

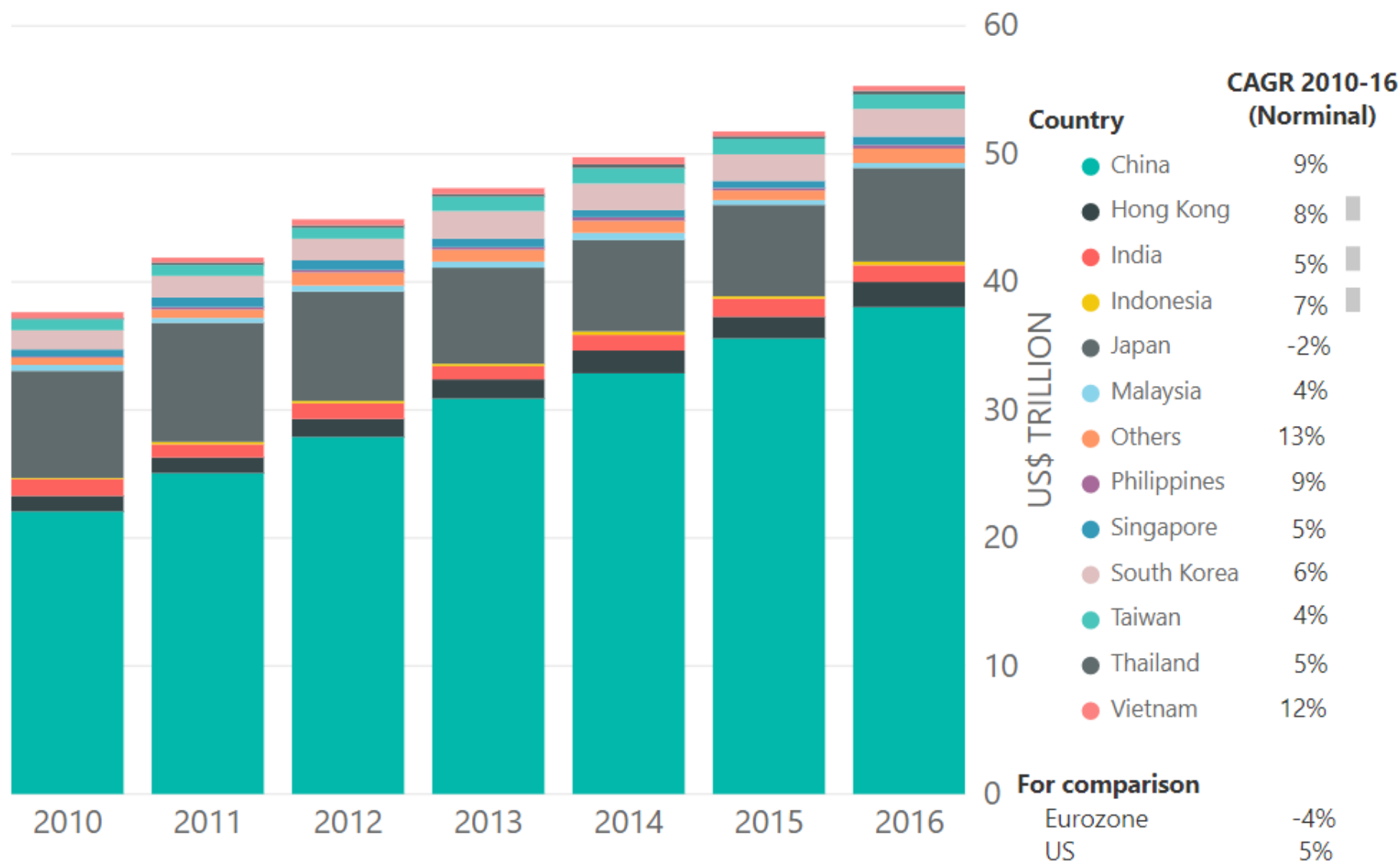
# PROJECT REPORT

Saarthi **.ai**

**ICICI Bank is using AI to amp up customer centricity**



# Asset Growth of the Asian Banking Market



Source: One Road Research



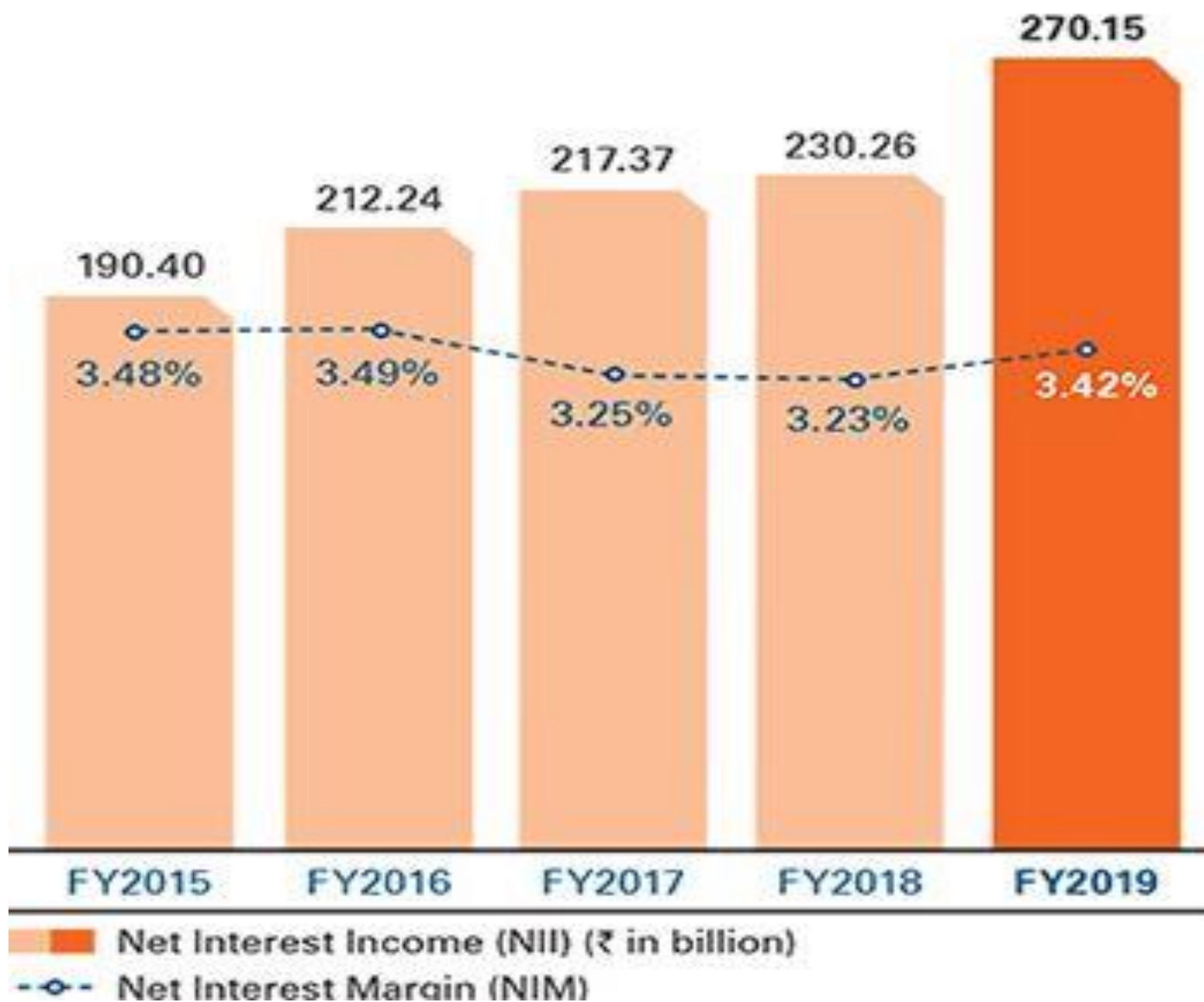
- In 2016, **ICICI Bank** became the first in India and among few organizations globally to deploy **software robotics** at a large scale to power its **operations** with 200 software robotics performing 1 million transactions daily.
- Two years hence, the private lender has scaled its **RPA** initiative to more than 750 software robotics handling approx. 2 million transactions daily which is 20% of the transaction volumes.
- **Anita Pai**, Head-Operations, ICICI Banks shares how the bank has scaled up the RPA initiative and placed big bets on AI, chatbots and a host of other emerging technologies to amp up operational efficiency.



- ❑ ICICI Bank has deployed software robotics functions across the organization including retail/wholesale/agri banking operations, **treasury** operations, human resources management, international remittances and private banking.
- ❑ The software robotics at ICICI Bank are configured to capture and interpret information from systems, recognize patterns and run business processes across multiple applications to execute activities including demographic data validation and updation, data formatting and consistency verification, multi-format message creation, text mining, workflow acceleration and reconciliations among others.



- ❑ We have implemented the 'Software Robotics' platform mostly in-house, leveraging recent advancements in artificial intelligence such as natural language processing, machine learning, cognitive tools, optical character recognition, data analytics and bots amongst others.
- ❑ Optical Character Recognition (OCR) is an old functionality but using it in conjunction with robotics to improve the efficiency and efficacy of OCR are some of the new initiatives we are embarking on.
- ❖ Software robotics have reduced the response time to customers by up to 60% and increased accuracy to 100% thereby sharply improving the bank's productivity, ability to handle scale efficiently.







- ❖ It has also enabled the bank's employees to focus more on value-added and customer service related functions.
- ❖ Besides, our ability to handle scale has improved. We have fulfilled the objective of being scale agnostic.
- ❖ Moving away from manual processes has helped our employees to ensure that processes are designed correctly and any fallouts in the process are handled quickly.
- ❖ So the employees are able to focus on more value-added and customer service functions.



- ❖ Most of the software robotics is geared to manage voluminous repetitive processes to be dealt with efficiently.
- ❖ In the banking operations, there is a lot of information that we sometimes move from one application to the other and while doing this we use some rules.
- ❖ These are the kind of operations that the software robotics platform has helped us simplify. For instance, it has helped us with demographic data validation thereby ensuring consistency across various operations.





- ❖ We are at various stages of doing user acceptance training etc. This will help us further reduce turnaround time for customers and automate another. 4 million transactions on an annual basis.
- ❖ Let me give you another example. One important use case is with respect to the 15G/H which every senior citizen submits at the beginning of the financial year.
- ❖ Typically, the time to submit it is April and May so the volumes go up during that period. When the customer submits the 15G/15H, it is the duty of Operations to ensure that all the holdings that he has with us have been covered in the 15G/15H certificate.



- ❖ The minute the customer's hands over the 15G/H to the branch, we check it for signature and then through internal application the branch scans it and sends it to Operations.
- ❖ The software robotics platform checks the core banking to make sure that all the fixed deposits that the customer has are covered and therefore ensures that there is no miss-out and there is no hassle to a customer subsequently for any inaccuracy that there may be.
- ❖ The other big use case is portability of accounts. If the customer opens an account in a particular branch and subsequently would have changed address and would like to move this account to a branch closer to them, it requires a lot of checks that need to be done prior to ensuring that the account is ported.



- ❖ Moreover, if the customer has a standing instruction or a bill pay attached to his account then it has to be done very carefully. We need to ensure that nothing is allowed to be missed out or lapsed.
- ❖ Earlier, the series of checkpoints through which the operations staff would go through were many and the process was still prone to error.
- ❖ Earlier, when our customers wanted limits to be set up, the amount was sanctioned and then the operations team would go into our core banking system and set up these limits.



- ❖ But these limits can be complex because there are various sub-sections and fungible limits. And hence it was one of the most critical functions that operations were doing.
- ❖ Now, we can we use the platform of software robotics to ensure that the limits are set up the way it has been designed because the sanctioned document is also a digitized document and the operations unit can read from there and insert it in the right place in the customer's limit node.
- ❖ The process has to be 100 percent accurate and we've been able to achieve that with software robotics.



- ✓ Indeed, AI-powered customer service is the future of operations. At ICICI Bank, we have also started leveraging AI along with our software robots and NLP. We are also trying new experiments and initiatives in the space of cognitive tools.
- ✓ We have also introduced AI led engine in our international remittance operations. This has helped to reduce the query resolution time. Earlier, we took about 12 hours but now we do it real time.
- ✓ Let me explain further when customers remit money from international locations into India, there is a bit of anxiety and so they write to us asking for an update.



- ✓ This was manually handled earlier. We have now been able to create an AI engine which is able to read the customer query, understand the intent of the mail and make sure it goes into the processing system, make a reply and submit it to the customer.
- ✓ Earlier, it was manually handled and took us 12 hours to turnaround the request. Now it is real time.
- ✓ We also use AI in document scrutiny. The Operations team is responsible for documents submitted by customers in line with what is required of them. We were doing these checks manually. Now, an AI engine aided by OCR is able to do this much faster and much more efficiently.





- We have deployed chatbots for customer queries and documentation.
- This has helped our operations to give real-time responses to customer queries including our own employees.
- So if an employee needs to know what documents he needs to pick up from a customer he can invoke the chatbot, get the reply and even get the formats of the documents that he is supposed to collect from the customer.
- Chatbots have been another improvement that we have done in customer operations.

# iPal Chatbot



is today a bank holiday?

Sorry, I could not understand that.

iPal

You can connect to our executive between 10 am to 6 pm IST (Monday-Saturday) except bank holidays.

what can you understand?

Umm.. I am an automated assistant that learns gradually. I am extremely sorry if I could not understand your query properly.

iPal

You can have 'Live Chat' with our executive to get manual assistance.

**Note** The service is available between 10 am to 6 pm IST (Monday-Saturday) except bank holidays.

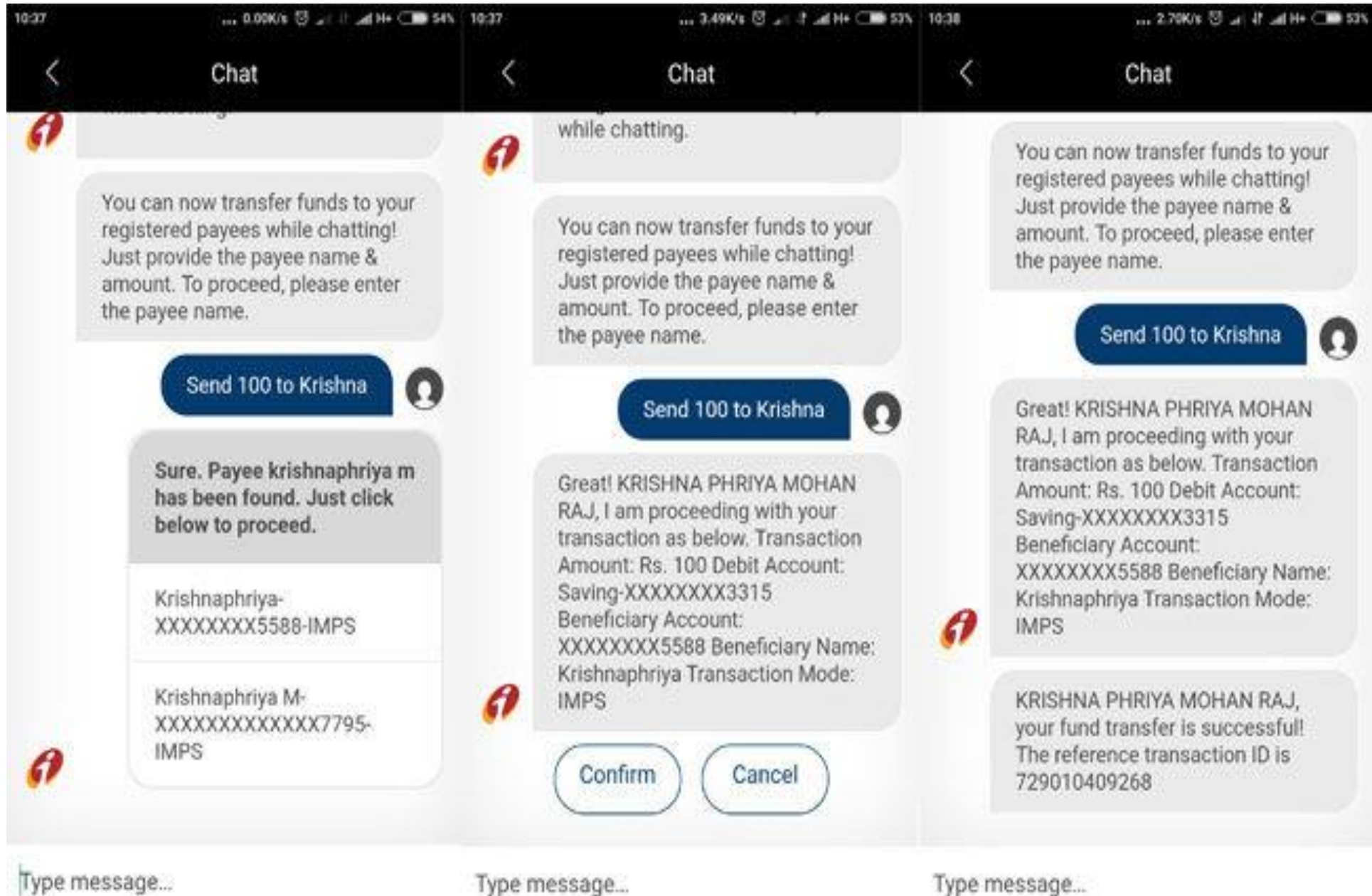
are you married?

Sorry, I could not understand that.

iPal

You can connect to our executive between 10 am to 6 pm IST (Monday-Saturday) except bank holidays.

will they know if you are married or not?

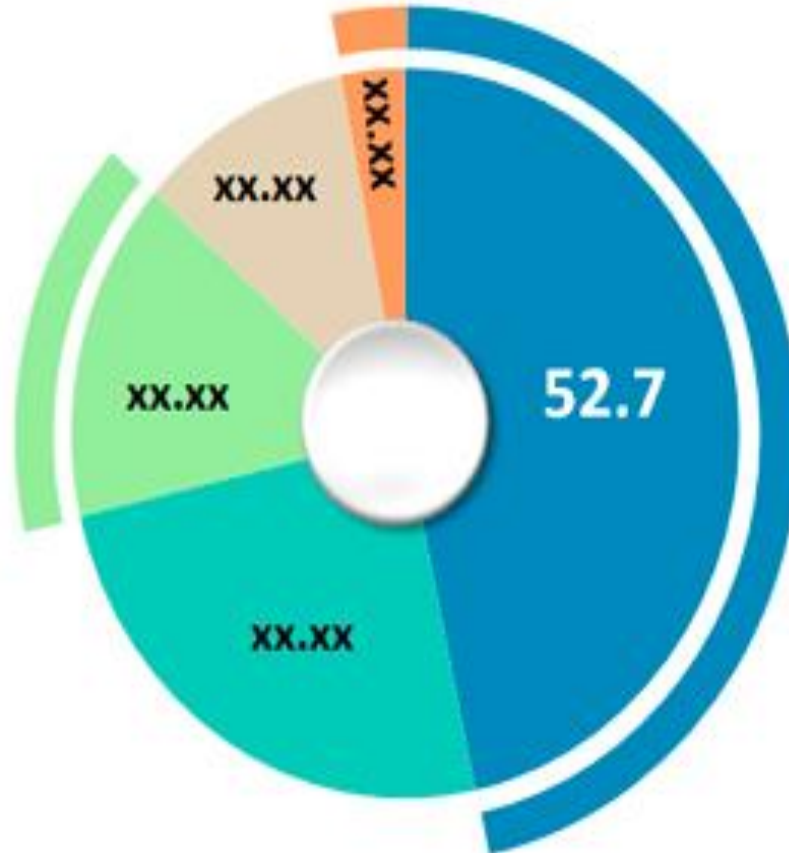




# Chatbot Market Revenue

By Region, 2015 (US\$ Mn)

2016 – 24 at a  
CAGR of 27.8%



- North America
- Asia Pacific
- Europe
- South America
- Middle East and Africa

# Conclusions



- **ICICI Bank's AI chatbot iPal empowers customers with information and financial services.**
- ***ICICI Bank's AI chatbot iPal has so far handled around 6 million queries on bank's portal and mobile app iMobile that includes information and financial services with nearly 90% accuracy.***

thank you