

APPLICATION OF ARTIFICIAL INTELLIGENCE (AI) IN BANKING SECTOR

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ABSTRACT

The most effective way to understand and bring the organization from traditional banking to digital banking is Omni-Channel approach to customer service where all the channels are tightly integrated, keeping customer in the center of the integration. Omni-channel banking is a prospect to take bottom-line on higher note by gaining insights from customers' channels, behavior and preferences. Today's banks are rapidly adopting Artificial Intelligence (AI) in various banking services. AI play a very significant and integrated role in a range of activities, from improving customers experience to a more efficient management of compliance to access to large data sets and an increase data processing power. As customers continue to change their channel usage patterns, banks need to focus on delivering a seamless customer experience across various touch points. In the last few years' regulators and policy makers looking at the way of AI using in banking services. Today's customers are more sophisticated and tech savvy, and to cater to their specific needs, each customer needs a unique experience from banking- opening an account, checking balance, conducting transactions, loans, credits, wealth management, customer support, etc delivering an Omni-channel experience has become a key to success in this competitive market place. This paper focuses mainly on an understanding and application of AI in banking services. Secondary Data is used for analysis.

Keywords: Artificial Intelligence, Customer's Experiences, Banking Services, AI Solution.

Introduction

Artificial Intelligence (AI)-is technology used by computer to emulate human tasks through learning and automation. The machine behave like a human, think like a human also capable of decision making, it is made up of two words, "Artificial"and "Intelligence"which means the "man-made thinking ability.

Application of Artificial Intelligence (AI) in Banking Sector

Earlier examples of IT application in banking business are the first example ATMs in 1967 in London, in India 1985 HSBC Mumbai branch. The second example of internet banking is in late 1990. In India more than 57% of population access to Internet in 2021 using bank Apps, third party apps like google pay, UPI apps and so on and thirdly AI – for banks data management without human involvement offers greater opportunities for banks to improve speed, accuracy and efficiency.

Review of Literature

Referred few article relating to AI:

¹**John D Kelleher and Brendan Tierney:** They opined that AI encompasses a set of principles, problem definitions, machine learning focuses on the design and evaluation of algorithms for extracting patterns from large data sets.

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¹ John D. Kelleher and Brendan Tierney, *Data Science*, The MIT Press Essential Knowledge series, Cambridge, MA, 2018

¹**McKinsey & Co, Executive's Guide:** Opined AI is typically defined as the ability of a machine to perform cognitive function we associate with human minds, such as perceiving, reasoning, learning interacting with the environment problems solving and even exercising creativity”

Research Design

Objectives of Study

- To understanding the application of artificial intelligences in banking
- To identify the artificial intelligence with respect to banking operations
- To know artificial intelligence and bank profitability

Scope of the Study

The study relating to concept of artificial intelligence application in the banking industry

Sources of Data

For the study secondary data collected from Journals and websites

Plan of Analysis

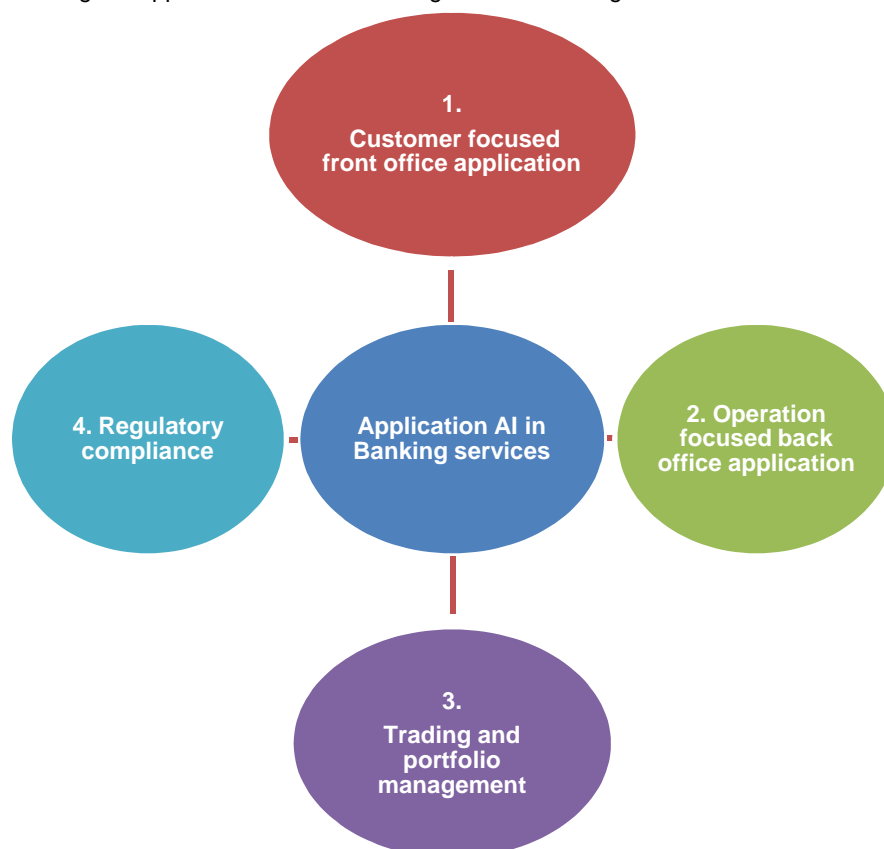
Data presented in diagram and chart and

Limitations of the Study

- The study used secondary data
- It is not suggested generalize the findings of the study

Finding of the Study

To understanding the application of artificial intelligences in banking



Source: compiled by Author

¹ McKinsey & Co, Executive's guide

Identify Artificial Intelligence with Respect to Banking Operations (AI Solutions)

Source:compiled by Author

AI Solution

Bank by and large experiencing with IA technology in their process

- **Security:** AI is being tested for real time identification and prevention of fraud in online banking. AI checks customers' transactions in real time and compare new transactions with previous amounts and locations. AI detect fraudulent activities like hacking, spoofing and blocks the transactions if it is not valid
- **Testing KYC of the clients to Verify the identity:** the information provided by clients comparing with information from the internet, if inconsistencies, raise a red flag and a more detailed KYC check by the employees is performed
- **Chat Bots–Provide Services to Customers very Short Period:** Retail–online customer support many websites now offer some form of 'chat' functionality. AI chat bots are digital assistance interact with customers with text or voice and aims to address customers request without involvement of a bank employees.
- **Gain quick Information:** it is possible to gain quick information on financial strategies, loan rates and the future market progress
- **Examining the Data Base Effectively:** it easier for the banks to recommend, forecast and execute tailored financial advice to customers.

- **Digitization:** is using the support of technology to transform data into a digital format-the movement of large cash inflow and outflow, saving time both for the customer as well as for the bank and dealing with cashless transactions from any place and at any time
- **Report Generation:** Banks explore AI to visualize information from legal documents or reports. After observing the data back testing to learn from their mistakes to improve accuracy in reports

To know Artificial Intelligence and Bank Operating Profitability

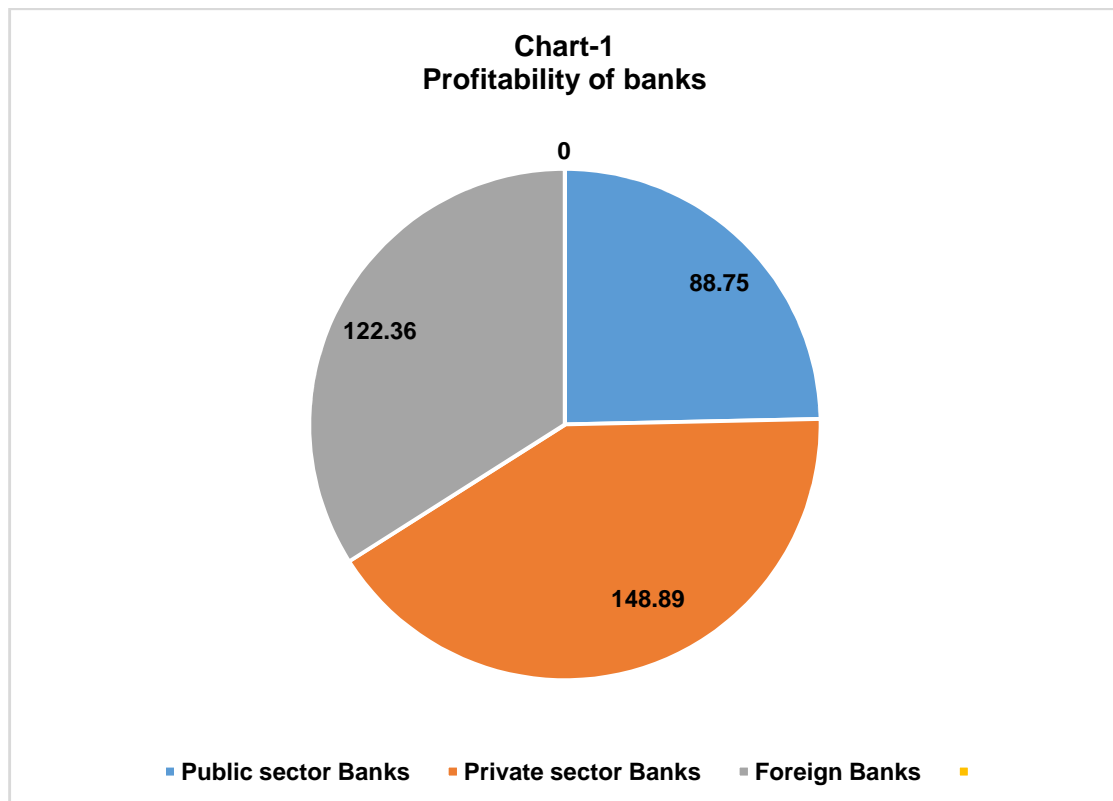
Various factor that determine bank profitability such as –lending interest rate, Non-performing loan, GDP, inflation etc although AI might contribute to bank profitability in two ways.

- **Cost Reduction:** By taking over repetitive tasks from bank employees, automatically AI software could reduce the demand for less-skilled employee and improve the efficiency of remaining bank employees it reduces the remuneration burden for banks.
- **Revenue Generation:** AI helps banks to develop new products and offer tailor-made products better suited to customer preferences.

Table 1: Showing Operating Income of Public, Private Sector& Foreign Banks Operating in India

Details	2019 (Rs in cr)	2020 (Rs in cr)	Increase (+) or decrease (-) in Rs Crs	Increase or decrease in Percent	Converting in to pie table (360 angle)
Public banks	1,49,603	1,74,390	(+) 24787	(+) 16.56	88.75
Private banks	1,26,526	1,61,684	(+) 35158	(+) 27.78	148.89
Foreign banks	26,728	32,829	(+) 6101	(+) 22.83	122.36
Total				67.17	360

Source: RBI



The above table-1 and chart -1 Reveals that the operating profit of public sector banks, private sector banks and foreign banks operating in India comparing between the year 2019 and 2020 have increasing both in rupees (in crores) absolute numbers and percentage. It indicates that AI significantly contribute increasing the operating profits of banks

Conclusion

Traditional banking customer services time consuming process. Banking sector play a very significant role in the modern economic world. The modern banking sector is witnessing groundbreaking changes foremost being the rise in customer-centricity. AI application in banking services enable them to offer more personalized and efficient customers services. In the competitive era banks has to compete with rivalry so need to apply AI for providing better service to customers

Way Forward

AI is a technical concept. It is necessary to provide training to bank employees to equip them application of AI in banking services Govt. has to give awareness program about the importance of AI to the general public

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