

A Review on the Adoption of Voice Assistant in Banking and Insurance Sector

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Abstract - In the banking and financial services industry, artificial intelligence voice assistants are used and become very common as a fresh digital voice technology channel. The implementation of Voice Assistants in the field of payment and wealth management causes continuous innovation through non-financial digital players such as Amazon, Apple, SAMSUNG and Microsoft to distort the banking and financial services industry. Voice assistants such as Amazon's Alexa, Google Home, Apple's Siri and Bixby Samsung are now swiftly being accepted for a range of apps such as bank balance investigations, card accounts, utilities, policy payment reminder and insurance claims processes for a range of apps by multiple economic and financial services. This study shows how multiple banks and financial services firms use this voice assistant as a platform in order to engage the client to establish a stronger connection with them. This fresh touchpoint for banks and financial institutions benefits customers as well as businesses.

Keywords- Voice Assistants, Voice Technology, Disruption technology, Alexa, Google Home, Banking and Insurance Sector, Disruptive innovation.

I. INTRODUCTION

Conversation helps us in building interpersonal relationship, in socializing and bridging the gap with strangers. Conversation and dialogues are essential part of our day to day life. A voice assistant is an innovation that has changed how we move about our each day lives. It listens to our calls, anticipates our desires, and acts when essential. Conversing with voice assistant given human touch and feel to this digital tool. This conversational power of digital voice assistant is now a days is utilized by major brands to give different service experience to customers. This is acting as a new channel or various brands through which brands are engaging the customers.

Worldwide big banks are moving in the direction of Artificial Intelligence (AI) technology to stay aggressively competitive in the digital era. AI has large benefits, for both banks and their customers. the results of AI disruption in the financial zone is that the evaluation of customers' habits, activities, behavioral characteristics, and financial statistics products help in customization and personalization to fulfill and anticipate every user's particular and evolving desires. This makes it feasible for every person to have his/her personal virtual financial assistant.

1.1. History of Voice Revolution

This progressive voice technology was born at Seattle worlds in 1962 where IBM added a tool referred to as 'Shoebbox' that may carry out mathematical functions, recognize 16 spoken & 0-9 digits. Considering that then,

this technology has come an extended way via the creation of voice assistants by means of leading generation organizations – Apple's Siri in 2011, In 2012, Google Now; In 2014 Microsoft Cortana ; In 2014 ,Amazon Alexa , and Google Assistant in 2016. It is predicted that there can be great increase inside the range of voice-enabled assistants – it is estimated to attain 1.83 billion by way of 2025.

History of Voice Revolution

1961 IBM introduced the first digital speech recognition tool named IBM Shoebbox .It recognized 16 words & digits
2016 Google Launches Google Home
1972 Carnegie Mellon completes Harpy program .It understand only 1000 words.
1990 Dragon, Launches Dragon Dictate. The first speech recognition product for consumer
1996 Microsoft introduces Clippy
2001 Microsoft introduces speech recognition features for office XP
2011 IBM Watson's wine Jeopardy Apple Introduces Siri
2012 ogle Launches Google Now
2013 Microsoft introduces Cortana
2014 Amazon introduces Alexa & the Amazon Echo

II. LITERATURE REVIEW

Adoption of voice technology in banking and financial sector

In this mobility driver world customer support services in banking and financial sector is not restricted and dependent on human interaction and intervention. Digital assistants are slowly replacing the standard customer executive role. These voice assistants are acting as a connection between company and clients while helping on different robotized tasks. Digital Assistants assume key jobs is to give computerization, centralization, and voice-based help to customers. They additionally help clients in achieving their work done by Do-It-yourself direction which will reduce the bank visit.

AI based voice assistant technology isn't new to India now. Research establishments and universities were working with diverse AI technology for many years, and specifically inside the vicinity of social transformation. With technologies becoming a lot more handy and less expensive, Voice technology adoption is now becoming mainstream in various organizations. Companies are utilizing this platform as a special opportunities.

According to Millennial disruption Index which was published on 2014 it was found that in the list of various industries banking was the most prompt industry to disruption. According to this survey 70 % millennial who were survey claimed that the way they do monetary transaction and payment will change in next five years. Many of them are looking forward from the technology giants such as Google, Apple and Amazon.

Future state of banking and financial services are now a days are being defined by digital technologies where banking process and operation is rampant by automation and focal point is customer. Artificial Intelligence including natural language process machine and deep learning, predictive analysis and Robotic process automation (RPA) will play a major role in the next wave of banking transformation.

Voice assistants can impact greatly on the consumer buying behavior process. In insurance industry information search is very important stage. For insurance customer search and compare a lot about various policies. Companies can leverage voice assistant as an intelligent service platform voice assistants like Siri, Alexa and Google home will transform the way customer search and choose for insurance and banking companies.

According to Capgemini conversational commerce report, those customers who use voice assistants for various purposes have positive customer experience. According to survey done by Capgemini with the consumers in US, UK, France and Germany it was found that 52 % customers said convenience and 48 % said ability to do work things

hands free are the two main reasons of using voice assistants, 37 % said that they felt more natural when they interact with voice assistant.

Customers are increasingly making voice technology, a central part of their cellular and home based interactions. As a result it is time for business to combine voice first technologies into client acquisition, sales, service and customer delight strategies.

According to a latest study from Capgemini, voice assistants like Alexa, Google assistant and Apple's Siri will revolutionize how customers and brand are interacting. This voice technology interface is engaging consumers emotionally anytime, everywhere. Banking through voice technology is bringing convenience and comfort in the life of the customer.

1.2. Benefits of using voice assistants to customers:

Voice assistants helps the client by providing answer to precise questions regarding transaction and balances. Searching any information via voice is much easier than typing and through voice command user can complete the task with greater efficiency and speed. Voice assistants like Siri, Alexa, Google and Microsoft Cortana are making customers busy life easy and organized by simple reminders of various appointments and to do list. By using digital reminders customer can actually save lots of paper and threat of misplacing important document will also go away. It allows customer to do various transaction hands free 24/7 anytime and anywhere.

Customers can ask various banking, finance and insurance related enquiries to voice assistants balance enquiries, payment due date, location of branch, financial news etc. and can get real time updates.

1.3. Benefits of using voice assistant and voice technology to the Banking and Financial Industry:

Banking and Financial services firms have to meet the demand of competitive future by adopting new technologies in their systems for creating a sustainable business.

Companies need to start integrating these technologies for customer retention strategies, customer engagement and experience strategies, customer acquisition strategies and for various marketing and sales strategies.

Through voice assistants brands are coming near to customers by supporting an individual relationship. We are seeing a shift in customer feelings as they are feeling that using voice assistant is acting as incentive on the individual connection.

Banking & Financial service organization are engaging customer through their new touch point of voice assistants like Siri, Alexa, Bixby and Google voice assistants are evolving as a new customer engagement channel.

Financial firm must be cognizant of changing customer

inclinations and choices and should address their new needs. This is the ideal opportunity for financial firm to utilize voice assistants as customer engagement and to mineable transactions and payments, to provide customer assistance and advisory related services to customers through voice.

Automated economic and financial advisors and planners help users in taking monetary and financial decisions. They check and monitor stocks, events and trends of user and offer personal portfolio recommendation regarding buying and selling of stocks and bonds.

In AI-driven organization voice assistants are being proactive and fully built-in with the organization structures .It measures the records proximity to integrate all the information sources to ensure records agility and receptiveness. This capability mixed with, voice assistant's talent to study the user's interactions and develops a behavioral map of users, allows to cater content material that they need.

In BFSI sector investments are very high to meet the sales target. Out of huge set of data it is tough and difficult to extract meaning information on timely basis. AI powered Voice assistants help the management to categorize and align sales and marketing data thereby enabling the management to take a look at the analytics statistics, purchaser's persona, and market traits and make real-time decisions. By this way voice assistants boosts up the employee's efficiency, brings down operational cost, speeds up the data access and improves the traceability of the service delivery procedure.

These voice assistants including voice chatbots study the customer interaction and develop a behavioral map and accordingly caters content. This way personalized customer engagement is done by the company and this conversational experience leads to customer delight.

In BFSI sector it has been observed that frequent modifications in regulatory policies and regulations are there and maximum time customers are not aware of the financial offering. Companies now a days can update financial happenings to customer by a push notification feature of voice assistant. These simple alerts to customer will update the customers on financial happenings.

1.4. Companies who have adopted voice assistant as a feature of service:

The motives for the fast growth in voice-led banking are clean to peer. Voice-enabled assistants ranging from Amazon's Alexa and Apple's Siri to Baidu's Xiaoyu and Alibaba's Genie, Samsung's Bixby and Google assistant are getting a part of purchasers' regular lives, so clients have end up conversant in using voice instructions for simple tasks like of getting guidelines or making reminders for various tasks. Google estimates that greater than 20% of

searches manifest by means of voice already and, because the graph beneath suggests, some observers count on customers to apply voice for greater than 1/2 of their searches by means of 2020 .because the satisfaction of voice-activated offerings expands, purchasers are doing a ways greater with voice instructions. They're already listening for recommendation instead of analyzing them and using voice as opposed to using button, for example, a checking account balances and due dates without logging in to net banking. The result is that voice based services are affecting customers' buying choices and making them extremely powerful.

Capital One was among the first to empower clients to get their records by means of the Amazon Alexa voice assistant gadget. Capital one understood that conversational interfaces are going to be future revolution, it makes customer easy to manage money anytime anywhere. With Alexa platform Capital One skill allows real time access to customer with reference to balance, credit card details and loan. Customers can control their money hands-free and naturally

Westpac- The Westpac banking has tied up with Amazon Alexa to expand the services to digitally active clients. The Westpac banking skill is a cloud based component accessible through voice innovation .At the point when clients set up the Westpac banking skill they are additionally provoked to set up a 4 digit password, which they give before Alexa reacts to inquire concerning their Westpac accounts. Westpac clients can utilize voice banking to check account balance, transactions and reward.

Indusind bank- To give the customer human to machine talk service experience Indusind bank has tied up with Amazon Alexa. Indus Assist is the Alexa skill for Indusind bank where customer can do financial transaction like paying various bills including credit card bill. For transaction customer has to register in Alexa app once and then voice based banking services get activated. With simple a voice command to Alexa and by following regulator's 2 factor authentically guideline transaction can be done safely and securely.

HDFC Bank-HDFC bank has tied up with Amazon Alexa and is attempting to offer clients the capacity to utilize their voice to get the data and even handle exchanges and transactions for their financial records such as account details, credit cards and other financial product.

Barclay's – Customers of Barclay's can make mobile payments via Apple's Siri voice assistant Siri . Customer can do open banking app hands free using voice. Customers can do various transaction and bill payments.

Bank of America- Bank of America has its own voice assistant called Erica. It is designed to help customers to manage their various financial transaction. Erica can advise customer by learning from customers transaction.

Kanetix Ltd- This insurance company in Canada is using Google home and Alexa as a voice assistant platform where customers can ask about quotations of auto insurance and mortgage rates.

Aviva Insurance –Aviva is using Amazon Alexa’s platform for voice assistant. Aviva skill will update the customer on pension plan and current pension value.

Prudential- Prudential is using Alexa skill to update the customer on various coverage, product and policy information.

Bank (Country)	Voice assistants	Features
Asia Pacific		
KEB Hana Bank, Korea	Bixby	Account enquiries, money transaction and spending, finance news, payments.
Shinhan Bank Korea	Bixby	Account enquiries, Transaction and spending, finance news, payments.
Woori Bank Korea	Bixby	Account enquiries, money transaction and spending, finance news, payments.
ICICI Bank	Siri	Remittances
OCBC Singapore	Siri	Account enquiries, payments
ING Australia	Siri	Account enquiries
Art Financial Group	Proprietary	Purchasing tickets, book hotel, calculating daily returns, balance checking, Account equities.
NAB	Alexa	Account equities.
Westpac Australia	Alexa	Account enquiries financial news.
OCBC Singapore	Google Home	Account enquiries , financial news ,financial advice
HDFC Bank	Alexa	Account enquiries, Transaction and spending, finance news, payments.
CIMB Malaysia	Proprietary	Account enquiries, track spending payments.
SBI Life	Alexa	Policy and plan information

Bajaj Allianz	Alexa	Policy Information
Emirates WB UAE	Proprietary	At call center only Intelligent call routing and account enquires , English and Arabic

UK and US		
Paypal US	Siri	Account enquiries
Capital One	Alexa	Account enquiries , payments , track spending
Monzo	Siri	Account enquiries payments
American Express , US	Alexa	Account enquiries , payments
US Bank	Alexa	Account enquiries , tracking, spending ,payments
USAA	Alexa	Account enquiries payments
Barclays UK	Siri	Account enquiries, payments
Enrichment CU US	Alexa	Account enquiries ,payments, loan payments, text or email balances.
Ally Bank US	Alexa	Account enquiries see features
Starting Bank UK	Google Home	Account enquiries payments
Farmers Insurance	Alexa	Policy information, Insurance coverage information, status of claim
Progressive Insurance	Google Home	Policy information, car and home buying tips
Allstate Insurance	Alexa	Policy information.
Amica Mutual Insurance	Alexa	Policy information.

III. RESEARCH METHODOLOGY

This research is based on desk research methodology and non-empirical research .This research include literature reviews ,conceptual articles, author’s subjective opinion and journalistic type report featuring real life examples of banking through voice technology .This paper contributes to the understanding of current usage of voice technology through voice assistant in the banking and financial institutes. This understanding is important for identification and promotion of this emerging technology in banking and financial institutes, this study can be used by researchers and young scholars for their future research, publications and collaborations. Since the adoption of this technology in banking and financial service sector is very new, number of publications, articles and blogs are from 2012 to 2019.

IV. FUTURE SCOPE OF VOICE ASSISTANT

Banking and Financial services firms have to meet the demand of competitive future by adopting new technologies in their systems to create a sustainable business.

Now a day’s customers wants to purchase a personalized products or services without going through the complicated system of office work or interacting with a customer representative. Based on a consumer’s needs and wants, insurance firms can allow voice assistants to pick and

suggest proper product for them. Voice assistant can compare various policies and suggest specific information which will help the customer to choose the best policy.

Voice assistants can extensively reduce the claims management procedure, by way of presenting the facts for FNOL (first note of loss) and FROI (first record of damage) in an organized and productive way. Claim adjusters can focus on the client by getting structured information.

With the extent of complexity in the process of insurance process and policies use of voice assistant will act as a perfect customer representative and will help in solving customers queries and problems.

Insurance company can free the customer service representative from day to day question handling and can utilize them in other productive work as day to day queries of customers can be handled by voice assistant and they will get the immediate answers for their questions. The client will have on the spot answers to every day questions without calling the insurance agency, thereby lowering calls to consumer representatives, this could reduce client representatives, time for pleasing greater vital problems or queries. Utilizing voice assistants for internal operation. Banking & financial can use voice assistants for their internal activities and operation to build the profitability and effectiveness of their representatives and sales executive. Utilizing voice assistants for internal operation. Employees of banks /Insurance can raise various issues , process support and consultation for decision through intra based voice assistant which will act as a self-service portal.

Bank / Insurance sales employees can use voice assistants for knowing complete profile of customers which will help them to pitch right product in a personalized way. Voice assistants will help sales team in setting plans and tasks on the basis of data collected by various branches by analyzing the collected data.

V. CHALLENGES IN BANKING AND FINANCIAL SECTOR

Though Artificial Intelligence in build voice assistants are next big thing but few challenges are also linked with it.

1- Language barrier and understanding the accent of customer is biggest barrier with voice assistant". According to the survey done by Capgemini and in the report named "Voice assistant a new glass", it was found that 80.5 % respondents were said that they will prefer to use voice assistants if voice assistants will be understand their diction and accent properly.

2- Security is the major and primary concern with the usage of voice assistants in banking and financial industry. It challenges the bank to keep customers information private and maintain authenticated process.

3- Data security is also a major concern with these voice

assistants because they are collecting personal information.

4- Privacy is also a concern with the usage of voice assistant because of the in-built microphone which is always active and attentive.

VI. CONCLUSION

Voice assistant usage in banking is still in nascent stage. Despite of digital progress and artificial intelligence revolution banking sector is still not prepare to adapt the total voice enabled Artificial Intelligence driven services. Voice payment technology is changing and transforming the way we search and do banking transactions. In the case of voice assistant like Google and Alexa, bank should use security four digit PIN before they give any banking information like bank account details, balance enquires and bill payments. New technology which makes customers life easier are always successful .Voice assistants can influence consumer buying behavior .For banking and financial service provider adoption of voice technology is both opportunity and challenge. Banks and Financial institute can differentiate themselves from competitors by giving compelling offers and services to the users. These voice assistant will act as a new communication channel and touch point which will also uplift the brand image of the banks and financial institute as a innovative service provider. Moreover voice technology in banking will act as a boon to visually impaired customers also. Overall voice assistants will help banks and financial institute to increase its reach, improve customers engagement and ultimately to improve the services.

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