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Theme: Artificial Intelligence a Boon to the Banking Industry

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Abstract: The growing impact of Artificial Intelligence in all the fields, be it business, personal or banking has changed the life of the consumers rapidly. Computer technology is banishing the traditional ways and taking all over. Advancement in technologies are doing great in every sector leading to productive growth with an ease. It took time for the banking sector to adopt to the new technology as compared to others as in this sector human beingsare involved to a great extent. Advanced technology is helping out in cutting down on repetitive tasks. Artificial Intelligence, cloud computing, the block chain and digital dashboards are helping in creating a stronger system to work on, by making the processes problem free.

Key words: Artificial Intelligence, Block chain, digital dashboards, banking

What is Artificial Intelligence?

Artificial intelligence (AI) is wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. AI is an interdisciplinary science with multiple approaches, but advancements in machine learning and deep learning are creating a paradigm shift in virtually every sector of the tech industry. How does AI matter too banks?

Objectives of the Study:

The study is conducted to know where the AI will be used in Banking sector and the changing face of Banking Sector. The study focused on key areas of AI adoption in the banking processes. The study covered various key obstacles as well as some challenges involved in the adoption of AI in the banking sector.

Below are some of the areas where AI is used in Banking:
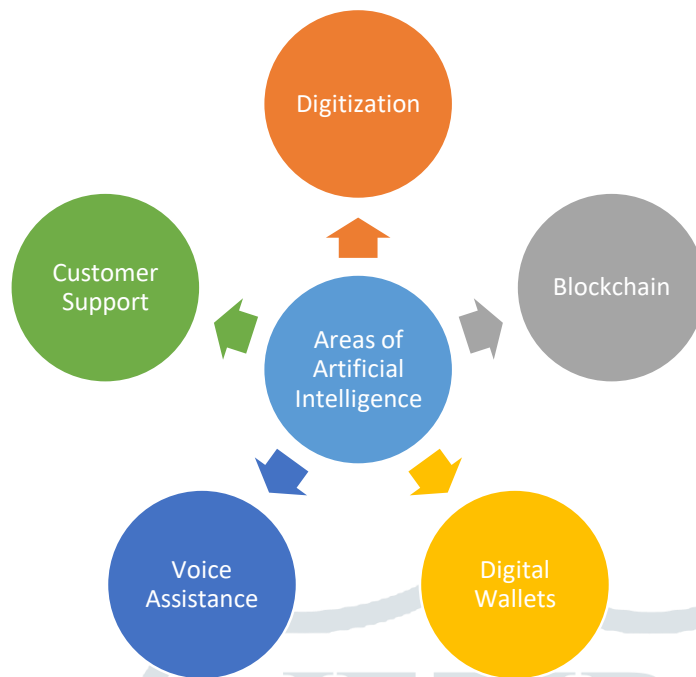
Digitization:

The prolonged process which was always involved in the banking sector, has been much eased up due to digitization. The productivity which was hampered due to the laziness of the human beings is being eradicated. The documentation procedure has already reduced the pain of the consumers which was not the case before. The major benefits of digitization in banking are business efficiency, cost savings, increased accuracy, improved competitiveness, greater agility and enhanced security.

Block chain

Block chain technology allows multiple parties that may not know each other from different geographical locations to have simultaneous access to a constantly updated digital ledger that cannot be altered. The block chain could potentially save banks billions in cash by dramatically reducing processing costs. Banks are keen to take the opportunity to reduce transaction costs and the amount of paper that they process. Implementing block chain would be a step to making banks increasingly profitable and valuable. All major banks are trying out block chain concept which could be used for money transfers, record keeping and other back-end functions.

Fraud Reduction-Most banking systems in the world, built on a centralized database, are more vulnerable to cyber-attack because once hackers attack the one system they get full access.

Smart Contracts-Block chains facilitate smart contracts as they facilitate storage of any kind of digital information, including computer code that can be executed once two or more parties enter their keys.

Clearing and Settlement -The messy web that records loans and securities costs investment banks billions of dollars to run. Today, this is managed through a myriad of messages and manual reconciliation

Payments-Block chain disruption could be highly transformative in the payments process. It would allow banks higher security with minimal lower costs to process payment between organizations and their clients and even between banks themselves. Block chain would get rid of all the intermediaries in the payment processing system.

Digital Wallets

The future of payments has totally changed with different apps like Paytm, Google Pay, Paypal, etc,.This has reduced the dependency on physical cash.
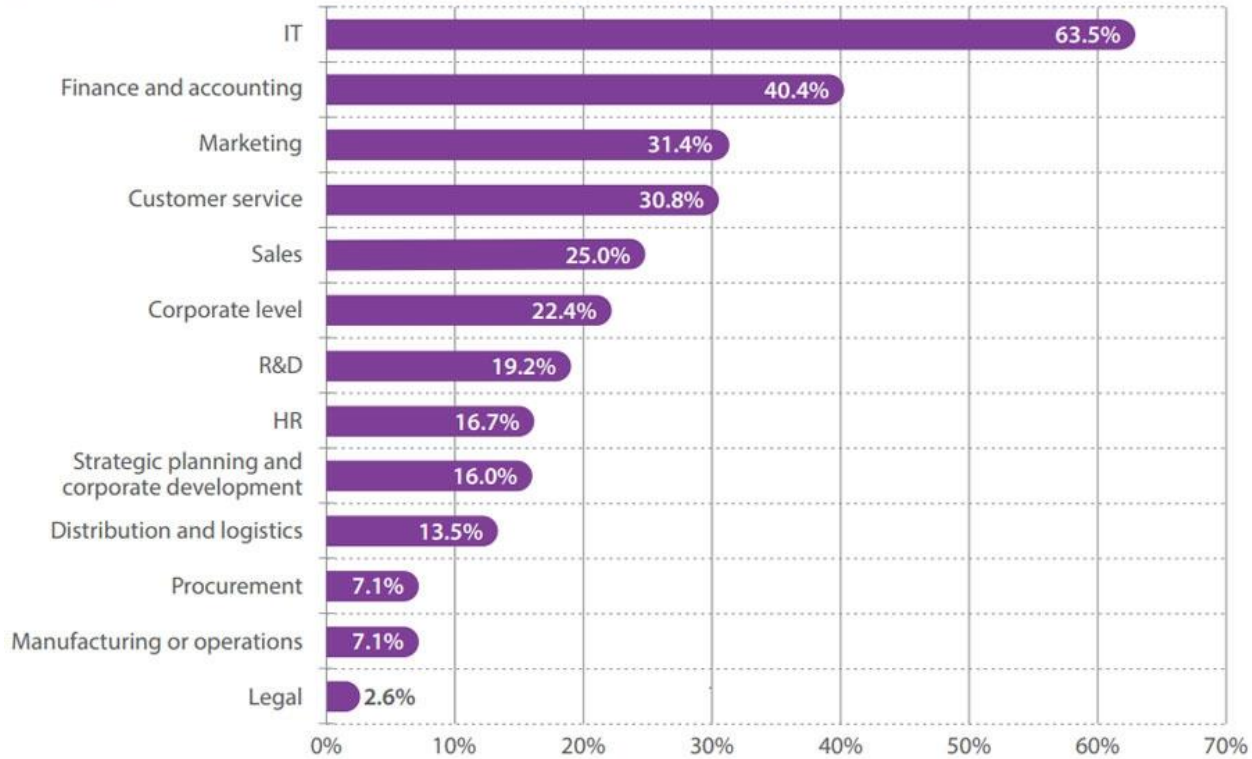
Voice Assistance

With the advancement in technology, day by day the physical services are reducing as Voice Assistance is enabling the customers to use banking services with touch screens and voice commands. Interactive Voice Response System (IVRS) helps the customers in processing their requests. Thiscauses reduction of errors that earlier occurred due to humans.

Customer support

We all know that customer is 'THE KING'. In this competitive world, as the number of banks are increasing, the customers also need to be kept happy and satisfied by providing them good services and support. In providing customer support, most of the banks are building customer-centric cultures with the advancement of machine learning. It is very important for the banks to reduce the waiting lines in the bank.

Where Banks are Using AI

(Banking and Financial Services): Percentage of Companies Using AI Today In Each Function

Function	Percentage
IT	63.5%
Finance and accounting	40.4%
Marketing	31.4%
Customer service	30.8%
Sales	25.0%
Corporate level	22.4%
R&D	19.2%
HR	16.7%
Strategic planning and corporate development	16.0%
Distribution and logistics	13.5%
Procurement	7.1%
Manufacturing or operations	7.1%
Legal	2.6%

AI is used in Banks to improve their results??

If Artificial Intelligence is implemented in a right way that it can help the banks to reduce the costs and the various jobs can be done faster and with more accuracy.

Increase work efficiency

- Repetitive tasks with amazing efficiency can be performed by the AI enabled machines removing human errors.
- Machines can work 24/7 unlike humans eliminating two shift employees
- If customers are attended every minute of the day,it would boost the sales of the company.

Reduce cost of training and operation

- Machines have a greater learning ability and they learn new processes much faster
- Cost of training humans thus gets reduced
- Cost of operations is reduced as the machines work with greater efficiency and accuracy
- Machines don't take breaks and can perform the same mundane tasks with accuracy and efficiently

Work with high accuracy

- Research is going on to teach AI powered machines to solve complex equations and perform critical tasks on their own with much accuracy than human counterparts
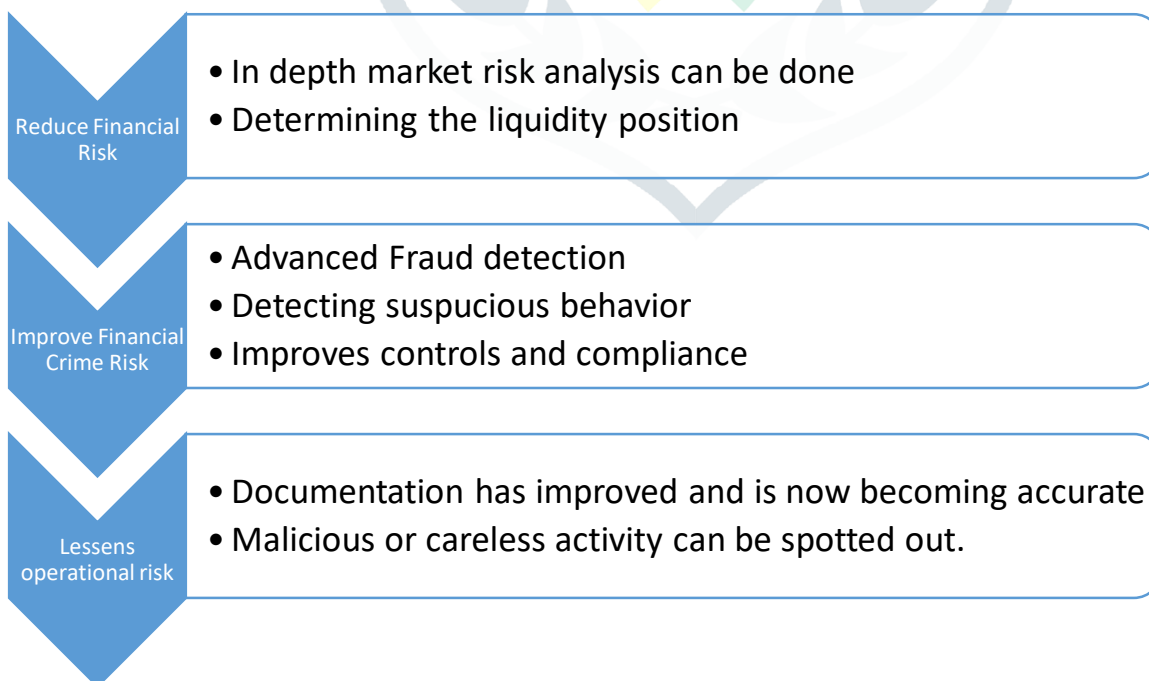- Their efficiency and accuracy has made these AI enabled machines indispensable

Improve Processes

- AI pwered machines can store humongous amounts of data related to work
- Such data is processed to gather deep insights into the processes with quantitaive analysis
- In future AI enabled machines would do analysis by themselves

Case study: The Indian banking system faced a massive cyber-attack in 2016 wherein 3.2 million debit cards issued by a number of banks were compromised. This was one of the biggest ever breaches of financial data in the country. The threat was detected when bankers received complaints about unauthorized usage of debit cards in China. One of the banks blocked the debit cards of certain customers and issued new cards to them. While the fraud took place in June 2016, it was discovered only in September 2016.
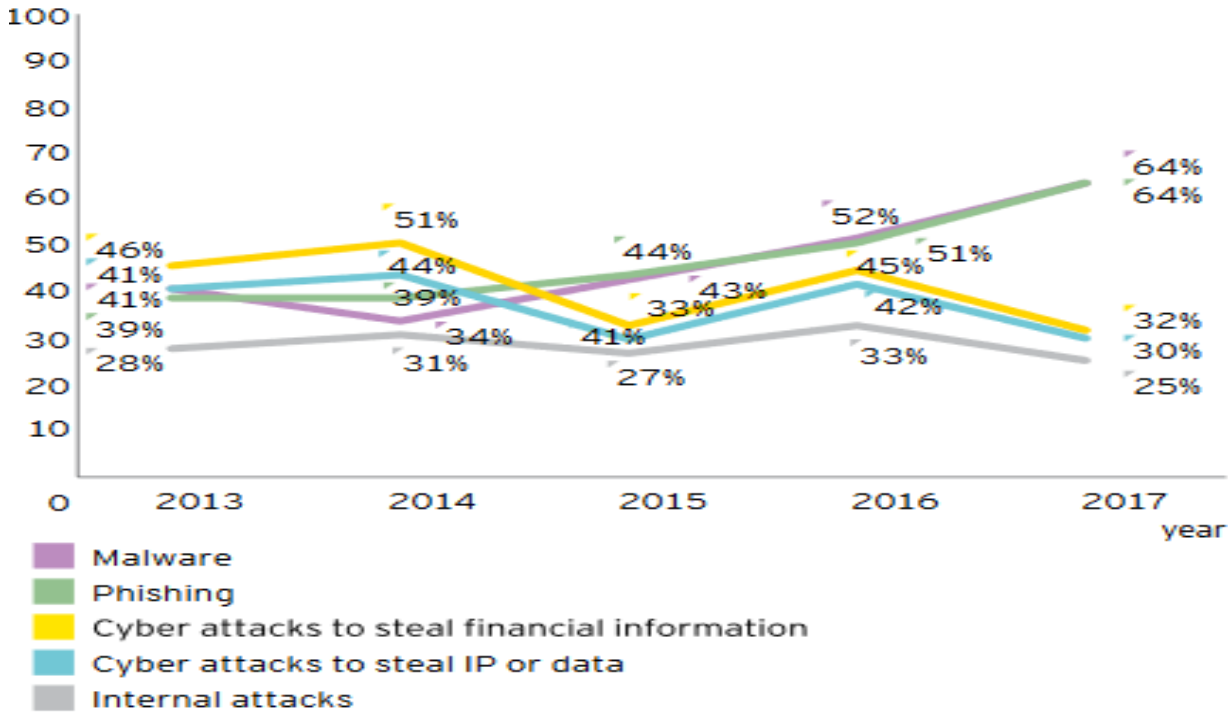
Reducing Risk with AI

Risk is a huge and complicated issue in banking. With growing adoption of new advanced Information Technology, banks are exposed to various risks viz. cyber-attacks, data privacy breaches, financial loss, etc.

Reduce Financial Risk
- In depth market risk analysis can be done
- Determining the liquidity position

Improve Financial Crime Risk
- Advanced Fraud detection
- Detecting suspucious behavior
- Improves controls and compliance

Lessens operational risk
- Documentation has improved and is now becoming accurate
- Malicious or careless activity can be spotted out.

Threats

% of respondents stating as top two items to increase risk exposure

- Malware
- Phishing
- Cyber attacks to steal financial information
- Cyber attacks to steal IP or data
- Internal attacks

AI is Unreasonable

The machines have reasonably high computing powers contributed by a range of several processers. These computer chips have rare materials like Seleniumas a major constituent. Besides, the batteries of such machines run on Lithium, again a rare element in earth's crust. As these material are required in large quantities, they are regularly mined from the earth's crust.The increased mining of these materials is permanently damaging our environment swiftly. These machines also use great amount of power to operate, which has put high pressure on our power plants which in turn is harming the environment.

Decreased Jobs

The machines can perform the repetitive and mundane tasks with greater efficiency and error free as compared to human beings. So instead of appointing human work force people might start keeping machines which can work 24/7 without taking breaks. Thus the employability of human goes on toss, as machines are replacing human beings at a greater pace. This also increases the profitability of business houses.

Conclusion

As every coin has two sides, Artificial Intelligence is no exception. The AI has definitely eased out our lives with machine technology coming in the forefront. Nowadays we do not go to banks and stand in a queue for withdrawing money, is just an example of the case. The Indian banking sector has got a renewed outlook after the post demonetization era. The banks which were earlier following traditional ways of banking have now shifted to newer and advanced technology to cut down their operating expenses and working efficiently. The adoption of digital payments is supported by successful implementation of Aadhaar and Unified Payments Interface (UPI).But on the other side AI has a lot of risks associated with it. The need of the hour is to reduce the various financial risks associated.

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