

## EMERGING TRENDS IN BANKING INDUSTRY

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### **Abstract**

Today banking is known as pioneering banking. India is having a well developed banking system with different classes of banks: public sector banks, foreign banks, private sector banks, regional rural banks, co-operative banks. The use of technology has brought a revolution in the working style of the banks. Information Technology has had a positive impact on substitutes for traditional services. With networking and interconnection new challenges are arising related to security privacy and confidentiality to transactions. The RBI's most important goal is to maintain monetary stability. Reducing inflation has been one of the most important goals for some time. There has been considerable innovation and diversification in the business of major banks. Some of them have engaged in the areas of consumer credit, credit cards, merchant banking, internet and phone banking, leasing, mutual funds etc. With the emergence of Privatization, Globalization and Liberalization in India, Banks are focusing on Research and Development and applying various innovative ideas and technology. There is a close relationship between the development of banking sector and the new innovations in technology and Electronic data processing. The present article focuses on the emerging trends and its challenges that recently emerged in the banking sector with special emphasis on digitization. It will be useful to the academicians, banking and insurance personnel, students and researchers. Common readers also know the latest innovations in banking sector.

**Keywords: Banking Innovation, Technology, Internet, Services.**

### **Introduction**

Today Indian banking Sector is a flourishing Industry; it's mainly focused on new Banking technological innovations. Banks created to use technology to provide effective quality and services to the customer and get high speed. Innovation in banking technology is driven by the constantly evolving customer expectations and internal business mandates. Customer behavior patterns have shifted over the last couple of years and the focus now is on instant fulfillment be it for account opening, transactions (financial/nonfinancial) or problem resolution. Customers today demand a 24×7 consistent access to systems and services, with the fastest transaction processing possible. In the recent scenario has been changed, there are around 340 banks are working in India, in which are public and private banks. Today all the banks started with the different channels, like ATM, Credit Cards, Debit Cards, Mobile Banking, Internet Banking, etc. But Net Banking made it an easy way for customers to do their banking transaction from various places. In 2020 India's banking sector is a fifth largest banking sector.

### **History of Banking in India**

A bank is a financial institution and a financial intermediary that accepts deposits and channels those deposits into lending activities, either directly or through capital market. A bank connects customers with capital deficits to customers with capital surpluses. Banking in India originated in the last decades of the 18<sup>th</sup> Century. The first Bank were Bank of Hindustan (1770-1829) and the General Bank of India

established in 1786. The largest and Oldest Bank still in existence is State Bank of India, which originated in the Bank of Calcutta in June 1806, which almost immediately became the Bank of Bengal. This was one of the three presidency banks, the other two being the Bank of Bombay and the Bank of Madras, all three of which were established under charters from the British East India Company. The three banks merged in 1921 to form the Imperial Bank of India, which, upon India's independence, became the State Bank of India in 1955.

### Phases of Indian Banking Sector

The history of Indian banking can be divided into three main phases.

Phase I (1786- 1969) - Initial phase of banking in India when many small banks were set up.

Phase II (1969- 1991) - Nationalization, regularization, and growth

Phase III (1991 onwards) - Liberalization and its aftermath

### Objectives of the study

- To study the emerging trend of banking technology and innovation.
- To study the challenges faced by Indian banks in the changing scenario.

### Data Collection

The study is descriptive in nature and is based on secondary data. The data are collected from various reports, journals, news articles, various bank portals, RBI portal and internet sources.

### Recent trends in banking sector

**1.Digitalisation:** With the rapid growth of digital technology, it became imperative for banking and financial services in India to keep up with the changes and innovate digital solutions for the tech-savvy customers. Besides the financial institutions, insurance, ealthcare, retail, trade, and commerce are some of the major industries that are experiencing the enormous digital shift. To stay competitive, it is necessary for the banking and financial industry to take the leap on the digital. Indian economy exposed itself to the global market. The banking sector opened itself for private and international banks which is the prime reason for technological changes in the banking sector. Today, banks and financial institutions have benefitted in many ways by adopting newer technologies. The shift from conventional to convenience banking is incredible.

Modern trends in banking system make it easier, simpler, paperless, signatureless and branchless with various features like IMPS (Immediate Payment Service), RTGS (Real Time Gross Settlement), NEFT (National Electronic Funds Transfer), Online Banking, and Telebanking. Digitization has created the comfort of “anywhere and anytime banking.”

**Table 1: Growth of digital payments in india**

	Digital	Cash	Other Paper
2005	3	92	5
2010	8	89	3
2015	20	78	2
2020	39	60	1
2025	58	41	1

**Source: Indian Journal of banking and finance**

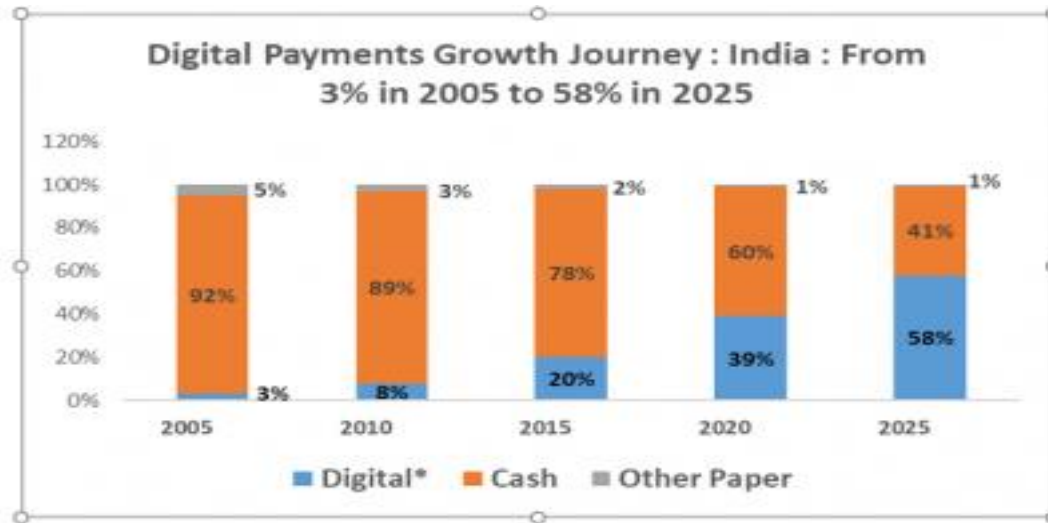


Table 1 reveals that India digital payments journey which began in the early 2000, going from 3% cash and non cash payments in 2005 to an estimated by 58% in 2025, phenomenal growth shown by digital payment modes which includes cards, mobile based ,QR based wallet based and all other electronic modes of payments is extremely significant.

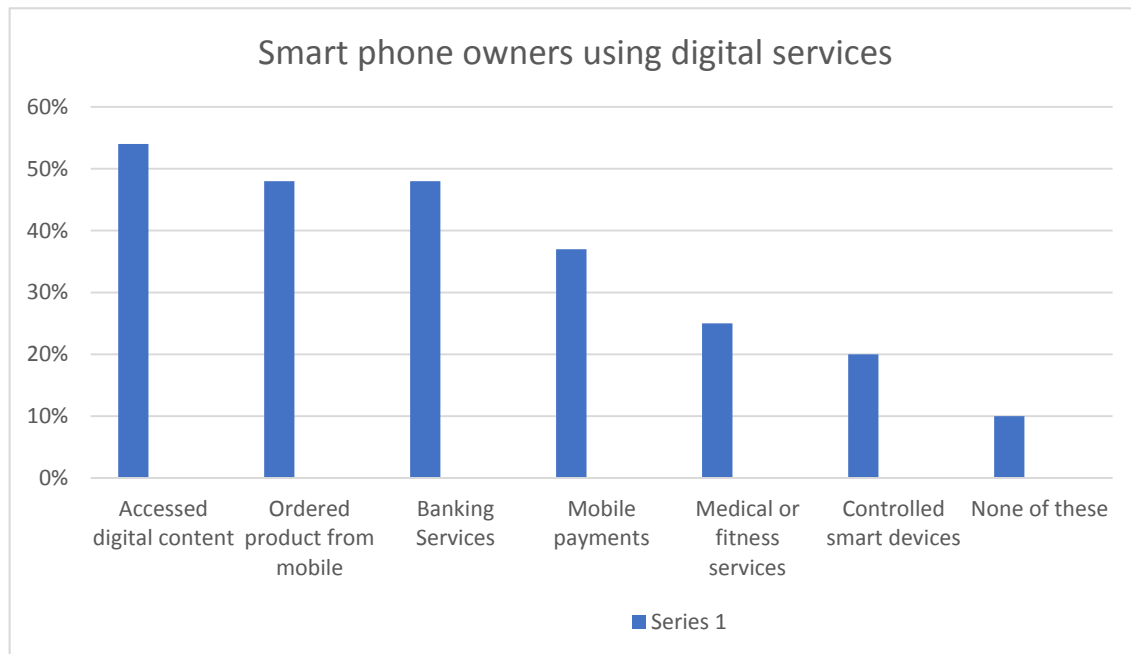
## 2. Electronic Payment System (E-Payment)

It is a type of payment conducted via electronic or online mediums. Online payment systems eliminate the need for cash or cheque payments. It is a unique payment method that allows you to conduct online transactions via digital wallets, bank cards and internet banking systems.

**3. Real Time Gross Settlement System**, introduced in India since March 2004, is a system through which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. The RTGS system is maintained and operated by the RBI and provides a means of efficient and faster funds transfer among banks facilitating their financial operations. As the name suggests, funds transfer between banks takes place on a 'Real Time' basis. RTGS was launched by RBI, which enabled a real time settlement on a gross basis. To ensure that RTGS system is used only for large value transactions and retail transactions take an alternate channel of EFT. The reach and utilization of RTGS has witnessed a sustainable augment since its introduction. In the year 2012-2013 to 2014-2015 transactions related to customer remittances have raised from Rs.68.5 million to Rs.92.8 million. This shows the increasing popularity of RTGS in Indian banking industry.

**4. Mobile Banking** is a service provided by the bank which helps the customer of the bank to make financial transactions using mobile phone, tablet, etc. Mobile banking helps the user to bank anywhere at any time. Mobile banking is more secure than internet banking. Mobile banking can be conducted only from one specific device (smartphone or tablet) which has a SIM card, the phone number of which is already registered with the bank account. A hacker needs to install logging software to steal the username and password of the person for relating a fraud using internet banking while in case of mobile banking the mobile phone with the registered sim card has to be stolen by the fraudster which makes it difficult for the fraudster to make a fraud. Hence mobile banking is safe compared to internet banking. A bigger challenge for the Banks is to offer a mobile banking solution on any type of mobile device.

Various services can be availed using mobile banking like access to statement, opening and tracking fixed deposit, transferring of funds, other banking services, etc.,



**Source : Mobile Ecosystem Forum June 2020**

Figure 1 reveals that in 2020, 54% of smartphone users surveyed accessed digital content such as film or music, 48% ordered a product from a mobile site or app as comfort with mobile commerce, 48% customers provide banking services and 37% mobile payments through mobiles. Only 25% customers use digital payments for medical services.

### **5.Unified Payment Interface (UPI)**

UPI is a trend that emerged in the last couple of years and it is revolutionizing the way we pay and receive money. Transactions can be done within seconds using this interface. Goggle Pay, Phone Pay, Paytm, UPI apps of leading nationalized and private banks, BHIM (Government of India) are the major interfaces among numerous other services that enable easy payment even if you are out of physical cash. Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the “Peer to Peer” collect request which can be scheduled and paid as per requirement and convenience.

Uniqueness of UPI: Immediate money transfer through mobile device round the clock 24\*7 and 365 days. Single mobile application for accessing different bank accounts. Single Click 2 Factor Authentication – Aligned with the Regulatory guidelines, yet provides for a very strong feature of seamless single click payment. Virtual address of the customer for Pull & Push provides for incremental security with the customer not required to enter the details such as Card no, Account number; IFSC etc., QR Code. Merchant Payment with Single Application or In-App Payments. Raising Complaint from Mobile App directly.

Participants in UPI: Payer PSP, Payee PSP, Remitter Bank, Beneficiary Bank, NPCI, Bank Account holders, Merchants

### **Benefits of UPI to the ecosystem participants**

- Banks - Single click Two Factor authentication, Universal Application for transaction, Leveraging existing infrastructure, Safer, Secured and Innovative, Payment basis Single/ Unique Identifier, Enable seamless merchant transactions
- Merchants - Seamless fund collection from customers - single identifiers, No risk of storing customer's virtual address like in Cards, Tap customers not having credit/debit cards, Suitable for e-Com & m-Com transaction, Resolves the COD collection problem, IAP.
- Customers - Round the clock availability, Single Application for accessing different bank accounts, Use of Virtual ID which is more secure, no credential sharing, Single click authentication, Raising Complaint from Mobile App directly.

## **6. Artificial Intelligence (AI)**

Robots Artificial Intelligence (AI) has been around for a long time. AI was first conceptualized in 1955 as a branch of Computer Science and focused on the science of making “intelligent machines” machines that could mimic the cognitive abilities of the human mind, such as learning and problem-solving. AI is expected to have a disruptive effect on most industry sectors, many-fold compared to what the internet did over the last couple of decades. Organizations and governments around the world are diverting billions of dollars to fund research and pilot programs of applications of AI in solving real-world problems that current technology is not capable of addressing. Artificial Intelligence enables banks to manage record-level high-speed data to receive valuable insights. Moreover, features such as digital payments, AI bots, and biometric fraud detection systems further lead to high-quality services for a broader customer base. Artificial Intelligence comprises a broad set of technologies, including, but are not limited to, Machine Learning, Natural Language Processing, Expert Systems, Vision, Speech, Planning, Robotics, etc. The adoption of AI in different enterprises has increased due to the COVID-19 pandemic. Since the pandemic hit the world, the potential value of AI has grown significantly. The focus of AI adoption is restricted to improving the efficiency of operations or the effectiveness of operations. However, AI is becoming increasingly important as organizations automate their day-to-day operations and understand the COVID-19 affected datasets. It can be leveraged to improve the stakeholder experience as well.

### **Some important applications of AI**

**Customer service/engagement (Chatbot):** Chatbots deliver a very high ROI in cost savings, making them one of the most commonly used applications of AI across industries. Chatbots can effectively tackle most commonly accessed tasks, such as balance inquiry, accessing mini statements, fund transfers, etc. This helps reduce the load from other channels such as contact centers, internet banking, etc.

**Robo Advice:** Automated advice is one of the most controversial topics in the financial services space. A robot-advisor attempts to understand a customer's financial health by analyzing data shared by them, as well as their financial history. Based on this analysis and goals set by the client, the robot-advisor will be able to give appropriate investment recommendations in a particular product class, even as specific as a specific product or equity.

**General Purpose / Predictive Analytics:** One of AI's most common use cases includes general-purpose semantic and natural language applications and broadly applied predictive analytics. AI can detect specific patterns and correlations in the data, which legacy technology could not previously detect. These patterns could indicate untapped sales opportunities, cross-sell opportunities, or even metrics around operational data, leading to a direct revenue impact.

**Cyber security:** AI can significantly improve the effectiveness of cybersecurity systems by leveraging data from previous threats and learning the patterns and indicators that might seem unrelated to predict and prevent attacks. In addition to preventing external threats, AI can also monitor internal threats or breaches and suggest corrective actions, resulting in the prevention of data theft or abuse.

**Credit Scoring / Direct Lending:** AI is instrumental in helping alternate lenders determine the creditworthiness of clients by analyzing data from a wide range of traditional and non-traditional data sources. This helps lenders develop innovative lending systems backed by a robust credit scoring model, even for those individuals or entities with limited credit history. Electronic Funds Transfer (EFT).

**7. Electronic Funds Transfer (EFT)** is a system whereby anyone who wants to make payment to another person/company etc. can approach his bank and make cash payment or give instructions/authorization to transfer funds directly from his own account to the bank account of the receiver/beneficiary. Complete details such as the receiver's name, bank account number, account type, bank name, city, branch name etc. should be furnished to the bank at the time of requesting for such transfers so that the amount reaches the beneficiaries' account correctly and faster. RBI is the service provider of EFT. The most widely used EFT programs is Direct deposits, in which payroll is deposited straight into an employees bank account, although it transfers the funds through an electronic terminal including Credit card, ATM and Point of Sales (POS) transactions.

### **8. Electronic Data Interchange (EDI)**

Electronic Data Interchange is the electronic exchange of business documents like purchase order, invoices, shipping notices, receiving advices etc. in a standard, computer processed, universally accepted format between trading partners. EDI can also be used to transmit financial information and payments in electronic form. New and improved variant of EFT was implemented in November 2005 to facilitate one to one fund transfer requirement of individuals as well as corporate. It uses the Structured Financial Messaging Solution (SFMS) for EFT message creation and transmission from the branch to the banks gateway and to the NEFT center, so it can transfer the funds with more security. With the SFMS facility, branches can participate in both RTGS and NEFT System. Using the NEFT infrastructure, a one-way remittance facility from India to Nepal has also been implemented by the RBI since 15th May, 2008. Overall EFT and NEFT based clearing increased from Rs.394.1 million to Rs.927.6 million in year 2012-2013 to 2014-2015.

### **9. Card Based System**

Among the Card based delivery mechanisms for various banking services, are Debit Cards and Credit Cards. The amount of Debit Card transactions increased rapidly which was Rs.469.1 million in year 2012-2013 and Rs.808.1 million in year 2014-2015, whereas the amount of Credit Card transactions was Rs.396.6 million in year 2012-2013 and Rs. 615.1 million in the year 2014-2015.

### **Innovative products and policies**

- My Saving Rewards, the programme allow customers to accumulate reward points on a host of savings account transactions such as bill pay, online shopping, EMI payment etc.
- 24x7 fully electronic branches are opened to undertake real time transactions by the customer.
- "E-Locker", an online service for storing important documents for privilege banking customers.
- UID authentication for Aadhaar based payments and enabling corporate to pay taxes online.
- Cash Deposit Machines (CDMs) are installed for cash deposits by customers at these machines by using their ATM cum Debit card.
- E-trade SBI, a web based portal launched in March 2011 to access trade finance services with speed and efficiency.
- To facilitate the Electronic Benefit Transfer (EBT) scheme for routing MGNREGA where all scheduled commercial banks were instructed to open Aadhaar enabled bank accounts of all the beneficiaries.
- Know Your Customer (KYC) norms simplified to facilitate financial inclusion and customer services.
- The RBI is replacing the existing RTGS with a new NGRTGS system which includes which includes few extra features like advanced liquidity management facility, Extensible Mark up Language (XML) based messaging system etc.
- Recently launched scheme of government "Jan Dhan Yojana" with the motive that every family must have a bank account
- The banks installed Solar ATMs, windmills to fulfil their own energy needs, paperless banking etc. SBI is the largest deployer of Solar ATMs.

### **10.De-Mat Account**

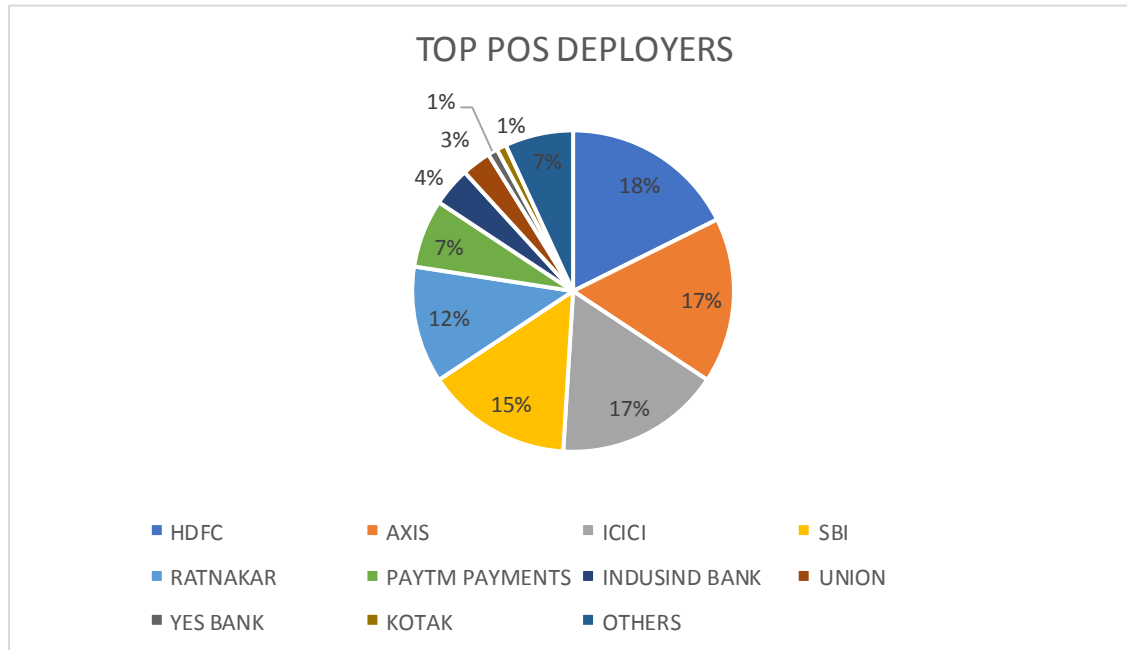
India adopted the de-mat system for electronic storing. According to depository act 1996 to maintain shares and securities electronically and eliminating the troubles associated with as per shares. De-mat system was introduced .to invest shares and securities every investor should have registration. Instead of investor taking physical possession of certificates a de-mat account is opened. De-mat account can be provided by through stockbrokers. It can be held electronically. For the purpose of purchase and transfer of shares and their process for sales.

#### **To access de-mat account it requires two types of passwords**

1. Internet password
2. Transaction password

**11.Point Of Sale (POS):** Making a payment in exchange of for goods and for retail transaction point of sale is useful. The transaction usually can be done by using debit and credit cards. Since 1990 POS transaction had become very common and it is using overall the world. To complete pose transaction cards usually authenticated with a pin number. The information transmitted via the pin number travel through ATM network until it reaches the bank it is used to register products by a bar scanner and to read the descriptions and price on the tag of every time. All the activities can be done automatically like finding the total balance deducts any discounts and applies the sales tax and sending customer

information to marketing database and transactions record to an investors system. Once payment has been credited to the account the post terminal check of validity of cards and connects to bank.



*Source: Indian Journal of Banking and Finance*

Figure 2 analyze that as of March 2022, the top credit card issuing banks were HDFC 18% ,Axis Bank 17% ICICI Bank 17% and SBI 15% Ratnakar Bank 12%,PAYTM Payments 7%,UNION Bank 3% YES and KOTAK Bank 1% and others 7%. By this we can conclude that only private banks issue more credit cards.

**12.Bio- Metric Authentication:** For the purpose of security the bio-metric authentication places a major role. Now a day’s many organizations are implementing bio-metric authentication. It works comparing two sets of data

1. Owner of the device
2. Visitor of device

**Both are one and same access to person. There are different types of scanners**

- Finger print scanner
- Eye scanner
- Speaker re-organization

**13.Financial Technology Firms:** Financial technology is the new technology and innovation that aims to compete with traditional financial methods in the delivery of financial services. The main aim of fin-tech is to provide technology and finance to start-ups and to enhance the usage of financial services for existing financial companies. For the automation of insurance, trading and risk management. Fin-tech is used for firms. Banks are collaborating with fine-tech firms to build an environment that mixtures innovation of customers. Fin tech firms have entered in the industries with innovation of products and services and targeting the most profitable segments. Viewing to their innovative commitment and caper offerings. Fine-tech firms have started acquiring customers from traditional banks due to lack and



favorable environments for innovation are finding it hard to complete with them. The main key purpose of fin-tech to provide lack of leadership support, regulatory budgets, cultural and infrastructure limitations are hampering in house innovation bank.



source : Banking Journals

**14. Frictionless and Secure Payments:** Consumers demand seamless, secure, cost-efficient and fast payments. Frictionless payments provide a competitive edge to the financial institutions. Banks can provide efficient payment transaction experience by streamlining their service and utilising full potential of the emerging technologies such as blockchain, smart contracts, tokenisation, Internet of things among others. Fraud prevention and compliance measures are also part of the payment system and it is essential for financial institutions to have a robust security system.

**15. Better Customer Support:** There's no doubt that providing excellent customer support is critical for any business, but it's especially important for banks. In a highly regulated industry where customers have a lot of choices, banks are doing whatever they can to stand out from the competition and give their customers the best in class service by offering better customer support. This includes providing more personalized service to making it easier for customers to get in touch with a live person when they need help. Whatever form it takes, better customer support can go a long way toward building trust and loyalty among bank customers. And that's something every bank is and will continue to work for.

**16. Improved User Interface:** A good user interface is one that is both easy to use and visually appealing. A well-designed user interface will make it easy for users to find the information they need, navigate their way around the site and complete tasks quickly and easily. In recent years, there has been a trend toward simplifying web interfaces and removing unnecessary clutter. This has made sites easier to use and has improved the user experience. Banks are now starting to follow this trend, with many of them redesigning their online banking portals and mobile apps to enhance the customer experience through:

- A streamlined and simplified interface that is easy to access with assistance tools like Chatbots, Quick links, etc.
- Attractive visuals that are pleasing to look at.
- A user-friendly layout that helps users find what they need quickly and easily.

## Conclusion

With the increasing dependency on smart phones and internet, digitalization of banking sector is inevitable to catch up the increasing expectations of the world. Digitalization reduces the dependency on humans for the day to day routine banking transactions. It increases the convenience which makes the businesses to be independent in the operation timings. Paying utility bills and making insurance policies premium payment can be automated using the various options available in digital banking. Mobile recharging, payment making for Ola, Uber has also become easy using the digital banking. Digital payment system has also transformed the railway ticket booking system. Anytime and anywhere banking is possible due to the digital banking. The various options available in digital banking makes the life of a consumer easy. But as every good thing comes with a cost, the common man is still not very well versed with the security features of digital banking which instigate the fraudsters to create the fraud and cheat the common man by stealing there hard earned money. Mobile connectivity and internet connectivity plays a very vital role for the success in the digital banking. Rapid increase in the use of digital banking will also reduce the dependence of the bank staff creating a risk for the employability in the banking sector.

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