played a significant role in developing the payment system in the nation through its establishment. ATM also provide better alternative to traditional payment system. RBI also enhances the payment system by introducing MICR, RTGS, Card based clearing etc.
3. Sugandha Singh (2009) highlighted that as payment is an integral part of mercantile process, electronic payment system is an integral part of e-commerce. The emergence of e-commerce has created new financial needs that in many cases cannot be effectively fulfilled by traditional payment systems.
4. Karamjit Kaur (2015) describes that spread of e-payment usage vary unevenly between countries partly due to difference in factors such as quality of regulatory framework and readiness of telecommunication infrastructure

4. Statement of the Problem

Although digital payment systems provide 24x7 cost free services, customer satisfaction is still under question. Even though, customers are using such systems substantial amount of their time is also spent on using physical banking services. Since, e-payments are a new concept it is very necessary for it to fulfil customer needs and provide full satisfaction to its users in order to sustain its image and customer loyalty. Hence, this study is undertaken to understand the level of satisfaction of the users of digital transactions systems.

5. Research Methodology

Sources of Data

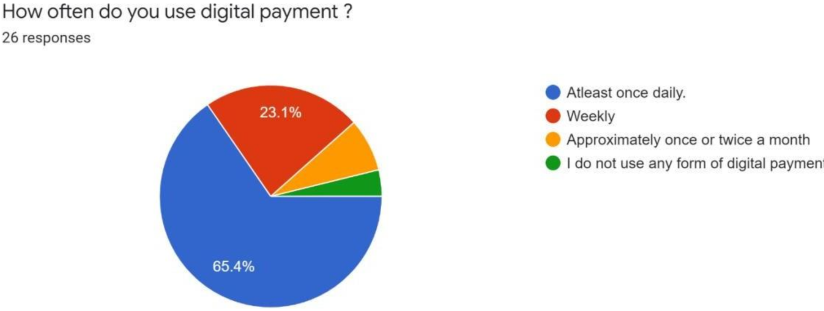
Primary data: This data is extracted directly from respondents through an online questionnaire.

Secondary data: The data has been extracted from collecting information from sources that hold readymade data. This secondary data has been collected from various sources such as newspapers, websites, and different published and unpublished article regarding the subject study.

6. Data Analysis and Interpretation

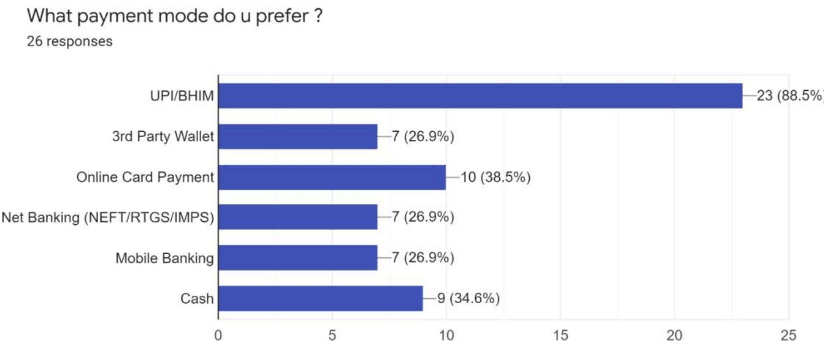
Daily	Weekly	Once or twice a month	None
18	7	2	1

Under this study a sample size of 25 respondents is taken. Most of them were around the age group of 20-50. An online questionnaire was shared, that consisted of 13 questions apart from name and age. All these 13 questions were regarding usage of Digital transaction system and its experience.



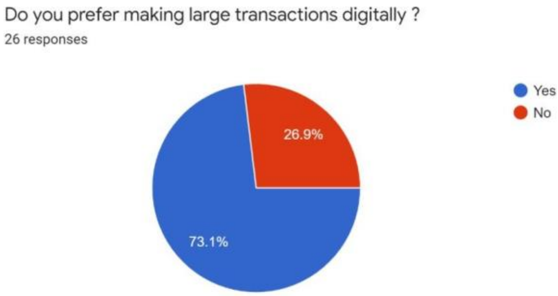
According to the above chart, more than 65% of the respondents use digital payments on a daily basis. This shows how rapidly the usage of digital payments is growing among users.

UPI	3rd Party Wallet	Online Card Payment	Net Banking	Mobile Banking	Cash
25	7	10	7	7	9



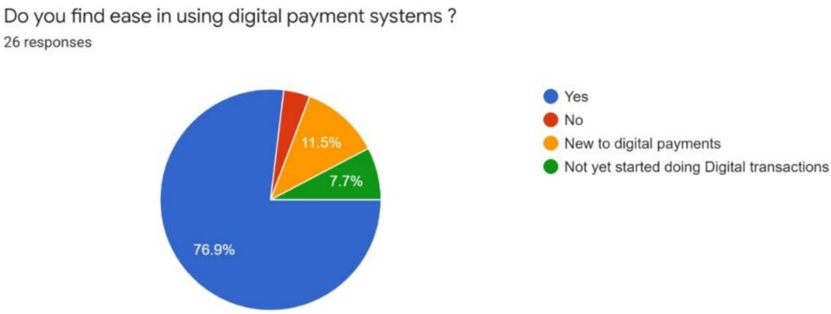
The above chart shows that Unified Payment Interface (UPI) and Bharat Interface for Money (BHIM) are most popularly used among digital transaction users. Apart from that about 38% of the respondents have also showed their confidence online card payments.

Yes	No
20	8



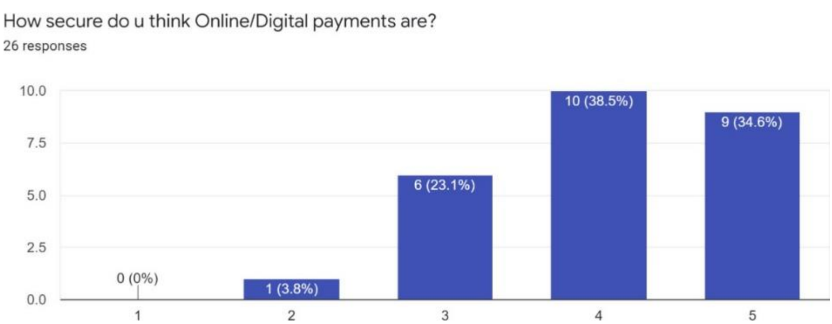
The above chart shows that about 73% of the respondents do trust online transactions enough to make transactions of larger amounts.

Yes	No	New user	None
22	1	3	2



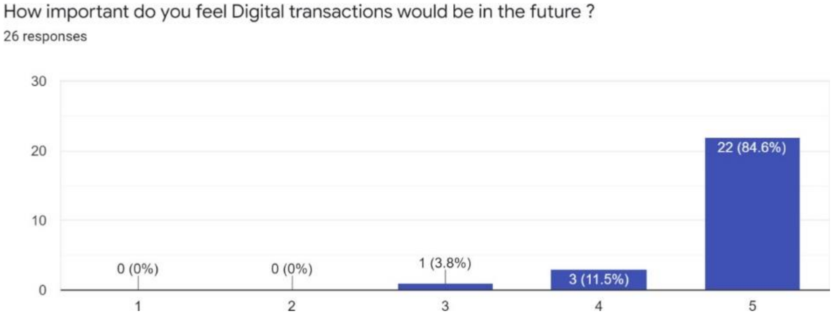
According to the above chart about 77% of the respondents find it easy to operate e- payments. But, as most of the respondents are digital payment users it is quite obvious for them to find operating digital transaction systems easy.

Not secure	Less Secure	Neutral	Secure	Very Secure
0	1	6	12	9



The above bar graph shows that most of the respondents have confidence on the security provided by digital transaction portals.

Not important	Less important	Neutral	Important	Very important
1	1	3	4	19



The above given bar graph shows that almost 95% of the respondents believe that e- transactions would be an inseparable part of the economy in the future.

7. SWOT Analysis of the Study

Strength of the Study

- Time saving: Digital transactions are very fast as they take place over the internet. The time required in physical transaction is reduced and hence, a lot of time can be saved.
- No time constraints: Digital transaction services can be availed 24x7, they can be used at any time and from anywhere.
- Cost effective: Digital transaction systems cut cost by eliminating involvement of middlemen and by reducing the need for physical infrastructure and outsourcing of logistics.
- Fast Exchanges of Information: Digital payments ensure faster exchange of money among customers and merchants.

Weakness of the Study

- Complexity in online transactions: At times people find it difficult to adapt to new technologies and therefore operating online transactions become a problem.
- Security: Security is one of the biggest insecurity customers face during e- payment. The integrity of online transactions is always a matter of concern for users.

- Fake websites: Several forged websites are available over the internet which promise premium service and secure dealing but end up doing frauds to their users.
- The necessity of internet connection: In case of digital payments, internet is one very important necessity. Failure of connectivity can cause loss of data and interruptions.

Opportunities of the Study

- Changing trends: Digital transactions are effective and fast. They can be initiates from any part of the world. Hopefully, the future generations would make the optimum usage of digital systems to facilitate transactions.
- New technologies: With new technologies being developed every now and then, users feel more used to making online transactions. Digitalization also provides a wider scope for digital payments to grow.
- Global availability: E-payments can be performed from anywhere and at any time without any interruption.

Threats of the Study

- Cut-throat competition: Competition is growing day by day, every now and then a new company is entering the field of e-payments. Even though this provides users with a wide range of options to choose from but also makes it difficult for companies to sustain in the market.
- Lack of feasibility in Rural Areas: The population of rural area are at times not updated with the new available technologies or even if they have knowledge, they might not have proper facilities required to make use of digital payments
- Lack of confidence: Making online payment can at times be complicated. People tend to remain insecure when it comes to exchange of money. Therefore, a lot of people still trust making traditional transactions instead of online transactions. At times users face technical errors or online frauds while transacting online and as a result they tend to avoid it.

8. Findings

- The inference that can be concluded from the data obtained is that a major sector of youths prefers digital payments over traditional payment system, approximately 4 out of every 5 individual's avails digital payment methods regularly.

- It has been observed that a large part of people has gained confidence over digital payments and are partially or fully aware of the cyber-cell.
- People are looking forward to digital payment/ online payment becoming an integral part of their regular economic activities.
- The only fear or discontent that the people are concerned about and would like to be upgraded or improved in future is the security factors of digital payment, as digital payment is comparably more vulnerable than traditional mode of payments.

9. Limitation of the Study

- Certain limitations do affect a research paper such as time, money, human efforts etc. Similarly, the present study is also not free from such unavoidable constrains.
- Insufficient presence of secondary data from journals and articles.
- Lack of accurate data

10. Conclusion

Digital transactions are growing rapidly. Possessing plastic cards have become a very normal thing nowadays. Development of technology has made our lives a lot easier, and one of the most outstanding innovations in the field of banking, finance and commerce is Digital transaction. E-payments refer to a technological breakthrough that enables its users make financial transactions digitally. Which saves from long ques, wastage of time and other hassles. Digital transactions entitle its users with a greater degree of freedom in making and receiving their payments from their conventional location and at their conventional time. After analysing and comparing of various modes of Digital payment systems, it can be said that e-transactions have a wide scope to grow in the future and would surely be used by majority of the population. But still it is quite difficult to assume weather traditional methods of transactions would be suppressed or not.

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methods in order to ascertain their usability among different age groups. The paper also intricately studies different modes of e-payment.

2. Abdullah Aldaas, 2020, “A study on electronic payments and economic growth: Global evidence”, this study focuses on economic growth and electronic payment system based on a sample of countries across the globe.
3. http://www.american.edu/initeb/sm4801a/epayment1.htm
4. http://globip.com/articles/asiapacific-vol3-article2pdf

Chapter - 6

A Study on the Effect of NPA on Bank Profitability

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Abstract

Banks are the essential wellspring of development for the Indian economy. Everybody has differed requests, for example, somebody who needs a credit to purchase a house or farming gear, etc. These prerequisites are met by India's monetary industry. Banks, NBFCs, helpful socialorders, and other monetary organizations are incorporated. Non-Performing Asset is a huge variable adversely hurt the organization's turn of events and development economy. The impact of NPAs on the climate is examined in this study. Bank benefits are significant.

The inspiration driving this study is to research the impact several vital financial figures on bank nonperforming assets and to make recommendations for better NPA the leaders. RBI data shows that According to the report, the ten sets aside cash with the greatest nonperforming assets (NPAs) were gathered from 2016-2021. For this study used ANOVA assessment to overview theassociation between net advantages and nonperforming assets (NPAs), as well as various backslide examination to review the effect of key money related heads on NPAs.

We have led the review in view of the factors of Return on resources, Gross NPA, Net NPA and Net advances of banks and directed the ANOVA test in light of their outcomes and deciphered the outcomes as per the p esteem, F worth and F-crit values.

Keywords: Indian Banking Sector, Commercial Banks, Gross NPA, NPA, Advances, ROA, Performance Evaluation, Standard Deviation, ANOVA.

I. Introduction

Banking is primarily concerned with borrowing money from the general population and then lending it to those in need and businesses at a profit. Money lending has a credit risk. The RBI's definition of a nonperforming asset and its several categories are as follows-

Non-performing assets, such as leased assets, are those that stop providing money for the bank.Any loan or advance on which interest or principal is remained due for a period of 90 days. As per Banks NPAs are classified into Substandard Assets, Doubtful Assets, and Loss Assets. Substandard Assets: Asset which has remained NPA for a period less than or equal to 12 months.

Doubtful Assets: Doubtful assets are those assets which are remained as NPAs or in substandardcategory for more than 12 months.

Loss Assets: If any loss has been identified on any loans or assets such assets or loans are writtenoff.

Reasons for Non-Performing Assets

A Non-Performing Asset (NPA) is a credit that no longer produces cash for the bank, whether through premium or principle instalments. On an accrual basis, a bank can't book interest on a NPA. As per the Reserve Bank of India's prudential standards at the end of the day, such exercises may just be planned for advance.

At the point when it has been gotten completely subsequently, this has developed into what is known as a basic execution in financial area, on the grounds that the quantity of nonperforming resources affects a bank's productivity.

Classification of Assets

Non-performing assets are further divided into three groups based on the length of time they have been non-performing and the amount of money they have owed:

I. Assets that aren't up to par value

A substandard asset is a nonperforming asset that has been evaluated more mediocre for less than or equal to 12 months of March 31, 2005. Substandard assets contain credit flaws that jeopardise the debt's liquidation, as well as the prospect of accruing and suffering losses if the flaws are not addressed.

II. Assets with doubtful Value

Since March 31, 2005, an asset will be classed as questionable if it has been a sub-standard asset for the last 12 months. A dubious loan contains all of the qualities stated under sub-standard assets, plus the possibility to prevent full liquidation or collection based on currently known conditions, facts, and values that are extremely unclear and challenging.

III. Assets That Have Experienced A Loss

The loss will be recognised by banks through internal auditors and the RBI's external auditors will recognised a loss asset, although the value has not yet been totally written off. Even if there is any salvage or recovery value left, these assets are uncollectible and of such low value that their continued or acceptable use as a bankable asset is not warranted or acceptable.

Factors Responsible for NPA

1. Diversification of money for non-investment reasons.
2. Business decline due to failures in product/marketing as well as financial management,strained working relationships, the adoption of unsavoury innovation, the usage of outmoded hardware, specialised issues, and outdated goods.
3. Economic slowdown, input shortages, power outages, price hikes, accidents, natural disasters, and customer difficulties that result in non-payment of past dues.
4. Cost and time overruns throughout the project execution stage.
5. Changes in government regulations, such as pollution control requirements, excise charges, bad credit decisions, priority sector loans, and the legal system, occur often.
6. Wilful default, asset redirection, extortion, and financial misappropriation.

II. Literature Review

Ahmad, Z., Jegadeeshwaran, M. (2013): The study is on NPA and the factors that contribute to it. Over the course of six years, secondary data was collected and evaluated using mean, standard deviation and coefficient of correlation and ANOVA. The banks were graded according to how well they managed nonperforming assets. The ability of nationalized banks to manage nonperforming assets was tested.

Tripathi, L. K., Parashar, A., Mishra, S. (2014): The impact of unsecured loans, priority sectors, and sensitive sector loans from banks on gross nonperforming assets (NPAs) is investigated in this study using a ANOVA.

Ranjan, R., Dhal, S.C. (2013): This study investigates an empirical approach to the investigation of nonperforming loans in Indian private banks using ANOVA. Loan terms, bank size-induced risk preferences, and macroeconomic shocks are all examined in the empirical study to see how they affect NPLs.

Kiran and Jones (2016): looked at secondary data from private sector banks and discovered that net earnings and non-performing assets had a negative relationship. If the cash component of such assets is not recovered, the NPAs begin to resemble expiry date items if they are not adequately managed.

Singh (2016): found that increasing levels of non-performing assets lead to increased credit default and have an impact on liquidity and loan quality, including profitability, in his study on NPA assessment and recovery mechanisms used by commercial banks.

The increase of NPA in private sector banks in India was studied by Das and Dutta (2014): They obtained data from publications on the growth and advancement of banking in India, RBI reports on currency and finance, and RBI economic surveys in India, and analysed it by focusing on non-performing assets by sector in commercial banks. Because of poor NPA management, the banks' performance is low, according to the findings of their study.

Tendon *et al*. (2017): focuses on the macroeconomic causes of non-performing loans particular to banks and their influence on bank profitability. Banks in India can improve their performance by properly recovering debts. One of the key issues facing the Indian banking system has been the rise of nonperforming assets (NPAs).

Ambrish Kumar Mishra, Archana Patel, and Sarika Jain (February 2021): The influence of the epidemic on the performance of the Indian banking system. In order to get semantic information, the Covid-19 outbreak constructed and analysed the greatest complete knowledge base called ontology (Covid19-IBO). They also address a few crucial research concerns about the Indian economy.

Impact of Covid 19 on Indian Economy with Special Reference to Banking Sector was the subject of a research report by Vikas Kumar and Sanjeev Kumar (Jan, 2021): An Indian perspective on the Reserve Bank of India's and the Indian government's policy initiatives to improve the country's present economic predicament.

A research study named "A Study on" was conducted by Dr. Ashly Lynn Joseph and Dr.

M. Prakash (July, 2014): Analyzing the Trend in Private Sector Banks.

Nonperforming Assets It outlines the key contributors to the rise of nonperforming assets (NPAs) in the banking industry, as well as some recommendations on how to alleviate this load.

Modelling tries to look into the influence of priority sector advances, unsecured advances, and sensitive sector advances made by banks such as the HDFC group and other nationalised banks on bank Gross NPAs. L. K. Tripathi, A. Parashar, S. Mishra, L. K. Tripathi,

L. K. Tripathi, L. K. Tripathi, L. K. Tripathi (2014)

III. Research Methodology

The research conducted using secondary data which has been taken from Various Journals, Annual Publication of Banks .The review depends on auxiliary information separated from the particular banks' sites and their yearly reports for the beyond 6 years. For this review I have taken 10 confidential banks and found their mean standard deviation and coefficient of variety and in light of that I have led ANOVA test.

Factors

The factors utilized in the review are autonomous.

1) Gross NPA
2) Net NPA
3) Return on Assets

Leading Private Sector Banks in NSE Axis Bank

As we all know Axis Bank is the third biggest private sector area bank. It was established in 1993 and was initially known as UTI Bank in India, however by 2007, it had a decent organization of 4530 branches. The unit trust of India's stake was then moved to SUUTI, an organization established in 2003. It has a monetary record of Rs. 9,96,118 crores and has shown supported development throughout recent years, with all out resources expanding by 13% and stores expanding by 15%.

Federal Bank

The Federal Bank of India is a private sector bank based in Alava, Kochi, India. It also has offices in Abu Dhabi, Qatar, Kuwait, Oman, and Dubai, among others. It has nearly 10 million users, including 1.5 million non-resident Indians. More than 15% of India was managed by the Federal Bank. It was established in 1931 with the goal of becoming India's most reputable private bank.

City Union Bank

City Union Bank is a Tamil Nadu-based Indian bank with headquarters in Kumbakonam. In the early years, the bank sought a regional role and used an agency model. In 1930, the first branch was established. The bank provides a wide range of financing choices as well as digital banking services. The bank's headquarters are in Tamil Nadu, and it has no growth ambitions during the first 30 years of its existence.

Bandhan Bank

Chandra Shekhar Ghosh established the bank during the 1990s in the wake of seeing the battle of Kolkata's humble dealers. It has started microfinance activities in Bengal's rustic regions. There are 501 branches, 50 ATMs, and 2,022 DSCs in the framework. Starting around 30 September 2021, the bank has prepared stores worth Rs 81,898 crore and had a complete development of Rs 81,661. Its name is GRUH, and it was established determined to help India's least fortunate financial classes. Its base camp are presently situated in Kolkata, West Bengal.

RBL Bank

Ratnakar Bank, originally RBL Bank, is a Mumbai-based Indian private sector bank founded in 1943. The Reserve Bank of India awarded it a banking licence, and it was known as an NH4 bank. As of December 2019, it employed 5,843 employees and operated 372 branches and 394 ATMs in 28 states and territories. The bank's name was changed to RBL BANK in 2014 after a long period of transition.

Indusind Bank

It's a new generation of Indian bank established in Mumbai. In April 1994, IndusInd Bank was founded with a capital of 100 crores, 60 crores from Indian nationals and 40 crores from non- resident Indians. The Nifty 50 benchmark index included IndusInd Bank on April 1, 2003. The bank was founded primarily to meet the needs of NRIs, but it soon expanded its product offerings. Various socioeconomic groups are being targeted.

IDFC First Bank

IDFC Limited was founded in 1997 to finance infrastructure, with a focus on private sector project financing and capital mobilisation. In 2014, the reserve bank of IDFC decided to start a new private bank. IDFC FIRST BANK now has a funded asset base of approximately 1,10,400 crores, with the retail sector accounting for 37% of its assets. They have more than 260 locations throughout the United States.

Kotak Bank

It was founded in 1985, and today it is one of India's fastest growing banks and most admired financial organisations. The bank has around 323 locations and more than 2.7 million customers. Winner of the award for best customer relationship achievement in 2008 and 2009. In Dubai, Kotak Mahindra Bank LTD has built a representative office. There are over 740 places in all. The bank has bought two companies in the last ten years: Ing Vysya Bank in 2015 and Fibrine in2021.

HDFC Bank

Due to its extensive banking network, HDFC Bank is India's most well-known private bank. In 2,956 cities/towns, it has 5779 branches and 17,238 ATMs. It has a market capitalization of $122.50 billion, making it the third largest corporation on the Indian stock exchange. It employs almost 120,000 people. In fiscal year 2017, it deployed 4,30,000 POS terminals and issued 2,35,70,000 debit and credit cards.

ICICI Bank

ICICI was the first non-Japanese Asian enterprise, as well as the main bank or monetary foundation, to be recorded on the New York Stock Exchange. It was made in 1955 on the World Bank's initiative. It flaunts an enormous and extending monetary framework, with more than 5270 bank offices and a huge number of auxiliaries. The organization's base camp are in Vadodara, Gujarat. Toward the finish of September 2020, the bank's absolute resources added upto Rs 14.76 trillion. ICICI Bank presently has 5288 branches and 13846 ATMs spread over India. ITC Classic Finance, Bank of Madura, and Bank of Rajasthan were among the foundationsit purchased.

IV. Research Proposal

1. Research Question

Is there a critical effect of connection between return on resources and the banks?H0: There is no huge connection between Return on Assets of the chose Banks. H1: There is critical connection between Return on Assets of the selected Banks.

2. Research Question

Is there a critical effect of connection between Gross NPA and the resources of the bank?

H0: There is no critical connection between the Gross NPA to add up to resources of the chosebanks.

H1: There is a connection between Gross NPA and the complete resources of the chose banks.

3. Research Question

Is there a critical effect of connection between Net NPA and the resources of the bank? H0: There is no critical connection between Net NPA to Total Assets of the chose Banks.H1: There is huge connection between Net NPA to Total Assets of the chose Banks.

4. Research Question

Is there a critical effect of connection between Net NPA and the resources of the bank? H0: There is no critical connection between Net NPA to Advances of the selected Banks.H1: There is critical connection between Net NPA to Advances of the selected Banks.

Tools Applied

Financial tools like ratio analysis (Gross NPA, Net NPA, ROA) and statistical tools. By using thefollowing formulas, I have calculated.

- Mean = (sum of variable / N)
- Standard deviation= ∑X2/N-(∑X/N)
- Coefficient of variance = SD/Mean *100
- ANOVA (Single-factor) = It is used to compare the means among the ten differentprivate sector banks. This tool is used because of one independent variable for different banks.

ANOVA Test

ROA (Return on Assets)-

For banks, the major assets are the money which they lend and interest which are receivablesfrom that. The percentage of return on assets calculation is shown below.

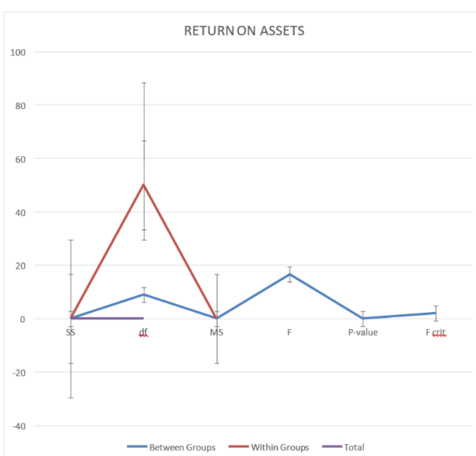
	ROA									
BANKS	**AXIS**	**FEDERAL**	**CITY UNION**	**BANDHAN**	**RBL BANK**	**INDUSIND**	**IDFC**	**KOTAK**	**HDFC**	**ICCI**
2016	1.64%	0.54	1.49	2.79	0.88	1.7	1.2	1.3	1.75	1.43
2017	0.64%	0.79	1.50	4.45	1.02	1.8	1.00	1.57	1.81	1.34
2018	0.04%	0.69	1.75	3.61	1.15	185	0.8	1.66	1.82	0.82
2019	0.63%	0.84	1.60	3.87	1.22	1.4	-1.2	1.68	1.83	0.36
2020	0.19%	0.91	1.00	4.08	0.60	1.6	-1.6	1.75	1.88	0.80
2021	0.69%	0.84	1.15	2.14	0.54	0.92	0.4	1.85	1.92	1.40
MEAN	0.64	0.77	1.39	3.49	0.90	1.51	0.01	1.69	1.85	1.01
SD	0.00559	0.001324	0.002482	0.008681	0.00282	0.00377	0.01261	0.0015	0.00039	0.00428
CV	0.87646	0.17277	0.172924	0.24886	0.31340	0.25004	1.89222	0.09306	0.02120	0.42370

The table above shows the banks' return on investment percentages for various banks also from a financial standpoint Return on Assets, mean, standard deviation, and coefficient of variation of selected banks. According to the research, Bandhan bank has the highest mean value, while IDFC first bank has the lowest mean value.

When it comes to standard deviation, Bandhan bank has the greatest and HDFC bank has the lowest, while when it comes to coefficient of variation, IDFC first bank has the highest and federal bank has the lowest.

ANOVA						
Summary						
BANKS	**COUNT**	**SUM**	**AVERAGE**	**VARIANCE**		
AXIS	6	0.0383	0.0063833	3.13017E05		
FEDERAL	6	0.046	0.0076666	1.75467E06		
CITY UNION	6	0.0831	0.01385	0.000006163		
BANDHAN	6	0.2093	0.0348833	7.53617E-05		
RBL	6	0.0541	0.009016	7.98567E-06		
INDUSIND	6	0.096	0.0151	0.000014256		
IDFC FIRST	6	0.0004	6.6666	0.000159135		
KOTK	6	0.1011	0.01685	0.000002459		
HDFC	6	0.1109	0.0184833	1.53667E-07		
ICICI	6	0.0607	0.01011166	1.83737E-05		
ANOVA						
Source of Variation	Ss	df	MS	F	P-Value	F crit
Between Banks	0.004751968	9	0.000527996	16.65889794	3.101885E-12	2.073351163
Within	0.001584718	50	3.16944E05			
TOTAL	0.006336686	59				

From the above table the lowest average of ROA is Indusind bank and the highest average is IDFC first bank. The p-value comprises The ROA of ten banks is 3.1018, we agree H1 that thereis a relationship between the ROA and the f value is 16.659, which is higher than the F critical value 2.073, rejecting the null hypothesis. As a result, there is a link between the aforementioned banks ROA.



Gross NPA/Total Assets

The below table is the calculated percentage of Gross NPA to their respective total assets indifferent years.

	GROSS NPA/TOTAL ASSETS									
BANKS	**AXIS**	**FEDERAL**	**CITY UNION**	**BANDHAN**	**RBL**	**INDUSIND**	**IDFC FIRST**	**KOTAK**	**HDFC**	**ICICI**
2016	0.0111	0.0176	0.0160	0.0009	0.0053	0.0054	0.0367	0.0147	0.0059	0.3638
2017	0.0348	0.0149	0.0193	0.0028	0.0073	0.0059	0.0137	0.0166	0.0068	0.5462
2018	0.0486	0.0200	0.0214	0.0084	0.0091	0.0076	0.0140	0.0144	0.0080	0.6055
2019	0.0365	0.0203	0.0215	0.0145	0.0093	0.0142	0.0127	0.143	0.0090	0.4735
2020	0.0325	0.0192	0.0284	0.0108	0.0240	0.0167	0.0152	0.0139	0.0082	0.3717
2021	0.0250	0.0224	0.0355	0.0500	0.0258	0.0159	0.0263	0.0193	0.0086	0.3319
MEAN	0.03147	0.01911	0.02373	0.01460	0.0135	0.0109	0.0198	0.0155	0.0077	0.4488
SD	0.01256	0.00257	0.00704	0.01808	0.0089	0.0052	0.0096	0.0020	0.0011	0.1109
CV	0.39906	0.13463	0.29683	1.23798	0.6651	0.4743	0.4888	0.1337	0.1513	0.2471

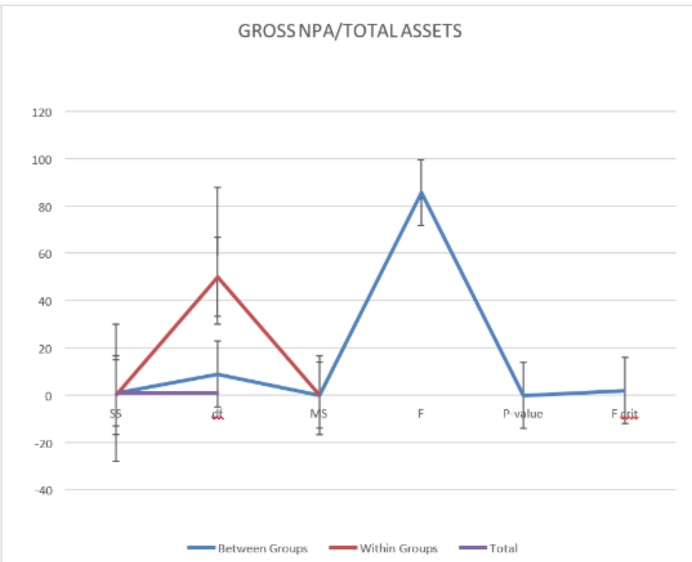
The table above shows the Gross NPA/Total Assets of various banks, as well as bank by bank. Return on Assets of selected banks: Mean, Standard Deviation, and Coefficient of Variation According to ICICI bank, its mean value is the highest, while HDFC bank's is the lowest. The data coming to standard deviation ICICI bank has the highest standard deviation and Kotak bank has the lowest standard deviation and coming to Coefficient of Variation Bandhan bank hasthe highest coefficient of variation while HDFC bank has the lowest coefficient of variation.

ANOVA: SINGLE FACTOR						
SUMMARY						
BANKS	**COUNT**	**SUM**	**AVERAGE**	**VARIANCE**		
AXIS	6	0.1888	0.03147	0.00015		
FEDERL	6	0.1146	0.01911	6.2079		
CITY UNION	6	0.1424	0.02373	4.96314		
BANDHAN	6	0.0876	0.01460	0.00032		
RBL	6	0.0810	0.01350	8.07468		
INDUSIND	6	0.0659	0.01099	2.71999		
IDFC FIRST	6	0.1189	0.01983	9.39799		
KOTAK	6	0.0935	0.01558	4.34721		
HDFC	6	0.0467	0.00779	1.391		
ICICI	6	2.6928	0.44881	0.01230		
ANOVA						
SOURCE OF	ss	df	MS	F	P value	F crit

VARIATION						
Between	1.007463457	9	0.111940384	85.78079142	0	2.073351163
Within	0.065247932	50	0.001304959			
Total	1.072711388	59				

As there is a significant relationship between ROAfrom the above table there is an average rangefrom lowest to highest, 0.00779 of HDFC bank to 0.4488 of ICICI Bank of India. And the P- value is less than 0.5 where we reject the null hypothesis, so there will be a significant relationship between the Gross NPA to the Assets of the banks.

As a consequence of the above analysis, the F value is 85.7807, which is more than the F Criticalvalue of 2.0733, rejecting the null hypothesis. As a result, the aforementioned banks' Gross NPA to Total Assets has a substantial link.



NET NPA/Total Assets

The below table represents the Net NPA percentage to the total assets. NET NPA/TOTAL ASSETS

BANKS	AXIS	FEDE RAL	CITY UNION	BANDHAN	RBL	INDUSIND	IDFC FIRST	KOTAK	HDFC	ICICI
2016	0.0046	0.0100	0.0101	0.0005	0.0031	0.0022	0.0136	0.0065	0.0017	0.1798
2017	0.0141	0.0081	0.0115	0.0020	0.0039	0.0024	0.0051	0.0080	0.0021	0.3267
2018	0.0235	0.0111	0.0118	0.0039	0.0050	0.0033	0.0070	0.0062	0.0024	0.3164
2019	0.0138	0.0101	0.0130	0.0040	0.0046	0.0080	0.0066	0.0049	0.0025	0.1394

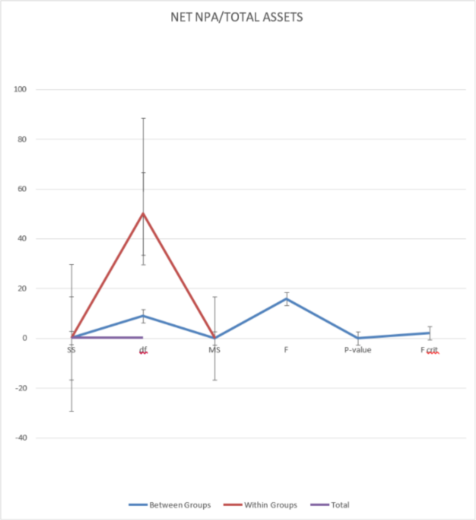
2020	0.0100	0.0087	0.0156	0.0042	0.0133	0.0061	0.0054	0.0043	0.0023	0.0903
2021	0.0069	0.0076	0.0201	0.0248	0.0123	0.0040	0.0115	0.0070	0.0026	0.0741
MEAN	0.01219	0.009313	0.01375	0.00660	0.00707	0.00439	0.00824	0.00619	0.02311	0.18782
SD	0.00671	0.00133	0.00364	0.00907	0.00452	0.00229	0.00352	0.00135	0.00031	0.11016
CV	0.55092	0.14361	0.26487	1.37394	0.63968	0.52119	0.42798	0.21912	0.13548	0.58652

The table above shows the banks' Net NPA/total assets, as well as their Mean, Standard Deviation, and Coefficient of Variation of Return on Assets. According to ICICI bank, its mean value is the highest, while axis bank's is the lowest the research. Getting back to the norm. Coming to standard deviation ICICI bank has the highest standard deviation and HDFC bank has the lowest standard deviation and coming to Coefficient of Variation Bandhan bank has the highest coefficient of variation while HDFC bank has the lowest coefficient of variation.

ANOVA: SINGLE FACTOR						
SUMMARY						
BANKS	**COUNT**	**SUM**	**AVERAGE**	**VARIANCE**		
AXIS	6	0.0731	0.0121	4.51306E-05		
FEDERL	6	0.0558	0.0093	1.78902E-06		
CITY UNION	6	0.0825	0.0137	1.32696E-05		
BANDHAN	6	0.0396	0.0066	8.22887E-05		
RBL	6	0.0424	0.0070	2.05037E-05		
INDUSIND	6	0.0263	0.0043	5.25015E-06		
IDFC FIRST	6	0.0494	0.0082	1.24437E-05		
KOTAK	6	0.0371	0.0061	1.84379E-06		
HDFC	6	0.0138	0.0023	9.80478E-08		
ICICI	6	1.1269	0.1878	0.012136481		
ANOVA						
SOURCE OF VARIATION	ss	df	MS	F	P value	F crit
Between	0.17565	9	0.019517758	15.84349571	7.57316E-12	2.073351163
Within	0.06159	50	0.00123191			
Total	0.23725	59				

From the above table, H1 is accepted because of p-value is 7.57316, hence, therefore, there is a no relationship between the Net NPA/Total assets because Net NPA decreases when there is an increase in the return of Assets, where for banks the interest on money lend are the major assets for them.

As a consequence of the above analysis, the F value is 15.8434, which is more than the F Criticalvalue of 2.0733, rejecting the null hypothesis. As a result, the aforementioned banks' Net NPA to Total Assets has a substantial link.



Net NPA/ Advances:

BANKS	AXIS	FEDERAL	CITY UNION	BANDHAN	RBL	INDUSIND	IDFC FIRST	KOTAK	HDFC	ICICI
2016	0.0074	0.0163	0.0153	0.0008	0.0058	0.0036	0.0249	0.0106	0.0028	0.2978
2017	0.0231	0.0128	0.0171	0.0036	0.0064	0.0038	0.0116	0.0126	0.0033	05431
2018	0.0377	0.0168	0.0170	0.0058	0.0077	0.0051	0.0170	0.0098	0.0039	0.5430
2019	0.0227	0.0147	0.0181	0.0057	0.0068	0.0120	00128	0.0075	0.0039	0.2292
2020	0.0163	0.0131	0.0229	0.0058	0.0204	0.0091	0.0094	0.0070	0.0035	0.1537
2021	0.0112	0.0118	0.0297	0.0350	0.0211	0.0069	0.0187	0.0120	0.0040	0.1242
MEAN	0.01978	0.014310	0.02005	0.009489	0.01143	0.00679	0.01577	0.00996	0.00360	0.31522
SD	0.01076	0.00201	0.00539	0.012678	0.00731	0.00329	0.00565	0.00229	0.00045	0.18658
CV	0.54439	0.14084	026916	1.33612	0.63944	0.48495	0.35825	0.23063	0.12748	0.59193

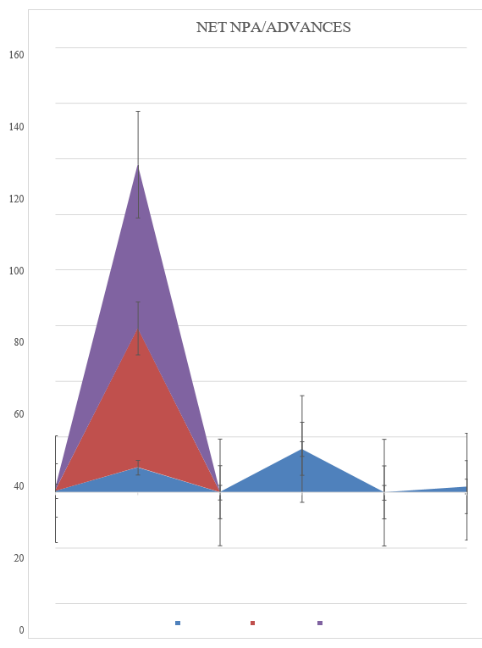
The table above shows the mean, standard deviation, and coefficient of variation of Net NPA to Advances for selected banks. ICCI bank has the greatest Mean Value compared to other banks, while HDFC Bank has the lowest. When it comes to standard deviation, ICCI bank has the greatest and HDFC bank has the lowest, and when it comes to Coefficient of Variation, ICCI bank has the highest and HDFC bank has the lowest. The biggest coefficient of variation belongsto Bandhan Bank, while the lowest belongs to HDFC Bank.

ANOVA: SINGLE FACTOR						
SUMMARY						
BANKS	COUNT	SUM	AVERAGE	VARIANCE		
AXIS	6	0.1186	0.0197	0.00011		
FEDERL	6	0.0858	0.0143	4.06232E-06		

CITY UNION	6	0.1203	0.0200	2.913E-05		
BANDHAN	6	0.0569	0.0094	0.000160746		
RBL	6	0.0686	0.0114	5.3469E-05		
INDUSIND	6	0.0407	0.0067	1.08722E-05		
IDFC FIRST	6	0.0946	0.0157	3.19567E-05		
KOTAK	6	0.0597	0.0099	5.27695E-06		
HDFC	6	0.0216	0.0036	2.11153E-07		
ICICI	6	1.8913	0.3152	0.034815668		
ANOVA						
SOURCE OF VARIATION	ss	df	MS	F	P value	F crit
Between	0.496841	9	0.055204603	15.67094517	0	2.073351163
Within	0.176136	50	0.003522736			
Total	0.672978	59				

From the above table, we reject the null hypothesis because the P-value is low 0 then the significant value is 0.5, and the F value 15.67 which is higher than the F critical value i.e., 2.073. So there will be a significant relationship between Net NPA to advances.

The F value is 15.6709, which is more than the F Critical value of 2.0733, rejecting the null hypothesis. As a result, it can be inferred that the aforementioned banks' Net NPA and Advances have a substantial link.



V. Limitations of the Study

1) The study was conducted for 6 years data.
2) Because the information is optional, i.e., it is assembled from their yearly reports.
3) Profitability proportion and NPA were utilized in the exploration.
4) This study is absolutely founded on optional information and in this manner the nature of the review relies simply on the precision, dependability and nature of auxiliary information givenby Money control and different Banks.
5) The review will be restricted to Gross NPA, Net NPA and Return on Assets Profitability else the chance of study will have been very wide.

VI. Findings

1. Total assets, gross and net nonperforming assets, advances, and efficiency are all factors that should be considered and characteristics, the study found that the chosen Commercial Bank is unique. Return on Assets, Gross NPA/Total Assets, Net NPA/Total Assets, and Net NPA to Advances all have different mean values.
2. Non-performing assets have a negative influence on the profitability of scheduled commercial banks in India, according to the findings.
3. Non-performing assets, sometimes known as bad loans, have an occasional negative impact on the global economy. As a result, the globe is in trouble.
4. Central banks are now taking strong steps to address non-performing assets and foster a stable and productive banking system.
5. Management evaluates how effectively they execute corporate operations using profitability measurements, and the whole bank is encouraged to make effective efforts to improve operational efficiency.

VII. Conclusion

Over the last three to four years, India's private sector banks have underperformed. This has mostly been due to concerns over Non-Performing Assets (NPAs), which have been swept under the rug thus far. It was strongly connected to the ratios of Gross NPA to Gross Advances and Net NPA to Net Advances, but not to the ratios of Gross NPA to Total Assets and Net NPA to Total Assets. As a result of the growth in non-performing assets among India's scheduled commercial banks, the banks' profitability has decreased.

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