

## **Inclination on Financial Technology towards Bank Investment Options with respect to Investors' Competency in India**

Anli Suresh, Sandhiya. M

Madras Christian College,

University of Madras, Chennai, India

anli.sagain@gmail.com, saisandhiya98@gmail.com

ORCID ID: 0000-0003-4610-3999, ORCID ID: 0009-0006-1672-6529

### **Abstract**

*Financial technologies have transformed banking and financial services operations worldwide over the last decade. It has simplified the investor's and banking authorities' lives significantly. Fintech brings an investor-centric approach, which can make them a investors' first choice. Many banks have successfully leveraged the power of Fintech to modernize their services for changing investor's demand. The impact of fintech on banking is great as it makes them faster, more secure, efficient, and cost-effective- everything the investor need. Fintech has gained significant traction globally and has attracted substantial investment and attention from both traditional financial institutions and venture capitalists. In this study the competency of the investors was equated to their educational qualification and further research was undertaken.*

**Objective:** To recognize the Fintech innovative applications and its causation on bank investors based upon the competency and to analyse the most inclining application.

**Methodology:** Primary data used for analysis and the sample size was 110 and the statistical method used for the study are simple percentage method, correlation analysis and Regression analysis.

**Findings:** From the Correlation Analysis four factors are extracted from the study and further tested by using correlation analysis with the competency of investors. There was a significant relationship between competency and Artificial Intelligence, Chatbots, Robotic Automated Technology and Cloud Computing applications invented by Fintech towards bank investment options under the financial inclusion. From the Regression Analysis four models were derived for understanding the role of fintech influence in bank investment options in investor's portfolio with fintech applications used by investors. All models have a positive influence on bank investment decisions with respect to investors competency.

**Conclusion-** From the findings it can be concluded the role of fintech applications has greater inclination in investors decisions in preference of bank investment options.

**Keywords: Bank Investment Option, Fintech Innovations, Financial Inclusion Technological Invention**

## **Introduction**

The practise of banking is still spreading throughout the world. The banking industry has largely recovered from the financial crisis, and compared to the previous ten years, there has been a considerable boom. The definition of a large boom, however, is not dependent on banks conducting business as normal or not encountering any disruptions. These developments are brought on by new technology in the financial industry. Fintech businesses are directing aggressive competition for the market from the youthful population in part by delivering financial products that fully fit current customer expectations. For finance apps, usability is crucial. Fintech applications must be simple to use since, unlike traditional banking, where clients visit a physical facility, they are utilised on mobile devices. The categories of fintech applications are digital payments, creating long-term financial plans and managing wealth, lending/loan, trading, retirement banking for individual investors and Insurtech.

## **Review of Literature**

**Mengxuan Tang, Shaen Corbet (2024)** in their research paper highlighted that fintech reduces bank liquidity creation, increase bank diversification. Covid-19 enhanced the inhibitory effect of fintech on bank liquidity creation.

**Igor Tomych (2023)** in his article says by 2026, the fintech services market will grow to \$31.5 billion. This is roughly four times higher than six years ago. Currently, particular financial sectors are using technological innovation to create valuable apps, make revenue, and change market dynamics.

**Nirvikar Jain (2023)** report the banking and broader financial industries are dealing with issues related to emerging digital banking innovation in a variety of fields, including lending, investment management, payments, and cash management.

**Saurabh Singh (2023)** in his analysis, Appinventiv can be a technological partner in the banking industry's digital transformation. The top personnel are available at Appinventiv to

support their clients, from developing a User Experience strategy to integrating cutting-edge data solutions.

**Alla Klimenko (2023)** in his report digital technologies like blockchain, cloud, Artificial Intelligence and machine learning, big data, biometrics, Robotic Process Automation, and mobile and embedded devices are driving a huge shift in the banking sector that will improve operations and services.

**Ahlem Chhaidar, Mouna Abdelhedi and Ines Abdelkafi (2022)** in their study, financial technology may be able to reduce costs by maximising economies of scale while also enhancing the speed and security of transactions. The Covid-19 epidemic has highlighted the advantages, preserving people's safety at this time of social estrangement, declining demand, and constrained input supply.

### Statement of the Problem

As per the studies pertaining to the Banking Investment options there are several studies relating to various Investment institutions and financial institutions. But there are few studies related to the Inclination on Financial Technology towards Bank Investment Options with respect to Investors' competency. This study has mainly focused on current innovation on financial technology towards banking investment options and inclination towards investors with respect to competency.

### Objective of the Study

To recognize the Fintech innovative applications and its causation on bank investors based upon the competency and analyse the most inclining application.

### Hypotheses for the study

H<sub>01</sub> -There is no significant relationship between competency and Artificial Intelligence.

H<sub>02</sub> -There is no significant relationship between competency and Chatbots.

H<sub>03</sub> -There is no significant relationship between competency and Robotic Automatic Technology.

H<sub>04</sub> -There is no significant relationship between competency and Cloud Computing.

### Research Methodology Table

<b>Table 1 Research methodology</b>	
<b>Research Framework</b>	Descriptive, qualitative, investigative and expressive research design
<b>Sampling Type</b>	Convenience Sampling

<b>Study Unit</b>	Keywords: Bank Investment Option, Causation, Fintech Innovations, Financial Inclusion, Technological Invention
<b>Samples, Study Period</b>	110, JUNE 2024
<b>Study Mode</b>	Digitally framed questionnaire with score value using a 5-point Likert scale
<b>Collected Data</b>	Primary data-Electronic approach to through E-letter and relative form of communication, Secondary Data-Journals
<b>Analytical Study</b>	Exploratory analysis- Correlation, Regression
<b>Source: Authors Compiled Data</b>	

**Interpretation:** Table 1 consists about research methodology framework, type of sampling used for research, specific unit of study, sample size taken for Research analysis, period of study mode of study to collect information and the analysis tools and techniques used for the Research purpose.

### Data analysis and Interpretation

<b>Table 2 Demographic Profile</b>		
<b>Valid</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Female	61	55.5
Male	49	44.5
<b>Age</b>		
18-25	49	44.5
26-35	19	17.3
36-45	17	15.5
46-55	13	11.8
Above56	12	10.9
<b>Family Annual Income</b>		
Less than 200000	59	53.6
Rs200001-Rs300000	12	10.9
Rs300001-Rs400000	16	14.5
Rs400001-Rs500000	13	11.8
AboveRs500001	10	9.1
<b>Educational Qualification (Competency)</b>		
Graduation	35	31.8
Post Graduation	30	27.3
Doctorate	18	16.4
Other Qualification	16	14.5
Below Graduation	11	10.0
<b>Occupation</b>		
Salaried	11	10.0
Business	13	11.8
Homemaker	16	14.5
Students	62	56.4
Others	8	7.3
<b>Total</b>	<b>110</b>	<b>100.0</b>

<b>Source- Primary Data Analysis</b>
--------------------------------------

**Interpretation for Demographic Profile:** The population profile that out of total 110 respondents in which 44.5% falls the age group of 18-25 years where as 17.3% falls under the age group of 26-35 years, there are 15.5% respondents from the age group of 36-45 years, 11.8% belong to 46-55 years and above 55 years there are 10.9% respondents. There are 44.5% male respondents and 55.5% female respondents. Out of 110 respondents the Annual income earned less than Rs 200000 is 53.6%, Rs 200001 to Rs 300000 is 10.9%, Rs 300001 to RS 400000 is 14.5%, Rs 400001 to Rs 500000 is 11.8% and Above Rs 500001 is earned by 9.1% of respondents. Out of 110 respondents 10.0% respondents are below graduation, 31.8% respondents have bachelor qualification, 27.3% respondents have master's qualification, 16.4% respondents are Doctorate holders and 10.0% respondents have some other educational qualification. The qualification of the respondents is equated to the competency of the investors. The occupational level of collected sample size are 10.0% respondents are salaried, 11.8% are business people, 14.5% are homemakers, 56.4% are students and 7.3% belongs to other category for this research study.

### Reliability Statistics Analysis

<b>Table-3 Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.892	4
Source- Primary data analysis	

**Interpretation:** The Cronbach's alpha value is found to be 0.892 which is 89% and it is found to be reliable and consistent.

### Correlation Analysis

<b>Table -4 Correlation Analysis</b>				
	Applications	Pearson Correlation	Sig.2-tailed	Ho Hypotheses
Competency	Artificial Intelligence	0.599	0.000**	Rejected
	Robotic Automation Technology	0.255	0.008**	Rejected
	Chatbots	0.447	0.000**	Rejected
	Quantum Computing	0.188	0.054*	Rejected
	*. Correlation is significant at the 0.05 level (2-tailed).			
**. Correlation is significant at the 0.01 level (2-tailed).				

<b>Source- Primary Data Analysis</b>
--------------------------------------

**Interpretation****H<sub>01</sub> -There is no significant relationship between competency and Artificial Intelligence:**

The correlation table reveals that the Pearson's coefficient value for the relationship between competency and artificial intelligence is 0.599 which shows a moderate positive correlation.

The significant value for fintech innovation is 0.000 which is less than 0.05 and shows that there is significant relationship between competency and artificial intelligence. Thus, the H<sub>01</sub>

**is rejected. H<sub>02</sub> -There is no significant relationship between competency and robotic automation technology:**

The correlation table reveals that the Pearson's coefficient value for the relationship between competency and robotic automation technology is 0.255 which shows a low positive correlation. The significant value for innovation is 0.008 which is less than 0.05

and shows that there is significant relationship between competency and robotic automation technology. Thus, the H<sub>02</sub> is rejected. **H<sub>03</sub> -There is no significant relationship between competency and chatbots:**

The correlation table reveals that the Pearson's coefficient value for the relationship between competency and chatbots is 0.447 which shows a positive correlation. The significant value for innovation is 0.000 which is less than 0.05 and shows that

there is significant relationship between competency and chatbots. Thus, the H<sub>03</sub> is rejected. **H<sub>04</sub> -There is no significant relationship between competency and quantum computing:**

The correlation table reveals that the Pearson's coefficient value for the relationship between competency and quantum computing is 0.188 which shows a low positive correlation. The significant value for innovations is 0.054 which is less than 0.05 and shows that there is

significant relationship between competency and quantum computing. Thus, the H<sub>04</sub> is rejected.

**Regression for Fintech Applications****Table 5-Regression Analysis Model Summary<sup>b</sup>**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.274 <sup>a</sup>	.075	.066	.890
2	.131 <sup>a</sup>	.017	.007	1.038
3	.216 <sup>a</sup>	.045	.036	1.017
4	.467 <sup>a</sup>	.218	.211	1.047
<b>a. Predictors: (Constant), Competency</b>				

**b. Dependent Variable: Artificial Intelligence, Chatbots, Robotic Automatic technology, Quantum Computing**

**Interpretation:** The above shows the regression analysis of the Dependent variable: Artificial Intelligence, Chatbots, Robotic Automatic technology, Quantum Computing. Independent variable: Competency. According to the table, it shows that the coefficient determination of R Square for model1 is 0.075. It indicates that artificial intelligence has contributed up to 7.5 % towards bank investment options with respect to investors. In model 2 it shows that the coefficient determination of R Square for model2 is 0.017. It indicates that chatbots has contributed up to 1.7 % towards bank investment options with respect to investors. In model 3 it shows that the coefficient determination of R Square for model3 is 0.036. It indicates that Robotic automatic technology has contributed up to 3.6% towards bank investment options with respect to investors. In model 4 it shows that the coefficient determination of R Square for model4 is 0.218. It indicates that quantum computing has contributed up to 21.8 % towards bank investment options with respect to investors. All the four models are seeming to be Goodness of Fit hence the R square value is higher than adjusted R square value.

**Table 6-ANOVA Analysis**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.700	1	6.700	8.459	.004 <sup>b</sup>
	Residual	82.366	104	.792		
	Total	89.066	105			
2	Regression	1.956	1	1.956	1.816	.181 <sup>b</sup>
	Residual	72.060	104	.735		
	Total	72.110	105			
3	Regression	5.111	1	5.111	4.939	.028 <sup>b</sup>
	Residual	107.616	104	1.035		
	Total	112.726	105			
4	Regression	31.832	1	31.832	29.064	.000 <sup>b</sup>
	Residual	113.904	104	1.095		
	Total	145.736	105			

**a. Dependent Variable: Artificial Intelligence, Chatbots, Robotic Automatic technology, Quantum Computing**

**b. Predictors: (Constant), Competency**

**Interpretation:** The hypotheses are further tested by ANOVA. In model 1, the F value and significance value, p indicates that there is significant relationship between Competency and artificial intelligence since the value is lesser than 0.05 the null Hypotheses is rejected. In model 2, the F value and significance value, p indicates that there is no significant relationship between competency and chatbots, since the value is higher than 0.05 the null Hypotheses is accepted. In model 3, the F value and significance value, p indicates that there is significant relationship between competency and robotic automatic technology since the value is lesser than 0.05 the null Hypotheses is rejected. In model 4, the F value and significance value, p indicates that there is significant relationship between competency and quantum computing since the value is lesser than 0.05 the null Hypotheses is rejected.

**Coefficients Model Table 7**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.130	.164		25.254	.000
	Competency	-.153	.053	-.274	-2.908	.004
2	(Constant)	3.511	.191		18.410	.000
	Competency	-.083	.062	-.131	-1.348	.181
3	(Constant)	2.959	.187		15.827	.000
	Competency	.134	.060	.213	2.222	.028
4	(Constant)	4.465	.192		23.217	.000
	Competency	-.334	.062	-.467	-5.391	.000

**a. Dependent Variable: Artificial Intelligence, Chatbots, Robotic Automatic technology, Quantum Computing**

**Source –Primary data analysis**

**Interpretation: Two Regression equations were derived from the Analysis.**

**Table-8 Regression Equations**



Model 1 (Artificial Intelligence) $Y=4.130+-0.153x$
Model 2 (Chatbots) $Y=3.511+-0.083x$
Model 3(Robotic Automatic Technology) $Y=2.959+0.134x$
Model 4 (Quantum Computing) $Y=4.465+-0.334x$

### Findings from the Study

**Demographic profile:** Majority of the respondents were from the age group of 18-25 years who were female respondents studied Post Graduation and are having their monthly earning as 10000-20000 and the majority are private sector employees.

**Correlation Analysis:** The four factors are extracted from the study with the reliability 0.89 value of and further tested by using correlation analysis with the competency. There is significant relationship between competency and Artificial Intelligence, Chatbots, Robotic Automated Technology and Cloud Computing applications invented by Fintech towards bank investment options under the financial inclusion.

**Regression Analysis:** The regression analysis further supports the correlation analysis and reinstates that competency as a predictor in explaining role and influence in bank investment options with respect to investors. In this regression analysis four models were derived for understanding the role of fintech influence in bank investment options in investors portfolio with fintech applications used by investors. All models have a positive influence on bank investment decisions with respect to investors competency in India.

### Conclusion and Suggestions

From the findings it can be concluded that role of fintech in bank investment options with respect to investors four applications has impact on competency of the investors. The role of fintech applications has greater inclination in investors decisions in preference of bank investment options. The study further concludes that the Artificial Intelligence, Chatbots, Robotic Automatic Technology and Cloud Computing are the fintech innovations which cause to incline the bank investors to prefer the bank investment options under financial inclusion.

### Social Relevance of the Study

Fintech is proving to be a solution to alleviating wealth inequality and discrimination in traditional banking systems. It grants the opportunities for financial services to transcend geographical boundaries and wealth classes, increasing financial inclusion globally.

## **Scope for Future Research**

The study has limited to the role of Fintech Influence towards Bank Investment Options among the Investors. There are more banking investment options preferences models and various reasons to study under different dimensions of investors towards future new innovation and upcoming technologies.

## **References**

- Alla Klimenko- Digital Transformation in Banking and Financial Services, maddevs.io, March 09,2023. Mad Devs Blog
- Ahlem Chhaidar, Mouna Abdelhedi and Ines Abdelkafi (2022)- The effect of Financial Technology Investment Level on European Banks profitability. Journal of the Knowledge Economy, Springer link, 14 March 2022
- Igor Tomych (2023) Top 10 Fintech innovations, dashdevs.com, FinTech garden
- Mengxuan Tang, Shaen Corbet (2024) Fintech, bank diversification and liquidity: Evidence from China, Research in International business and finance, Science Direct, volume 67, part A, January 2024,102082
- Nirvikar Jain (2023)- Digital Banking Innovation in the Age of Disruption. Finance, toptal.com.
- Saurabh Singh (2023)- Digital Transformation in Banking: What it means for businesses. Appinventiv, Blog/ Digital Transformation, June23.2023.