Artificial Ingtelligency (AI) in Banking: An Opportunities & Challenges

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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. AI offers several opportunities in banking services to enhance operational efficiency, risk management and so on. Integration of AI brings challenges including ethical consideration, security risks, and substantial investments in technology and skills. However, 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, making payments, loans, credits, wealth management, customer support, etc delivering an Omni-channel experience has become a key to success in this competitive market place. his paper focuses mainly on an understanding the opportunities and challenges integrating AI in banking services. Secondary Data used for analysis

Keywords: Artificial intelligence, customer's experiences, banking services, opportunities, challenges

Introduction:

Artificial Inelligence (AI)**-** is technology usesd 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 Íntelligence"which means the "man-made thinking ability

Application of Artificial Intelligence (AI) in Banking Sector:

Earlier examples of IT application in banking business, the first example ATMs in 1967 in London. In India 1985 HSBC Mumbai branch. The second example internet banking 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 articles 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

[2]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"

1. **Research Design**

a) **Objective of study-**

1. To understanding the **artificial intelligence** (AI) opportunities in banking
2. To identify the AI challenges with respect to banking operations
3. To explore AI Solutions -both Bank employee and customers point of views
4. To measure AI and Bank operating profitability

b) **Scope of the Study**

The study relating to concept of artificial intelligence in the banking services

c) **Sources of Data-** for the study secondary data collected from Journals and websites

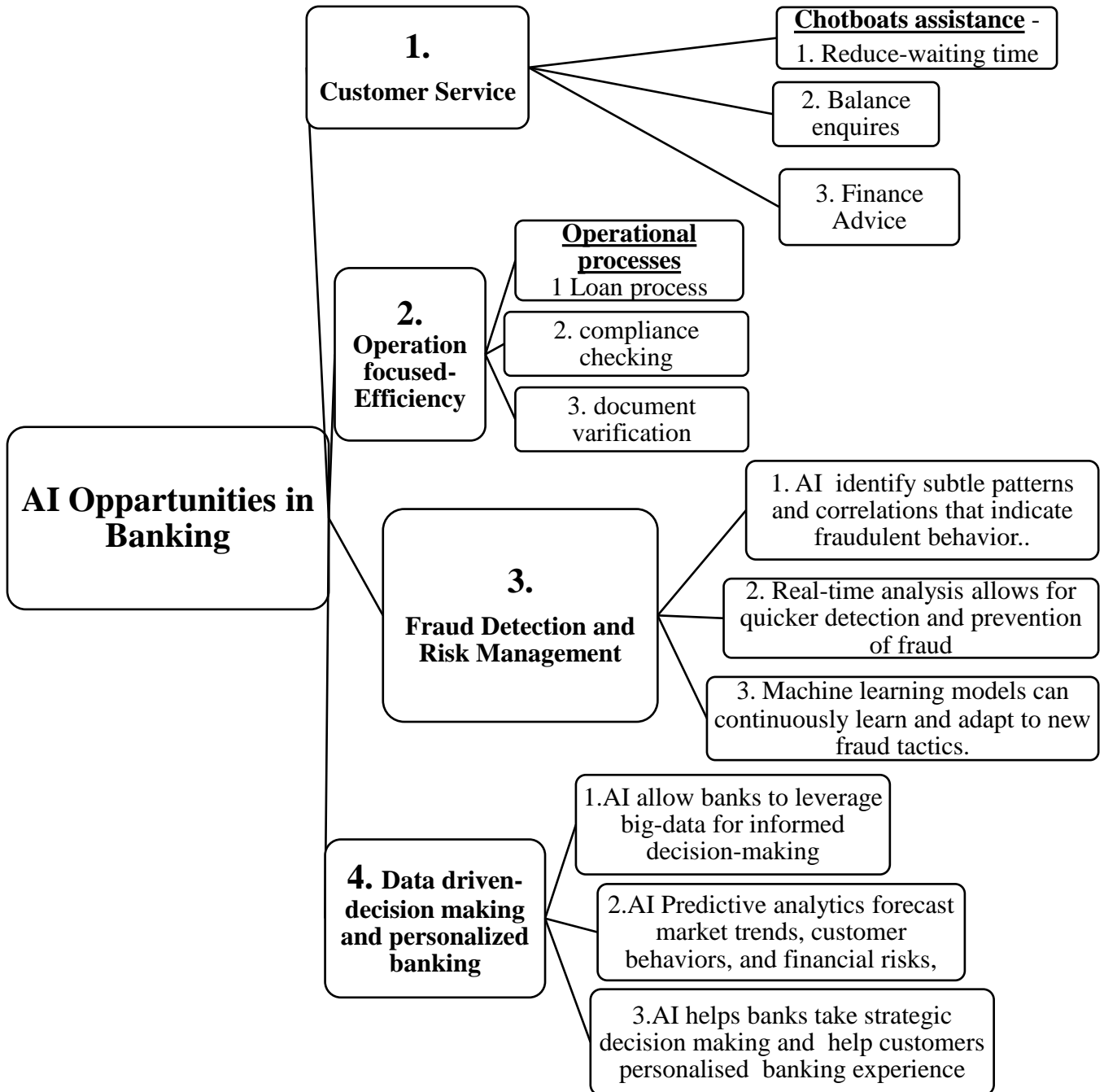d) **Plan of analysis-**Data presented in diagram and charts

e) **Limitation of the study**

a) the study used secondary data
b) It is not suggested generalize the findings of the study

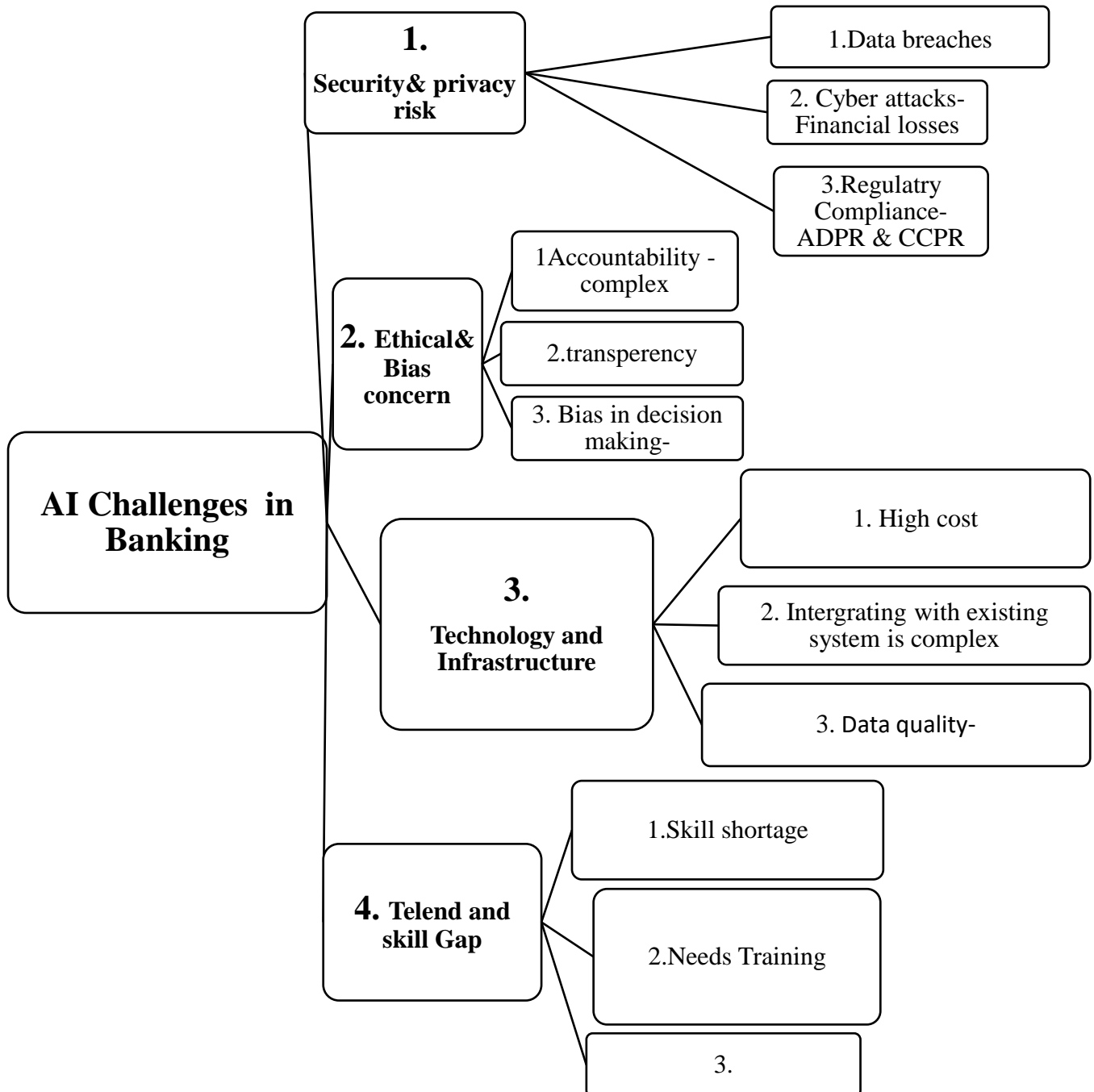
[2] McKinsey & Co, Executive's guide

2. **Finding of the study**
1. **To understanding the AI opportunities in banking**

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                    ┌──────────────┐      ┌─────────────────────────┐
                    │      1.      │──────│ Chotboats assistance -  │
                    │   Customer   │      │ 1. Reduce-waiting time  │
                    │   Service    │      └─────────────────────────┘
                    └──────────────┘      ┌─────────────────────────┐
                                          │ 2. Balance enquires     │
                                          └─────────────────────────┘
                                          ┌─────────────────────────┐
                                          │ 3. Finance Advice       │
                                          └─────────────────────────┘

                    ┌──────────────┐      ┌─────────────────────────┐
                    │     2.       │      │ Operational processes   │
                    │  Operation   │──────│ 1 Loan process          │
                    │  focused-    │      └─────────────────────────┘
                    │  Efficiency  │      ┌─────────────────────────┐
                    └──────────────┘      │ 2. compliance checking  │
                                          └─────────────────────────┘
                                          ┌─────────────────────────┐
                                          │ 3. document varification│
                                          └─────────────────────────┘
┌──────────────┐
│     AI       │    ┌──────────────┐      ┌─────────────────────────┐
│ Opparunities │    │     3.       │      │ 1. AI identify subtle   │
│   in Banking │    │    Fraud     │──────│ patterns and            │
└──────────────┘    │  Detection   │      │ correlations that       │
                    │   and Risk   │      │ indicate fraudulent     │
                    │ Management   │      │ behavior..              │
                    └──────────────┘      └─────────────────────────┘
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2. To identify the AI challenges with respect to banking operations

Source:complied by Author based on secondary data

3. **To explore AI Solutions -both Bank employee and customers point of views**
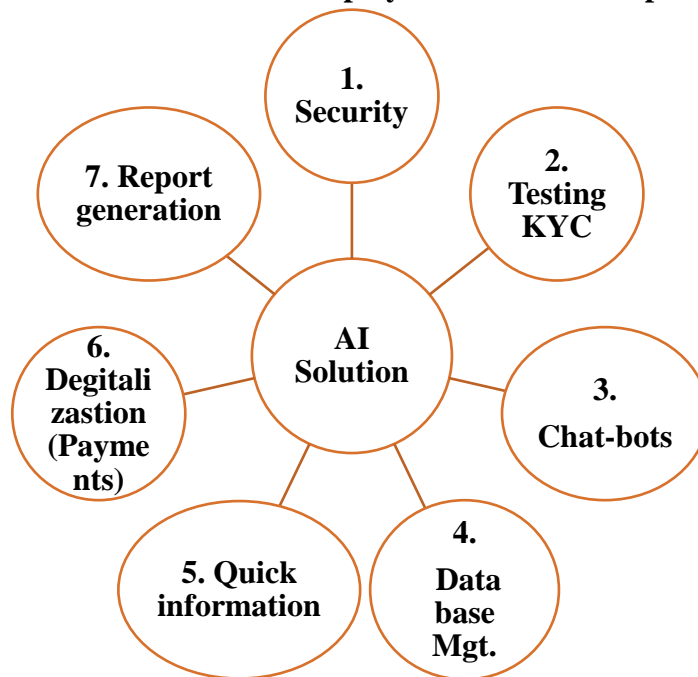
Source:complied by Author

AI Solution –Bank by and large experiencing with IA technology in their process

1. **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

2. **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

3. **Chat Bots** –**Provide services to customers very short Period**-Retail–online customer supports 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.

4. **Gain quick information**: it is possible to gain quick information on financial strategies, loan rates and the future market progress

5. **Examining the data base effectively:** it easier for the banks to recommend, forecast and execute tailored financial advice to customers.

6. **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

7. **Report generation-** Banks explore AI to visualize information from legal documents or reports. Both from the point of view of customer and bank employee point of view Bank and customer transaction such transfer of money by using

a. **RTGS, NEFT, MMPS and so on -** for transferring money from one account to another account both customers and bank employee point of view both using RTGS/FEFT/IMPS methods. In case customer

fail to executives the transaction on their own bank transfer on behalf of customer on the direction of the customers.

4. To measure artificial intelligence and bank operating profitability

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

a) **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

b) **Revenue Generation**- AI helps banks to develop new products and offer tailor-made products better suited to customer preferences.

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

5. Way Forward

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

Reference

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