

Indian Banking Sector: Issues, Challenges and the Road Ahead

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Abstract

In the past three decades, Indian banking has faced numerous challenges in the form of technology, product innovation, customer expectations and economic slowdown. Indian banking system has been strong enough to handle the challenges and has certain outstanding achievements; one of its major achievements is its extensive reach and ability to serve the ever growing Indian population. This sector offers numerous amenities and prospects towards the growth of the economy. The need to focus on the customer perspective has made slow moving banking sector to adopt a fast track approach. Using internet and technology as a medium, the bankers are able to market their products and services which has made players at all levels in the banking industry to gaze at their active portfolio offerings. Traditional banking has protected Indian banks from many crises in the past, but in the modern era, Indian banking has been expanding all over which has led to higher valuation of Indian banks as compared to some of the Asian countries. This research focuses on the contributions made by the banking sector to the Indian Economy, the challenges faced and the plans for the future which will lead the economy to new strides of growth.

Keywords: Banking, Indian economy, growth, technology

INTRODUCTION

Banking or trading with money has its presence since 2000 BC. "As early as 2000 BC, Babylonians had developed a system of banks. In ancient Greece and Rome, the practice of granting credit was widely prevalent" [1]. The banking sector was dominated by private individuals and the existence of privately owned banks until 1401. The year 1401 is considered remarkable as it saw the existence of first-ever public sector banks in Barcelona the city in Spain. "The bank of Amsterdam came into the picture in 1609 to meet the needs of the vendors of the town" [2]. There is evidence of giving loans to others even during Vedic Periods. Banking was tantamount to money lending. "The Manusmrithi speaks of deposits, pledges, and loan and interest rates. Moneylenders and indigenous bankers played an important role in Indian society as purveyors of money and credit from times immemorial" [1]. The money lenders provided the loan to people in times of need mainly for consumption purposes, while the indigenous bankers extended credit for financing trade and industry. The indigenous bankers were for a long time trusted custodians for the deposits made by people. However, the importance of money lenders and indigenous bankers was reduced to some extent with the establishment of agency houses and presidency banks patronized by the East India Company towards the close of the 17th century. It is considered to be the origin of modern banking.

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Table 1 indicates important decision taken to standardize banking actions from 1949 to 1980. Post nationalization of seven more banks in deposits in public sector banks rose up to 800% after the step of nationalization was taken. Government ownership bought faith in the common public and made way for the sustainable prospect for public sector banks. Under the able leadership of Shri M. Narasimham, a committee was framed which worked for the liberalization of banking practices. The Narasimham Committee recommendations led to many changes in the Indian Banking system.

Table 1. Important decision taken to standardize banking actions from 1949 to 1980.

1949	An act for banking regulation was passed to streamline the banking process provides guidelines to existing banks.
1955	The biggest bank State Bank of India was Nationalized
1959	After the SBI followed the nationalization of SBI subsidiaries
1961	Deposits were taken under the umbrella of insurance to enforce confidence among the depositors which lacked during the first phase
1969	Nationalization of 14 major banks
1971	A corporation was created to monitor the process and to guarantee credit extended by the banks
1975	To help the rural people and to make banks reach in remote corners of the country Regional Rural Banks were established
1980	Nationalization of seven more banks with deposits of over Rs. 200 crores

Source: Muraleedharan [3].

For the past three decades, Indian banking has faced numerous challenges in the form of technology, product innovation in other countries, customer expectations and other external or internal factors. The Indian banking system has been strong enough to handle the challenges and has specific outstanding achievements; one of its significant achievements is its extensive reach and ability to serve the ever-growing Indian population.

LITERATURE REVIEW

Goyal and Joshi [4]

This article discusses the various challenges and opportunities of Indian Banking sector like “rural market, transparency, customer expectations, management of risks, growth in banking sector, human factor, global banking, environmental concern, social, ethical issues, and employee and customer retentions. Banks are striving to combat the competition. The competition from global banks and technological innovation has compelled the banks to rethink their policies and strategies”.

Biswal [5]

The author has focused on the challenges and opportunities of Indian Banking sector. He suggested that the banks have put an effort on financial literacy program to educate the rural population but banks have to put more efforts to reach the untapped markets. “In order to increase the bank credit in the agriculture sector, proper awareness program about the banking credit facilities should be formulated based on the need of the particular rural region”.

Ratna Manikyam [6]

Through this paper, the author has made an attempt to explain the changing banking scenario and need for the banks to meet competition in the market. The authors add that the banks have to change their service to customer-centric as there are many players in the market and huge demand for innovative services which will help to reduce the waiting time of the customers. In the first phase, the author discusses evolution of banking sector and changes made by the banking sector due to economic changes in the country. In the second phase, the author elaborates the challenges faced by Indian banks. The author concludes that technological changes and innovation in services of the banks are unavoidable, and the banks must make an effort to adopt these changes at the earliest.

Kamra et al. [7]

Through this paper, the authors have explained various technological advancements in the banking sector and recent initiatives taken by the Government of India to improve access to banking facilities for every individual. The authors have also analyzed the number of ATMs, number of branches per 1000 km². The authors conclude that the Indian banking sector has a huge potential for growth and a wide range of customer base.

Shrivastava and Bhatnagar [8]

Authors have made an effort to measure performance of Indian banks during the phase of global financial turmoil. The authors have selected five leading banks for analysis. They are: SBI, Punjab National Bank, ICICI Bank, HDFC Bank and Bank of Baroda. The study period is 2007–08 when there were financial crises in the globe. As per the author's analysis, all the selected banks have shown growth during the crises period in their net worth, profitability, deposits, etc. The authors conclude that the major challenge for the government during this phase is to balance growth and inflation. Indian banks have performed well during the crises phase due to several reasons. Some of them are: less dependency on plastic money, secured investments, and policies of RBI and maintenance of credit limits by banks.

Diamond and Rajan [9]

The authors emphasized that a mismatch in depositors' demands and production of resources forces a bank to generate the resources at a higher cost. Liquidity risk may cause for sale of the assets of the bank which may fall into impairment of the bank's capital base. They clarified that if too many economic projects are funded with loans, the bank cannot meet the demand of the depositors. Thus, these depositors will claim back their money if these assets deteriorate in value.

Singh and Kohli [10]

'Evaluation of Private Sector Banks in India a SWOT Analysis': This paper attempts to undertake a SWOT analysis of 20 old and 10 new private sector banks. These banks have also been ranked on the basis of financial data for the years 2003, 2004 and 2005. The study has used the CAMEL model for evaluating these banks. The author concludes that banks should adopt the latest technology to excel in banking and to sustain competition.

Kamath et al. [11]

The authors, in their paper on Indian banking sector challenges and opportunities, share opinions of managing directors and chief executive officers of Indian banking sector in their views. "The biggest opportunities of the Indian banking system today is the Indian consumer. Demographic shift in terms of income level and cultural shifts in terms of lifestyle aspirations are changing the profile of the Indian consumers; this is and will be a key driver of economic growth going forward". The Indian banking sector has to meet the competition by adopting the changing environment quickly and focus on innovative products and services.

Haralayya and Aithal [12]

"It is necessary to measure the performance of banking sector in order to make Indian banking industry globally competitive and to increase its contribution in Indian economy". The authors have made an attempt to measure the performance of banking in India by using panel data and using various banking performance ratios.

Kumar and Prakash [13]

The focus of this paper is on sustainable development which can be achieved by adoption of green banking or online banking. "Indian banking sector, the adoption of the international sustainability code of conduct is still in its nascent stage". Banks must focus on green loans, green buildings and energy finance for protecting the environment and helping the economy to achieve sustainable development.

Sawant [14]

The main focus of the paper is on various technological developments in the banking sector in India. “Developments in the field of information technology (IT) strongly support the growth and inclusiveness of the banking sector by facilitating inclusive economic growth”. Efficient use of technology has helped banks to operate fast with large volumes of transactions and a larger customer base.

Tanwar et al. [15]

The authors have applied data envelopment mode to measure the efficiency of Indian banking sector. “The working population of India is raising demand for banking services”. “Reserve Bank of India has regulated the banking system from time to time to ensure that banks are resilient to global turmoil.” The paper studies the impact of changing the input and output variables and studying the impact on banks efficiency.

Gaur and Mohapatra [16]

In this paper, the authors have made an attempt to study the impact of nonperforming assets on priority sector lending. Correlation between public sector lending and gross domestic product is done, and a positive correlation is found between the two. Public sector lending is found insignificant for the NPA ratio.

Malali and Gopalakrishnan [17]

The paper discusses the application of artificial intelligence in Indian banking sector. “AI will empower banking organizations to completely redefine how they operate, establish innovative products and services, and most importantly impact customer experience interventions”. “Today, AI has become the de-facto technology used by all Fintech companies to build their platforms”. AI can be applied in various financial services provided by the banks, namely, wealth management, predictive analysis, auto teller machines, customer services claim management etc.

OBJECTIVES OF THE STUDY

1. To study the critical concerns and current trends of Indian banking sector.
2. To analyze the relationship of bank credit on GDP of India economy.
3. To analyze the relationship of bank Deposits on GDP of Indian economy.
4. To analyze the relationship of Net Interest Margin on GDP growth rate of Indian economy.

HYPOTHESES OF THE STUDY

The following hypotheses were examined during the course of the study:

Hypothesis 1

H₀: There is no significant impact of bank credit on GDP of Indian economy.

H₁: There is a significant impact of bank credit on GDP of Indian economy.

Hypothesis 2

H₀: There is no significant impact of bank deposits on GDP of Indian economy.

H₂: There is a significant impact of bank deposits on GDP of Indian economy.

Hypothesis 3

H₀: There is no significant impact of Net Interest Margin (NIM) on GDP growth rate of Indian economy.

H₃: There is significant impact of Net Interest Margin (NIM) on GDP growth rate of Indian economy.

RESEARCH METHODOLOGY

Nature and Source of Data

The current study is focused on Indian banking sector and its contributions to the Indian economy; the data of banking industry and GDP of 7 years is used to analyze the impact.

Collection of Data

The study was purely conducted on the secondary data extracted from:

1. Publications of RBI,
2. Capital Line Database,
3. Journals, Magazines, and Newspapers, and
4. Periodicals and other reports of RBI.

Duration of Study

The data for the purpose of the research was for 7 years' time period, commencing from the financial year 2013–14 to 2019–20.

Statistical Analysis Tool

Multiple Regression.

CRITICAL CONCERNS FOR INDIAN BANKING SECTOR

Rising NPA

NPAs are considered as the most significant issue in the banking sector as these non-performing assets will not be able to earn any revenue for the banks; they also cause loss to the banks concerning capital. Rising NPAs have led to huge provisions created by the banks for losses which are creating trouble in the financial statements of the scheduled commercial banks. RBI is pressurizing these banks to reduce NPAs and set a proper recovery mechanism for these loans. Continuous efforts put by banks to reduce NPAs by taking various steps and legal actions have fallen flat as the NPAs are rising year after year at a faster pace. Banks face many hurdles for different types of loans such as no buyers for house property in case of housing loan, no strategic investors in case of business loans, the government policy of wavering off agricultural loans, and many such factors have led to the slow recovery of existing NPAs and given way to create new NPAs.

To resolve the issues of growing NPA, the Corporate Debt Restructuring (CDR) system was structured 17 years ago to restructure commercial arrears outside the purview of Debt Recovery Tribunals (DRT) and the Board for Industrial and Financial Reconstruction. Its three-tiered organization consisted of CDR Standing Forum, CDR Empowered Group, and CDR Cell. The Standing Forum was accountable for laying down all policies and guiding principles associated with arrears restructuring, while the CDR cell was in charge of scrutinizing all restructuring applications from borrowers and lenders. The CDR Empowered Group took the final decision on approving the restructuring package. RBI is thinking to wind up the cell after it issued a circular on 12 February 2018 retreating all existing restructuring schemes; this includes the CDR scheme, Strategic Debt Restructuring (SDR) scheme and Scheme for the Sustainable Structuring of Stressed assets (S4A). The vital bank has asked all banks to kick off resolution plans as soon as a corporate default happens and refer it for economic failure proceedings in the event of a failure in restructuring.

Cyber Security

Over the last few years, the Indian banking industry has been rebellious to contain cyber threats like Distributed Denial of Service (DDoS) which slows down a banks system to aggravate clientele, worms that make ATMs discharge out cash, and some that can reroute funds to a secret destination. With increasing pressure for delivering services on time using the internet or mobile banking, the worry of cybercrime has increased. The customers are demanding online services but are also concerned about the safety of the information and financial details that they furnish during an online banking transaction. The banks must make efforts to avoid cybercrimes and provide security for the confidential data provided by the clients.

New Basel Committee Banking Proposal

The banking industry is concerned about the Basel Committee on Banking Supervision's (BCBS) new proposal to change the method of assessing and quantifying operational risk in banks. Under present rules (Basel II/III), lenders may use one of three methods to ascertain the amount of capital required to underpin operational risk. The BCBS recently published a consultation paper on the amalgamation of these three methods into one, known as the Standardized Measurement Approach (SMA). Under the proposal, the Pillar 1 capital charge for operational risk will be based on a Business Indicator (BI), which will serve as a proxy for operational risk exposure. All but the smallest banks will have to adjust the BI in light of their historical loss experience. The BI will be the sum of net interest income, net fee and other operating income, and net profit on the trading and banking books. If carried forward, the proposed new rules will likely raise the number of capital banks required to hold against operational risk and create a Pillar 1 capital charge for operational risk, based solely on the size of a bank's balance sheet and its profit and loss.

Slowdown in Economic Growth

Sectors that involve massive cash movement are supposed to be stable in the short run. The demonetization move of the government severely hit sectors such as construction, real estate, jewellery, tourism, etc. are slowly gaining momentum as the liquidity crunch in the economy has reduced and therefore the demand for consumer products has increased in the market. The corporate sector was poorly hit after the demonetization which in turn had an impact on the banking sector as the risk of lower demand for credit and weak debt servicing capacity persist for long; even after the corporate sector has some signs of stability by the end of 2016, the banking sector seems to have been in trouble. Furthermore, risks to the country's banking industry have increased in the last one and a half years, mainly on account of an additional weakening in asset quality and low profitability. Indian economy is currently going through an economic slowdown as per the article published in Business standard "Moody's cuts India's GDP growth to 6.2% for 2019 amid economic slowdown". According to an article on the "Dynamics of Indian Slowdown" published by Amit Kapoor in Economic Times on 9th September 2019, the reasons for economic slowdown can be "the recent collapse of the automobile sector or the rising number of non-performing assets (NPAs), sluggish consumer demand or failing manufacturing sector; all have a hand in this deceleration of growth rate". The COVID pandemic has added to the downfall of GDP and economy.

Asset Quality

Banks are facing significant challenges from several quarters, and deteriorating asset quality is one of the major problems. Though the Indian banking system has remained flexible, asset quality has seen continued pressure due to constant economic slowdown. The Indian banking sector has to work rigorously towards reducing the pressure of stressed assets and growing NPAs. Reserve Bank of India and the government has to take measure to reduce NPAs in the banking sector by coming up with firm guidelines for granting credit to the corporate which involves higher amounts. The recent cases of Nirav Modi and Vijay Mallya have added to the mounting pressure of NPAs and have led to the low performance of banks.

Capital Adequacy

Superior level of capital adequacy is essential for banks, in particular, the public sector banks (PSBs) due to higher provisioning requests. Capital is required to cover the risky areas that may come up with the rising credit demand. Reserve Bank of India makes constant efforts to improve the capital adequacy ratio of the banks by providing rules and regulations to meet the Basel requirements. Capital to Risk Asset-Weighted Ratio (CRAR) was continuously declining since 2013–14. It was 13% continuously for two years from 2013–2015 as compared to 13.9% in 2012–13. However, it has slowly grown and has reached 13.7% by the end of 2016–17, 13.8% by the end of 2017–18.

Technology

Technology has become synonymous with the banking, and the use of technology has greater significance for the banking system, especially the PSB banks. Though all PSBs are now on CBS platform and have urbanized capacity to offer everywhere banking and few have also started contributing necessary banking transactions on mobile for their customers, but it is just commencement as the technology can be leveraged for a far superior result and to race with their private-sector peers. PSBs must be able to leverage technology for constructing data warehouses and then be able to do data mining and analytics. In the future, banks will have to focus on two significant aspects: delivering customer satisfaction and driving business optimization; and technology is going to play a significant role in it. Initiatives taken by the Government of India towards digitizing the banking operations has been proved beneficial to many traders as it has made things more comfortable and accessible. Through the digitization process, the traders are now able to reach a wide range of customers and can showcase their products and services. The government has also made several attempts to become a cashless economy on such a step was taken by launching Unified Payment Interface (UPI) through which an individual need not share his crucial banking details or passwords. The UPI will allow clients to instantly transmit money across various banks with the use of a solo identifier which will act as a virtual address; the UPI was launched by National Payments Corporation of India (NPCI) and RBI. As of now, 29 banks are a part of the UPI's network, out of which, 15 central banks have by now incorporated the interface into their Smartphone applications. UPI can be used for grocery shopping at the supermarket, or online shopping as well. Payment banks and universal banks are an initiative taken to meet the government's objective of financial inclusion which means providing banking services to every individual in the country, banking the unbanked.

CURRENT BANKING INDUSTRY TREND

Indian financial system is considered as stable even during the times of global crises. The reason behind this is the regulations set for the banking system in India. Indian banks have to grow and make the financial system study as they provide finance for all the developmental decisions in the country. Indian banking is the backbone of Indian economy which supplies resources to meet all the strategic objectives of the economy. The banking sector supports capital-intensive sectors such as infrastructure, real estate, iron and steel, health, education, etc. Indian banking has changed itself from traditional banking to modern banking in the past two decades; it has adopted various innovations in financial services and has gained more confidence and dependency from the general public.

Banks Credit Growth

As per the data on sectoral deployment of bank credit as released by the Reserve Bank of India (RBI), non-food bank credit increased 11.9% in April 2019 over a year ago, showing acceleration in growth compared with 10.7% increase in April 2018. Credit growth to agriculture rose 7.9% in April 2019, showing acceleration from 5.9% growth in April 2018. Meanwhile, the credit to the industry increased by 6.9% in April 2019 compared with a 1.0% rise in April 2018. Within the industrial segment, the advances to large industry rose 8.1%. Further, the credit growth for the micro and small industry improved to 1.0 from 0.3% and credit to the medium industry was steady at 3.5% in April 2019 from 3.6% growth in April 2018.

Credit growth to the services sector has eased to 16.8% in April 2019 compared with an increase of 20.7% in April 2018, driven by moderation in the credit growth for other services to 10.9%, retail trade 7.1% and professional services 11.8%. However, the services credit growth has accelerated for NBFCs to 37.8%, commercial real estate 8.3%, transport operators 16.0%, wholesale trade 14.2%, tourism, hotels and restaurants 7.5% and shipping (-) 0.1% in April 2019.

Personal loans increased at slower pace of 15.7% in April 2019 as against an increase of 19.1% in April 2018, driven by slower credit growth for other personal loans to 21.4%, advances against fixed deposits (-) 5.1%, consumer durables (-) 69.1%, vehicle loans 4.9%, credit card outstanding 26.4%,

and education (-) 2.2%. However, the credit growth has shown acceleration for housing to 18.6% and advances to individuals against share, bonds, etc. 6.2% in April 2019 from April 2018. Priority sector loans rose 9.5% in April 2019 compared with a 5.0% growth in April 2018. Among priority sector loans, the credit growth for housing improved to 17.8%, weaker sections 17.1% and agriculture and allied activities 7.5%, while growth also improved for micro and small enterprises to 11.9%.

Banks Deposits Growth

According to RBI data, the total deposits are growing at a compounded annual growth rate of 11.71% year on year. The deposits from \$474 billion in 2006 grew up to \$1718 billion in 2017–18. This growth shows that over the years, Indians have shown confidence in banking. This is because of the continuous innovations and financial inclusion programs of the government of India. After demonetization which was announced by the government of India in November 2016, there was a huge rush to deposit old currency notes in the banks which led to high bank liquidity, which in turn led to lower deposit interest rates as well as lower yields on investments made in bonds. The increase in deposits due to demonetization made banks to invest in more government securities or to find customers for granting credit. However, this phase did not last long and led to stable growth in deposits since then. Deposit growth of banks has declined below the 10% level for the first time in several decades in the wake of a fall in interest rates offered on term deposits, alternative safe savings avenue like tax-free bonds.

Bank Technological Growth

The Indian FinTech software market was forecasted to touch USD 2.4 billion by 2020 from a current USD 1.2 billion, as per NASSCOM. The transaction value for the Indian FinTech sector is estimated to be approximately USD 33 billion in 2016 and was forecasted to reach USD 73 billion in 2020. The broad FinTech products/services offered in Indian financial markets are shown in Figure 1.

Figure 1 indicates the categorization of Fintech products and services. Banking sector or virtual banking has grown at a faster pace in the last 5 years, cashless banking has become the new trend and people are more reliant on plastic money like debit cards and credit cards; carrying cash has the risk of theft, so modern bank customers carry plastic money and use them in their day to day transactions.

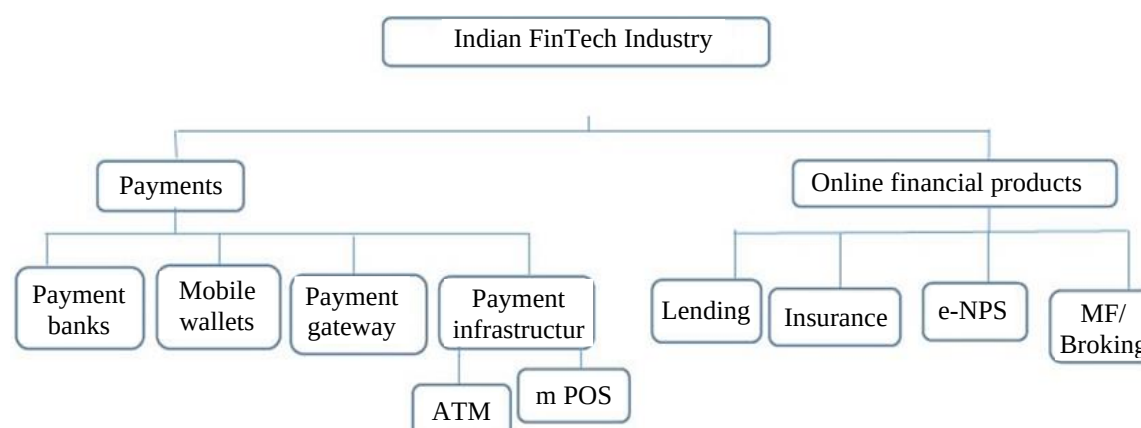


Figure 1. Fintech products and services.

Source: Reserve bank of India publications report of the working group on FinTech and digital banking.

Government Support to Public Sector Banks through Recap and Comprehensive Reform Plan

The government announced the Indradhanush plan for revamping Public Sector Banks (PSBs) in August 2015. The plan envisaged, among other things, infusion of capital in PSBs by the Government to the tune of Rs. 70000 crore over a period of four financial years. The government has recently announced decision to further recapitalize PSBs to the tune of Rs. 2,11,000 crore, through recapitalization bonds of Rs. 1,35,000 crore and a budgetary provision of Rs. 18,139 crore (the

residual amount under Indradhanush plan) over two financial years, and the balance through capital raising by banks from the market. The government has so far infused capital of Rs. 59,435 crore in PSBs under Indradhanush.

The capital infusion is aimed at supplementing the achievement of regulatory capital norms by PSBs through their efforts and, also, based on performance and potential, augmenting their growth capital. The government has announced that a differentiated approach would be followed, based on the strength of each bank. Public sector banks had to be recapitalized to meet the Basel requirements; the government of India has taken an initiative to recapitalize public sector banks. The announcement of this was made in October 2017. According to the recap, the agenda government is going to infuse capital in PSBs through Recap bonds Rs. 80,000 crores, and Rs. 8139 crores through budgetary support. This reform plan is based on the recommendations made by PSB Manthan in November 2017. The reform agenda is based on the theme of responsive and responsible public sector banks.

Enhanced Customer Base through Improvement in Customer Services

Modern banking has changed the way banks used to look at customers in the past; in the recent economy, customer service is the main agenda to retain and expand the business from existing clients, as well as attract new customers by leveraging the services provided. The technology-oriented customers want to spend less time waiting in queue for banking activities with the use of the internet and mobile banking, they wish to complete the banking activities in the nick of time.

Financial Inclusion Policy and Progress

Financial inclusion in India is the need of the hour. Since 2014 with the formation of new government, financial inclusion has taken to a new level by linking all the subsidies to the bank accounts and linking Aadhar card for availing all the government benefits since then, it has become necessary for every individual getting government benefits to have an operating bank account. The Pradhan Mantri Jan Dhan Yojana scheme by the government has opened zero balance accounts of millions of Indians who get their benefits transferred to those accounts. However, if the account holder needs cheque book facilities he/she has to maintain a minimum balance as per banking rules.

As per the statistics given by RBI, the credit-deposit ratio has consistently been above 70% in the last 5 years. The number of new bank branches opening every year is decreasing but on an average, 5000 branches are opened every year. Total banking outlets in the village are increasing year on year which proves that banking services back the government efforts on financial inclusion. Moreover, under the “Pradhan Mantri Jan Dhan Yojna (PMJDY), the lenders have opened around 25 crores of accounts. On a constructive note, zero balance accounts under PMJDY have constantly been flagging from 45% in September 2015 to 27% in March 2016. Around 94.4% of households had savings bank accounts in 2015–16” (5th Annual Employment-Unemployment Survey). The figure was much higher than the official figure (58.7%) of households with savings bank accounts in India, as per Census 2011. Furthermore, under the “Jan Suraksha scheme, banks have enrolled a total of 12.6 crores of applicants cumulatively, out of which State Bank of India (SBI) alone has enrolled 2.3 crore accounts for the year ending March 2016. Taking this proposal forward, Government has been using the banking channels to pay out the financial support amounts through these accounts, by using the Aadhaar platform” (SBI).

DATA ANALYSIS

Banks play a key role in the development of any economy. The stronger the bank grows, there will be a better infusion of capital in an economy which will lead to the funding of the many business ideas. This will create job opportunities and increase the gross domestic product. The banks have to financially perform well to grow stronger and support the economy. Table 2 indicates data related to

banking industry which talks about its investments and borrowings collected to analyze bank performance and GDP data is collected to analyze economic performance.

Figure 2 shows the amount of GDP, Bank credit, Investments made by banks in government securities and other securities, and total deposits over the last 7 years.

GDP, Bank Credit and Deposits (Amount in crores)

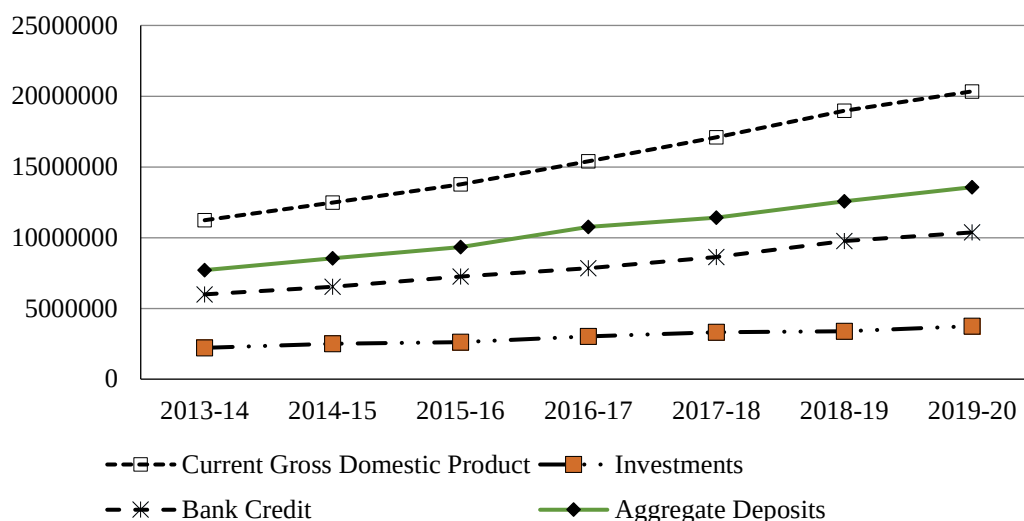


Figure 2. GDP, Bank credit and deposits (amount in crores).

Table 2. Investments made by banks in securities.

Year	Gross Domestic Product	Investments	Food Credit	Non-Food Credit	Bank Credit	Demand Deposits	Time Deposits	Aggregate Deposits
2013–14	11233522	2212821	98447	5895649	5994096	713921	6991639	7705560
2014–15	12467959	2491825	94418	6442002	6536420	794029	7739256	8533285
2015–16	13771874	2625509	105254	7144361	7249615	888996	8438294	9327290
2016–17	15391669	3030963	53927	7787539	7841466	1281439	9476217	10757656
2017–18	17098304	3318454	41989	8583436	8625425	1370282	10055767	11426049
2018–19	18971237	3381056	41610	9730112	9771722	1511287	11062484	12573772
2019–20	20339849	3747349	51764	10319097	10370861	1617003	11950489	13567492

HYPOTHESIS TESTING

Table 3 shows hypothesis test decisions done based on significance value obtained for the hypothesis statements. It indicated Hypothesis 1 and 2 were rejected and Hypothesis 3 was accepted for the study.

Table 3. Hypothesis tests decisions.

Sl. No.	Null Hypothesis	Test	Sig.	Decision
1	There is no significant impact of Bank credit on GDP of Indian Economy	Linear Regression	0.000	Reject
2	There is no significant impact of Bank deposits on GDP of Indian Economy	Linear Regression	0.000	Reject
3	There is no significant impact of Net Interest Margin (NIM) on GDP growth rate of Indian Economy	Linear Regression	0.167	Accept

REGRESSION ANALYSIS

Testing of Hypothesis 1 and Hypothesis 2

Table 4 provides the R and R^2 values. The R value represents the simple correlation and is 0.96, which indicates a high degree of correlation. The R^2 value indicates how much of the total variation in the dependent variable GDP, can be explained by the independent variables Total credit and total

Deposits. In this case, 0.9216 can be explained, which is very large.

Table 4. Model summary.

Model	R	R Square
1	0.96 ^a	.9216

Table 5 indicates that the regression model predicts the dependent variable significantly well. The Sig column indicates the statistical significance of the regression model that was run. Here, $p < 0.000$, which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable, i.e., it is a good fit for the data.

Table 5. Results from ANOVA.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68268826319333.020	2	34134413159666.510	2009.018	.000 ^b
	Residual	67962374312.698	4	16990593578.175		
	Total	68336788693645.720	6			
a. Dependent Variable: GDP						
b. Predictors: (Constant), total deposit, total credit						

The Coefficients: Table 6 provides us with the necessary information to predict GDP from total credit and total deposit, as well as determine that total credit and total deposit contributes statistically significantly to the model.

Table 6. Coefficients.

Coefficients ^a								
Model	Unstandardized Coefficients			Standardized Coefficient	t	Sig	95.0% Confidence Interval for B	
	B	Std. Error	Beta				Lower Bound	Upper Bound
1 (Constant)	-1066052.190	268042.805		-3.977	.016		-1810258.325	321846.055
Total credit	1.192	.289	.575	4.128	.015		.390	1.994
Total deposit	.670	.219	.426	3.061	.038		.062	1.278
a. Dependent Variable: GDP								

Figure 3 indicates the total credit and total deposits contributing in predicting the gross domestic product of the Indian economy.

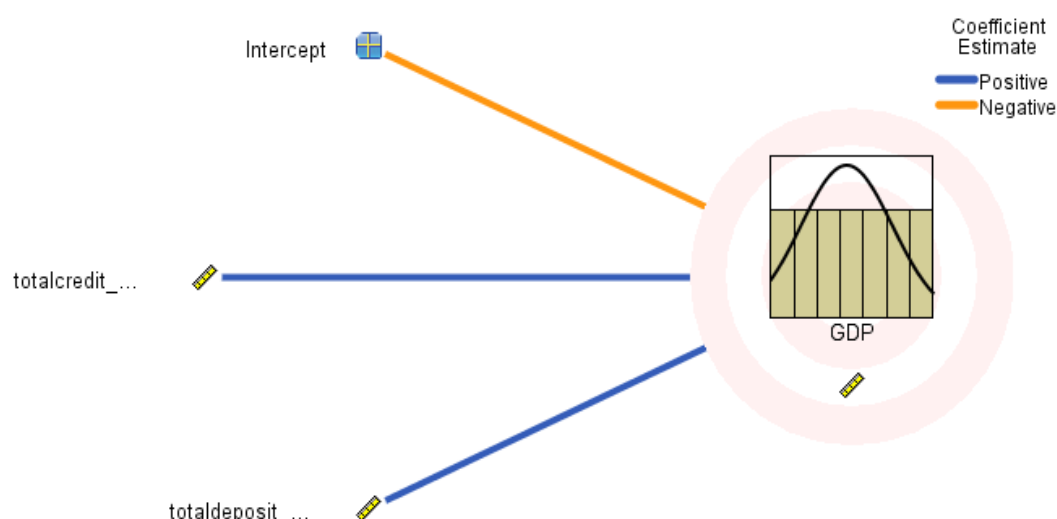


Figure 3. Variables predicting GDP.

Testing of Hypothesis 3

From Table 7, the R value represents the simple correlation which is 0.585, which indicates a moderate degree of correlation. The R^2 value indicates how much of the total variation in the dependent variable GDP growth rate, can be explained by the independent variables' Net Interest Margin. In this case, 0.343 can be explained, which is very low.

Table 7. Model summary.

Model	R	R Square
1	.585 ^a	.343

Table 8 indicates that the regression model predicts the dependent variable significantly well. The Sig column indicates the statistical significance of the regression model that was run. Here, $p > 0.167$, which is greater than 0.05, and indicates that, overall, the regression model does not statistically significantly predicts the outcome variable i.e., it is not a good fit for the data.

Table 8. Results from ANOVA.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.932	1	3.932	2.607	.167 ^b
	Residual	7.540	5	1.508		
	Total	11.472	6			
a. Dependent Variable: GDP growth rate						
b. Predictors: (Constant), NIM						

The Coefficients: Table 9 provides us with the necessary information to predict GDP growth rate from Net Interest Margin (NIM), as well as it shows that it does not contribute statistically significantly to the model.

Table 9. Coefficients.

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficient	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
1 (Constant)	23.820	10.569		2.254	.074	-3.349	50.989
NIM	-7.198	4.458	-.585	1.615	.167	-18.658	4.261
b. Dependent Variable: GDP growth rate.							

FINDINGS

1. The banking sector plays an important role in contributing towards the growth of Indian economy as it is the back bone of the economy and provides financial support.
2. Total credit provided by the banks in the economy boosts the purchasing power of the population and pumps money in the industries to produce more and increase the GDP this in turn increases the employment opportunities and leads to overall growth of the economy.
3. Total deposits in the bank help the population to save their excess cash in the banks and earn interest on that amount, in turn, the banks use those deposits to provide loan and boost the economy.
4. It was seen that total credit and total deposits are strongly correlated with GDP and have a significant relationship with GDP.
5. It was found that Net Interest Margin (NIM) is moderately correlated with GDP growth rate and does not have a significant relationship with GDP growth rate.

CONCLUSION

Indian banking system has been strong enough to handle the challenges and have certain outstanding achievements, one of its major achievements is its extensive reach and ability to serve the ever growing Indian population. This sector offers numerous amenities and prospects towards the

growth of the economy. Total credit provided by the banks in the economy boosts the purchasing power of the population and pumps money in the industries to produce more and increase the GDP; this in turn increases the employment opportunities and leads to overall growth of the economy. The banking sector acts as an intermediary between the suppliers of funds, the depositors and the demanders of funds, that is, the loan takers. Using internet and technology as a medium, the bankers are able to market their products and services, which has made players at all levels in the banking industry to gaze at their active portfolio offerings. Traditional banking has protected Indian banks from many crises in the past, but in the modern era, Indian banking has been expanding all over, which has led to higher valuation of Indian banks as compared to some of the Asian countries.

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