JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A study on Operational risk Management in Indian Banks

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Abstract

A strong and stable financial sector is important for any country development as it helps in mobilizing resources to investment. It also helps in shaping the monetary policy of country which is important for economic development of a country. Banks in any country are very important as they work as a medium to mobilise resources from surplus sector to deficit sectors. Banks helps in shaping the economic development of any country when regulated efficiently. Indian economy is one of the fastest growing economies of present time. India is home of 1.4 billion people and 80% of population above 15 years have bank account. For economic development of India, Government of India and Reserve bank of India as a regulator played a commendable role in increasing the penetration of banking sector. Indian banking sector is a mix of schedule Public sector banks (12), schedule private sector banks (21),schedule small finance banks(12),schedule payment banks(4),schedule regional rural banks(43),schedule foreign banks(45).Banks in India as an important player of economic development of country face different type of risks which can be broadly classified in Market risk, credit risk and operational risk. Our study was focused on the operational risk faced by banking sector, for this 10 banks were studied which included 6 public sector banks and 4 private sector banks to make it convenient. All the selected banks annual reports were studied along with the Reserve bank of India published data on banking sectors was studied to find out the operational risk issues faced by Indian banks. Also, a primary study was done to find out the awareness and guidance about present operational risk issues and emerging operational risk issues. This study showed that Indian banks at present time are facing biggest problem in fraud besides that customer complain data showed that most of the complaint are related to the digital payment mode as more and more people are shifting from the physical payment to digital payment mode due to the convenience and the experience gained in the COVID time which showed the importance of digital payment. Also, with the penalty-imposed data it is found that banks need to strictly follow the compliance issues which are laid down by the regulator. The study also found that banks at present and in future going to face issues related to cybersecurity, IT disruption, climate risk any many more emerging risk which need to be studied and prepared with right policy and process mix.

Keyword:- Operational Risk, Fraud Risk, Emerging Risk

Chapter - 1

Introduction

1.1 Background of study

Commercial banks in India were established for the purpose of creating habit of saving and nation building through targeted lending in the thrust area for its stakeholder. Banks undertake these activities by taking fair amount of risk and expect a sufficient return to remain as a going concern. Banks in the process of providing the financial services assumes various kind off financial risk. The risks differ in their nature and occurrences pertaining to different business activities. That is to say that certain risk in particularly affect the operations of banking industry.

Also, risk associated with banking service differs as per services rendered. Banks face several Risk to conduct their business, and how well these risks are managed and understood is a key driver behind profitability, and how much capital a bank is required to hold. Some of the main risks faced by banks include credit risk, market risk and operational risk. Credit risk is the risk of loss of principal or loss of a financial reward stemming from the borrower's failure to repay a loan or meet contractual obligations. Market risk is the risk of losses arising from changes in value of the market risk factors. There are three common market risk factors to banks and that are liquidity, interest rates and foreign exchange rates. Operational risk refers to the financial loss to business as a consequence of conducting it in an improper or inadequate manner. Operational risk may manifest itself in the likes of business disruption, control failures, frauds (Internal & external) and external events.

1.1.1 Operational Risk Management

The bank of International Settlement (BIS), the principal organization of central bank (based in Basel Switzerland) and the central banks of major economies of the world had defined operational risk as the risk of losses resulting from inadequate or failed internal processes, people and system or from external events. Losses from Operational risk can be divided into those losses that are expected and those that are unexpected. Operational risk is not a new but historically if we see before the sophistication of risk management process and before Basel defined operational risk, organization were already using operational risk management technique by accepting and making best practices and procedures. Operational risk management is different from credit risk and market risk as risk is taken not for getting any return, but risk is taken as cost of doing business. Operational risk is not a new risk, but as the banking operations are increasing risk is also significantly growing, virtually every catastrophic financial institution loss that had taken place during the past 20 years can be traced to poor operational risk management and controls. Example of Four bank staff were arrested at Arani in the district for allegedly committing jewellery loan fraud to the tune of Rs 2.51 crore in the Arani Cooperative Bank. As per the information the suspects Chairman of the Bank Ashok Kumar, Manager Lingappan, Jewellery Assessor Mohan, and Cashier Jagadeesan allegedly got loans in the name of their relatives by pledging gold-plated jewellery. it was revealed total loans provided in the bank were Rs 29.12 crore. Out of that 77 account owners pledged fake and low-quality gold jewellery and committed fraud worth Rs 2.39 crore. Five accounts pledged jewellery worth Rs 21 lakhs and got Rs 12 lakh more loan amount than the permissible limit," officials said.

Liberalization, Globalization and technology advancement have provided banking industry with ample opportunity of profit making but have also made it more vulnerable to operational risk. It seems that the industry's risk control capability has not kept pace with these developments as proved by, example the Punjab National Bank Nirav Modi Saga. These occurrences together with many others incident motivated banks to take a more proactive approach to operational risk management.

The Basel Committee on Banking Supervision (2003) suggested that risks other than credit, interest and market risks could be substantial. The greater use of highly automated technology has the potential to transform risk from manual processing errors to system failure risks as greater reliance is placed on integrated systems. After the covid crisis the incident of fraud and hacking event has increase along with systems security issues that are not fully understood. Also due to increase of e-commerce business banks acting as large volume service providers creates the need for continual maintenance of high-grade internal controls and backup systems. According to the Credit-Suisse Group (2001), banks may engage in risk mitigation techniques to optimize the exposure to market and credit risk but which may in turn produce other forms of risk like operational risks.

1.1.2 Indian Economy and Banking industry in India

In recent financial year global economy was hit by COVID. Indian economy was also got affected by the immediate surge in covid cases. Indian economy saw many challenges like recurring and devastating COVID waves, supply chain disruptions and recently elevated inflationary pressures. The economy strived to expand but was time and again lashed by COVID induced lockdowns. The government and the regulator’s immediate response in providing stimulus packages and relief measures to the vulnerable sections of the society has helped alleviate the stress. Consequently, Indian economy has shown resilience to macroeconomic shocks and retains the tag of world’s fastest growing economy. As per the provisional estimates released, Indian economy witnessed real GDP expansion of 8.7 per cent in FY 2021-22 and expected to grow at 7.2 per cent in FY 2022-23 after contracting in FY 2020-21. This implies that overall economic activity has recovered past the pre-pandemic levels.

The Banking industry in India has historically been one of the most stable systems globally, despite global disturbances. Bank’s resilience was tested by the pandemic in an unforeseen way, but banks have emerged stronger. Banks in FY 2021-22 witnessed improved asset quality, stronger capital and provision buffers and increased profitability. The credit and deposit growth accelerated in FY 2021-22. During FY 2021-22 credit off-take has taken place in almost all major sectors compared to FY 2020-21. Industrial sector credit turned positive after contracting over the previous two years. Timely restructuring of loans helped industries and business to fight the downturns.

Scheduled Commercial Banks continued to bolster their capital through a mix of internal accruals and capital raising, including Tier I and II bonds, resulting in the capital to risk-weighted assets ratio rising to new peak levels in almost all banks.

The return on assets and return on equity maintained their rising profile, with Public Sector Banks recording multi-year highs. The cost of funds and yield on assets declined across bank groups to reach their lowest levels in the last two decades. The economic growth in FY 2022-23 is projected to be in the range of 7 - 8 per cent, with RBI projecting the growth at 7.2 per cent. Indian banks need to take into account the tectonic shifts emerging in the financial system – phenomenal growth in digitization, advent of innovative products, disruption by Fintech players, fusion of technologies and proliferation of increasingly intertwined ecosystems. The Indian economy is at a crucial stage where it is coming out of pandemic shock and ready to take off. Indian Banks have strong fundamentals and are well positioned to play the part. Access to credit and banking products has improved over the past decade on the back of sustained efforts by the government. Increase in working population and growing disposable income will further raise the demand for banking and related services. The government is also very keen to drive cashless transactions, and has encouraged initiatives to improve payment infrastructure, leveraging the internet and mobile technology. Banks have ramped up their efforts to expand their footprints in this platform since there has been continued uptick in online transactions and it is likely to continue even after the pandemic. Mobile, internet banking and extension of facilities at ATMs will also help improve the operational efficiency. The digital payments system in India has evolved the fastest amongst the countries. It is evident from the record number of UPI transactions per month. The opportunities and potential to grow digitally are virtually unlimited. There is still a huge gap between the urban and rural India, which itself is opportunity where banks can grow. This opportunity can be utilized fully by collaborating with NBFC and fintech company. Banks will benefit as they will get access to new customers, can make use of the Fintech's digital capabilities and provide a better digital experience to the customers. The Fintech can benefit via the bank's safety, trust people have on the banking structure and the risk analytics of the banks. Thus, the respective comparative advantages of the banks and NBFCs can be leveraged in a collaborative effort to raise the financial reach. Also due to rising penetration in online purchase and changing consumer behavior card payment (Credit card, Debit card) is going to increase.

With all these promising outlooks of economy it also opens up the threat and challenges which is shaping. New kinds of FinTech's have entered the banking landscape and have the potential to disrupt the market. Going ahead, the biggest challenge for banks lies in surviving the digital disruption. Banks instead of competing, should collaborate with them for risk sharing and facilitating the synergies between banks and non-bank lenders. Business Intelligence Units and setup is required to create data driven decision making models as it will provide competitive advantage to the Bank. Data should be core to the strategy of the Bank and should not just be limited as an enabler. Cyber risk is the greater risk given the adoption of digital payment by masses. Banks need to invest in the area to mitigate the risk emanating from the cyber risk. Banks also need to be cautious on the evolving risk related to the digital assets and have to keep pace with the development to stay modern and technology driven entity.

1.1.3 Reserve bank of India and operational risk management in Indian bank

The Basel committee on banking Supervision defines Operational Risk as the risk of loss resulting from inadequate or failed internal process people and system or from external events. The committee states that it excludes strategic and reputational risk but includes Legal risk. Operational risk is inherent in banking system. Operational risk ranges from natural disaster to the risk of fraud.

Banks need to have a clear appreciation and understanding of what is meant by operational risk and it is critical to the effective management and control of this risk category. It is also important to consider the full range of material operational risks facing the bank and capture all significant causes of severe operational losses. Operational risk is pervasive, complex and dynamic. Unlike market and credit risk, which tend to be in specific areas of business, operational risk is inherent in all business processes. Operational risk may present in a variety of ways in the banking industry.

On the line of Basel Committee, Reserve bank of India has identified the following types of operational risk events as having the potential to result in substantial losses:

• Internal fraud. For example, intentional misreporting of positions, employee theft, and insider trading on an employee's own account.

• External fraud. For example, robbery, forgery, cheque kiting, and damage from computer hacking.

• Employment practices and workplace safety. For example, workers compensation claims, violation of employee health and safety rules, organized labour activities, discrimination claims, and general liability

• Clients, products and business practices. For example, fiduciary breaches, misuse of confidential customer information, improper trading activities on the bank's account, money laundering, and sale of unauthorized products.

• Damage to physical assets. For example, terrorism, vandalism, earthquakes, fires and floods.

• Business disruption and system failures. For example, hardware and software failures, telecommunication problems, and utility outages.

• Execution, delivery and process management. For example: data entry errors, collateral management failures, incomplete legal documentation, and unauthorized access given to client accounts, non-client counterparty mis performance, and vendor disputes.

Operational risk is different from other banking risk as it is not directly taken in expectation of any return but it is implicit in day-to-day business. Failure to properly manage operational risk can expose the institution to significant losses. The whole purpose of management of operational risk is identification, assessment, measurement, monitoring and control/ mitigation of risk.

Based on the principles of Basel committee on banking supervision, Reserve Bank of India has issued "Guidance Note on Management of Operational Risk" on 14th October 2005.

In view of changing operational risk scenario bank felt a need to study operational risk practice in bank and comparing it with other banks. The study will use mainly qualitative measures to answer the question regarding the measure taken to control operational risk in day-to-day banking and comparing it with other banks and coming out with any suggestion which can be useful in addressing those situations.

1.2 Research Problem

Any Financial Disaster in any Institution whether it is Bank or non Bank Financial company indicates towards poor Risk Management Practices. Any major bank failure had happened due to unidentified risks within the banks which was either ignored or remained unmapped. Many of these highly improbable events such as the terrorist attacks on 26/11, unauthorized trading losses at Barings Bank, resulting in its collapse and other events have contributed towards a growing focus on identification and measurement of operational risk. Banks generally operate in environments where risk changes at a very fast pace also one risk can introduce different other risk hence the need for an efficient risk management process, categorized by risk type to be able to address the specific risk factors. A clear description of all the risk factors will ensure the allocation of accountability and responsibility to deal with each factor.

A Bank can face different type of risk. Risk can be broadly categorized as Market Risk, Credit Risk and Operational risk. Operational risk is quite different from the other risk as it is inherent in other all type of risk. Operational risk refers to the losses flowing from inadequate internal process, human error or an external event. In detail it can be inadequate computer system, insufficient internal control, incompetent management, fraud(Internal and external), employee mistake, natural disaster and cyber security risk.

The above characteristic of operational risk brings the importance of this study on operational risk. In this study we are studying the operational risk management in Indian banks.

1.3 Research Objective

The objective of research is to focus on

- Present operational risk environment in Banking sector and response and remedial action taken by banks to mitigate and control the same.
- Study of emerging risk in operational risk area and defining the emerging risk and studying the preparedness of banks in defining and controlling the same.

Chapter: -2

Literature Review

History of Operational risk management is much older than credit risk and market risk management as long before the advent of Basel II, financial institutions had put in place various control mechanisms and procedures. The process of managing operational risk is different from those of managing market risk and credit risk as operational risk is different from the other two kinds of risk. One important difference, between operational risk management with credit risk and market risk is that at each hierarchical level implementation of operational risk management is different. Kaiser and Kohne in their book “An introduction to operational risk” defines this difficulty as the absence of a portfolio concept for aggregating the individual risk categories that operational risk contains. In coming years Banks will have to focus on the development of new and sophisticated way to measure operational risk due to new regulatory orders or increasing operational risk in banking operation along with integration of credit and market risk into analysis. As per “Operational risk and financial institution: getting started” Followings are the objectives of operational risk management, (i) avoiding catastrophic losses, (ii) generating a broader understanding of operational risk issues, (iii) enabling the firm to anticipate risk more effectively, (iv) providing objective performance measurement, (v) changing behavior to reduce operational risk, (vi) providing objective information so that services offered by the firm take account of operational risk, (vii) ensuring that adequate due diligence is shown when carrying out new business decision. As per the above objectives it is quite clear that they fall under Risk avoidance and risk reduction but operational risk is more than that as it also contains risk transfer and risk pricing.

As per Harris R “Emerging practices in operational risk” has provided a basic overview of what advanced financial organizations are at present doing to address and implement operational risk management. He elaborates this pattern as recognizing operational risk as a separate discipline, restructuring the organizational hierarchy, defining a management process, creating measurement tools, developing monitoring systems. As per Ford and Sundmacher ”Leading indicators for operational risk: case studies in financial services” argued that it was unlikely that operational losses in the three banks Barings, AIB and NAB would have been recognized and consequently prevented under the revised capital standards for financial institutions suggested by the Basel Committee on Banking Supervision (BCBS). Instead, they recommended that key risk indicators to be developed. Accordingly, they identify some operational risk indicators like cost-to-income ratio, Ratio of Back Office to Front Office Staff, Number of Daily Trades per Individual Trader, Expenditure on Training per staff member, proportion of incentive-based remuneration that can be incorporated into a scorecard approach for use within institutions. Herring richard (2002) in “The Basel 2 Approach to Bank operational Risk: Regulation on the wrong side” challenges the rationale for employing capital charge suggested by New Basel Capital Accord to mitigate operational risk. The argument is that operational risk unlike other risks is idiosyncratic, thereby involves less systemic implications. Banks with the help of technological advancements have been able to manage operational risk by offering innovative products like e-banking, mobile banking, digital lending which has been able to reduce a lot of their operational risk exposure by minimizing the human intervention in their overall process. Martin (2009) in “ As Risk Management evolves , is operational risk management important” argues that the culture of an organization is critical to its success in managing operational risk. Operational risk according to the author has two causes, an act of God (flood, earthquake and windstorm) and a person. People, who are at the heart of the culture of an organization design and maintain processes and systems and cause operational risk events by either doing something they should not be doing or not doing something that they should be doing. He argues that the culture of an organization is critical to its success in managing operational risk.

A proper risk culture embedded in people and processes offers a financial institution greatest protection against failure as against its capital. At the core of any risk culture are the incentives for individual reward that balance risk and return which is long-term stakeholder goals. In this direction Basel II presents an operational risk framework that intended to foster a risk-adjusted performance culture (RAROC) that is hoped for preventing such crisis in the future.

As per GARP books on “Operational risk management” banks traditionally controlled operational risk based on qualitative risk management checklists and guidelines. This has become inadequate due to the increased complexity and speed of bank operations. Now, banks must first try to measure operational risk so that senior managers can establish objectives in prioritizing risk control among different business lines and risk categories, in order to supplement internal control in a more robust way. Measurement also is necessary for the management to determine whether the banks have appropriate capital for their level of operational risk. In addition, measurement also enables the bank to tie performance to employee's risk management effectiveness.

At present most of the Indian banks are going through the transition phase where banks are updating themselves as per the requirement of regulators and due to growing size of Indian economy where banks have to keep pace with the economic development of country alongside the rapidly changing banking environment where banks are facing competition from traditional competitors and fintech company which are riding on the back of technological development. Due to this changing environment banks are exposed to new operational risk events like climate risk, conduct risk, IT disruption are few of them to be listed. As per Nitish idnani “The future of operational risk management” uses of artificial intelligence and data science is going to be way forward towards effective operational risk management due to its dynamic and constantly evolving nature. At present all the Indian banks which are studied are using basic indicator approach to calculate the operational risk capital calculation which is going to be changed to new standardized approach as per Basel III from 01-04-2023 which are more robust and future looking. Still most of the Indian banks are struggling in proper development of Risk culture and governance which is quite clear by going through the reported cases and near miss event where banks or customers of banks have been duped or cheated by not adhering to the laid down procedure and in process bringing the banks to reputation risk. A risk culture is an important part in development of operational risk management framework in banks.

Conclusion: - Operational risk management is quite different from credit and market risk management. Operational risk is inherent in banking operation right from natural disaster to fraud incident. As per BCBS sound operational risk management practices covers governance, the risk management environment, risk culture and the role of disclosure. Operational risk Management must be fully integrated in the overall risk framework of banks to obtain maximum benefit.

As per the objective of this research work where comparative study of operational risk in Union bank and other schedule commercial bank Annual report and other disclosure are being studied.

Chapter: - 3

Research Design & Methodology

3.0 Introduction:

This chapter sets out a description of the research methodology. Research methodology provides details regarding the procedures to be used in conducting the study. Research methodology is a specific plan for studying the research problem and constitutes the blueprint for the proposed data collection, measurement and analysis of the data. Included in the methodology section are descriptions of the research design, the population, the sample and sampling techniques, and a description of instruments or tools used to collect data, the measurement of variables and the techniques to be used in analyzing the data.

3.1 Research Design:

The research problem was studied by use of mixed method design. A mixed method design is characterized by the combination of qualitative and quantitative research component. A questionnaire was made to collect the primary data from people working in banks and a study on the awareness on operational risk management in the Bank and emerging operational risk management issue was done . Secondary data from Reserve bank report along with annual reports of banks, disclosures published by banks were studied and analyzed along with article published by economic publication and research report on the subject were studied.

3.2 Target Population:

Target of this study was all schedule commercial banks working in India but to make it comparable, top 6 public sector banks and top 4 private sectors banks were selected to study the operational risk management. Along with this a questionnaire was made and responses were collected from the people working in banks to know their awareness and response on present and future operational risk management issues.

3.3 Sample size

Sampe size of this study was 10 banks functioning in India which include top 6 Public sector bank and top 4 private sector bank. Also, a primary data was collected from 102 responded working in various banks .

3.4 Data Collection

Data was collected from 10 banks Annual reports along with RBI Published data on banking outlook of Indian banks along with newspapers and journal which published the data related to Indian banks operational risk. Besides that, primary data was collected from the volunteers from banking domain who willingly gave their responses and filled questionnaire.

Chapter: - 4

Data analysis & Result

4.0 Introduction

This chapter presents the research finding and result of the study done on the operational risk management in indian banks. For study last three-year data has been taken as amalgamation process in top public sector banks was happened in Financial year 2020-21.

4.1 Study of Operation Risk Management in Banks on different KRAs:

For our study we have used secondary data which was collected from Reserve Bank of India report, NPCI data and the selected 10 banks and their annual reports were studied, and comparison were made on few parameters related to operational risk management.

4.1.0 Implementation of Operational risk Management and capital calculation in studied Bank:

In our study we had following observation

- All the banks are having board approved operational risk management policy based on Reserve Bank of India guideline.
- All the banks studied are using Basic Indicator Approach for Operational Risk Capital calculation.
- All the banks studied are having loss data management policy.
- All the banks studied are having a fraud risk management policy.
- Fraud cases above 1 crore has been separately handled by all the banks.
- All the banks studied have Business continuity or operational resilience policy in place as per their annual report except PNB and INDIAN bank which had not discussed on the matter in their annual report.
- All the banks studied are in place cyber security policy.
- All the bank studied are having outsourcing policy in place.
- All the banks studied are having a documented Compliance policy.
- All the banks studied are having grievance redressal policy in place.
- ESG and Climate risk related initiative is found in all banks where banks are consciously adopting green initiative. All the bank studied are having some sort of green initiative in place but some of Banks are in advance stage in implementation. SBI, HDFC and ICICI Bank have already adopted ESG framework. SBI and HDFC Banks have already declared to achieve carbon neutral organization status till FY 30 and FY 32 respectively.

4.1.1 Customer Complaints and analysis of complain:

In a service industry customer complain and grievances redressal are important issues. A successful institution not only give priority to the customer complain but also analyze the root cause of problem. It not only helps in customer satisfaction but also customer retention which leads to profitable organization.

We studied our sample bank annual report to understand the number of customers complain received by them from various medium and also the nature of customer complain.

CUSTOMER COMPLAIN RECEIVED AND DISPOSED BY BANKS INCLUDING BO COMPLAIN		
	2021-22	2020-21
	NO OF Complain	No Of Complain
STATE BANK OF INDIA	3323232	3041095
PANJAB NATIONAL BANK	642589	1282799
BANK OF BARODA	867546	1908739
CANARA BANK	210725	102481
UNION BANK OF INDIA	337601	407127
INDIAN BANK	264429	326846
HDFC BANK	367676	466247
ICICI BANK LIMITED	429365	480666
AXIS BANK LIMITED	907526	343782
KOTAK MAHINDRA BANK LTD.	199413	292133

Source:- Individual Bank Annual Report

As per the reports published by banks it is found that under top five category of customer complain mainly constituted ATM, Internet banking/ mobile banking, credit card, account opening, Pensioner or senior citizen related issues, Loan and advances related complain, cheque book related issues and charges related issues came in all the banks. Majority of the complains the banks received were from ATM related complain. SBI customer complain constitute more than 80% from ATM related services. Second highest complain was from internet banking related issues. Except SBI all the banks received more than 10% of complain. Third highest customer complain area remained as credit card, account opening and Loan and advances. For some banks like Union bank of India and SBI charges debited to account remained as third highest area.

Most of the banks have improved upon customer complain from year-to-year basis where total complain has decreased from previous year except SBI and Axis Bank and Canara Bank. There is also change in the composition of customer complain from bank to bank seen from one year to another year.

- PNB, Union Bank of India, INDIAN Bank, HDFC Bank, ICICI Bank had seen significant improvement in cases of customer complain pertaining to ATM related issues.
- SBI and Canara Bank had witnessed a jump of 135.42% and 49.06% complain under category Internet Banking and Mobile Banking.
- Canara Bank had witnessed a 69% and 163% increase in complains pertaining to Account opening and customer service and working hour related issues.
- Axis Bank had witnessed the increase in customer complain in all the area like Credit card, Account opening, ATM/Debit Card, Internet /Mobile Banking. It had witnessed more than two times increase in no of complain on year-to-year basis.

Customers complain is an important area of interest for operational risk management. As it gives an indication regarding the problem area which need to be fixed and attended. In case of ATM and

Internet banking related issues it gives an indication about problems related to information technology and connectivity. Banks need to study closely about all the complaint area and try to rectify the issues which can be rectified through use of technology or proper training as most of the complain consist of small issues.

4.1.2 Fraud data analysis:

Fraud is an intentionally deceptive act where one party by way of false representation of facts, withholding important information or providing false statements to another party for the specific purpose of gaining something that may not have been provided without the deception.

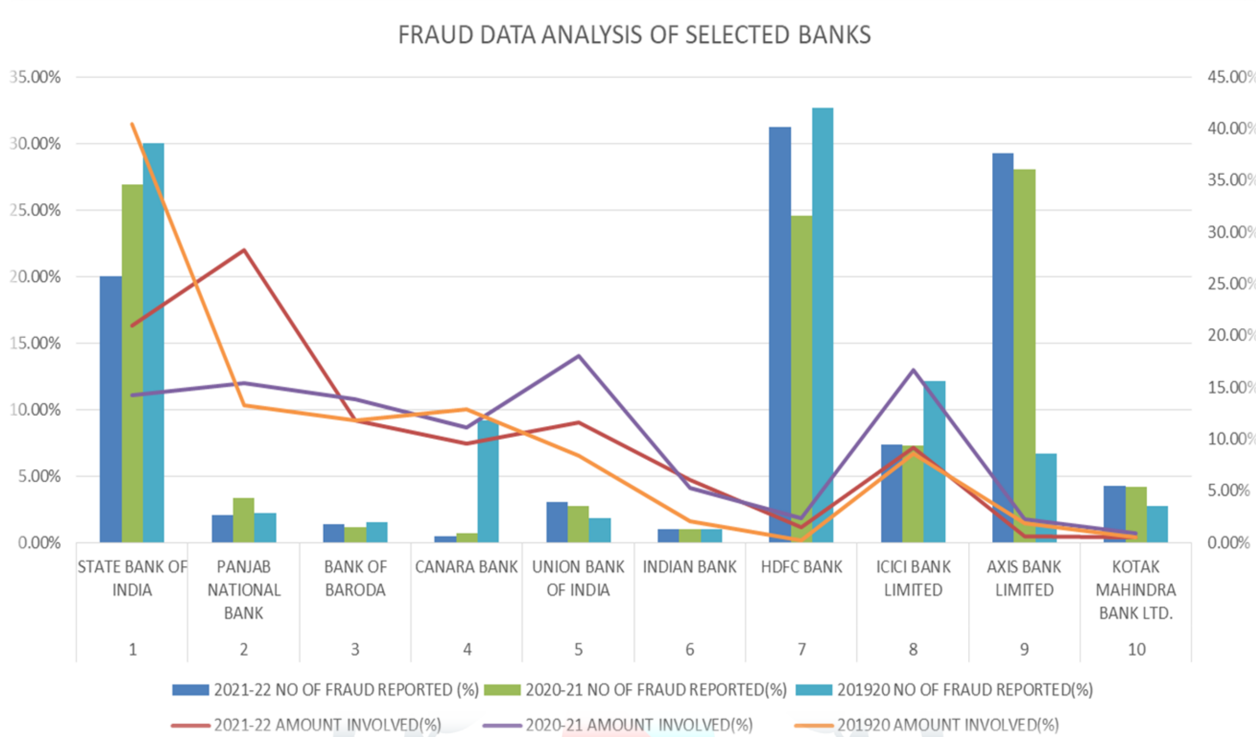
As per the RBI study it is found that every year Indian banks loses a substantial amount due to fraud. Data published by RBI also bring to the notice that private banks reported maximum number of fraud event in the last two financial year but amount wise Public sector banks contributed more than 50% of the fraud amount. As per loss data published by RBI it is found that maximum fraud happened in the area of loans and advances in number and amount wise. It consists more than 95% of total losses due to fraud. Also, as per RBI report it is found that there is sufficient time lag between date of occurrence of fraud to reporting of fraud.

We collected the data published by banks in their annual report regarding the fraud event happened and reported in last three financial years.it is found that most of the banks had improved upon the loss in last previous year.

	BANK NAME	FY 2021-22		FY 2020-2021		FY 2019-2020	
NO	AMT IN CRORE	NO OF FRAUD REPORTED	AMOUNT INVOLVED	NO OF FRAUD REPORTED	AMOUNT INVOLVED	NO OF FRAUD REPORTED	AMOUNT INVOLVED
1	**STATE BANK OF INDIA**	4192	7100.65	5724	10085.92	6964	44622.45
2	**PANJAB NATIONAL BANK**	431	9579.8	714	10947.51	509	14633.22
3	**BANK OF BARODA**	280	3990.12	248	9796.31	350	12971.14
4	**CANARA BANK**	90	3245.18	152	7885.25	2132	14237.27
5	**UNION BANK OF INDIA**	638	3942.37	579	12791.43	415	9196.98
6	**INDIAN BANK**	211	2036.71	219	3759.68	226	2252.1
7	**HDFC BANK**	6543	505.86	5232	1640.8	7580	222.6
8	**ICICI BANK LIMITED**	1549	3100.05	1549	11838.64	2817	9472.87
9	**AXIS BANK LIMITED**	6125	209.43	5959	1579.67	1554	2055.62
10	**KOTAK MAHINDRA BANK LTD.**	899	169.55	894	656.44	643	579.6
	TOTAL	**20958**	**33879.72**	**21270**	**70981.65**	**23190**	**110243.8**

Note:- As per Annual report published by banks.

As per the data analyzed it is found that Punjab National Bank had reported highest no of fraud amount wise in all the banks and HDFC Bank in case of Number wise as per Annual report of Financial Year 2021-2022. Also, it is found that loan and advance was the main area where fraud happened.



As per the study all the banks studied had fraud risk management at place. Fraud event above 1 lakh were reported to the regulator. All the banks studied had made special committee for fraud cases of above Rs-1 crore which primary work is to find out the systemic lacunae and to investigate and find out perpetrators and put in place the remedial system to avoid it recurring. For this staff accountability is also studied. Cyber insurance policy is also used from reputed insurance company to protect against internet-based risk and frauds. All the banks studied were using red flagging of accounts on observance of EWS & examination of fraud angle is done within a specified timeline as per the term of regulatory guidelines. Also, banks studied are promptly reporting the same in RBI CRILIC platform. Banks are also using whistle blower policy to control fraud and malpractice or any activity which is harmful for banks. Audit play a great role in control and detection of fraud. Banks studies are using regular Audit, concurrent audit and statutory audit as per norms. Banks studied have in place a board committee looking after organisational operational and quality control of audits.

Banks studied had also taken measures to improve the credit decision by strengthening due diligence process, enhancing credit decision mechanism, use of risk rating module and validation of same at regular interval. Bank like SBI, HDFC Bank, ICICI Bank, AXIS Bank have integrated with National Hunter to check their fraud database.

Vigilance also plays a major role in fraud detection and control. There are three aspects to the vigilance function i.e Preventive, Punitive and Participative. Based on the previous experiences and incidents, system and processes are streamlined by use of technology and as per bank guidelines in form of Preventive vigilance and participative vigilance. All the banks studied have vigilance mechanism in place. Public sector banks had Chief Vigilance officer at there controlling office which oversees the matter related to vigilance function as per the guidelines of Central vigilance commission

All studied banks have a Board approved Fraud Risk Management policy in place. Bank has Fraud review council, Operational risk management committee, Audit committee of the board and special committee of board for monitoring of fraud cases to examine the cases of fraud / attempted fraud and to put in place system and procedure for prevention of fraud. Apart from reporting of fraud cases of Rs 1.00 lakhs and above to the board the bank also report all the fraud cases of Rs. 1.00 crore and above to the special committee of the board for monitoring of fraud. Union Bank has also implemented Enterprise wise Fraud Risk Management solution for fraud detection in transaction through various channels. Bank has also Chief vigilance officer in place and whistle blower policy in place.

4.1.3 <u>Penalties Imposed By regulators and sexual harassment cases:</u>

All the banks studied had declared the penalties imposed by regulators in their annual report of year 2021-22 which is being studied to get insight of the cases.

- SBI had been penalized Rs-50 lakhs by regulator for failure in taking utmost care in data accuracy and integrity while submitting data on CRILIC portal. Besides that, it is being penalized Rs-1 crore each for non-classification of fraud account and under Banking regulation act 1949.
- HDFC Bank had been penalized Rs-10 crore for marketing and sales of third party non-financial to the bank auto customer arising from whistle blower complain. RBI imposed restriction on HDFC to stop all digital business generating activity due to certain incident of outage in the internet banking/mobile banking/payment utilities of bank which was eventually relaxed afterwards.
- Bank of Baroda had been penalized by RBI amounting Rs-10.33 crore in 532 cases and by overseas regulator in their home territory by Rs- 0.33 crore in 11 cases.
- ICICI Bank was penalized Rs-3 crore by RBI for transferring security from HTM (Held to maturity) category to AFS (Available for sale) without taking permission from regulator, on other occasion ICICI Bank was penalize Rs-30 lakhs under Banking Regulation act 1949 from levy of penal charges for non-maintenance of minimum balance in saving account which ICICI bank was wrongly charging.
- Axis Bank was penalized by RBI Rs-5 crore due to non-compliance with certain provision of RBI Direction.
- Indian Bank had been penalized Rs-2.65 Crore in financial year 2021-22 in 163 entries. Out of these 149 entries pertaining to currency chest operation for shortages, forgeries in soiled notes remittances, delayed/ wrong reporting in ekuber /nonadherence to RBI guidelines.
- PNB was penalized 2 crore by RBI for delayed reporting of fraud data and not ensuring the data accuracy and integrity while submitting data at CRILIC.PNB was also penalized 1.8 crore by RBI for holding more than 30% of paid up capital share in four borrower account against the provision of holding maximum up to 30%. PNB was also penalized Rs. 1 crore by RBI for operating a bilateral ATM sharing arrangement with Druk PNB Bank LTD Bhutan without approval / authorization from RBI.

- Union Bank of India was penalized Rs 1 crore by RBI under for non-compliance with the certain provisions of directions issued by RBI contained in “Reserve Bank of India (Fraud - Classification and Reporting by commercial banks and select FIs) Directions 2016” and “Guidelines on Sale of Stressed Assets by Banks”.
- Canara Bank was penalized Rs- 5 lakhs by RBI due to first instance of SGL Bouncing.
- Kotak bank had reported nil penalty by RBI.

Banks disclose the sexual harassment of woman at workplace in there annual report which was studied and found following observation

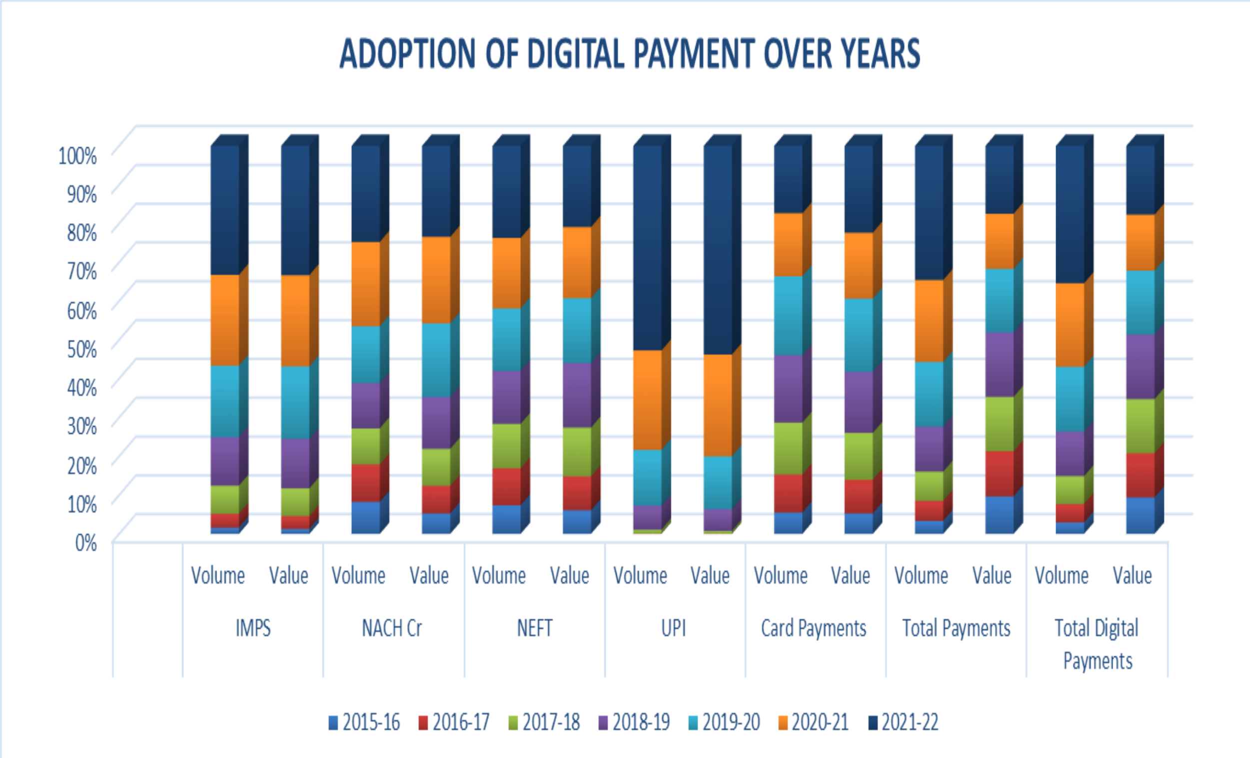
- Bank of Baroda reported 25 such incident in which 21 were resolved during the financial year 2021-22
- Canara Bank reported 6 incidents during the same time which were resolved during the period.
- PNB reported 13 such incident out of which 10 were resolved and 3 remained unresolved during the same time.
- SBI reported 49 cases during the same time including unresolved issue out of which 44 were resolved and 5 remained unresolved.
- Union bank of India received 10 cases during the same time out of which 5 remained unresolved.
- Indian bank reported zero such cases during the same time.
- HDFC bank reported 51 cases during the same time out of which 48 cases resolved during the same time and 3 remained unresolved.
- ICICI bank reported 46 such cases which were resolved during the same time.
- Axis Bank reported 49 such cases including unresolved cases of previous year out of which 44 were resolved and 4 remained unresolved.
- Kotak bank reported 33 cases related to sexual harassment cases out of which 7 remained unresolved.

4.1.4 Study of UPI and NFS data:

After the arrival of covid pandemic there was a globally shift in the payment habit of customer. Digital payment habits were adopted due to social distancing measure and convenience. Also government of India and RBI along with banking industry had promoted the digital payment method by directly transferring benefit to beneficiary account along with some other measures like zero commission on use of digital platform.

As per the RBI report the payment system in India showed a robust growth of 63.6 % in terms of volume during 2021-22 which was much higher than 26.7 % expansion seen in the 2020-21. In value terms, the growth was 23.1 % as against a decline of 13.4 %in the previous year, mainly due to the higher growth observed in the large value payment system like RTGS. The share of digital transactions in the total volume of non-cash retail payments increased to
99.3 % during 2021-22, up from 98.8 % in the 2020-21.

Among the digital modes of payments, the number of transactions using RTGS increasedby 30.5 % during 2021-22. In terms of value, RTGS transactions registered an increase of 21.8 %. Transactions through the National Electronic Funds Transfer (NEFT) system also witnessed an increase of 30.6 % and 14.3 % in volume and value during 2021-22.



Among the digital modes of payments, the number of transactions using RTGS increasedby 30.5 % during 2021-22. In terms of value, RTGS transactions registered an increase of 21.8 %. Transactions through the National Electronic Funds Transfer (NEFT) system also witnessed an increase of 30.6 % and 14.3 % in volume and value during 2021-22.

During 2021-22, payment transactions carried out through credit cards increased by 27.0% and 54.3 % in terms of volumeand value. Transactionsthrough debit cards decreased by 1.9 %in terms of volume, but in terms of value, it increased by 10.4 %.

one of the fastest growing digital payment modes is UPI. UPI has seen growth of 105.79% in 2021-22 than 78.37% increase in 2020-21 in term of volume. In term of value, it has seen an increase of 105.08% in 2021-22 than 92.50% increase in 2020-21.

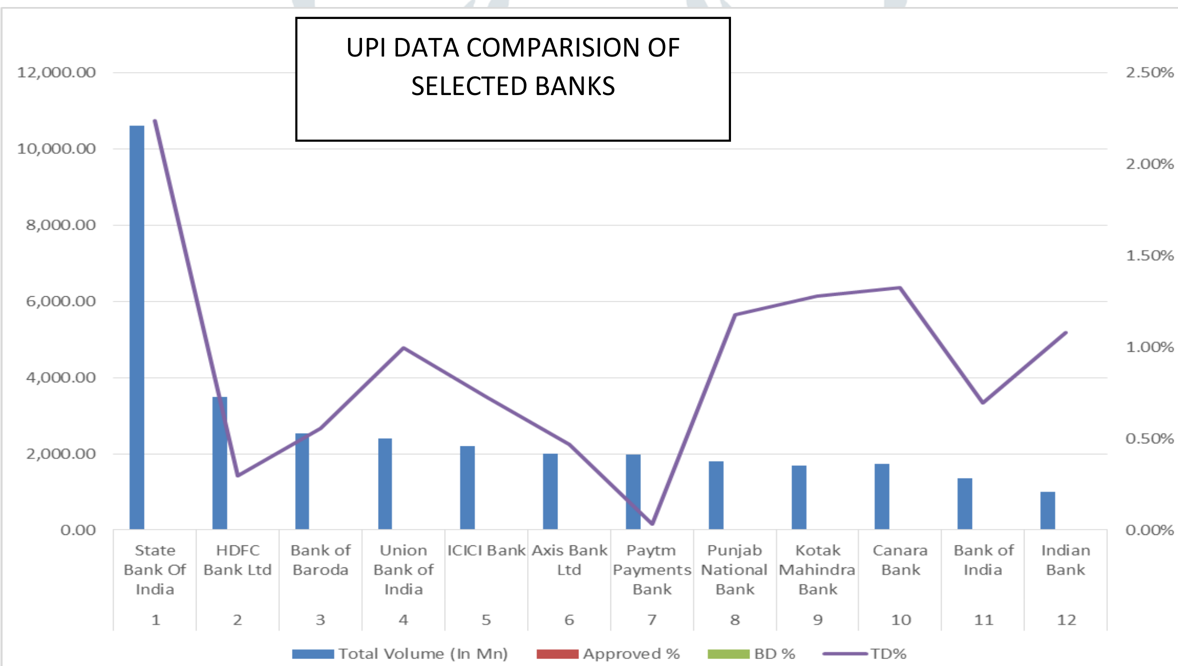
UPI Remitter Banks (May to Oct-2022)	Total Volume (In Mn)	Approved %	BD %	TD%
State Bank of India	10,611.52	92.21%	5.55%	2.24%
HDFC Bank Ltd	3496.81	94.45%	5.25%	0.30%
Bank of Baroda	2539.18	93.37%	6.07%	0.56%
Union Bank of India	2403.66	91.40%	7.61%	0.99%
ICICI Bank	2196.38	94.75%	4.52%	0.73%
Axis Bank Ltd	2007.91	95.68%	4.79%	0.47%
Paytm Payments Bank	1972.26	95.98%	3.99%	0.03%
Punjab National Bank	1799.24	93.61%	5.21%	1.18%
Kotak Mahindra Bank	1682.66	93.70%	5.02%	1.28%
Canara Bank	1746.06	93.44%	5.23%	1.33%
Bank of India	1366.41	94.31%	4.99%	0.70%
Indian Bank	995.12	93.46%	5.46%	1.08%

- Business Decline (BD) - Transaction decline due to a customer entering an invalid pin, incorrect beneficiary account etc. Or due to other business reasons such as exceeding per transaction limit, exceeding permitted count of transactions per day, exceeding amount limit for the day etc. Such declined transactions are termed as Business Decline. Any decline which is not because of a technical reason of the bank or NPCI is termed as business Decline.

- Technical Decline (TD) - Transaction decline due to technical reasons, such as unavailability of systems and network issues on bank or NPCI side.

UPI now consist of 63.84% of total retail payment in term of volume as per 2021-22 which was increased from 51.09% of 2020-21.In term of value it consist of 4.82% of total retail payment in 2021-22 which was 2.90% in 2020-21 .One of the main USP of UPI is it is fast and it is linked to mobile device which is convenient to common people as India is one of the highest number of mobile phone user in the world.

We studied top 12 UPI remitter data from NPCI site and compiled data for last 6 months and analyzed the data. We found that Paytm payment bank had lowest TD% in all the platform and SBI had the highest TD%. Union bank of India with TD% of 0.99% Ranked 7th out of this list in high no of TD%.

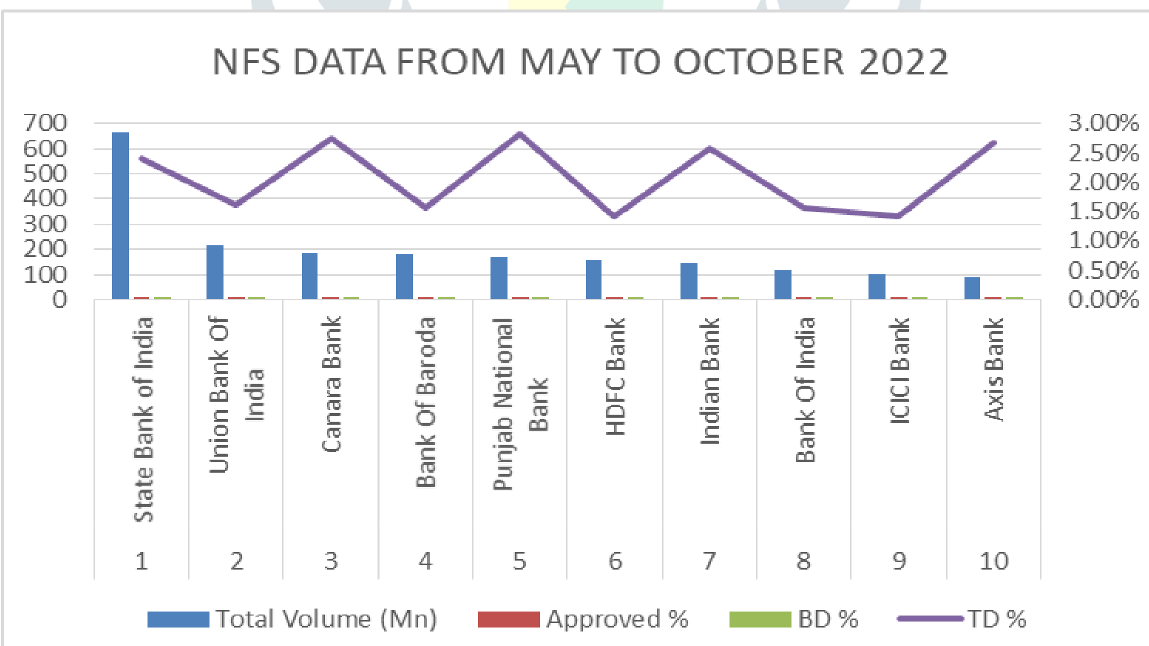


We also studied the NFS data from NPCI site. National Financial Switch (NFS) ATM network having 37 members and connecting about 50,000 ATMs was taken over by NPCI from Institute for Development and Research in Banking Technology (IDRBT) on December 14, 2009. As on 31st Oct' 22, there were 1,236 members that includes 113 Direct, 1,076 Sub members, 43 RRBs and 4 WLAOs using NFS network connected to more than 2.61 Lac ATM (including cash deposit machines/recyclers.

NFS DATA FROM MAY TO OCTOBER 2022					
Sr No	**Issuer Bank Name**	**Total Volume (Mn)**	**Approved %**	**BD %**	**TD %**
1	State Bank of India	663.99	84.10%	13.51%	2.39%
2	Union Bank of India	213.49	84.15%	14.23%	1.62%
3	Canara Bank	186.68	80.42%	16.83%	2.75%
4	Bank Of Baroda	180.24	83.09%	15.35%	1.56%
5	Punjab National Bank	169.04	82.04%	15.13%	2.83%
6	HDFC Bank	158.92	86.40%	12.19%	1.41%
7	Indian Bank	145.43	82.28%	15.15%	2.57%
8	Bank Of India	120.5	82.44%	16.00%	1.56%
9	ICICI Bank	97.99	86.37%	12.21%	1.41%
10	Axis Bank	90.28	86.96%	10.36%	2.68%

- **Business Decline (BD)** – Transaction declines that are attributable to business decisions by stakeholders participating in the transaction. These shall also include business decisions attributable to a customer behaviour like sufficiency of balance in the account, account blocks owing to a bad credit history etc. A few indicative sample reason codes are Insufficient Balance, Incorrect PIN, do not Honour etc.
- **Technical Decline (TD)** – Transaction declines that are attributable to technical shortcomings like connectivity issues, switch unavailability, incorrect message data elements etc are classified under TD. A few indicative sample reason codes are Invalid response, Issuer or Switch is inoperative etc.

We compiled last six-month NFS data and studied about the performance of bank on TD%. We found that PNB had the highest no of TD% followed by Axis bank. Lowest TD% achieved by HDFC and ICICI bank jointly.



Union bank of india during this period achieved 1.62 TD% which was sixth highest TD% in studied banks. During our study we also found that in the last 6-month duration NFS uptime was 100%.

4.1.5 Human resources and Employees Turnover:

Human resources remain at core of any activity any organization takes. Operational risk management is also affected by these issues. In studied banks it was found that most of the public sector banks Manpower remained lower than the previous year although the business had shown a positive growth for all the public sector banks except PNB where a meagre increase was noticed, on the other hand all the private sectors banks had substantially increased the manpower strength during the same period. One reason could be employee turnover because as per studies it is found that private sector banks were having highest attrition rate which goes up to 30-40% in some cases specially in sales stream.

4.2 Primary Data collection and findings:

As part of our study, we conducted a primary data collection from people working in the schedule commercial banks. Total 102 people participated in the study and their responses were collected and analyzed to know the awareness about operational risk and emerging operational risk.

Chapter: -5

Discussion, Summery & Recommendation

5.0 Introduction:

This chapter present the discussion of the research findings along with conclusion and recommendation of the research findings.

5.1 Discussion:

In our study on operational risk management in Indian banks we studied 10 banks which included top 6 public sector banks and 4 private sector banks to understand the practices and policies followed by these banks in controlling the issues related to operational risk management along with the issues itself along with their performance on the different operational risk management issues.

Also, during our primary survey, we tried to find out the awareness level of people working in different department on the present and future operational risk management issues.

As per our study we found that Fraud (Internal or external) is a major issue faced by banks across the industry. Private sector banks reported more fraud event than public sector banks but amount wise it is public sector banks who are losing more money comparing to private sector banks. Also advance remained as a major area where banks lost money and as public sector banks lost heavily in advance portfolio due to fraud.

When we studied the customer complain which has been received by the banks, we found that majority of complain across the banks were from tools used in digital mode of payment like ATM, Debit card, Mobile banking, Internet banking and Credit card. As the people using digital mode is increasing year on year which is evident from the data studied on payment system so does the customer complain on the products. While studying through the NPCI data on UPI Payment data TD% in most of the banks were more than 1% while in case of Paytm payment bank which is having best outcome with lowest TD% as 0.03%.During this period the Uptime was 99.99% of UPI Network. Also, in NFS data it is found that all the banks were having more than TD% as more than 1% some of the banks were even having more than 2% as TD%. Also while studying we found that that uptime of NFS was 100% during all this time.

While studying the penalties imposed by regulator on banks it is found that almost all the banks except Kotak bank. Common area on which maximum banks were penalized were late reporting of Fraud event, Violation of operational guidelines issued by RBI, Breach of trust in selling third party products and poor Currency chest management and violation of KYC Guidelines. All these events need to be studied thoroughly and root cause analysis of the events to be done to avoid it to happen again.

Data integrity and data security is also going to be big concern area for the banks as banks are adopting the new age technology and banks handle huge volume of personal and financial data of its customers. Technological advances have enabled the banks to reach to new markets and tap the unexplored markets. This advancement has brought the new risk related to data integrity and data security. As per the survey data received it was found that data security received highest attention from the subjects on matter of future operational risk. Also during our study, we found that some of the banks penalized on matter of data integrity.

During our primary survey we tried to find out awareness on the future operational risk management issue on subjects and we found that there is sufficient awareness on the subject like data integrity and IT related issues but there was very less awareness on the important topics like climate risk. Climate risk is going to be the major issue in coming day. Banks need to make strategy and include the climate risk factor in designing the products and need to include the factors in the assessment of proposals. Till now banks were focused more on short term analysis and mainly financial factors but banks need to develop the models which include long term questions which may be non-financial in nature. Banks would have to focus not only of environmental issues but social and governance issues in lending and long-term perspective to be developed to achieve the net zero emission target set by government which is to be achieved by 2070.

5.2 Summery of finding:

The research study on operational risk management in indian banks was done to find out the operational risk related issues present in Indian banks along with a study on emerging operational risk management issues which is going to critical in near future. The study consisted of 10 top banks in India which consist of 6 public sector banks and 4 private sector banks were selected along with that a primary study was done by taking response of 102 people working in various banks to study the awareness and finding out suggestion for present operational risk issues along with emerging operational risk issues.

The study was focused on the issues of different operational risk events faced by banks like fraud (Internal and External),area of fraud, Losses suffered by banks due to fraud, Customer complain related to banking services along with resolution of customer complain by banks, Adoption of digital payment along with Technical decline out of total transactions in respect of UPI and NFS data, penalties imposed by regulators and workplace safety and sexual harassment cases handled by banks , preparedness of banks on emerging operational risk area adoption of ESG framework sustainable finance along with effect of climate risk on future banking operations were studies.

The study found that Indian banks every year losing a good amount of money due to fraud. Also, Public sectors banks are the one who are most affected by the fraud event in respect of amount lost due to fraud and credit area is the one concern were most of the money was lost by the banks. Customer complain study also brought into notice that most of the customer complain banks received were from ATM, Mobile Banking, Internet banking, Credit card and debit card.For some banks ease in account opening and levy of charges , Functions of branch remained in the second most grievances areas for customers.

Study on major penalty imposed on banks also brought out that majority of banks got penalized due to noncompliance of RBI directive and not sticking to the time norms set by RBI in declaration of fraud and in some cases, banks got penalized due to faulty data management. Also, incident of penalty imposed on HDFC banks and Indian banks worth mentioning as Indian bank got penalized due to poor operation of currency chest were shortage of funds and counterfeit notes were found and in case of HDFC bank they were penalized due to Third party product which was sold without the customer consent.

On sexual harassment disclosure it is found that all the bank who received the complain tried to resolve the issue within the same year except in some case. Sexual harassment and gender equality is one of the area where banks need to empower the women employees more and awareness on the subject is required.

In part of study on operational risk subjects from different banks were approached and responses collected. Total 102 people were contacted and there responses collected to study the responses of the people on present and emerging operational risk issues.74% of the respondent were found to be working in union bank of India and 24% of respondent were found to be working in other banks. Out of this 48% of people were found to be working for more than 10 years in their organization. Response received from the responded indicated that for most of the people Fraud (External and internal) remained a major area of concern along with employment practice and workplace safety remained as second highest concern area for the bankers. 21% of people studied were not fully aware of KRI of there operational areas. Kyc compliance remained as major area of concern for bankers as on previous occasions banks got penalized due to this and also lot of frauds events has happened in the non-KYC complied accounts. Also, responses were collected on the future roadmap to reduce the operational risk were taken and same was analyzed. Most of the responses received gave indication towards use of technology towards the risk identification and mitigation. Also, responses were collected on the emerging risk and it was found that most of the respondent were aware about the Data security and it disruption but were not much awareness was found on the climate risk.

5.3 Recommendation:

Based on the study done on the operational risk management few recommendations can be made for further study and implementation

- Risk detection with real time data and analytics: -The present risk management systems are centered on self-assessment and control mechanism and will be ineffective in managing emerging risk like fraud, cyber risk and conduct risk especially the low frequency and high severity events. Advance analytics covers all the area related to every aspect of operational risk. It can detect operational risk more quickly and reduce false signal whether it is related to cyber security, fraud detection, anti-money laundering, process failure and third-party risk.
- Creating a talent pool to manage specialized risk: - Banks in present time are facing different type of operational risk issues like risk related to cybersecurity, Fraud risk, conduct risk and all type of risk needs specialized knowledge and tools. A person with cybersecurity background will be good in cyber risk and fraud risk but not be good in the Conduct risk. A person with a operational background with investigative skills will be good match to study conduct risk.
- Development of Fraud score model or use of existing one to filter the application for smooth onboarding of customers.
- Development of ESG related scoring model for credit appraisal along with existing models. Existing models are more dependent on short term measures specialy financial
- Employee awareness through training and self-development program.

5.4 limitations:

The study was done by studying the 10 major banks which included public sector and private sector banks and study was based on the disclosures made by banks in their annual reports and other published data and RBI reports and other report made by journal and newspaper. The study was focused more on finding the better ways and practices towards operational risk management and finding the better ways which can be long lasting and be useful in addressing the future operational risk management. The study was limited to the key risk areas which were studied and there could be more areas which could not studied due to unavailability of any publicly information and limited scope of study. Also the study was focused on the last three year documents published by banks due to amalgamation activity taken by banks in 2020. The recommendation suggested need to be studied further on cost benefit analysis to reach at any final decision.

5.6 Suggestion for further research:

Study was focused more on the operational risk and sample of 10 banks were taken. Any study on broader parameter which include other risk and their effect on the earning of banks will be required. Also, present and future banking scenario is going to be more technology driven and AI/ML are going to be tools which will be used in a big way. Also, as the economy will move towards carbon neutrality which is to be achieved up to 45% till 2030 and 100% till 2070 there are lot of changes are going to happen in the industries and lifestyle and accordingly bank credit is going to be adapted to the changing environment. Further explorative study on these subject area will be required.

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