

Consumer's Dilemma: Vulnerability of Banks in India Versus Crypto Currency Adaptability

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Abstract

Today's banking system has seen revolutionary change within a decade or more. The foremost reason being the adaptation of information technology in the banking system. Although, this has strengthened the economy of our country, it has also led to many frauds and scams in the recent times. In this research paper, we have tried to collect information on the above events and tried to preview the actual positioning of India's banking system. There has also been some discussion on the understanding, growth, usability and adaptability of crypto currencies such as Bitcoins, Ethereum, Litecoin, Dash etc. The overall discussion helps us to understand how the inner complexities of Indian banking system is leading to consumer's thoughts and interest shifting towards crypto currency. Some suggestions have also been provided as different steps which can be taken in the present situation.

Keywords : Bank, Bitcoin, crypto currency, frauds, scams

I. INTRODUCTION

The Indian banking sector is going through subterranean shady phases with different stories and arguments developing from NPAs in the Indian banking sector i.e. both public and private sector. This research paper guides through various historical events in recent years and current past which includes banking and financial sectors. On one hand, the banking sector has been the backbone of Indian economic growth since independence, and on the other hand there has been a sharp growth in malicious activities related to activities involved in it.

Over the last 35 years, the world financial industry has been weighed down by uninterrupted waves of financial crimes. There has been some or more intentional inefficiency along with many insider-trading scandals associated with the arrival of mergers & acquisition boom of the 1980s, different IPO manipulations in the 1990s, accounting practices related fraud in major corporations like Enron and Ahold (a Dutch retailer) during 2003. Also, included are the share stock options scandal and late-trading, market-timing practices linked to mutual funds during 2000s. In recent times, there has been an occurrence of the financial crisis of 2007–2008, rampant fraud in the mortgage industry, illegal handling of key benchmark rates, and widespread wrong-selling of various complex financial derivatives

instruments to unknowledgeable and naive investors [30]. During the last few decades the frequency of financial crimes has increased manifolds with increase in scope and areas. In theory, there has been an overlooking of investigating financial crime which in terms of financial market conduct includes activities of legal stipulation, such as statutory laws, regulatory rules, civil laws, or criminal laws, and does not include an extensive range of real-time world behaviors and new market dynamics. Therefore, new practical cases have been the source of additional inputs for existing legislations and modifications are needed for better control over the banking system.

II. LITERATURE REVIEW

Banking system has been providing uninterrupted services to customers since the 1970s. According to Agarwal (1979), who performed a study on nationalized banks with special reference to their social obligations, there should be more branch offices for public in the semi-urban and rural areas in the lead districts [1]. He also recommended that more credit facilities should exist for the public including both priority and neglected sectors. He also focused on how new branches could lead to employment generation and take the role of reducing unemployment opportunities, finance government securities, and expand the growth of bill

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form of credit.

The growth and introduction of Information Technology (IT) has also led to substantial changes in banking sector. Bajaj and Nidumolu [2] reported that information and information technology (IT) are the main catalytic tools of the information age, that has led to modern knowledge-based industrial revolution. As per the researcher, all the existing businesses in today's era are networked and utilize information technology to sustain in a highly competitive environment.

As researchers involved in the field of white-collar crime have long indicated that the law-violating behavior existed, although mostly overlooked, acted as contributing factors during the financial crisis of 2007–2008 [11], [13], [20]. Majority of these included activities that involve legal management of risk, situations of financial complexity, liquidity, and volatility, growing leverage in the banking and parallel banking systems, the swift growth of credit and declining credit standards, illogical enthusiasm, and unproductive rigid policies [20]. The financial crimes also includes active manipulation of information leading to massive misallocation of capital, an indefinite, and uncontrolled accumulation of risk, and an extensive disrespect for existing laws and regulations.

Many researchers and experts even indicated that illegal behavior is more prevalent in the financial sector than in any other area of the economy [11], [12] and that such activities in the financial markets take place on such a great scale that it cannot be considered as extraordinary [10]. Some have even stated that today's financial markets have curved into a de facto “criminal playground” [18].

The Indian banking sector has seen a smooth and fluency in transactions, with rapid changes in banking world. Singh [23] stated that the Indian banking industry is exceptional and has no parallels in the banking history of any country in the world. Post independence, the Indian banking sector has gone through different stages that include character-based lending, ideology-based lending, and competitiveness-based lending. Similarly, Kumar and Sriganga (2014) observed that the number of employees in Indian Banking sector is nearly 1175,149 employees, in approximately 109,811 branches in India (also 171 branches abroad with customer deposits of Rs. 67,504.54 billion along with bank credit of Rs. 52,604.59 billion [16]. According to DNA (2012) report, Indian public sector banks (PSBs) possess a 75% market share, but the amount of funds contributed by private banks is almost five times of public sector banks. The

Reserve Bank of India (RBI) is the central policy making and national-level regulatory body that keeps an eye over the entire banking industry. The exceptional increase in number of branches, growth, and diversification in business with large-scale computerization and networking, have jointly amplified the operational risks faced by the banks. Regrettably, this banking sector had to face many types of frauds and scams [3].

Recently, Pan acknowledged that there were deposits of Indian banking industry of around Rs. 81 trillion (USD1.30 trillion) in 2014. Modern banks are using internet and mobile devices to make transactions and also communicate with the masses [19]. As per report of Chakraborty, by 2020 Indian banking sector can achieve to become the fifth largest in the world by 2020, and by 2025, the third largest in the world [5]. Besides, Kaveri also observed that that there has been a simultaneous growth of frauds and scams along with the growth of Indian banking industry with more business and increasing profits, the amount involved in bank frauds has also been on the rise [15]. This detrimental development caused huge losses to banks and damaged their credibility [3].

According to KPMG's India Fraud Survey 2012, there have been doubtful reasons and fear that the financial services sector although being strictly monitored may appear most susceptible sector to frauds [17]. Chiezey and Onu stated that fraudulent activities are losses to both banks and their customers, and leads to decrease of funds for contribution for the development of economy [7]. It was also observed that the banking industry in India considers increasing fraud as an inevitable cost of conducting such business [9]. Another important survey conducted by Deloitte India concluded that widespread causes of frauds in banking include fund diversion and siphoning, falsified documentation, absence, or overvaluation of collateral securities were the main issues for frauds made in retail banking [8].

On the other hand, we have crypto currencies such as Bitcoins, Ethereum, Litecoin, Dash etc. Bitcoins are being debated as being safe for users with people trading all over the world. Bhattacharjee and Kaur also stated that Bitcoin currency value is based upon the growth of transaction volume and customer acceptability [4]. According to the author, many of the demerits of banking system can be avoided using Bitcoins. The reason is that it is an anonymous algorithm with no bias in any form. Sending and receiving money is now an

elementary part of the internet like sending a message over email and Bitcoins transfers acts as a solution for the easy movement of money between the users of such cryptocurrencies. As per a recent news dated June 19, 2018 Nishiawakura, a Japanese village is going to use cryptocurrencies completely to strengthen its economy. A new cryptocurrency named Nishiawakura Coin (NAC) will be issued and circulated by Nishiawakura's Token Economy Association.

As per a report by Coindesk, all the 41 patent applications have been submitted at Digital Currency Research Lab of People's Bank of China (PBoC) that are focusing on a certain aspect of the digital currency system. They also believe that when all these patents are combined, they would create a new technology that can issue a digital currency. It also promises to provide a wallet system that can store and transact the assets in an "end-to-end" fashion [22].

III. RESEARCH OBJECTIVES

This research has the following research objectives:

- 1) To understand the current position of Indian banking sector (public & private sector included).
- 2) To identify the growth of cryptocurrency in the global context.
- 3) To understand whether cryptocurrency can prove to be an alternative to existing banking system.
- 4) To provide suggestions, if applicable in the current context.

IV. HYPOTHESIS

I considered the following hypothesis for this research:

- 1) Null Hypothesis (H_0): Performance of Indian banking sector and growth of crypto currency are not interrelated to each other.
- 2) Alternate Hypothesis (H_1): Performance of Indian banking sector and growth of crypto currency are interrelated to each other.

V. DATA COLLECTION

The data has been collected from various sources such as published work available in journals, newspapers, books, and websites. Most of the data and facts have been collected from secondary sources.

VI. DATA ANALYSIS

A. Banking Scams in 2018

Here is a brief look at each of the scams that rocked the banking sector in India till now.

1) PNB scam: On February 14 this year, one of the state-run lenders PNB shocked the whole banking industry of India by declaring that it had been defrauded by Rs 11,400 crore purportedly by Nirav Modi, a billionaire jeweler, his family members, business partner Mehul Choksi, along with owner of Gitanjali Gems from PNB's Brady House Branch in Mumbai. The scam was followed by the suspension of employees including people at the general manager level from PNB for their supposed association in one of the biggest scams ever in the Indian banking sector. The Indian government has revoked passports of Nirav Modi and Mehul Choksi [14].

2) Rotomac case: Another event unfolded as Kanpur based Rotomac Global was probed by the authorities for purportedly deceiving a sum of Rs 3,700 crore from a conglomerate of seven banks. According to the facts revealed, the concerned investigation agency is probing Vikram Kothari and Rahul Kothari, directors of the concerned business group for misdirecting credit sanctions amounting to Rs 456.63 crore issued by Bank of Baroda (BoB), the member of consortium banks at its International Business Branch (IBB) located at the Mall Kanpur [29].

3) SBI fraud case: Kanishk Gold Ltd. has been probed for a case of defraud amounting to Rs 824.15 crore from a consortium of 14 banks bank led by the SBI. As per as reports, the Enforcement Directorate (ED) and CBI started a case against Kanishk Gold [34].

4) R P Infosystem scam : In January, the CBI charged two directors of R P Info Systems for allegedly cheating a consortium of banks including PNB, SBI, and Canara bank of an aggregate amount of 15 crore. The banks suspected that loans were issued on the basis of fictitious documents [35].

5) PNB 91 million scam: Another scam stuck PNB bank after the scam of Rs 12,000 crore supposedly committed by Nirav Modi, where it could detect an additional 91 million fraud in March. It included the officials of a little-known company known as Chandri Paper and Allied Products Pvt. Ltd. This fraud had been identified at the

same PNB's Brady House Branch in Mumbai where the Nirav Modi scam was disclosed [37].

6) Karnataka Bank fraud case: Another private sector bank, the Karnataka Bank on March 28 detected a fraud valued at ₹ 86.47 crore in the domain of fund based working capital facilities which it had loaned to Gitanjali Gems Limited which has been under observation in connection with the alleged association of the promoter Mehul Choksi in the mega banking scam [28].

7) United Bank of India case: In the first week of March, 2018 the Central Bureau of Investigation (CBI) filed a disproportionate assets (DA) case against Archana Bhargava, former Chairperson and Managing Director of United Bank of India (UBI). The CBI alleged that Archana Bhargava acquired movable and immovable assets disproportionate to her income between 2004 and 2014 [26].

8) Canara Bank: The CBI arrested two directors of a computer maker RP Infosystem for defrauding 27 banks including Canara Bank. Canara Bank filed a complaint on behalf of other lenders on February 27. The CBI has registered the case under the charges of cheating, criminal conspiracy, and forgery [23].

9) Oriental Bank of Commerce Fraud: The CBI said about Dwarka Das Seth, and the directors of city-based jewellery outlet had left India along with their family members sometime in 2014, even before Oriental Bank of Commerce (OBC) had informed the agencies about the complaint of fraud amounting to ₹ 390 crore against them [33].

10) ICICI Bank & Videocon: The CBI also started a preliminary enquiry (PE) into the alleged pact between ICICI Bank M.D. and CEO Chanda Kochhar's husband Deepak Kochhar, and Videocon group chairman Venugopal Dhoot [32]. As per different reports, PE aimed at seeking authenticity of the charges that Dhoot supplied crores of rupees to a company being promoted by Deepak Kochhar and their two relatives six months after Videocon group received Rs 3,250 crore as loan from ICICI Bank in 2012 [36]. This amount was just a fraction of the total amount i.e. Rs 40,000 crore loan that Videocon group obtained from a group of 20 banks led by SBI. Dhoot supposedly gave Rs 64 crore in 2010 through a fully owned entity to NuPower Renewables

Pvt. Ltd. (NRPL) that he had started with Deepak Kochhar and two of his relatives. Also, he had transferred the ownership of the company to a trust controlled by Deepak Kochhar for just Rs. 9 lakh within six months after he obtained the loan from ICICI Bank [32].

11) Axis Bank Fraud: As reported in Financial Express, Another bank fraud has come into the picture in which Axis Bank was duped. Three directors of a private company had been charged for a bank fraud of Rs 4,000 crore, out of which Rs 250 crore of Axis bank were also included [14].

According to RBI, bank frauds can be divided into three broad different categories that include deposit related frauds, advances related frauds, and services related frauds. Deposit related frauds are thought to be considerable in terms of frequency but not in amounts since they have decreased considerably in current years due to a new payment system and preamble of cheque truncation system (CTS) for commercial banks, application of electronic transfer of funds, etc. Advances related fraud is another major challenge due to the amount of money involved (approximately, 67% of total amount concerned in frauds during the last 4 years), which still is the most potential direct threat to the current financial stability of banks [27].

With continuous use of technology and growing internet speed in the banking system, issues related to cyber frauds have augmented and converging into even further sophistication in terms of usage. This also includes documentary credit (letter of credit- LoC) related frauds that have arisen with negative implications on trade and related activities. It is also to be noted that more than 95% of fraud cases along with gross amount drawn in fraud comes from commercial banks. Although the public sector banks explain just about 18% of total number of fraud cases, it claims around 83% in terms of the amount involved. On the other hand, private sector banks, accounting for 55% of number of fraud cases, having just about 13% of the total amount involved in such cases. Therefore, the PSBs are more susceptible in case of big-ticket advance related frauds (1 crore or above) in both terms of total amount involved and the number of fraud related cases reported.

According to various researches conducted by Deloitte [8], both the frequency and sophistication of frauds in banking sector have amplified during the last two years. A greater percentage of around 93% of

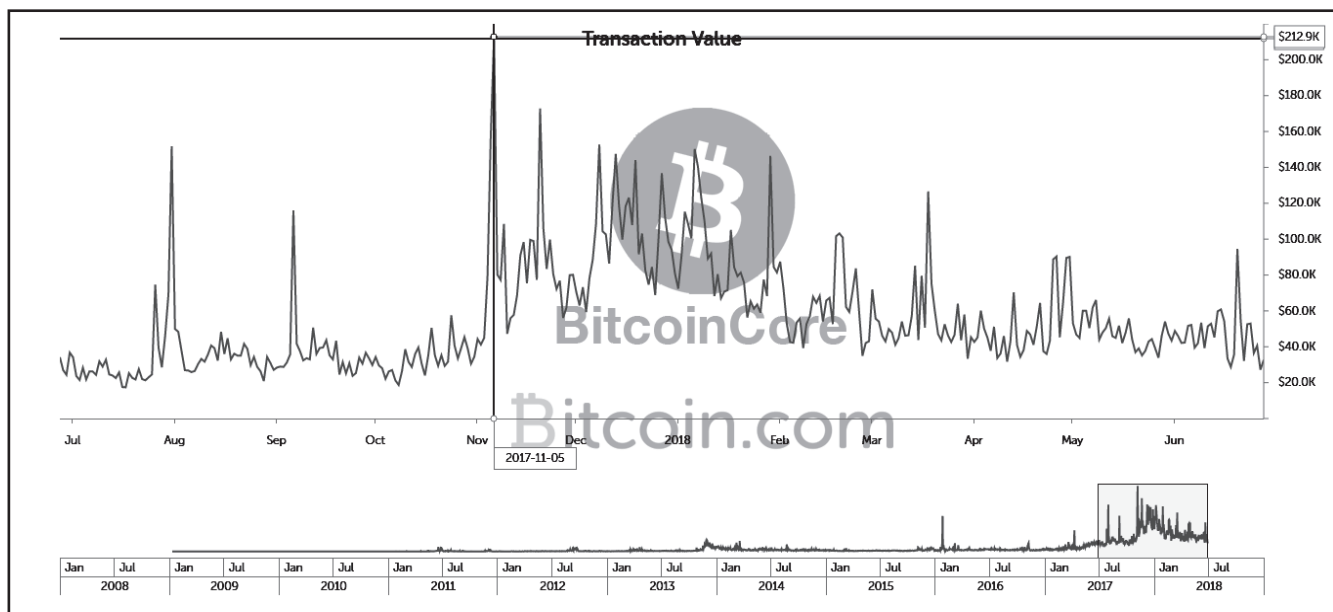


Fig. 1 . Bitcoins Transactions (2017-2018)

Source: Bitcoin Cash Charts (n.d.) [6]

respondents thought that about increase in fraud incidents and more than 50% said that they had observed such cases in their own organizations [8]. The research also revealed that retail banking was acknowledged as the foremost contributor to fraud incidents, with most respondents saying that they had experienced nearly 50 fraudulent incidents from 2012 to 2014, and banks have lost Rs 10,000,00 per fraud on an average.

B. Bitcoins

1) Transaction volumes: As seen in Fig. 1, in November 2017, around \$ 280 million value of Bitcoins were being transacted around the Bitcoin network on a per day basis. Since then, transactions volumes have been hovering around \$ 100 million to \$ 160 million value of Bitcoins from December 2017 to June 2018. As per Forbes.com author, Kyle Torpey, the quantity of transactions taking place on the Bitcoin network per day has remained roughly the same in 2017, the off-chain Bitcoin payments are arising which makes Bitcoins suitable for more of payment settlements in the present circumstances [24]. The concern about Bitcoin has been the rising fee for Bitcoin transfers. An instance can be a person who claimed on Twitter that for transfer of \$25 worth of Bitcoin, he had to incur \$16 fee, to sum it to \$41 actual money sent by the user [6].

There has been an introduction of a new network known as Lightning Network, which adds a second layer

of protocol to existing Bitcoin transfer layer making it more faster and efficient but considered only for smaller micro transactions around \$ 300 [31]. Further improvements can make the transfer amount even more in future.

2) Performance in cryptocurrencies trading: As seen in Table I, Bitcoin has the highest market capitalization of \$ 101,633,806,086 with highest USD exchange price of \$ 5,936.06 and circulating supply of 17,121,425 BTC. Ethereum is considered as another important cryptocurrency with a market cap of \$ 41,943,053,825 with USD exchange price of \$ 417.87 and circulating supply of 100,373,451 ETH.

VII. FINDINGS & CONCLUSIONS

Certain important facts have been identified which are as follows:

- 1) Manual banking is subject to manipulation with widespread NPAs, bad debts, and fraudulent transactions becoming very common in both public sector banking systems, and private sector banking systems.
- 2) On the other hand, crypto currencies are more anonymous in nature and chances of likely fraud are negligible.
- 3) Bitcoin transfer is more secured although transaction fees are comparatively higher. Other crypto currencies such as Ethereum, litecoin, Zcash, and Dash also have

Table I. Top 10 Cryptocurrencies as on June 29, 2018

#	Name	Market Cap	Price	Volume (24h)	Circulating Supply
1	Bitcoin	\$101,633,806,086	\$5,936.06	\$3,721,300,000	17,121,425 BTC
2	Ethereum	\$41,943,053,825	\$417.87	\$1,490,040,000	100,373,451 ETH
3	XRP	\$17,362,523,943	\$0.44	\$235,424,000	39,262,097,329 XRP *
4	Bitcoin Cash	\$11,422,294,270	\$663.73	\$387,072,000	17,209,300 BCH
5	EOS	\$6,595,758,839	\$7.36	\$770,371,000	896,149,492 EOS *
6	Litecoin	\$4,248,470,997	\$74.30	\$281,951,000	57,183,346 LTC
7	Stellar	\$3,359,875,970	\$0.18	\$34,103,300	18,760,404,985 XLM *
8	Cardano	\$3,047,234,527	\$0.12	\$51,354,700	25,927,070,538 ADA *
9	Tether	\$2,704,544,198	\$1.00	\$2,479,360,000	2,707,140,346 USDT *
10	IOTA	\$2,574,539,925	\$0.93	\$44,238,400	2,779,530,283 MIOTA *

Source: <https://coinmarketcap.com/> [21]

higher transactions fees.

4) Consumers are becoming more aware of these currencies and in many places around the world, it has been considered suitable for long term usage (China and Japan).

Thus, we can conclude that consumers are facing lot of dissatisfaction due to current banking system events, and this has led to them trying to find alternative sources of investment, among which crypto currency and its usage have become bigger than ever. Therefore, we can say that our alternate Hypothesis (H_1) i.e. performance of Indian banking sector and growth of crypto currency are interrelated to each other and the null hypothesis (H_0) stands as false.

VIII. SUGGESTIONS

Some suggestions can be as follows:

- 1) Due to continuous low profitability in most of the banks despite increase in number of branches and employees, there must be corrective actions for more employee discipline and control on operations of branches.
- 2) Increasing Non Performing Asset (NPA) has led to increases in aggregate losses over the past decades. A better system is to merge these banks under a single unitary law which can have better control on loan sanctioning.
- 3) More computerization of banking in rural areas with transparency at all ends needs to be undertaken at earliest.
- 4) Priority sectors including industries and social sectors should be allotted for more investments in the future without any bias under any circumstances.

5) More uniform accounting practices must exist for better coordination and cooperation among different public and private sector banks.

6) Special tribunals by government to speed up the process of recovery of loans.

7) Appointment of chief executives of banks and directors should be depoliticized.

8) Advance related fund loans should be handled more carefully with electronic verification of the loan application and fund transactions should be tracked on a continuous basis.

9) An indirect control of indigenous banks by RBI mediated through commercial banks is needed.

10) Flow of funds from banks to indigenous sector should be more regular, assured, and automatic.

11) Proper verification and systematic evaluation of indigenous bankers is needed before granting them limits.

12) Rural banks, including RRBs, should function in rural areas and their business should be involved more in financing of agriculture and allied activities, with consideration of profitability objective [25].

13) Indirect linkage of indigenous bankers with RBI can be made through assistance for discounting of hundis on a more regular basis than the usual time taken for such transfer [38].

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