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ABSTRACT

Fraud detection and prevention is a national concern. Fraud prevention is important for the national economy's corporate image, and an efficient mechanism must exist to identify and stop the continuation of the frauds, as well as strict prosecution. This study investigates the nature and types of bank frauds, as well as their consequences, as well as bank perceptions of factors causing bank frauds, regulatory framework views, and fraud prevention mechanisms. Secondary data were collected from RBI's website on Bank Frauds from 2004-05 to 2022-23 and correlation is calculated to understand the relationship among the bank fraud categories correlating with each other. Further, some bank managers were interviewed to understand the modus operandi of frauds and prevention mechanisms. A case study is analysed based on an interview which was done to gather the information about Nirav Modi case. This research also looks into the flaws in bank operational risk architecture. Based on the analysis and findings, it also intends to revisit the risk management architecture in banks and provide recommendations to prevent bank fraud incidents.

Keywords: bank, frauds, operational risk, monitoring, prevention, incidents

JEL Codes: G2, G20, G10, K420

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1. Introduction

Financial institution fraud, majorly known as bank fraud, encompasses a wide range of financial crimes perpetrated against both the bank and its customers. A bank fraud is basically the employment of some deceptive methods to get something of value from a financial institution. The bank frauds encompass a variety of different types of deceptive activities causing loss to the banks, such as, identity theft, new account fraud, account takeovers, counterfeit check activity, forged instruments, loan kiting, loan fraud, electronic funds transfer fraud, internal fraud schemes, wire transfer fraud and check fraud. Since the past three decades, the financial institution frauds have been rising exponentially, hence the annual losses amount are rising as well. Therefore, in order to protect them and take preventive actions against these growing losses, the banks are developing more sophisticated anti-fraud programme at their end.

The losses from the bank are categorized into two parts: Credit losses and Non-credit losses. The losses that result from the credit-based transactions and accounts such as loans and advances, lines of credit and credit cards etc, are known as the credit losses. While the Non-credit losses comprises of a wide range of areas of operations within a financial institution such as checking and savings between a financial institution associate and the perpetuator and losses from fraud. In India the frauds have been occurring majorly, both in terms of numbers and value, in the credit portfolio of the banks i.e. the advances category. By identifying and imposing rigorous check and verification boundaries, controls can be put in place to reduce the amount of fraud losses sustained by a financial institution.

The fraud triangle is a framework for spotting a High-risk Fraud situation. It helps to explain the reason behind an individual's decision in committing fraud. Donald R. Cressey, a well-known criminologist, created the framework of fraud triangle. The premise is that in order to combat fraud, it is vital to not just recognise that it occurs, but also to figure out how and why it occurs. It outlines three important components interconnected to each other that contribute to the growing risk of fraud: i) Pressure ii) Opportunity and Rationalization. Pressure relates to the financial or emotional force that pushes towards committing a fraud, it may be due to a financial problem which is non-shareable in nature. The Opportunity pertains to the ability to execute a plan to commit a fraud without being caught. Lastly, the Rationalization relates to the personal justification of dishonest action.

The banking sector acts as the backbone of the economy of the country, contributing to the growth, parity while equally contributing to the social growth objectives. The banking industry has become more solid and stronger as a result of consecutive prudential and regulatory reforms, making it more resilient to bubbles and external shocks. Despite this, India's banking system has been plagued by fraud.

The current trend in Bank frauds records, published by the Reserve Bank of India in their annual report, shows that there has been a high jump since the last 4 years. Here the operational risk has been emerging as a major source of risk. Despite the fact that loans accounted for 98 percent of all frauds in terms of dollar amount, their occurrence was spaced out over several years. It can also be seen that the Large-value frauds were concentrated, with the top fifty credit-related frauds accounting for 76% of the total amount reported as frauds in 2019-20.

As per the recent annual report of RBI 2021, the number of frauds reported during the period of FY 2020-21 has decreased by 15 percent in terms of number and 25 percent in terms of value as compared to the FY 2019-20. For the frauds reported in 2020-21, the average time lag between the date of occurrence and the date of detection was 23 months. However, for massive frauds of Rs100 Crore or more, the average lag was 57 months over the same time period. This research aims to look into the rising number of banking frauds in India and their implications for the commercial and economic systems, as well as the flaws and chinks in bank operational risk architecture and lax corporate governance. The study will also look at the factors that will simplify existing legal and regulatory duties to report fraud in order to ensure that bank operations are compliant, consistent, and transparent.

2. Literature Review

The RBI, India's banking regulator, defines fraud as “A deliberate act of omission or commission by any person, carried out in the course of a banking transaction or in the books of accounts maintained manually or under computer system in banks, resulting in wrongful gain to any person for a temporary period or otherwise, with or without any monetary loss to the bank”. According to the Basel Committee (2006), frauds are losses that originate from failed internal processes, people and systems or from external events.

The three factors known as the triangle of fraud, which are pressure (financial or emotional force pushing towards fraud), opportunity (ability to execute plan without being caught), and rationalisation (personal justification of dishonest actions), function as enabling factors for the occurrence of a fraud within the organisation (Cressy, 1973). The disgruntled employees are more likely to break the rules, irrespective of their age and position to equate with the perceived inequalities (Holliger & Clark, 1983). The fraud is likely to happen in a situation where situational pressure and opportunity for fraud are high, combined with low personal integrity of the individual (Albretch, 1984). Wolfe and Hermanson (2004) added a new component to the fraud triangle theory: capability. They discovered that a smart, knowledgeable, influential person in a powerful position can either coerce or bully his subordinates or colleagues into committing fraud, willingly or unwillingly, be a partner in fraud. The triangle of external pressure, personal financial needs, and financial target has contributed to bank fraud risks (Skousen & Wright, 2006). The less likely an employee is to be exposed or caught, the more likely he is to commit bank fraud (Chen et al., 2007). A typical fraud triangle cited in the literature consists of three major components: (1) Opportunity – Also known as perceived opportunity, this term refers to the method of committing crimes or frauds; (2) Motivation – The pressure or "need" that a person feels, which could also be a perceived financial need, in which a person has a strong desire for material goods but lacks the money or means to acquire them; and (3) Rationalisation – The method and mental process by which an inmate justifies his or her actions. Some of the factors and conditions that allow an individual to

have the opportunity include knowledge of the company's internal control system weaknesses, access to accounting records or assets, a lack of supervision, an unethical "Tone at the Top", and the belief that the person will not be caught (Fraud Risk, 2009).

Organisational culture and the ethical atmosphere at the top can be used to gauge tone (Biegelman & Bartow, 2012). The integrity of top leadership, managerial control systems, reward management systems, working circumstances, and the enforcement of disciplinary procedures as made possible by an ethical environment and organisational culture were the components used by the study to analyse tone at the top (Murphy, Free & Branston, 2011). Effective implementation of management control systems increases shareholders' wealth, claim Letting, Wasike, Kinuu, Murgor, Ongeti, and Aosa (2012). Reactive anti-fraud tactics are designed with the aid of efficient management control systems, resulting in a zero-tolerance fraud environment (Sebau, Sendroiu & Sgardea, 2013). The International Accounting and Standards Board (IASB), the International Organisations of Securities Commission (IOSCO), and the prudential control systems proposed by Barth, Gan, and Nolle (2003) are derived from the Basel Committee on Supervision. The Basel Committee is often mentioned by scholars and practitioners in a biased manner, despite the existence of the Financial Action Task Force on Money Laundering (FATF), the World Bank, and the International Monetary Fund (IMF). A single supervisory authority or a number of bank supervisors can oversee banking (Barth et al, 2003; Iyade, 2006). Due to a lack of expertise and other contextual conditions, police are perceived as being ineffectual in managing fraud risk on a global scale (Brooks, Button & Frimpong, 2009). Conyon and He (2013) looked at the connection between CEO pay and corporate fraud. They discovered that there was a positive association between the two, with higher rates of fraud associated with lower executive salary. According to other research, there is a bad relationship between pay and performance (Nyaoga, Basweti & Tarus, 2014). After researching the executive pay structure in the Netherlands, Swagerman and Terpstra (2007) came to the conclusion that, because base pay carries no risk, it remains a crucial part of executive remuneration. When the China Securities and Regulatory Commission takes enforcement action, fixed pay tends to decline, according to research by Conyon and He (2014) on the impact of executive compensation in China. The manner in which audit committees' function within the organisation will stop frauds from happening, not the audit committees' mere existence (Alleynes & Howard, 2005). When banks outsource their hiring processes to other companies, they may lose complete control over the hiring process and allow dishonest and morally reprehensible individuals to work in the banking industry (Newenham & Kawindi, 2011). According to research, a range of factors, from wealth maximisation to governance frameworks, contribute to the propensity to perpetrate fraud. Many research projects are being undertaken to look into the connection between earnings management and corporate governance practices. The Asian crisis (1997), many scandals in Russia, and business failures and scams in the United States have elevated corporate governance concerns in developing and transitional countries. Researchers have suggested a number of actions to lessen the severity of frauds. These can be broadly categorised as internal self-correction activities, modifications to legal and reporting systems, and governance structures.

The absence of routine independent performance reviews, ineffective organisational control techniques, poor communication channels, unauthorised access, and physical possession of assets, documents, computer programmes, or data are the

main causes of operational risk (Jeffords, et.al, 1992). According to Sharma and Brahma (2000), one of the primary causes of fraud is supervisors' casual adherence to internal control policies and procedures. The perpetrators of fraud take advantage of the oversight officials' negligence in adhering to the security measures instituted by the Reserve Bank of India (RBI). Palfi and Muresan (2009) looked at the significance of a well-functioning internal control system for the Romanian banking system. They discovered that maintaining a complementary relationship and ongoing cooperation between all the structures with control responsibilities—such as the supervisory authority and the internal and external auditors—based on regular meetings is essential to the success of an effective internal control system. Power is a key social concept in organisational situations. Advances in information technology (IT) have also induced frauds. MacInnes et al. (2005) categorise IT fraud into five major causes: (1) incentives of criminals; (2) characteristics of victims; (3) the role of technology; (4) the role of enforcement; and (5) system-related factors. Corporate fraud occurrences have direct relation to audit quality, standards and practices. As Amaram (2015) points out, whistleblowing has been instrumental in exposing the majority of the world's most significant scams. Conversely, Ayagre and Aidoo-Buannel (2014) discovered a negative link between fraud detection and whistleblowing, suggesting that the former is ineffective and unappealing. Internal fraud investigators and/or law enforcement teams may be involved in fraud investigation as a response mechanism (KPMG, 2006). While Modugu and Anyaduda (2013) note that most organisations lack forensic accountants or trained fraud examiners, Biegelman and Bartow (2012) advise that every organisation have internal fraud investigators. This suggests that a solitary strategy might not be effective. According to a survey on the effectiveness of fraud detection systems conducted in the Indian banking sector, data analysis and transaction monitoring software were used to find more fraud cases. As a result, the study concluded that forensic data analytics represents the cutting edge of fraud detection and deterrence in the modern era (Deloitte, 2015).

The literature claims that corporate frauds come in a variety of shapes and sizes, and that people's perspectives on them also differ. Corporate decision-makers have a tremendous incentive to commit fraud since they know that taking legal action will be irrelevant or useless, according to the majority of research. Although there are many laws in India that address fraud, the country still has a rising rate of fraud. Corporate fraud affects a wide range of stakeholders. Preventing and detecting fraud is a national priority. The national economy's corporate image depends on the prevention of fraud, which calls for stringent prosecution in addition to an effective system to detect and halt frauds in progress. Thus, we look into the kinds and nature of bank frauds, their effects, bank opinions of the variables that lead to bank frauds, perspectives on the regulatory environment, and methods for preventing fraud. The secondary data on bank frauds from 2004–05 to 2022–23 was gathered from the RBI website for this study. Correlation was computed to determine how the various bank fraud categories are related to one another (Annexure I). In order to comprehend the methods used for bank frauds and how to counteract them, various bank managers were also interviewed (Table No. :01). Based on an interview conducted to get information regarding the Nirav Modi case, a case study is examined (Exhibit:01). The shortcomings of the bank operational risk architecture are also examined in this study. It also aims to review the risk management architecture in banks and offer suggestions to stop bank fraud events based on the analysis and conclusions.

3. Findings

Frauds in major Operational Areas in Bank are described below along with the trends and correlations between them.

3.1 Advances

Historically, the frauds happening in Advances area of operation have been the highest, both by total nominal value and no. of frauds. The total no. of Advances area of operation frauds reported in the year 2020-21 were 3,501 and accounted in total nominal amount of Rs. 1,37,023 crores.

The composition contribution of Advances in the total frauds has stayed highest in all the years under observation i.e. from the year 2004-05. On average across years, the number of Advances frauds amount to approximately half (i.e. 50%) of all the frauds reported. On the other hand, the total amount contribution from Advances fraud area of operation is disproportionately high at around 83%.

With consistent rise in the number and amounts of the Advances area of operation frauds in the last four years, the year 2020-21 showed a considerable decline of approximately 25% for both numbers and nominal amount of reported frauds. Out of all the 17 years under observation, i.e. from year 2004-05 to year 2020-21, the number of reported cases of fraud in advances has shown Y-o-Y rise in total of 11 years, and in 12 years the nominal amount showed Y-o-Y rise.

One more key observation in the Advances area of operations frauds is the disproportionate increase in the "nominal amount of fraud per case" metric. The per case Advances fraud were Rs. 0.43 crores in the year 2004-05, which has grown multi-fold to Rs. 39.14 crores in the year 2020-21. The disproportionate increase in per case amount of loss was observed to happen from the year 2010-11. The figure has almost doubled in every year since 2010-11.

The number of cases of frauds in Advances is highly correlated with some of the other area of operations of frauds. It is highly correlated with Card/Internet (with correlation of 0.974), Cash (with correlation of 0.928), Foreign exchange transactions (with correlation of 0.840), Inter-branch accounts (with correlation of 0.800), and Clearing etc accounts (with correlation of 0.786). Remarkably, Advances area of operations fraud is moderately negatively correlated with Cheques/demand drafts etc. (with correlation of -0.573), and Deposits (with correlation of -0.516).

The banking industry and regulators are placing various steps and checks to reduce the number and amounts of Advances area of operations fraud. The foremost step in this direction is improving the corporate governance and internal audit systems at industry-wide scale.

3.2 Deposits

The Deposits area of operation fraud has been the top contributor in terms of contribution to the number of cases. Although, the overall contribution to the total amount was only modest and nominal. The total no. of Deposits area of operation frauds

reported in the year 2020-21 were 2,545 and accounted in total nominal amount of Rs. 119 crores.

The composition contribution of Advances in the total frauds has stayed among the top contribution all the years under observation i.e. from the year 2004-05. On average across years, the number of Deposits frauds amount to approximately 14% of all the frauds reported. On the other hand, the total amount contribution from Deposits fraud area of operation is negligible at less than 1%.

With mix of rises and declines in the number of the Deposits area of operation frauds from year 2004-05 to 2014-15, from the year 2014-15 the number of cases has declined consistently. This is testament to the fact that more and more care is being taken and controls are being put in place help reduce various commission frauds. From year 2014-15, the number of Deposit frauds cases has reduced by an average of 8%. The amount of loss resulting from Deposits area of operations has increased in all years in comparison to the previous years except in the years 2011-12, 2017-18, and 2018-19. All these years experienced a reduction of more than 50% from the respective previous years.

Contrary to the trend observed in Advances operations of frauds, the "nominal amount of fraud per case" metric is at similar levels across all years under consideration. The figure has stayed almost same every year since 2004-05.

The number of cases of frauds in Deposits are highly correlated with some of the other area of operations of frauds. The correlations with all other area of operations mostly observed to be negative, except Off-balance sheet and Cheques/demand draft. It is highly correlated with Cheques/demand drafts (with correlation of 0.876), Inter-branch accounts (with correlation of -0.812), Foreign exchange transactions (with correlation of -0.798), Clearing etc accounts (with correlation of -0.775), and Cash (with correlation of -0.704). It is positively correlated with Off-balance sheet (with correlation of 0.060), and Cheques/demand drafts (with correlation of 0.876).

The banking industry and regulators are placing various steps and checks to reduce the number and amounts of Advances area of operations fraud. The foremost step in this direction is improving the corporate governance and internal audit systems at industry-wide scale.

3.3 Cheque

The Cheques/demand drafts area of operation fraud has been among the modest contributor in terms of contribution to the number of cases and the total amount. The total no. of Cheque/demand drafts area of operation frauds reported in the year 2020-21 were 163 and accounted in total nominal amount of Rs. 85 crores.

The composition contribution of Cheques/demand drafts in the total frauds has stayed only modest in all the years under observation i.e. from the year 2004-05. On average across years, the number of Cheques/demand drafts frauds amount to approximately 4% of all the frauds reported. On the other hand, the total amount contribution from Cheques/demand drafts fraud area of operation is negligible at approximately 0.5%.

With mix of rises and declines in the number of the Cheques/demand drafts area of operation frauds from year 2004-05 to 2014-15, the years 2017-18, 2018-19, and 2019-20 has abnormally shown lowest number of cases in the history; the number of cases totalled to 6, 3, and 2 respectively. This abnormality still needs to be reasoned. But the fall in itself is a good thing for the economy and industry as a whole. The highest percentage of Y-o-Y increase in the number of Cheques/Demand drafts was observed in the year 2014-15. It increased by 41.11% from the previous year.

The "nominal amount of fraud per case" metric is at similar levels across all years under consideration, barring the year 2020-21, in which the figure stood at 0.52.

The number of cases of frauds in Cheques/demand draft are highly correlated with some of the other area of operations of frauds. The correlations with all other area of operations mostly observed to be negative, except Deposits. It is highly correlated with Deposits (with correlation of 0.876), Inter-branch accounts (with correlation of -0.858), Foreign exchange transactions (with correlation of -0.845), Clearing etc accounts (with correlation of -0.827), and Cash (with correlation of -0.747). It is positively correlated with Off-balance sheet (with correlation of 0.876).

3.4 Foreign Exchange

The frauds in the foreign exchange transactions are one of the operational areas where the number of frauds were relatively less as compared to other areas. However, these lesser numbers also contributed to a significantly higher value of frauds historically. Recently in FY2020-21 the numbers in this area were 4 but the value of overall frauds was Rs 129 Crores.

In all the years under the consideration of our study the contribution of the frauds in the foreign exchange transactions among all the areas were less than 1 percentage and the contribution value wise was also less than 10% indicating a comparatively less amount lost by the banks in this area.

There has been a fluctuation in the number of frauds occurring in this area in some years there was a sudden spike in numbers whereas in others the numbers went down. A similar pattern was shown in the amount of frauds where there was no uptrend, but a volatile movement across the years

If we see the YOY growth there is a very sharp increase of 4215.69% in 2016-17 even though the number of frauds in the same years in the specific area was on a decline.

From the correlation matrix it can be seen that the forex transaction frauds are highly positively correlated with the inter-branch accounts frauds (0.9857) and the clearing accounts frauds (0.9765), however they were very weakly and positively correlated with the off-balance sheet items frauds (0.012)

3.5 Off balance sheet items

Similar to the Forex frauds the off-balance sheet item frauds have also been very low in numbers. But the value of these frauds was very high and has been in an uptrend with some number of fluctuations. Recent data of FY2020-21 shows that the number of frauds in this area of operations were 23 however the value of these frauds was a whopping Rs 535 Crores.

The off-balance sheet items are very complex products and require a lot of technical understanding. This could be a reason pertaining to very low contribution in frauds in terms of numbers every year. However, value wise, the overall contribution during a year has hit a maximum of 39.57% in 2017-18. The contribution to the overall amount of frauds also shot up in some years (17%-18%) whereas in most years were lower than 10%.

If we see the YOY growth percentage of recent figures in this particular area of operations, it could be seen that there has been a decline in the amount of value specific to the Off-balance sheet items. From 2018-19 to 2020-21 there has been a declining YOY trend of -66%, -57% & -78% respectively. This bodes a good sign about the stringent regulations and excellence in operations in off balance sheet items

The correlation matrix shows that the Off-balance sheet items are having very weak correlations with all the other area of operations as far as the frauds are concerned.

3.6 Clearing Accounts

These are usually temporary accounts containing amounts that are to be transferred to another account. Historically, it can be seen that the number and number of frauds has been close to each other. There hasn't been much fluctuations in this particular area. Interestingly in the FY 2020-21 data it can be seen that the number of these frauds has increased but the value of these frauds has decreased.

The contribution of these frauds in the overall frauds has been on a declining trend. Also, the value wise contribution has always been less than 2%. The recent data shows that the amount of frauds in this particular area has contributed a near zero percent to the overall frauds for the past two years.

The correlation matrix shows that the clearing account frauds are having a high correlation with the foreign exchange transaction frauds (0.97). It also has a high correlation with the interbranch account frauds (0.95). Cash related frauds are also having (0.91) a relatively high correlation.

3.7 Card/Internet

With the increase in the digital way of life, especially when it comes to financial transactions, the risk of financial frauds cannot be ignored**.**A fraudulent online transaction in one's bank account, debit or credit card could be because of e-mail spoofing, phishing or cloning of one's card.

Today, any innovation in banking business and process cannot be thought of in isolation without the active role of technology. The increasing dispensing of banking service through electronic delivery channels has brought with it the burden of fraud risk. The modus operandi adopted in technology related frauds is not only varied, but also dynamic. Before a string of similar frauds emerges as a trend, sizeable damage is already done. The challenge before the banks, therefore, is to predict the fraud potential in their computerised setup and build systems that can forestall frauds. Banks need to stay ahead of the cyber fraudsters. Banks have so far been fairly successful in fraud management, as far as technology related frauds are concerned.

a. ATM/Credit Card Frauds

1. Skimming of Cards

Card frauds are largely perpetrated by skimming; Skimming is addressed by banks by installing ATMs with Dip Card Readers. For ATMs with Motorized Card Readers, 'jitter' technology is adopted by banks, which renders data captured by skimmers not usable. As per RBI's advice, banks have moved to chip-based cards from magnetic strip cards, for international fraudsters.

2. Scams and frauds

This entail pretending to be bank correspondence, which serves as a lure to get you to click on phoney links. Usually, this will direct you to genuine-looking webpages. Fraudsters can get your card details and utilise them to their advantage once you enter them on these phoney URLs. Another variation involves scammers posing as bank employees and requesting an OTP over the phone in order to "verify your card," "avail the reward points," or "extend the validity of your reward points."

3. Keyboard recording

Since the majority of financial transactions take place online these days, hackers are now depending on malicious software to capture keystrokes in order to obtain credit card information. This usually begins after you have clicked on a suspicious link and unknowingly installed malware on your system. The software records every key pressed on the system, eventually stealing card details, PIN and more.

b. Internet banking frauds

Internet Banking Fraud is a fraud or theft committed using online technology to illegally remove money from a bank account and/or transfer money to an account in a different bank. Internet Banking Fraud is a form of identity theft and is usually made possible through techniques such as phishing.

The Card/Internet area of operation fraud has been among the second highest contributors in terms of contribution to the number of cases. The total no. of Card/Internet area of operation frauds reported in the year 2020-21 were 2545 and accounted in total nominal amount of Rs. 119 crores.

The correlation matrix shows that the Card/Internet frauds are having a high correlation with the Advances frauds (0.97).

On average across years, the number of Card/Internet frauds amount to approximately 22% of all the frauds reported. On the other hand, the total amount contribution from Cheques/demand drafts fraud area of operation is negligible at approximately 0.63%.

With mix of rises and declines in the number of the Cheques/demand drafts area of operation frauds. The highest percentage of Y-o-Y increase in the number of Cash was observed in the year 2017-18. It increased by 50.07% from the previous year.

3.8 Cash

The Cash area of operation fraud has been among the significant contributor in terms of contribution to the number of cases and the total amount. The total no. of Cash area of operation fraud reported in the year 2020-21 were 329 and accounted in total nominal amount of Rs. 39 crores.

The correlation matrix shows that the Cash frauds are having a high correlation with the Advances frauds (0.93). It also has a high correlation with the foreign exchange transaction frauds (0.90).

The composition contribution of Cash in the total frauds has stayed only modest in all the years under observation i.e. from the year 2004-05. On average across years, the number of Cash frauds amount to approximately 3.87% of all the frauds reported. On the other hand, the total amount contribution from Cash fraud area of operation is negligible at approximately 0.47%.

With mix of rises and declines in the number of the Cheques/demand drafts area of operation frauds. The highest percentage of Y-o-Y increase in the number of Cash was observed in the year 2018-19. It increased by 172.02% from the previous year.

3.9 Inter-Branch Accounts

Internal and inter-branch account fraud is a typical occurrence. Due to the branches' lack of attention, this situation has come about. Supervisors don't always monitor their suspense account. Employees at the bank claim that an unattended specimen signature from a dormant account is retained. Similar negative circumstances in interbranch accounts have arisen as a result of the branches' low priority of the reconciliation process relative to other assumed tasks. Even if calling out old books and registers takes a lot of time, the work is still significant and needs to be done as soon as possible. It may potentially take longer than 15 days, according to respondents, to attend reconciliation. The Inter-Branch area of operation fraud has been among the lowest contributor in terms of contribution to the number of cases and the total amount. The total no. of Inter-Branch area of operation fraud reported in the year 2020-21 were 2 and accounted in total nominal amount of 0. The correlation matrix shows that the Inter-Branch frauds are having a high correlation with the foreign exchange transaction frauds (0.97).

On average across years, the number of Cheques/demand drafts frauds amount to approximately 0.62% of all the frauds reported. On the other hand, the total amount contribution from Cheques/demand drafts fraud area of operation is negligible at approximately 0.14%.

With mix of rises and declines in the number of the Interbranch area of operation frauds. The highest percentage of Y-o-Y increase in the number of Interbranch frauds was observed in the year 2017-18. It increased by 500% from the previous year.

[Table 1]

[Exhibit 1]

4. Conclusion and Recommendations

The banking industry and regulators are placing various steps and checks to reduce the number and amounts of Advances area of operations fraud. The foremost step in this direction is improving the corporate governance and internal audit systems at industry-wide scale.

The number of cases of frauds in Advances is highly correlated with some of the other area of operations of frauds. It is highly correlated with Card/Internet (with correlation of 0.974), Cash (with correlation of 0.928), Foreign exchange transactions (with correlation of 0.840), Inter-branch accounts (with correlation of 0.800), and clearing etc accounts (with correlation of 0.786). Remarkably, Advances area of operations fraud is moderately negatively correlated with Cheques/demand drafts etc. (with correlation of -0.573), and Deposits (with correlation of -0.516).

The number of cases of frauds in Deposits are highly correlated with some of the other area of operations of frauds. The correlations with all other area of operations mostly observed to be negative, except Off-balance sheet and Cheques/demand draft. It is highly correlated with Cheques/demand drafts (with correlation of 0.876), Inter-branch accounts (with correlation of -0.812), Foreign exchange transactions (with correlation of -0.798), Clearing etc accounts (with correlation of -0.775), and Cash (with correlation of -0.704). It is positively correlated with Off-balance sheet (with correlation of 0.060), and Cheques/demand drafts (with correlation of 0.876).

The number of cases of frauds in Cheques/demand draft are highly correlated with some of the other area of operations of frauds. The correlations with all other area of operations mostly observed to be negative, except Deposits. It is highly correlated with Deposits (with correlation of 0.876), Inter-branch accounts (with correlation of -0.858), Foreign exchange transactions (with correlation of -0.845), Clearing etc accounts (with correlation of -0.827), and Cash (with correlation of -0.747). It is positively correlated with Off-balance sheet (with correlation of 0.876).

If we see the YOY growth there is a very sharp increase of 4215.69% in 2016-17 even though the number of frauds in the same years in the specific area was on a decline. From the correlation matrix it can be seen that the forex transaction frauds are highly positively correlated with the inter-branch accounts frauds (0.9857) and the clearing

accounts frauds (0.9765), however they were very weakly and positively correlated with the off-balance sheet items frauds (0.012)

If we see the YOY growth percentage of recent figures in this particular area of operations, it could be seen that there has been a decline in the amount of value specific to the Off-balance sheet items. From 2018-19 to 2020-21 there has been a declining YOY trend of -66%, -57% & -78% respectively. This bodes a good sign about the stringent regulations and excellence in operations in off balance sheet items.

The correlation matrix shows that the Off-balance sheet items are having very weak correlations with all the other area of operations as far as the frauds are concerned.

The correlation matrix shows that the clearing account frauds are having a high correlation with the foreign exchange transaction frauds (0.97). It also has a high correlation with the interbranch account frauds (0.95). Cash related frauds are also having (0.91) a relatively high correlation.

The correlation matrix shows that the Card/Internet frauds are having a high correlation with the Advances frauds (0.97). On average across years, the number of Card/Internet frauds amount to approximately 22% of all the frauds reported. On the other hand, the total amount contribution from Cheques/demand drafts fraud area of operation is negligible at approximately 0.63%. With mix of rises and declines in the number of the Cheques/demand drafts area of operation frauds. The highest percentage of Y-o-Y increase in the number of Cash was observed in the year 2017-18. It increased by 50.07% from the previous year.

The composition contribution of Cash in the total frauds has stayed only modest in all the years under observation i.e. from the year 2004-05. On average across years, the number of Cash frauds amount to approximately 3.87% of all the frauds reported. On the other hand, the total amount contribution from Cash fraud area of operation is negligible at approximately 0.47%.

With mix of rises and declines in the number of the Cheques/demand drafts area of operation frauds. The highest percentage of Y-o-Y increase in the number of Cash was observed in the year 2018-19. It increased by 172.02% from the previous year.

On average across years, the number of Cheques/demand drafts frauds amount to approximately 0.62% of all the frauds reported. On the other hand, the total amount contribution from Cheques/demand drafts fraud area of operation is negligible at approximately 0.14%. With mix of rises and declines in the number of the Interbranch area of operation frauds. The highest percentage of Y-o-Y increase in the number of Interbranch frauds was observed in the year 2017-18. It increased by 500% from the previous year.

Recommendations

For Corporate advances, banks should develop a EWS framework based on the illustrative Early Warning Signals (EWS) which indicate suspicion of fraudulent activity. Borrower's social media activities should be tracked to predict fraud potential. For detecting Card/Internet frauds banks should issue chip enabled cards, also daily

transaction limits can be introduced. Banks should implement fraud detection software to detect frauds. Banks should nominate a nodal officer for fraud reporting who should submit FMR to RBI on detection of fraud cases. Banks should conduct regular stock and inventory audits, obtain end use certificates and conduct account monitoring for early detection of frauds perpetrated by diversion/siphoning off funds through group companies and/or by manipulating financials. Employees bank accounts should be monitored for any unusual credits which then should be taken up for scrutiny. Employees accessing unrelated account of customers should be flagged-off for review. Mandatory leaves should be given to employees abruptly to prevent internal frauds. There needs to be coordination amongst the lenders pertaining to sharing of information including account statements, turnover routing, stress in the account, etc. A common secured portal may be created by RBI where all the relevant information for a particular borrower can be archived and accessed by lenders (PAN card-based portal may be created).

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Table: 1

Bankers Interview

Questions	***Reply***
1) Recent frauds happened in bank/branch if any, please specify the area of operation of fraud?	Frauds were observed in almost all the products/processes in the Bank with digital frauds contributing the highest, followed by advances. With respect to corporate cases reported as fraud in the area of advances, general modus operandi observed in the past for working capital and term loan facilities are given below: • Transfer of funds to/ trade transactions with related/connected/ fictitious entities/ unrelated business etc. • Misrepresentation of financial statements/ stock statement/ other information provided to lenders • Misappropriation of hypothecated/ mortgaged security
2) Which area of banking operations in your bank have maximum frauds and please provide the details (by value and frequency) in different areas of operations?	**Frauds in Payments Banks**: Payments Banks are not authorized to lend. The entire platform of Payment Banks is digital. Digital means mostly payment systems such as IMPS, RTGS, UPI, and wallet are offered by them. Some of the Payments Banks have a peculiar advantage being the largest issuer of wallets which even the small shopkeepers use. There are two types of frauds witnessed by Payments Banks: 1) Fraud which they report to the RBI. Here the fraud typically means where the bank has lost the money because of some breach in the system or negligence in staff. Where the banks are put to loss they are classified under fraud and reported under FMR. Mostly when bankers discuss frauds, they confine discussion to FMR frauds; 2) There are other transactions where customers have compromised such as shared OTP or details of the account or even phone. In such cases banks are not forced to bear the liability as this is the fraud from the perspective of the customer. But once he reports, banks also take this figure as a fraud not for the purpose of reporting in FMR, as there is no liability on the

Questions	*Reply*
	bank, but for internal control system and also reporting to RBI on quarterly basis. **Advances frauds**: Mostly in the cases of fraud, the composition of frauds will be on the loan book i.e. advances area. RBI report also indicates that the total annual fraud amounts to Rs 138422 crores, of which 99% pertains to advances. These are mostly because of the corporate lending activities i.e. big-ticket loans which go for default. In the last couple of years, there has been a big rise, particularly in FY19 it was Rs 71000 crores, and in FY20 it was Rs 185000 crores. Advances, as they constitute 99%, the major focus remains how you improve their credit management, and how you monitor the operations of a unit which is financed by the bank, how you take care of the raw materials, stock, receivables. On the other hand, financing things like software, you (bankers) cannot know anything. Then a lot of reports are there that some sectors get disturbed because of market conditions and also other factors like covid. It was a boon for pharma companies, they almost prospered like anything. But when you consider these shopping malls, they had a tough time. Similarly, some sectors like steel really it was in bad shape for years together and real estate is also in lot of NPA due to frauds. Even big builders like Super Tech Limited in NOIDA are in a big problem. Currently their position is such that people are behind the bars and even the big towers of Super Tech are being demolished because they took away money from customers and never created assets, thus Advances fraud per se will always be the highest contribution, all other types of frauds will always have minimal contribution. **Deposits Fraud**: These types of frauds happen when somebody is cheating the customer or the customer is losing money for his negligence. It doesn't qualify for fraud unless it is some insider who has done something silly or the bank system is put to question for some reason. Example: Cheque book frauds **Frauds in Off Balance Sheet Items**: It is basically Bank Guarantee/LC, if your funded

Questions	*Reply*
	limits are in default these will also be classified as NPA. And if it is a part of fraud account then entire exposure come as a part of the fraud , it is not that your CC hypothecation is fraud and book debt is not fraud entire exposure is put to fraud. If you have Rs1000 crore exposure and diversion is noticed for Rs 50 crore then the entire Rs1000 crore will be put in fraud. **Frauds in Clearing Accounts**: These are very few as they are not automated process earlier dividend frauds were there now these have been controlled , Banks have put some automated systems not many frauds happen in clearing accounts except some cheque related frauds but there also above 50k there is a secured system , customer has to inform to the bank if he is drawing any cheque beyond 50k most of the banks have already introduced this security feature with that results controls are already there. In case of clearing accounts 10 yrs back Branch General Ledger (BGL) accounts were not reconciled so balancing the clearing house corporations was the toughest task. It was manual that time then gradually it started working in automated mode now it gets cleared same day. **Frauds in Card/Internet**: If you see the annual report of RBI, it is Rs119 crore means it is 0.1% fraud in total. Here internet may be IMPS, RTGS etc. Card will be a debit card, credit card etc. Again, on the card side because of the chip the liability has been restricted now. If any bank's ATM is not chip reading ATM, then liability falls on bank again if there is a fraud. Fraudsters try to make clone cards to dupe the genuine customers and misuse them. Sometimes fraudsters try to change the registered mobile number with the bank without the customer's knowledge so as to take advantage of OTP and make fraudulent transactions. **Cash frauds**: Will come in fraud if loss is there. Embezzlement is classified under cash losses. But these instances are very rare. In the passage of time, if you see the total digital frauds are growing. Fraudster world have found new ways to cheat you online.

Questions	*Reply*
	Inter Branch Account frauds: It is an account used for internal frauds. Internal staff members not reconciling the accounts and putting some money into their own accounts **Forex Transaction** frauds: This can be a part of lending portfolio, can be a part of standalone or there may be some misuse of the position that these people cheat up the beneficiaries of the legitimate account holders. **Frauds in Cheques/DDs**: DD Frauds are rare now, cheques also coming down.
3) Is there any Fraud detection tool/ process used by your bank? If yes, please specify the name.	For Corporate advances, the Bank has developed a EWS framework based on the illustrative Early Warning Signals (EWS) laid down in the RBI Master Directions on fraud, which indicate suspicion of fraudulent activity. The framework allows the Bank to choose to adapt the relevant EWS and include other signals based on their experience and business models. Where the set triggers are breached, the account is reported as Red Flagged Account (RFA) by the Bank and are referred to the internal investigation departments for thorough investigation in case of sole banking or to the consortium / largest lender / external forensic auditor in case of consortium or multiple banking. For Cheques/DDs, the Bank has implemented transaction risk scoring model internally developed by Data Science and Analytics Group (DSAG) of the Bank. For advances related fraud Early Warning Signals, Transaction Monitoring System, Stock Statement Verification, checking borrowers' data are implemented. Borrower's social media activities are tracked to predict fraud potential. Then there are some vendors who gives you some inside details according to your industry. If banks get alerts within time than it solves the major sort of problems. Then in deposits, you need to protect the interest of customers for this purpose device binding is introduced unless the customer shares his credentials or PIN number due to which fraud can happen in UPI. People sometimes click the wrong link,

Questions	*Reply*
	wrong QR code thinking that money will come to their account. For detecting Card/Internet frauds many banks have chip enabled card these days, many banks have put daily transaction limits also. For deposits there will be separate Early Warning Signals/Alerts, for digital transactions it will be different like a person can't be in two different places in a short span of time so transaction at different locations from the same card are declined. All banks have fraud detection software either their internal software or purchased from the market from any vendor.
4) Kindly tell us briefly why frauds are occurring as per your understanding, examples if any, their modus operandi and what controls banks are implementing to prevent these frauds? How banks mitigate fraud risks?	The main reason for fraud continues to be man's greed to earn fast and easy money. There are tools/techniques/tutorials available on/ through World Wide Web to facilitate these nefarious activities. The area in which fraud is perpetrated would largely depend upon the fraudster's skill/judgement in pulling off the act. The new age digital contact less mode of banking offers greater degree of anonymity to the crooks to execute their fraudulent scheme from any location on the planet. In the area of Corporate Advances, common modus operandi identified include diversion/ siphoning off funds through related/ connected/overseas parties (based on paper transactions only). The foremost reason which the Bank could identify is that it is not possible for lenders to monitor the transactions happening at Group level of the Borrower. The Bank has been strengthening the EWS to monitor transactions with related parties which include monitoring year on year movement of debtors and creditors including related party transactions, monitoring debt availed by the borrower year on year vis-à-vis funds transferred by the borrower to group companies via loans/advances/investments. Further, the scope of stock audit and account monitoring are also regularly reviewed and improved as required.

Questions	*Reply*
	Further, in the areas of Cards/ Internet, while state of the art tools/techniques aligned to the regulatory guidelines have been implemented, fraudsters are successful in swindling the funds because of negligence of customers.
5) Frauds were being reported by the Central Vigilance Officers of the banks to the RBI through the Fraud Monitoring and Reporting (FMR) mechanism. What is the frequency of submission of this report and is your bank submitting any kind of report like this? Is it the same for PSB, Private or Foreign banks?	The Bank is guided by the RBI Master Directions on Frauds – Classification and Reporting which is applicable to all scheduled commercial banks (excluding RRBs) and all India select financial institutions. As per this Master Directions, the Bank has nominated a nodal officer for fraud reporting and submits FMR to RBI on detection of fraud cases. For Inter Branch accounts RBI has mandated the banks to submit the reconciliation reports, they have to create the provisions, so these are provisional items and no auditor can leave it aside even during inspection audit, internal audit, concurrent audit. Forex also, lot of frauds happen because of non - reconciliation of entries, may be some instruments are lost but now all these are coming through digital mode so they are safer. Any fraud which happens, has to be reported to RBI within 21 days otherwise penalty is imposed. Rules are same whether it is a private bank, public bank or local bank. Rules will remain the same and format is the same. Standard format is available online on XBRL Portal.
6) What type of EWS (Early Warning Signal) systems are implemented majorly by the bank, how are they monitored and what is the frequency of monitoring?	The bank has adopted relevant EWS illustrated by RBI in addition to other signals based on the Bank's experience and business models. The threshold for EWS and RFA is an exposure of ₹ 30.0 million or more at the level of Bank. The broad areas of EWS triggers considered by the Bank include movement of debtors, creditors, inventory, sales/purchases, loans/advances/ investments, fixed assets (including related party transactions) as reported in annual financials of the borrower vis-à-vis as reflected in monitoring documents viz., stock audit report, stock statement, account statement, etc. EWS also includes monitoring of collateral,

Questions	*Reply*
	management related and other negative media/regulatory news pertaining to borrower. At every renewal/enhancement/Asset Quality Review (AQR) post NPA, the EWS is reviewed and triggers, if any, are included in the appraisal/ AQR note.
7) According to you, which types of bank frauds are generally hard to detect and what measures is your bank taking to increase the probability of fraud detection?	The fraud perpetrated by diversion/siphoning off funds through group companies and/or by manipulating financials are generally difficult to detect. The Bank has been strengthening the scope of EWS to specifically monitor year on year related party transactions. The Bank also conducts regular stock and inventory audits, obtains end use certificates and conducts account monitoring for early detection of such type of frauds. However, the risk of siphoning of funds especially through undisclosed group company and/or overseas entities is difficult to be eliminated.
8) What is your opinion regarding employee's involvement and behavior in Fraud Participation and subsequent detection?	In corporate cases, all credit facilities sanctioned by the Bank are approved by Committees or Forums constituted for this purpose. The detailed proposal notes are presented to the said Committee or Forum post seeking inputs and approval from Risk Team, Credit Monitoring Team and Compliance & Legal Team. As different teams are involved in the sanctioning/renewal/enhancement process, it is generally not possible for a particular employee to connive with the borrower in perpetration of fraud. Non-adherence to processes by the employees has been observed in certain cases during our review, however, it is generally caused by negligence or lack / deficiency of knowledge rather than malefice intention on the part of employees.
9) What are the methodologies the bank uses to monitor the employee behavior in the organization?	Employees bank accounts are monitored for any unusual credits which are then taken up for scrutiny. Employees accessing unrelated account of customers are flagged-off for review. For corporate cases fraud prevention team conducts mystery shopping at regular intervals to identify if the Relationship Manager agrees to

Questions	*Reply*
	compromise data/documents of/for the borrower. The Team also reviews whether the monitoring processes (including stock & receivables audit, end use of funds) are adhered to by the Business Team. Internal Frauds are most typical to detect. That is why mandatory leaves are given to employees abruptly in banks nowadays. For monitoring the employee's involvement in Fraud participation one thing is job rotation, second is mandatory leave, third is, scrutiny of their large accounts and transactions and lastly by analysing the lifestyle spending style some suspects can be found. Many frauds are detected by whistle blowers.
10) How are the suspected fraud accounts monitored by the bank?	In respect of CASA and cards, while it is difficult to monitor each and every account/card keeping the scale of operations in mind, accounts/cards are monitored largely based on patterns, risk scoring and offline analytics. Classification of suspected fraud accounts is updated in Central Repository of Information on Large Credits (CRILC) database within a week of fraud detection. Also, within 21 days of fraud detection, suspected fraud is reported to RBI through Fraud Monitoring System (FMS). Details of perpetrators including directors of the company along with detailed modus operandi of the fraud is updated in the FMS, which is accessible to all the banks through Central Fraud Registry (CFR) of RBI. The attributes of a fraudulent account/fraudster are also updated in Bank's internal databases such as CPCS and FALCON which are used as primary filters while on-boarding new clients in the Bank. Within 30 days of reporting the suspected fraud account to RBI, a police complaint is filed against the perpetrators. In case of consortium / multiple banking having PSU banks as major participants, largest PSU bank lodges complaint with CBI. The Bank provides mandate letter to the PSU bank requesting to include bank's outstanding exposure in the combined complaint.

Questions	***Reply***
11) According to you, what are the few initiatives that have to be implemented at industry-level to improve fraud detection and subsequent redressal mechanisms?	There needs to be coordination amongst the lenders (including out of consortium lenders) pertaining to sharing of information including account statements, turnover routing, stress in the account, etc. A common secured portal may be created by RBI where all the relevant information for a particular borrower can be archived and accessed by lenders (PAN card-based portal may be created). This portal may also be useful to share information between Financial Institutions [banks (not forming part of consortium), NBFC, co-operative banks] to identify trail of funds. A common portal may be created to list of all the shell, dormant, non-complaint, defaulter entities along with their related parties, promoters and directors, from different portals viz., Registrars of Companies (ROC), Goods and Services Tax (GST), Central Repository of Information on Large Credits (CRILC), Central Fraud Registry (CFR), etc National Financial Reporting Authority (NFRA) may suo-moto review auditing methods adopted by the firms where majority of the particular firm's auditees have been reported as defaulter/fraud, as the lenders and rating agencies rely on the audited financials for credit risk assessment. NFRA's such assessments to be shared with the banks through IBA from time-to-time.
12) Any RBI guidelines on different areas of fraud? What are RBI regulations and compliance requirements?	Yes, RBI has issued Master Directions on Frauds – Classification and Reporting by commercial banks and select FIs dated July 01, 2016 (Updated as on July 3, 2017). These directions are issued with a view to providing a framework to banks enabling them to detect and report frauds early and taking timely consequent actions like reporting to the Investigative agencies. Also, the banks are required to examine staff accountability and do effective fraud risk management.

Source: primary source

Exhibit 1
Nirav Modi Case

The Punja National Bank Fraud case of Nirav Modi is a massive example of fraud happening due to compromise in compliance and regulations in the operations of the bank. Media has publicized this fraud in such a way that a massive blunder has happened in one of the most significant public lenders and the banking industry might collapse.

Issues responsible for the fraud

The issues which were responsible for this particular fraud can be associated with the Non-compliance and Relaxation. There was non-compliance of the internal guidelines and relaxation of certain preventive vigilant guidelines. These were compromised not intentionally but inadvertently.

Modus Operandi

The key area involved in this fraud was the SWIFT messaging system and the CBS. In brief, the SWIFT (Society for Worldwide Interbank Financial Telecommunications) is a massive communications network that allows financial organisations like banks to send and receive international money transfer requests and information swiftly, securely, and precisely. Whereas CBS (Core Banking Solution) is a bank's centralized back-end system for efficiently processing banking transactions across all of the bank's branches. The RBI guidelines specified that both these systems should be integrated properly so that all the transactions happening at SWIFT can be seen in the CBS as well, so as to monitor and control it. But in Punjab National Bank at that time these two systems were not integrated. The alternative to this integrated mechanism was to follow a Standard Operating Procedure which required that all the transactions of the SWIFT to be manually incorporated in the banks CBS system at the end of the day.

The person responsible for this job was a well-known person in SWIFT operations in the banking industry back then and had not been transferred anywhere for a very long period of time. Since it was a specialized job with very little awareness, nobody could question that person and everyone trusted him. This person used to delay the work till everyone left the office so that he can enter those details in CBS which were not as per the SWIFT. In such a way the amount of the LoU Letter was altered and was used by Nirav Modi. This LoU was also to be supported by some collateral which was not present in this case.

At the time of retirement of this particular person when a different person was asked to follow the similar procedure he didn't oblige. This led to uncovering the fact that there has been a huge divergence in the amount of the transactions involved in the SWIFT and CBS. When the whole issue was investigated properly it was found that the overall magnitude of the Fraud amount was around Rs 13,500 Crores.

Some of the core reasons highlighted in the cases which could have prevented the fraud are:

i) Integration of the CBS and SWIFT

ii) Transfer of concerned person after a certain period of time

iii) Lack of knowledge on part of the auditors

iv) Lack of proper cross checking of SOPs and reconciliation of NOSTRO accounts

Note: The area of operations under which this case is categorized is Forex advances.

Fraud monitoring and reporting mechanism (FMR): RBI has notified that in case there is any issue of divergence of funds or suspicion of any similar kind the Banks concerned can red flag the account based on Early warning Signals. For these Red Flag accounts, the bank has to properly investigate it. If in 6 months duration it is confirmed that the account is being used for the purpose of any unwanted or fraudulent activities then the overall account has to be reported as fraudulent account

If the amount is less than 10,000 Rs it has to be reported to the Circle office

If the amount is more than 1 Crore Rs it has to be reported to the RBI

If the amount is more than 50 Crore Rs it has to be reported along with the report of the Demi Official (DO) letter from the MD.

EWS: Early warning signals are signals which should alert the bank officials about some wrongdoings in the loan accounts which may turn out to be fraudulent. There is a list of EWS provided by the RBI in their circulars that are followed by the banks to take proactive actions.

Employee involvement is a very rare scenario of 1 in 1000 cases of frauds. It is not very common because of double checking and reconciliations. The RBI has strictly specified that the employee can't be posted in the same seat for longer tenure and they will have to take mandatory leaves.Branch Manager can even visit the employee home to check on their lifestyle i.e. house, car, assets etc.

Industry level initiatives: Capacity building about frauds monitoring and detection is very important and is provided in training colleges.

RBI has specified various guidelines with respect to various types of frauds including KYC guidelines to prevent identity theft, Loans Red flagging, Forensic Audit for Non-Performing Assets etc.

Deposits frauds: Money laundering is a major way in which a single person having multiple accounts can operate and siphon funds.

Other ways include Cheque manipulations for example altering the amount of cheque from 5000 Rs to 50,000 Rs.

Therefore, one way to prevent this is to have proper KYC checks in order to prevent impersonations and fictitious naming under which frauds can be conducted

Off Balance Sheet Items: It includes non-fund-based facilities such as Bank Guarantees because this liability arises after 6 months or 1 year.

Clearing Accounts: These are internal accounts of the banks as the banks act as a clearing agent of various other banks. They are imprest accounts where reconciliation has to be done with different banks. These frauds usually take place with the involvement of the employee. Fictitious or delayed entries can be done in order to siphon off funds or alter the statements.

Cash: These types of frauds usually consist of fictitious notes. Involvement of the cashier can be some of the reasons for these frauds

Source: primary

Annexure I

Correlation among the Bank Frauds

		Advances	*Card/ internet*	*Deposits*	*Off-balance sheet*	*Foreign exchange transactions*	*Cash*	*Cheques/ demand drafts etc.*	*Inter-branch accounts*	*Clearing etc accounts*	*Non-resident accounts*	*Others*
		Row 1	*Row 2*	*Row 3*	*Row 4*	*Row 5*	*Row 6*	*Row 7*	*Row 8*	*Row 9*	*Row 10*	*Row 11*
Advances	Row 1	1										
Card/internet	Row 2	0.97431	1									
Deposits	Row 3	-0.51632	-0.62174	1								
Off-balance sheet	Row 4	0.38183	0.29123	0.05984	1							
Foreign exchange transactions	Row 5	0.84022	0.86923	-0.79752	0.01246	1						
Cash	Row 6	0.92799	0.87596	-0.70354	0.2128	0.90575	1					
Cheques/demand drafts etc.	Row 7	-0.57318	-0.63069	0.87594	-0.10256	-0.8448	-0.74725	1				
Inter-branch accounts	Row 8	0.80047	0.86038	-0.81248	-0.0132	0.98578	0.84993	-0.85819	1			
Clearing etc accounts	Row 9	0.78588	0.82182	-0.77522	0.02474	0.97656	0.915	-0.82689	0.95264	1		
Non-resident accounts	Row 10	0.2968	0.4184	-0.29221	0.51514	0.47262	0.53482	-0.35257	0.39921	0.5543	1	
Others	Row 11	0.68385	0.51321	-0.07784	0.49713	0.29143	0.35956	-0.27267	0.31517	0.18511	-0.05386	1

Source: Calculated by author