License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017

SHRI RAM COLLEGE OF COMMERCE

ISSN 2581-4931 (Print)

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

VOLUME 2 ISSUE 2 JANUARY–JUNE 2018

Publication Date: September 28, 2018 Publication City: Delhi

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

VOLUME 2 ISSUE 2 JANUARY–JUNE 2018 ISSN 2581-4931 (Print)

WEBLINK
Visit: http://www.srcc.edu/publications/students-publications

IMPRINT LINE

Printed and published by Prof. Simrit Kaur (Principal, Shri Ram College of Commerce) on behalf of 'Shri Ram College of Commerce' and printed at M/s Poonam Printers, C-145, Back Side Naraina Industrial Area, Phase-I, New Delhi and published at Shri Ram College of Commerce, University of Delhi, Maurice Nagar, Delhi-110007, India.
Editor – Dr. Santosh Kumari

License No. – DCP / LIC No. F. 2 (S / 37) Press / 2017
Registration No. DELENG/2018/75093
ISSN 2581- 4931 (Print)

All correspondence relating to publication of the Journal should be addressed to:

The Principal
Shri Ram College of Commerce
University of Delhi, Maurice Nagar
Delhi - 110 007 (India)
E-mail: principaloffice@srcc.du.ac.in

Publication Date: September 28, 2018
Printing Date: September 25, 2018
Publication City: Delhi

ORIGINAL

भारत सरकार
GOVERNMENT OF INDIA

सत्यमेव जयते

भारत के समाचारपत्रों के पंजीयक का कार्यालय
OFFICE OF THE REGISTRAR OF NEWSPAPERS FOR INDIA

पंजीयन प्रमाण–पत्र
CERTIFICATE OF REGISTRATION

समाचारपत्रों के ... भारत स... नई दिल्ली ... सूचना एवं प्रसारण मंत्रा...

प्रमाणित किया जाता है कि प्रेस और पुस्तक पंजीकरण अधिनियम, 1867 के अन्तर्गत इस समाचारपत्र को पंजीकृत कर लिया है :
This is to certify that this newspaper has been registered under the Press and Registration of Books Act, 1867 :

1. समाचार पत्र का नाम Title of the Newspaper	**STRIDES - A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE**
2. समाचार पत्र की पंजीयन संख्या Registration Number of the Newspaper	**DELENG/2018/75093**
3. भाषा/भाषाएं, जिसमें/जिनमें समाचारपत्र प्रकाशित किया जाता है Language/Languages in which it is published	अंग्रेजी ENGLISH
4. इसके प्रकाशन का नियतकाल तथा जिस दिन/दिनों/ तिथियों को यह प्रकाशित होता है Periodicity of its publication and the day/days/ dates on which it is published	अर्ध वार्षिक HALF YEARLY
5. समाचारपत्र की फुटकर कीमत Retail selling price of the newspaper	FREE DISTRIBUTION
6. प्रकाशक का नाम/Publisher's Name	SIMRIT KAUR
राष्ट्रीयता/Nationality	INDIAN
पता/Address	341, NARMADA APARTMENTS, ALAKNANDA, NEW DELHI-110019
7. मुद्रक का नाम/Printer's Name	SIMRIT KAUR
राष्ट्रीयता/Nationality	INDIAN
पता/Address	341, NARMADA APARTMENTS, ALAKNANDA, NEW DELHI-110019
8. सम्पादक का नाम/Editor's Name	DR. SANTOSH KUMARI
राष्ट्रीयता/Nationality	INDIAN
पता/Address	T-7, NEW TEACHERS FLAT, SHRI RAM COLLEGE OF COMMERCE, UNIVERSITY OF DELHI, MAURICE NAGAR, DELHI-110007
9. जिस स्थान पर मुद्रण का काम होता है, उसका सही तथा ठीक विवरण True and precise account at the premises where printing is conducted	M/S SUDHA PRINTING PRESS B-21/3, OKHLA INDUSTRIAL AREA, PHASE-II, NEW DELHI-110020. (2) M/S POONAM PRINTERS, C-145, BACKSIDE NARAINA INDUSTRIAL AREA, PHASE-I, NEW DELHI.
10. प्रकाशन का स्थान Place of publication	SHRI RAM COLLEGE OF COMMERCE, UNIVERSITY OF DELHI, MAURICE NAGAR, DELHI-110007

दिनांक /Date: 4|5|2018

RKBardwaj

(आर. के. भारद्वाज/ R.K. BHARDWAJ)
उप प्रेस पंजीयक/ Deputy Press Registrar
कृते भारत के समाचारपत्रों के पंजीयक
FOR REGISTRAR OF NEWSPAPERS FOR INDIA

Owner(for reference):
SHRI RAM COLLEGE OF COMMERCE

निस्केयर
NISCAIR

NATIONAL INSTITUTE OF SCIENCE COMMUNICATION AND INFORMATION RESOURCES
(Council of Scientific and Industrial Research)
14, Satsang Vihar Marg, New Delhi 110 067

ISSN
INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

S. B. Burde,
Head, National Science Library, ISSN
Phone: 91-11-26863759
E-Mail: issn.india@niscair.res.in

No. NSL/ISSN/INF/2018/210 **Dated: June 01, 2018**

Shri Ram College of Commerce,
University of Delhi, Maurice Nagar,
Delhi - 110007

Dear Sir/Madam,
महोदय/महोदया,

We are happy to inform you that the following serial(s) published by you has/have been registered and assigned ISSN(s) [Print].

हमें आपको यह सूचित करते हुए प्रसन्नता हो रही है कि निम्नलिखित प्रकाशन पंजीकृत कर लिए गये है एवं **प्रिन्ट** आई.एस.एस.एन. आबंटित कर दिये गये हैं|

ISSN 2581-4931 Strides - A Student's Journal of Shri Ram College of Commerce

It is mandatory that the ISSN must be printed on every issue preferably at the right-hand top corner of the cover page.

प्रकाशन की प्रत्येक प्रति के कवर पेज के दाहिनें ओर के ऊपरी सिरे पर आई.एस.एस.एन. छपा होना अनिवार्य है|

We will be responsible for monitoring the use of ISSN(s) assigned to Indian Serials and for supplying up-to-date data of the same to the International Centre for ISSN, Paris. For this purpose, we request you to send us the forthcoming issue of your serial on complimentary basis.

भारतीय राष्ट्रीय केंद्र की जिम्मेदारी होगी कि वह भारतीय पत्रिकाओं को आबंटित आई.एस.एस.एन. की जांच करेगा एवं उद्यतन डाटा की जानकारी इंटरनेशनल सेंटर फॉर आई.एस.एस.एन. पेरिस को भेजेंगे| अतः आपसे अनुरोध है कि इस कार्य हेतु प्रकाशन की एक प्रति आई.एस.एस.एन. प्रिंट करके सम्मानार्थ भेंट हमें भेजें|

Kindly note that assigning the ISSN does not amount to approving the journal or its contents by National Science Library/CSIR-NISCAIR. In future, the names and/or logos of NISCAIR, CSIR should not be mentioned on the journal or the journal website.

कृपया ध्यान दें कि आवंटित किया जा रहा आई.एस.एस.एन. राष्ट्रीय विज्ञान पुस्तकालय/सी.एस.आई.आर.-निस्केयर द्वारा किसी भी जर्नल/पत्रिका या इसकी विषय- वस्तु को अनुमोदित करने का द्योतक नहीं है| भविष्य में पत्रिका या पत्रिका की वेबसाइट पर निस्केयर या सी.एस.आई.आर. का नाम अथवा प्रतीक चिन्ह नहीं दर्शाया जाये|

We solicit your cooperation in this regard.
आपके सहयोग के लिए हम आभारी रहेगें|

Yours sincerely,

For Head
ISSN National Centre of India

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

ISSN 2581-4931 (Print)

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a new Journal named 'Strides – A Students' Journal of Shri Ram College of Commerce'.

ABOUT THE JOURNAL

It is a double blind reviewed bi-annual Journal launched exclusively to encourage students to pursue research on the contemporary topics and issues in the area of commerce, economics, management, governance, polices etc. The journal provides an opportunity to the students and faculty of Shri Ram College of Commerce to publish their academic research work.

PUBLICATION POLICY

Shri Ram College of Commerce is committed to upholding the high academic standards. Therefore, the Committee on Publication Ethics (COPE) follows a 3-Stage Selection Process while approving a paper for publication in this Journal. The policy is as follows:

Stage-1. Screening of Plagiarism

To maintain high *academic standards, academic ethics and academic integrity* each research paper received by COPE (Committee on Publication Ethics) is sent for screening of plagiarism on "Turnitin". The committee adheres to the maximum tolerance limit of 25%.

After screening for plagiarism, research papers are sent to the *Referees* (Subject Experts) for double blind review.

Stage-2. Double Blind Review

The journal adheres to a rigorous double-blind review policy. Each research paper received by COPE is sent for review to the *Referee* (Subject Expert). The reports submitted by the *Referees* are sent to the respective students for improvement (if any, suggested by the *Referees*). After reporting all the suggestions recommended by the *Referees*, the revised and improved version of the papers are re-submitted by the students to the COPE.

If a research paper is rejected by the *Referee*, no further proceedings are taken into account. Once rejected by the expert means cannot be published at all.

Stage-3. Approval by Committee on Publication Ethics (COPE)

After double blind review and screening of plagiarism, research papers are submitted for final approval to the Committee on Publication Ethics (COPE). The research papers approved by COPE are finally sent for publication.

Since COPE is the apex authority to take all decisions related to publication of research papers and articles in 'Strides – A Students' Journal of Shri Ram College of Commerce', the decision of COPE is final and binding.

INSTRUCTIONS FOR MANUSCRIPT DRAFT

The following guidelines are to be carefully adhered by the students before final submission of the manuscript. The submitted manuscripts not conforming to the following guidelines are not taken into consideration for any further processing.

Format

Format of the article on the front page should be:

a) Title

b) Name(s) of the student(s) and mentor along with their details

c) Abstract

d) Keywords

Abstract

The abstract should capture the essence of the article and entice the reader. It should typically be of 100 -150 words, and in Italics.

Font type and word limit

The research paper is to be typed on A-4 size paper with single line spacing. The complete length of the paper should not exceed 5000 words including endnotes and references. The font size should be 12 and font style should be Times New Roman.

Referencing style

The Journal adheres to the APA (American Psychological Association) Referencing Style, Sixth Edition. Students must refer to the APA Referencing Guidelines to ensure conformance to this reference style. For further information you may visit the following link - http://www.apastyle.org

Endnotes

Endnotes should be serially arranged at the end of the article well before the references and after conclusion.

Table, Figures, Graphs

The first letter of the caption for table, figure, graph, diagram, picture etc. should be in capital letter and the other words should be in small letter - e.g. Table-1: Demographic Data of Delhi, Figure-1: Pictorial Presentation of Population etc.

MANUSCRIPT SUBMISSION GUIDELINES

Soft Copy: The soft copy of the manuscript should be sent through e-mail to the editor at strides@srcc.du.ac.in and cc to principaloffice@srcc.du.ac.in.

Hard Copy: The hard copy (3-Sets) of the manuscripts should be submitted in the Administrative Office of the College.

Declaration

As part of the submission process, the student and mentor needs to declare that they are submitting original work for first publication in the Journal and that their work is not being considered for publication elsewhere and has not already been published elsewhere. Again, the paper should not have been presented in any seminar or conference. The scanned copy of duly signed declaration by the students and their respective mentors has to be emailed along with the research paper.

COPYRIGHT

The student(s) remain the whole and sole author of their respective research papers published in 'Strides – A Students' Journal of Shri Ram College of Commerce' and hold its copyright. Also, the 'author' is wholly and solely responsible for plagiarism caught after publication (if any). The Editor, Referees, Mentors, COPE, SRCC, Printer, Publisher and Printing Press shall not be responsible for any plagiarism.

AWARD

The authors of best three papers from every Issue are awarded – First Prize, Second Prize and Third Prize on the SRCC Annual Day.

Principal's Message

The mission statement of the college signifying the existence and its road map to the achievement of its vision, reads as:

"To achieve and sustain excellence in teaching and research, enrich local, national and international communities through our research, improve skills of alumni, and to publish academic and educational resources"

To achieve and promote excellence in publications and applied research, the college has taken the initiative to launch a new journal exclusively to publish students' research papers and articles. It will be an add-on to the enriched catalogue of college publications and academic literature.

The Journal has provided an opportunity to the students of our college to focus on research. Since the students were not opened to the research methodologies at the undergraduate level, they were mentored by experienced faculty of our college. Simultaneously, their articles were also reviewed by the referees and tested for plagiarism before publication. After reporting all the suggestions recommended by the referees, the articles were revised and then finally published. The college had successfully released the foundation issue of the Journal **"Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** on the occasion of 91st Annual Day of the College held on 13th April, 2017. The Journal was released by Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.

I would like to congratulate the students whose papers are published in this issue of the journal and simultaneously encourage all the students to contribute their research papers and articles for the successive issues of the Journal.

Best wishes for their future endeavors.

Prof. Simrit Kaur
Principal

Editor's Message

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The College appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the College has taken the initiative to launch a new Journal named 'Strides – A Students' Journal of Shri Ram College of Commerce' to encourage students to pursue research under the guidance of the faculty of Shri Ram College of Commerce.

It is a bi-annual Journal launched exclusively to publish academic research papers and articles by the students on contemporary topics and issues in the area of commerce, economics, management, governance, policies etc.

In order to maintain high standards of publication, COPE (Committee on Publication Ethics) has been constituted. The COPE shall be the apex authority to take all decisions related to publication of research papers and articles in Strides. The decision of COPE shall be final and binding.

To maintain high *academic standards, academic ethics* and *academic integrity*, a rigorous process of double blind review of research papers is followed along with screening of plagiarism of each manuscript received by the COPE for publication. The research work published in Strides is original and not published or presented at any other public forum.

The foundation issue of the Journal **"Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** was successfully released on 91st Annual Day of SRCC held on 13th April, 2017 by Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.

The successive Issues of 'Strides – A Students' Journal of Shri Ram College of Commerce' shall be bi-annually released.

I congratulate all the students whose research papers are published in this Issue of Strides and express my sincere thanks to their mentors and referees.

Dr. Santosh Kumari
Editor

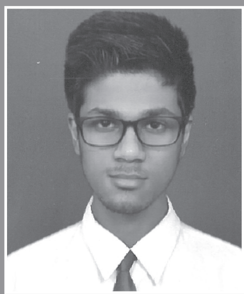
ISSN 2581- 4931 (Print)

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

Volume 2 Issue 2 JANUARY - JUNE 2018

RESEARCH PAPERS

Crypto Banks: The Future of Indian Banking



Neeraj Anand
B.com. (Hons.)
Shri Ram College of Commerce
University of Delhi

Rishav Jain
B.com. (Hons.)
Shri Ram College of Commerce
University of Delhi

Mentor

Dr. Vandana Jain
Assistant Professor
Department of Commerce
Shri Ram College of Commerce

Abstract

Recent banking scams in Indian banking sector have questioned the trust, credibility and the repute of Indian banks. Indian economy which stood firmly even during sub prime mortgage crisis of 2007-09, is grappling with the banking sector scams. Through our analytical study we endeavor to outline the problems infested in Indian banking sector. Meanwhile it is also acknowledged that to reinstate the world's trust and bring back the pride in Indian banking system, a more decentralized and transparent structure is the need of the hour.

Through our study we propose a "Model X"- a process for the robust and efficient functioning of crypto banks, wherein, the adoption of "Model X" would empower the Indian banks to bury the ghost of the past. Through our research we not only identify the working of the "Crypto Banks" but also highlighted that crypto banks hold immense potential for revolutionizing the Indian banking industry.

Keywords: Growth of the Agriculture Sector, Gross Domestic Product, Time Series Data, Structural Break

INTRODUCTION

"Bitcoin is a remarkable cryptographic achievement having the ability to create something that is not duplicable in the digital world and has enormous value."

-Eric Schmidt, Former CEO, Google

The last decade has seen the rise of a disruptive force called Blockchain. The disruption has impacted over 50 industries and has totally changed the outlook. Companies like IBM, Microsoft and Amazon are the ones who are betting big on the blockchain. On the flipside, Cryptocurrency major Bitcoin has garnered interest throughout the world. Large scores of the people around the globe, irrespective of their country are investing heavily while the governments are battling the power struggle. Countries like China, Sweden, Turkey, Finland have banned cryptocurrency trading as well as the Initial Coin Offering (ICOs) which at one point amounted up to 75% of the total cryptocurrency in circulation. While countries like England, Venezuela, Zimbabwe and Switzerland have already launched the prototype of their own cryptocurrencies. Amid this, India is still toying with the idea of cryptocurrency.

Reports indicate that Reserve Bank of India and NITI Aayog aim to build a proof-of-concept (PoC) of the modus operandi of Indian counterpart of cryptocurrency completed by the end of 2018 and launch a government-backed crypto coin, proposed as 'Lakshmi'. Along with this, Government is also working out while the cost and benefits of the blockchain ledger in the wake up of several hacking and duping scams in Bitcoin and Ethereum. The Government has still not made its stance clear and hence creating an ambiguous environment not only for crypto traders but for businesses as well.

OBJECTIVE OF STUDY

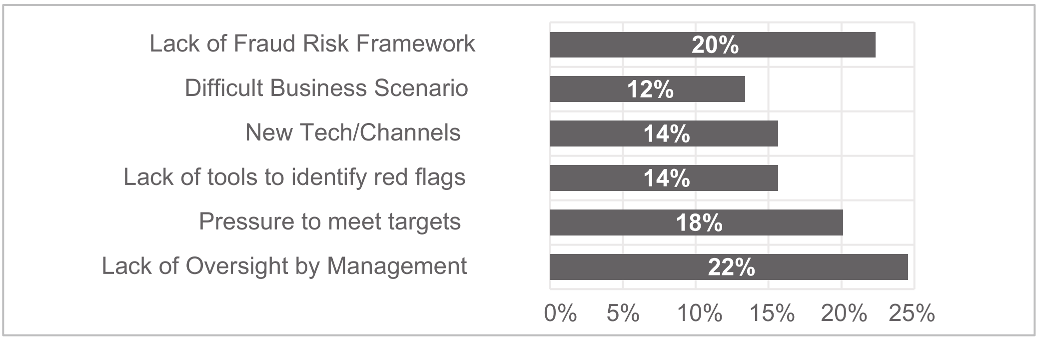
The study is primarily undertaken to accomplish the following objectives:

- To identify the prominent issues in the current banking structure
- To suggest the possible ways to tackle the problems faced by the Indian Banking sector
- To analyze the potential of cryptocurrency in Indian banking system.

PROBLEM STATEMENT

As per ***Global Fraud Study 2016,*** prepared by ***Association of Certified Fraud Examiners***. Indian banking is one of the most corrupted sectors of the Indian economy. In the last few years, the Indian banking has lost more than 75000 crores of money in frauds alone and this amount is increasing with every year. Earlier banking frauds were just limited to fake currency, forged cheques, and advancing loans to parties without checking their creditworthiness. But as the time passed, the level of the frauds became murkier and penetrated widely in the system. With the advent of technology, cybercrime has become the new menace of the day. Off-shore accounts, cybercrime, benami accounts, nepotism and KYC violation induce for the frauds in the current period. As they increase with each day, it is important to address the issue on a priority basis as the mounting burden of debt on banking sector can wreak havoc on Indian economy.

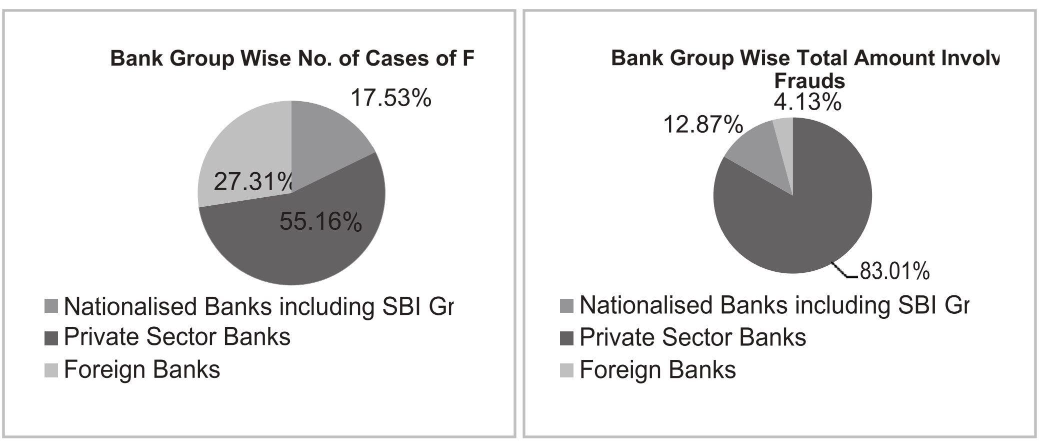
Figure 1: Reasons for the occurrence of Frauds in Indian Banks (2007-2014)



Source: PWC India and Assocham (2014)

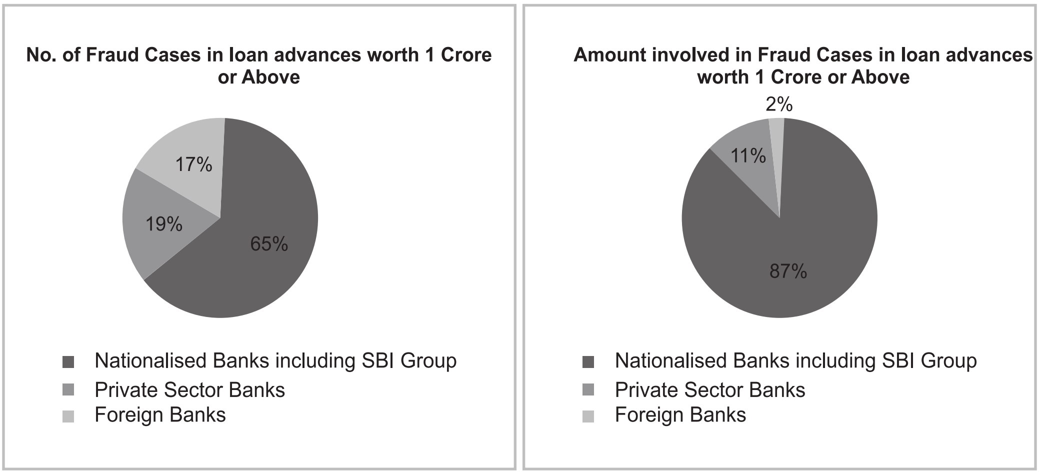
Most of the frauds detected in India are detected due to a customer complaint and internal whistleblower. It is alarming to see that most of the banks lack a framework to detect frauds and hence around 17% cases are detected due to accidents, third party information and review by Law Enforcement agency such as National Investigation Agencies (NIA) and Enforcement Directorate (ED). Clearly going forward, banks need to adopt strong international reforms & measures to tackle frauds. As per the RBI, bank frauds can be classified into three board categories: Deposit related frauds, advance related frauds, and service related frauds. But with the evolution of CTS (Cheque truncation system) by commercial banks, use of electronic transfer of funds have helped in significantly reducing the number of deposit related frauds. Nowadays, advance related frauds have emerged to be a major challenge thus posing a serious problem.

Figure 2: Group wise summary of bank fraud cases (Mar 2010- Mar 2013)



Source: Chakrabarty (2013)

Figure 3: Group wise summary of advance related fraud cases (Mar 2010- Mar 2013)

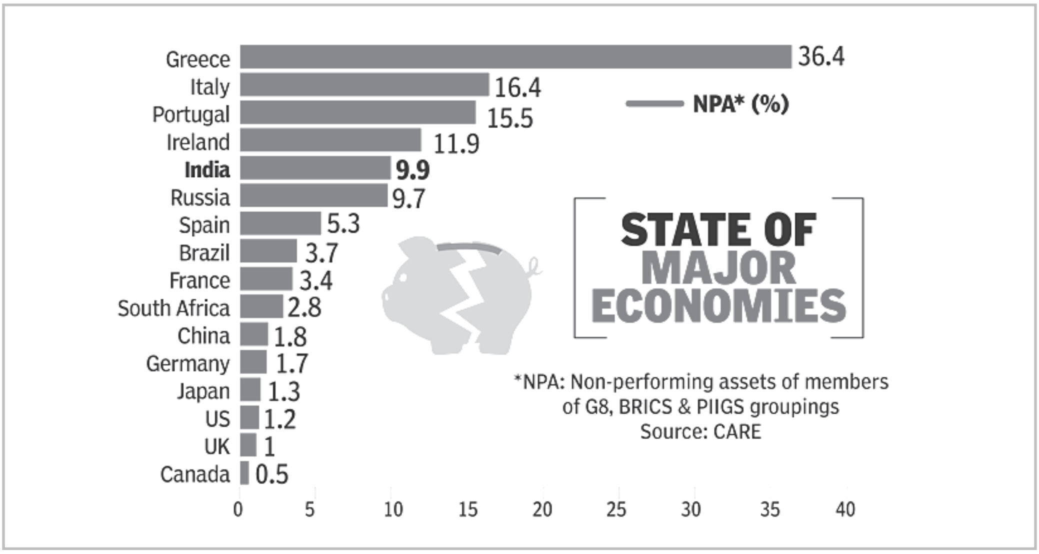


Source: Chakrabarty (2013)

Another thing which poses a threat to Indian banks is non-performing assets. Most of the challenges faced by banks go hand in hand with each other and leads to another. So, frauds are one of the reasons for NPAs. These are those assets which due to some reasons will not generate any further income for the lender because of any kind of default by the borrower. As per RBI, Indian banks suffer from an NPA of more than 7.5 lakh crores of money thus posing a serious problem for Indian banks. India has second highest NPA ratio in the major economy of the world after Italy at 9.6%. This needs to be reduced otherwise it can hinder the growth of the economy. The Government has come up with new policies like Financial Resolution and Deposit Insurance Bill, Insolvency Bankruptcy Code, Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest Act and some other bills to curb this problem. But as we go with the facts, these policies haven't proved to be productive enough.

Recent frauds like PNB Scam, ICICI Scam, and other frauds have questioned the effectiveness of these policies. Both fraud and NPA give birth to another challenge which haunts the efficiency of the Indian banking. Following are the latest ratings published by CARE ratings which shows that India is among the top five countries in the world with worst NPA ratio. Now NPA always has been an alarming situation and government has been on its toes to tackle this. They have come up with numerous policies and corrective measures over the year but as per the statistics it proves to all be in vain.

Figure 4: NPA in Major Economies, Nov 2016



Source: Care Ratings (2016)

Now there are many reasons for the spurt of these inefficiencies in the Indian banking. One reason often leads to another reason which makes it a vicious cycle which can act as cancer and if not treated early then the patient would die. So, some of the reasons for these problems are inefficient management, corporate governance, lack of efficient controls etc. Till now the government has taken various steps to address these problems. The government formed various committees like fraud monitoring cell, a special committee of board members and have come up with new laws and rules like Indian Bankruptcy Code, Benami Act, Basel 3 and some more laws to quarantine Indian banking sector from these problems. But as per the records till now these policies are not able to make a difference. So, it is important to come up with a new structure which can change the basic problems which prove to a mosquito breeding ground for these challenges. Hence, these inefficiencies are forcing the Indian banks to adopt new technology, which is decentralized, transparent and cost-effective, which is – "***Blockchain***".

RESEARCH METHODOLOGY

The research methodology employed in this study is descriptive in nature. The conceptual framework of this paper is developed by comparing the working of the crypto bank with the current banking structure.

Through the analytical framework: the study will show how fraud and NPA related problems can be tackled. The study also employs cost-benefit analysis by using the data from accredited reports related to digital and cash payments and consequently analyze the benefits.

- **MODEL X – The Future of Bank**

Core banking system (CBS) is a storehouse which enables all banking transactions - holding deposits, lending, payments etc. A new age crypto bank needs a robust core. By creating a single Blockchain node for all the banks and then replacing the deposits system with the tokenized system, a new Core Blockchain-banking system (CBSS) can be created.

In between April and December 2016, over 3,500 cases of fraudulent transactions were reported involving Rs 177.50 billion, which were facilitated by 450 private and public-sector employees. Public Sector Banks in India lost at least 227.43 billion (Rs 22,743 crore) owing to fraudulent banking activities between 2012 and 2016, according to an IIM-Bangalore study. According to data released by the apex bank for the first nine months of FY17, approximately 455 cases of fraud transactions - each of Rs 1,00,000 or above - were detected at ICICI Bank; 429 at State Bank of India, 244 at Standard Chartered Bank and 237 at HDFC Bank. So, to tackle such a scenario and ensure that a scam – internal or external – never occur again, decentralization is not a matter of choice but the only option.

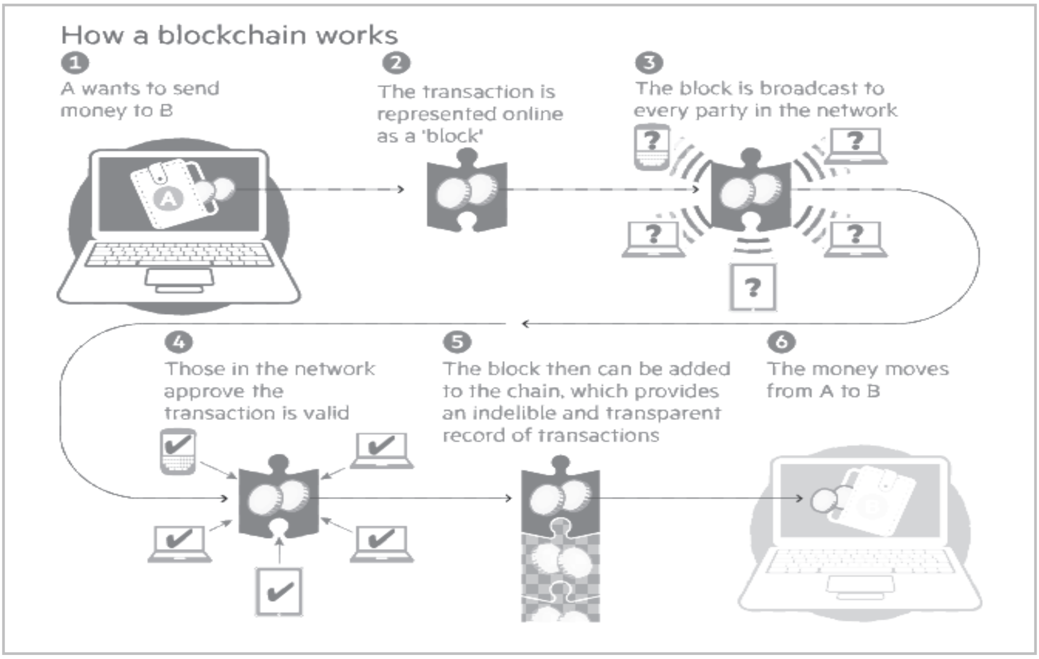
Let's understand this through an example of any bank say Punjab National Bank.

Punjab National Bank has a network of 6,937 branches over 764 locations and a band of 10,681 ATMs. It's impossible for a committee or says some prominent branches to keep an eye on every branch or its personnel and ensure transparency and high standards. As in the case of PNB Scam, how a manager kept it from the entire PNB systems and issued Letter of Undertakings to Nirav Modi's firm, proves how much difficult the task is and how much it can cost to the economy.

Model X will solve the problem: A CBSS or Blockchain Powered bank will be created for all of 6,937 branches of PNB. And similarly, for every bank. And instead of current cash and deposit system, every individual will be given digital tokens equal to the money they hold, and the transaction will take place like this. Let's say there's an individual A in India who hold Rs 4,00,00,000 digital tokens in Punjab National bank. Also, there's an individual B in America who holds $ 560,000,000 digital tokens in Citi Bank. Now A wants to pay B $10,000 for a business deal executed. A will instruct the PNB Bank to release Rs 6,50,000 digital tokens to B in America at Citi Bank. This instruction will be broadcasted throughout the PNB network and after approval, the block will be added to the ledger (which can't be deleted either edited) or tokens will be transferred to Citi Bank. The same process will take place at Citi, hence an indelible imprint of transparency.

Therefore, a complete record of transactions will be available, and this will prevent any fraudulent transactions from taking place. Let's take this forward to much bigger scale.

Figure 4: NPA in Major Economies, Nov 2016



SOURCSource: Blockchain Council of Indian Report (2016)

In the PNB scam, the manager under influence kept issuing LOU's to Nirav Modi's Firm and keeping it from the PNB committee and board. PNB was simply clueless at the time of discovery and knew nothing about it. The fact that LOU's were granted through SWIFT (Society for Worldwide Interbank Financial Telecommunication) with already outstanding dues show how much our Banks, especially public banks are plagued by scams and influence (nepotism). But with the onset of the blockchain, if loans or LOU's are to be issued to someone the request needs to be approved by every bank in the network. In such a system, the scam wouldn't have taken place. So, if Rs 2,000 crores digital tokens are requested by Nirav Modi, the bank manager can't approve it on his own. He / She will broadcast it in the network, every bank will scrutinize the transaction in terms of dues paid, financials, operating margin, etc and if deemed fit, the request will be approved, the block will be added, and loan released then only. In this case, clearly, the loan will be rejected, and the block won't be added. Even the ministers or big corporates can't do anything about this, as even if every bank approves it under influence and release it, the transaction will be available in the ledger and up for review by the Central bank (Reserve Bank of India) at any time and incur penalties and sanctions.

Such system is required to bring honesty and pride back in Indian Banking System. A crypto bank would be built on cloud and microservices architecture compared to most banks today which use mainframe technology and have monolithic architecture. This enables a crypto bank to deploy financial products and react to changes in days rather than weeks or months. The backend systems can primarily be composed of micro-services communicating over modern data-pipelines, using blockchain based primary data store.

RESULTS AND FINDINGS

The first thing which needs to be considered is the cost involved with the paper currency and the credit cards which are used for most of the transactions today. If implemented as a legal tender, what would be the costs, what would be the benefits and if it would be advantageous for a big economy like ours?

As per the Financial Stability Report of 2015-16, published by the Reserve Bank of India, 95.2% of total value is now paid using digital currency. These include mainly the credit cards debit cards, net banking and mobile wallets. The card transactions can cost the merchant anywhere between 2% to 2.5%. In a typical credit card transaction, there are 5 parties that are involved: Consumer, Merchant, Issuer, Acquirer, and Switch. The consumer purchases a good or service from the merchant and the backend of the transaction is facilitated by the issuer, acquirer, and switch. The issuer is the bank from which the consumer received their debit or credit card. The acquirer is the bank that the merchant uses to process their debit/credit transactions. Then finally the switch, Visa or Mastercard, tie the Issuer and the Acquirer together to complete the transaction.

The switch plays the middleman that can connect all the Merchant's banks, or Acquirers, to all of the customer banks, or card issuers. This makes it easy for these banks to allow transactions to flow between themselves without having to have specific bilateral relationships. Rather they must have a relationship with a mutually acceptable switch, such as Visa or Mastercard.

Suppose the consumer pays Rs 100 to the merchant for the good, the merchant then has to pay a 2% fee and a Rs 0.25 transaction charge. This means that the merchant is now left with Rs 97.76, after paying the merchant discount fee of Rs 2.24. The Rs 2.24 is split up between the Issuer, Acquirer, and Switch. From this example, we can see that the majority of the transaction fee is kept by customer and merchant banks, and only about 0.1% of the transaction goes to Visa or Mastercard. While some of the fees that are charged by the customer's bank (Issuer) goes to paying for things like fraud (~Rs 0.12), the majority of it is for low value-added services such as advertising including customer rewards.

In addition, there are also other costs of fraud and chargebacks that are paid by the merchant which add another (~Rs 0.29). Now, we will have a look at the costs of transactions done using the cryptocurrencies. The Ethereum Network can handle a higher number of transactions per second. The cost of one transaction in December 2017 using Ethereum was 1 gwei or $0.007. The thing which makes cryptocurrencies better here is that there are no intermediaries. The transactions costs are very low (with respect to other forms of the transaction). Also, the transaction is completed at a faster rate.

With respect to the current structure and the crypto currency-oriented structure, the study shows the following results:

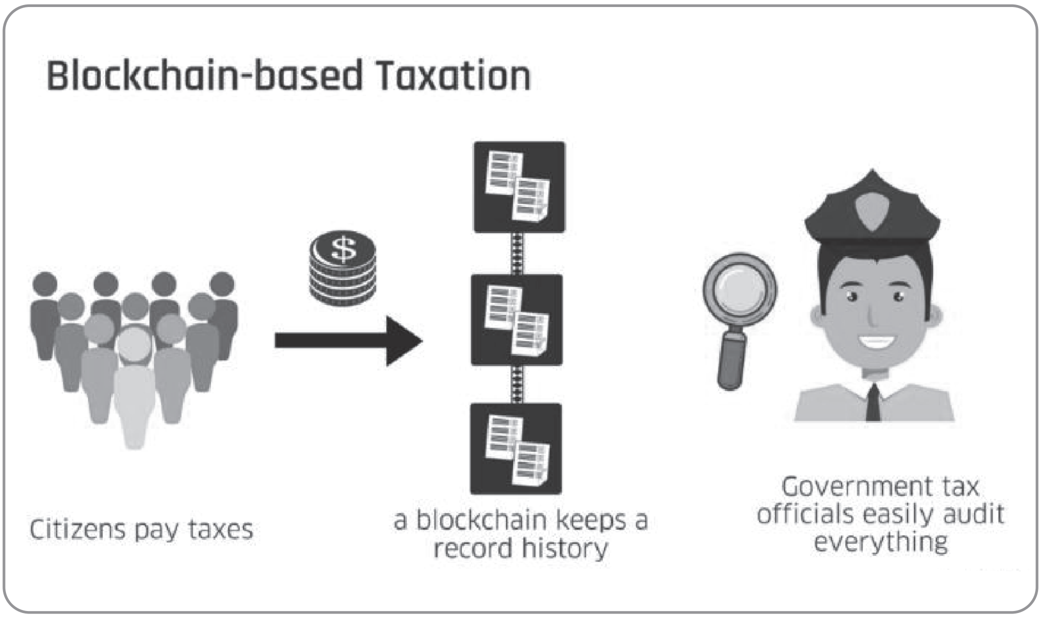
Figure 4: NPA in Major Economies, Nov 2016

Basis	Traditional	Currency
Time	No. of parties is involved in the traditional currency increases the time taken to complete a transaction.	A little over 5 seconds are required to get a crypto coin. There are only one or two parties involved in the exchange; making it time efficient.
Accessibility	There are around 2.2 billion people with access to the Internet or smart-phones & no access to a traditional exchange.	Cryptocurrency is perfect as it can be assessed by anyone who has a phone.
Cost	Traditional banks charge fees to process transactions & even the printing is the cost is higher than crypto currency.	With Crypto currency being exchanged over the internet, there are usually little/no transaction fees.
Structure	Digital & Traditional Currency are centralized in nature meaning a group of people generally control all the transactions.	Digital & Traditional Currency are centralized in nature meaning a group of people generally control all the transactions.
Transparency	Digital currencies are not transparent. You cannot choose the address of the wallet and see all the money transfers.	Crypto currencies are transparent. Everyone can see any transactions of any user since all the revenue streams are placed in a public chain.
Anonymity	Everyone knows about the parties in the transaction as banks take their identification proof and some documents are submitted to the authorities. Thus, the parties in transactions are not anonymous.	Though the transaction is known to everyone, the identities of the parties are anonymous. No confidential information is known to the parties in trade. IP address used by parties is not shared with the network.
Regulation	Traditional currency is under the regulation of the authorities and all the transactions are monitored by them.	Crypto currencies are unregulated, and no authority is monitoring the transactions going on. Thus, making it less credible.

Purchase Power Parity	There are different currencies in different countries; making it difficult to trade as one must match the currencies of the countries.	With cryptocurrency in circulation, there can be one single currency for the world. This can ease the trade and can help in making the world a global village economy.

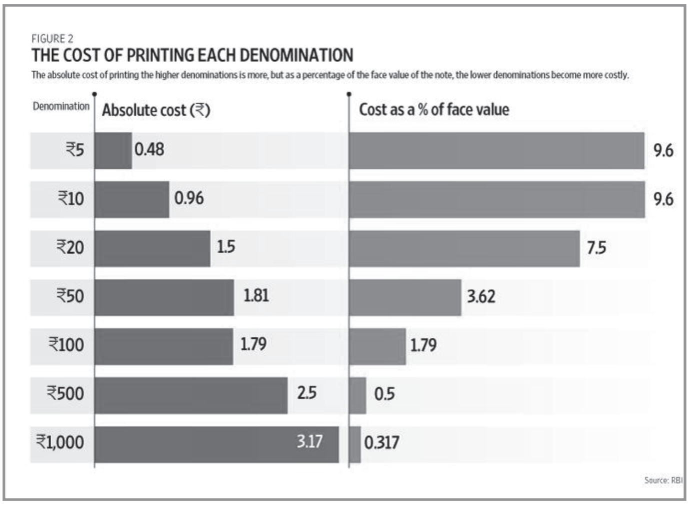
CONCLUSION

The Government of Estonia's e-Residency kit, for example, has been launched to leverage the benefits of blockchain to encourage "digital migrants" to set up businesses there. As blockchain patterns evolve in the future, it's probably it could be extended to help governments collect taxes from overseas citizens, or that taxes on goods and services are



controlled using a traceable network on the blockchain. For employees, well payments made for services rendered in or outside the country could easily be done through digital tokens and the ledgers can be used for automatic tax deduction. Cryptocurrencies could help reduce the costs of money such as printing, distribution, and management, and increase efficiency. Free trade and flow of goods and services can be amplified through blockchain utilities.

As the pressure for digital money builds, creating widely accepted, fully convertible cryptocurrencies could be a process managed in the private sector, challenging the role of the state in managing money. To improve transaction transparency and reassure consumers that virtual currencies are safe, however, governments need to provide firm foundations — such as digital identities, legal standing and the right kind of regulations. The opportunities are limitless and without precedent. For those countries with the boldness to pursue it, the internet of money presents an invaluable tool to unleash the potential of this powerful driver of growth and productivity. The challenge is to encourage and harness that potential without stifling it. While we have tried to cover every possible view, but the research still might leave some aspects.



It can be finally concluded that cryptocurrency is the future of the banking sector, with the abundant potential to explore.

REFERENCES

Association of Certified Fraud Examiners (2016), Global Fraud Study https://www.acfe.com /rttn2016/docs/2016-report-to-the-nations.pdf

Charan Singh (2016), Frauds in the Indian Banking sector, IIMB

https://www.iimb.ac.in/research/sites/default/files/WP%20No.%20505.pdf

Ernst and Young (2010), Proactive fraud monitoring for banks in India http://www.ey.com/Publication/vwLUAssets/Proactive_fraud_monitoring_for_banks in_India/$FILE/Proactive_fraud_monitoring.pdf

Fede (2018), Blockchain and Government- Can they work together? The Blockchain Lion https://blockchainlion.com/blockchain-and-government/

Mohammed Saif Ali (2014), How does bitcoin blockchain work and what are the rules behind it? https://blockchainlion.com/blockchain-and-government/

Karl Kreder (2017), Money Vs Cryptocurrency, The Real Costs, Part 1, Grid Plus Blog https://blog.gridplus.io/money-vs-cryptocurrency-the-real-costs-part-133c09dfea671

Kartik Shashidhar (2016), Scrapping Rs500, Rs1000 notes a costly idea, Live Mint https://www.livemint.com/Politics/fhNlITluEPxCOHef3GSA6H/Scrapping-Rs500-Rs1000-notes-a-costly-idea.html

K C Chakrabarty (2013), Frauds in the Banking Sector: Causes, Cures, and Concerns. https://www.bis.org/review/r130730a.pdf

PwC and Assocham (2014), Growing NPAs in Banks: Efficacy of Credit Rating Agencies"

Reserve Bank of India, (2017) Financial Institutions: Soundness and Resilience, Chapter 2 https://rbi.org.in/scripts/PublicationReportDetails.aspx?ID=872

Rosamond Hutt (2016), All you need to know about blockchain explained simply, World economic forum https://www.weforum.org/agenda/2016/06/blockchain-explained-simply/

TNN (2017), Only 4 major nations have higher bad loans than India, The Times of India https://timesofindia.indiatimes.com/business/india-business/only-4-major-nations-have-higher-bad-loans-than-india/articleshow/62275553.cms

IMPRINT LINE

Printed and published by Prof. Simrit Kaur (Principal, Shri Ram College of Commerce) on behalf of 'Shri Ram College of Commerce' and printed at M/s Poonam Printers, C-145, Back Side Naraina Industrial Area, Phase-I, New Delhi and published at Shri Ram College of Commerce, University of Delhi, Maurice Nagar, Delhi-110007, India.

Editor – Dr. Santosh Kumari

License No. – DCP / LIC No. F. 2 (S / 37) Press / 2017
Registration No. DELENG/2018/75093
ISSN 2581- 4931 (Print)

Publication Date: September 28, 2018
Printing Date: September 25, 2018
Publication City: Delhi

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

HISTORY OF THE JOURNAL

The idea to launch this Journal was discussed in December 2016 by the former Officiating Principal, **Dr. R.P. Rustagi** with **Dr. Santosh Kumari**, the Editor of the Journal. Since the idea appealed to **Dr. Santosh Kumari**, she took the initiative to contribute to SRCC by creating this new academic research Journal and took the responsibility for its Creation, Registration, License and ISSN (International Standard Serial Number) etc. along with *Editorship*. Therefore, **Dr. Santosh Kumari, Assistant Professor in the Department of Commerce, Shri Ram College of Commerce** was appointed as the Editor of the Journal vide. Office Order – SRCC/AD-158/2017 dated March 14, 2017. She meticulously worked hard in creating the concept and developing the structure of the Journal. She introduced the concept of COPE (Committee on Publication Ethics) to maintain high academic standards of publication.

On behalf of the college, **Dr. Santosh Kumari** made every effort in seeking License from Deputy Commissioner of Police (Licensing), Delhi to register the Journal at "The Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India". The paper work for seeking license started under the former Officiating Principal, **Dr. R.P. Rustagi** on March 27, 2017. The foundation Issue of the Journal **"Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** was successfully released on the 91st Annual Day of SRCC held on April 13, 2017 by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.** The title of the Journal got verified and approved by the Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India on April 21, 2017. On September 1, 2017, **Prof. Simrit Kaur** joined SRCC as Principal and signed each and every legal document required for further processing and supported **Dr. Santosh Kumari**.

On December 18, 2017, the College got the license **"License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017"** to publish 'Strides – A Students' Journal of Shri Ram College of Commerce'. Due to change of Printing Press, the License got updated on March 09, 2018. On April 26, 2018, the SRCC Staff Council unanimously appointed **Dr. Santosh Kumari** as the **'Editor of Strides'** for the next two academic years.

On April 27, 2018 (The Foundation Day of the College), **Dr. Santosh Kumari** submitted the application for the registration of the Journal. On May 04, 2018, the college received the 'Certificate of Registration' for Strides – A Students' Journal of Shri Ram College of Commerce and got the **Registration No. DELENG/2018/75093** dated May 04, 2018. ***On behalf of SRCC, it was a moment of pride for Dr. Santosh Kumari to receive the 'Certificate of Registration' on May 04, 2018 at the Office of Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India (website - www.rni.nic.in).***

On May 07, 2018, **Dr. Santosh Kumari** submitted the application for seeking ISSN (International Standard Serial Number) at "ISSN National Centre – India, National Science Library, NISCAIR (National Institute of Science Communication and Information Resources). Weblink - http://nsl.niscair.res.in/ISSNPROCESS/issn.jsp". Finally, the College received the International Standard Serial Number **"ISSN 2581-4931 (Print)"** on June 01, 2018.

We are proud that this journal is an add-on to the enriched catalogue of SRCC's publications and academic literature.

License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE
ISSN 2581-4931 (Print)

RELEASE OF FOUNDATION ISSUE OF STRIDES

Foundation Issue of the Journal *"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"* was successfully released on the 91st Annual Day held on April 13, 2017 by Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.

SHRI RAM COLLEGE OF COMMERCE
University of Delhi, Maurice Nagar, Delhi - 110 007
Phone: 011-27667905 Fax: 011-27666510
Website: www.srcc.edu